



ARCH 2330 BUILDING TECH III – SPRING 2015

Team Research Assignment No.1

Overview:

We will mix up the teams for the first research project. Teams are divided up by topic – structure, mechanical, program review, room naming & numbering system and egress. The member of each team who worked on this area will be the member who continues to research this subject – now part of a second subject based team.

There are two parts to each presentation. The general overview of the subject and then how it applies to each of your buildings. The general overview will be completed by the subject based team. The application of the subject to your building is to be reviewed and discussed with your project team. While you will present the subject your project team members should debate systems, agree on solutions and contribute to your presentation.

These presentations are to be used as reference information for the entire class to use as they develop their individual buildings. As with all presentations the team must create a uniform professional quality presentation. One of the first slides should be an outline of the presentation identifying which portion each team member worked on and will present along with a photograph of each of you. Each of you must participate in the oral presentation. Be certain that the name of the file name includes the course number, semester and professor (ARCH2330.SP15.KING) and also the subject and the last names of every team member.

Do not just cut and paste information gathered from other websites - you must understand and summarize the key points of your research and how it can be applied. You must know what you are talking about and all images or quotes used from web or other sources must be credited on the slide it occurs!

Team topic assignments: Each topic will be presented in class as listed in the table below:

Class #	Presentation Date	Topic
5	Wednesday February 18	Room Naming & Numbering
6	Thursday February 19	Structure
7	Monday February 23	Mechanical
8	Thursday February 26	Program Review Finishes, Furniture, Equipment & Lighting
9	Monday March 2	Egress

1. Structural Research:

Develop a presentation on structural systems and components. Start with a review of each of the projects and identify the necessary structural components that may be necessary from the foundation to the roof. This presentation should include but not be limited to a review of components (floor construction, beams, columns, , footings, foundations, trusses, etc.) and spans (short and long) and materials (steel, concrete & wood) and assembly and use of shear walls, etc. What are the sizes of each of these components? Consider showing drawings, photographs and images.

The general part of this presentation is to be worked on as a member of the structure team and then each team member should focus on their separate projects and look to identify their specific solutions. Updated overlays of each project must be included. Discuss your project specific solutions with your project team.

2. Mechanical Review:

Develop a presentation on mechanical systems and components. Consider what happens to air as it enters the building, circulates and leaves. What are the components that convey air (supply & return ducts, vertical and horizontal distribution) and make up mechanical systems? What are the different strategies for distributing air throughout a building? Where can mechanical room be located and why? How does the fire rating of walls, floor and ceilings affect mechanical systems?

The general part of this presentation should be worked on as a member of the mechanical team and then each team member should focus on their separate projects and look to identify their specific solutions. Updated overlays of each project must be included. The focus on teams selected project should be discussed with your team.

3. Program Review:

Working from the list of program spaces for all of the buildings, divide these up into categories and then complete research on each space type. Identify the code requirement for square foot required per person based on the use, identify the types of materials & lighting that are appropriate and the equipment or furniture that is appropriate. Develop an appropriate number of people for each type of space and then figure out the necessary square footage. Show prototype plans and sections of each type of space with proper furniture layout, width of corridors, etc. Consider the entire space, the walls, floors, ceilings, doors, etc. and begin to develop a project manual that can be used by the class.

As with the other presentations first develop a general presentation and then focus on spaces that are specific to each project. As part of this you should identify rooms in the project that are incorrectly sized and show a prototype space that is designed correctly.

4. Room Name and Numbering System & Drawing Set Organization:

Working as a team identify different strategies for room naming and numbering for a building. It is important to explain the pros and cons of each possible solution. Consider what other information may be useful to include as part of room numbering and naming and also consider drawing types – (plans, reflected ceiling plans, etc.) that are part of your final set.

Review the strategies with your project team and provide an outline of your project teams proposed solution. This should include an overlay of your project with complete numbering and naming.

5. Egress Study:

Working as a team develop a presentation that focuses on egress. What are the rules that govern egress and how are they applied? This should include a focus on fire stairs and fire ratings. What codes do we need to consider and where do we locate this information (what section of code). You should look to develop a reference that can be used by the entire class to help them resolve their own buildings. Each project team member needs provide an updated overlay of their project with the necessary modifications.

Developing an outline and dividing the work:

All teams must develop an outline and post this to OpenLab by Sunday February 8th so they can be reviewed on February 9th. The outline and division of work must be approved.

Submittals & Deadline:

The final PowerPoint is to be printed to a PDF as a single file uploaded to OpenLab the night before your presentation date so that your classmates can follow along during your presentation. Presentations not posted will be considered late. Additionally one team member is to upload both the PDF and the original PowerPoint to blackboard where grades will be posted.

Credits:

Each presentation begins with a photo of each team member and an outline that identifies what each team member worked and presented. Put the initials of who worked on a slide on a bottom corner. If multiple people contributed include each person's initials.

Oral Presentation:

The group presentation must start off with an outline of the presentation and each section should have a proper title slide and at least, one summary slide. Each group will present their work together & each student must be part of the oral presentation. At the end of the presentation Team members will be available for a Q & A session by the rest of the class.

Posted Comments by Other Teams:

Immediately after each presentation the teams not presenting are required to spend 2-3 minutes writing out a summary of the most critical points of the presentation (what was the most valuable thing you learned?) and to be posted as a comment to the posted presentation. Since this is posted by a single person please be certain to include the names of each member of the team in the post.

Grading

Each team member will be graded both as a group and as an individual. Each team member must be present on the day of their presentation and must speak about their topic. Absence from your own presentation will lower your individual grade.

Computer Program(s): OpenLab, PowerPoint, Illustrator, InDesign, Acrobat

Student Learning Objectives:

Upon successful completion of this assignment, the student will:

1. Be able to work as a team to define shared goals & divide responsibilities equitably.
2. Be able to thoroughly research a topic.
3. Be able to compose & present a professional quality presentation.

Assessment:

To evaluate the student's achievement of the learning objectives, the professor will do the following:

1. Evaluate the teams ability to define shared goals and divide responsibilities equitably.
2. Evaluate the students research on a given topic.
3. Evaluate the team and the individual's ability to compose & conduct and oral presentation.

References:

1. All sources must be identified and credited. Include the book reference, author or URL.