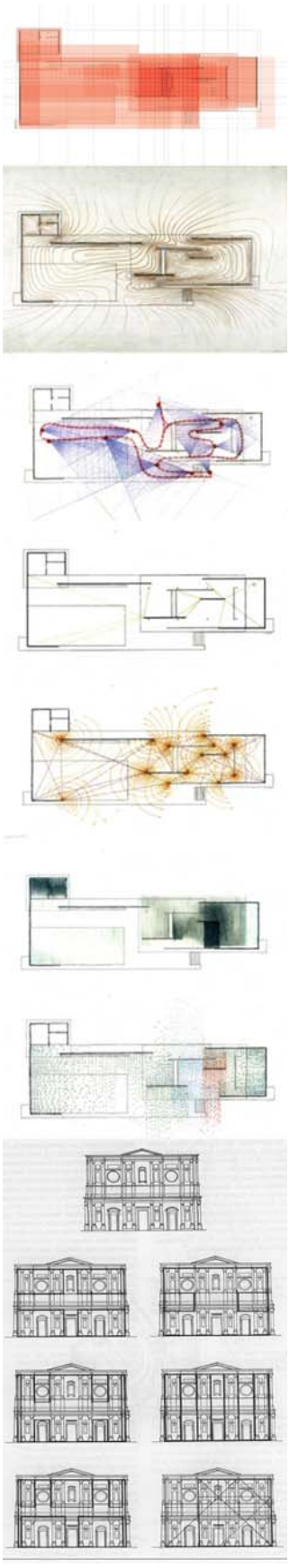
Architecture Studio: 1st Year Spring

Spring 2014, CMU, Arch #48-105, M/W 12:30-4:20
Class Website: www.andrew.cmu.edu/course/48-105

Coordinator: Kai Gutschow
Email: gutschow@andrew.cmu.edu
Off. Hr: by appt. in MM302

(5/14/14)

Project 2: BUILDING ANALYSIS



ASSIGNMENT #2 (Due Mon. 3/24, 12:30pm)

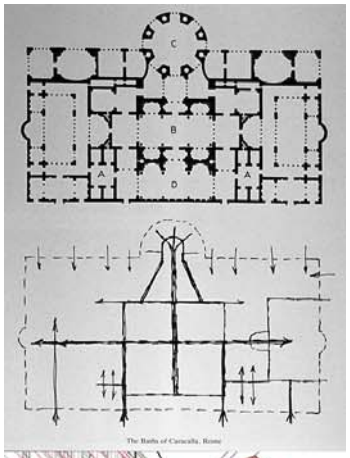
A) 50 DIAGRAMS: Continue to research, visit, and experience your building, as a group, and individually. Based on readings and lectures so far, begin to analyze your building, and translate your understanding and ideas into diagrams. As a team, draw 40-50 analysis drawings or diagrams of various aspects of your building. Remember that diagrams can be both analytical and generative. You should interpret, read, or *analyze* the building on your own terms, but also speculate about diagrams that may have *generated* the building. Focus on a broad range of design issues, at different scales, from the overall plan, to construction details. Use a variety of different analytical-drawing techniques. Feel free to work 2D or 3D, analog or digital (you can use photos of models or screen shots of digital drawings). Work to create several "series" or iterations of one drawing type or theme; but also work to create many different kinds of drawings. Be sure each diagram or drawing is distinct and deliberate: not a doodle or mere gesture.

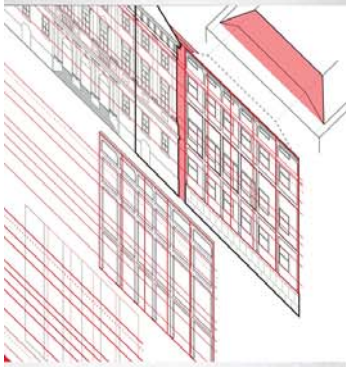
Suggested themes for your diagrams (see readings for others):

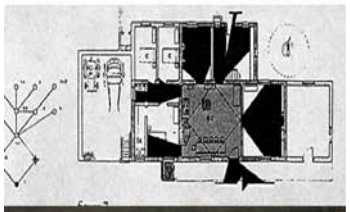
- CONTEXT / SITE: Analyze how your building "fits" within its context, or stands out, in section and plan. Find your building using Google Earth, chart views, landscape features, streets, nearby buildings, etc. How does the building touch the ground or sit on a hill? Does it look like it's neighbors? How does it work with the flow of the landscape? Why?
- SPATIAL DEFINITION: Using techniques of understanding space and spatial definition from 48-100 and 48-126, use line and contour to explore and diagram the real and implied spaces inside and around your building. Think especially about the geometry and framework that orders and controls the spaces and spatial experiences.
- INSIDE / OUTSIDE: Analyze the relation of inside and outside in your building. Imagine the transition from inside to outside as a series of layers, some spatial, some planar, some material, and some immaterial, that together define a set of experiences. Chart the experience of your building: start far away, get ever closer, more around, enter, and then back out of the building.
- LIGHT / OPENINGS: Analyze the building's relationship to the sun/shade. Use Ecotect or your intuition to abstract how light comes into various parts of your building. How does the architect work with openings in the facades or roof to let light in? What are the different "moods" or "atmospheres" of light created? How do they change over the day & seasons? How do they relate to program and circulation? Can you draw them?
- STRUCTURE: Analyze the structural system of your building, what holds the building up. In plan & section, attempt to isolate and accentuate the structural components of your building (load bearing walls and columns), as opposed to enclosure systems. What rhythms does the structure create? How does structure define space? How does the structure organize the program? Distinguish between stacks of load-bearing members, sticks used to frame the structure, or planes to enclose space.
- CONSTRUCTION / DETAILS: Using a *wall-section* or other detail drawings, or construction photos, analyze or describe how the architect created certain effects through construction. Analyze and draw diagrams to explain why the architect used different materials for different parts of the building.
- GEOMETRY/FORMAL PATTERNS: Building on ideas of order, systems, patterns, and geometry from Proj.1, find and record systems and patterns at various scales. Look for the underlying order of the overall plan, the "regulating lines" of the facades, the rhythm of the structural system, the primary and secondary circulation systems, tectnoic systems of sticks, planes and blocks, and the patterns created by materials such as brick and cladding, etc. Find as many formal patterns and groupings as you can. Highlight issues of symmetry/balance, additive/subtractive, verticals/horizontals, light/dark, parts/whole, curves/orthogonals, repetitive/unique, etc. Find rhythms, hidden shapes, proportions, axes, spaces, angles, shapes, scale, or any other formal patterns you can identify. Show what is missing, what's obvious, and what's hard to detect.

- PROGRAM / USE / FUNCTION: What are the distinct programmatic spaces in your building? Draw the program as an assembled set of "program blocks" (consider making a model, or a digital model with quick cubes of space) Is the programmatic massing the same as the overall building massing? Distinguish between the primary or "served" components, and the secondary or "poche" components.
- SEQUENCE / PROMENADE: Analyze how people approach, circulate, or use the building. Seek to understand *WHAT* the architect intended with the overall design, the choreographed movement, and each detail, and *WHY* the architect "composed" it that way, and create analytical diagrams to show it. Consider creating a "storyboard" with abstracted vignettes of the flow through the building. Draw the various layers, zones, or thresholds encountered.
- SEVEN SENSES: Analyze a variety of sensual and immaterial effects of your building; things that are audible, smellable, touchable, feelable, etc. Look at textures, mood, temperature, materials, joinery techniques, hierarchy, the role of ramps, stairs, tall ceilings, etc. Move beyond the visible, to the emotional and bodily reactions.
- EXPERIENCE: Capture or analyze the human experience of the building, what we feel beyond what we can see, how people behave, how the building constrains or moves people, the affect or emotional expression of the building.

** Create many diagrams quickly in sketch format, and bring to studio on Wed. For the final, each group should re-draw 40-50 diagrams so they are neat and well-composed onto pages into a GRID of similar analysis drawings-diagrams. Plot a hardcopy, and submit pdf to archpcserver.







B) FLOOR PLANS: Obtain, create, or edit a primary, Autocad floor plan of the building. Then individually create the following different scaled drawings of the plan at different scales, each containing different amounts of information and abstraction, emphasizing different qualities and details, depending on your individual interpretation:

1) a "**postage stamp**" version of the plan, no bigger than 1.5" x1.5" that begins to abstract the primary features of the building's floor plan. Because it is so small, it can usually not show all the different rooms, but might show the primary spaces, and other most important features of the plan. Print/center on 8.5"x11" paper.

2) an "**A5**" (approx. ½ letter size) version of the plan, no bigger than 8.5"x5.5", the kind of drawing you might see in a book, that shows most relevant details about the floor plan, but leaves off extraneous construction and detail information. Print on 8.5x11.

3) a detailed, "**poster-sized**" (24"x36") version of the floor plan with as many details as appropriate for that scale building and plan, including material specifications, structural systems, construction information, underlying geometric frameworks, other technical systems, programmatic details such as use. Plot whole plan, and 8.5x11 fragment.

To do this assignment well, you will need to master the "layers," and "pen-sets" or line-weights features of Autcad, as well as think carefully about how the various scale drawings read as printouts from various distances. Plot often, experiment, and be picky about your line-weights.

** Bring drafts of all three plans to studio on Wed. 3/19.

C) ANALYTICAL DRAWING 24"x36": Each student should create a 24"x36" *analytical drawing* of your building that focuses on a particular sequence of experiences into and through the most important parts of your building. Much as in your *analytique*, consider combining multiple drawing types, at different scales, and over-lapping the parts. Although you are free to choose any drawing type, or a hybrid of drawing types, we recommend you explore sectional perspectives, exploded axos, or other drawings that carefully show both outside and inside experiences. Focus on the physical architectural elements, but see if you can render "atmosphere" as well. Attempt to include both the context and details, revealing how the building fits into the landscape, and how pieces of construction inter-connect and assemble into patterns and order. Include geometric and other revealing analytical information through subsidiary lines. Consider carefully the view angle and how the drawings sit on the page to show all the different info you want to communicate. Draw and ammend several drafts before beginning the final. Make sure it is an ANALYSIS drawing!

** Bring sketches or first drafts to class on Wed. Submit draft to the archpcserver by Fri. at 5pm. Bring a final copy for Mon.