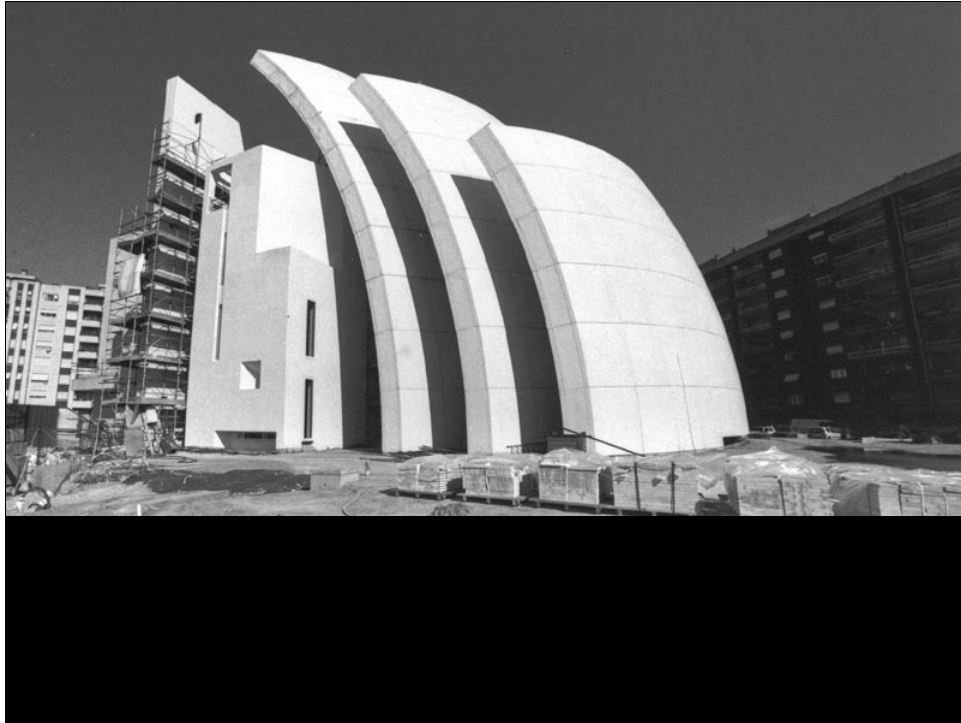
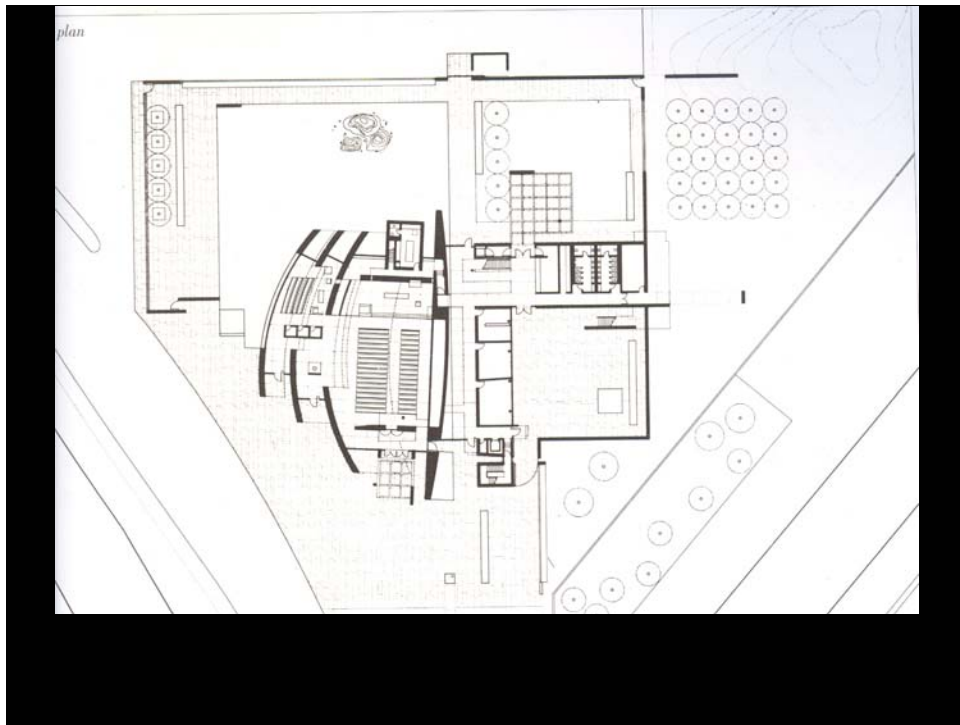
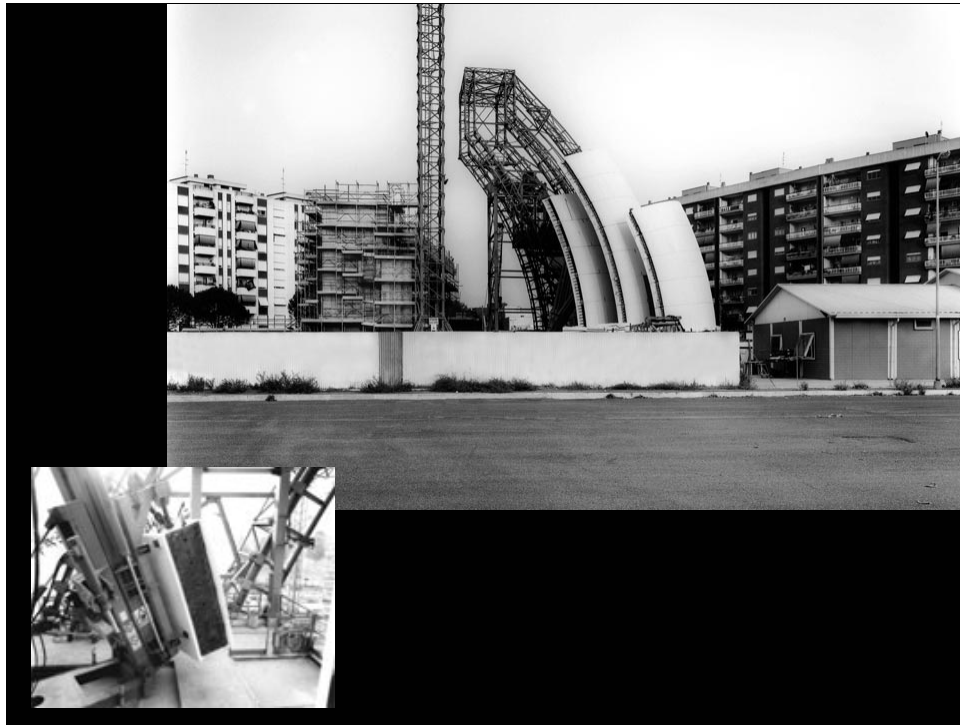




Course focus on how to accomplish something in built form with materials and methods available . . . Or un-available, as of yet.



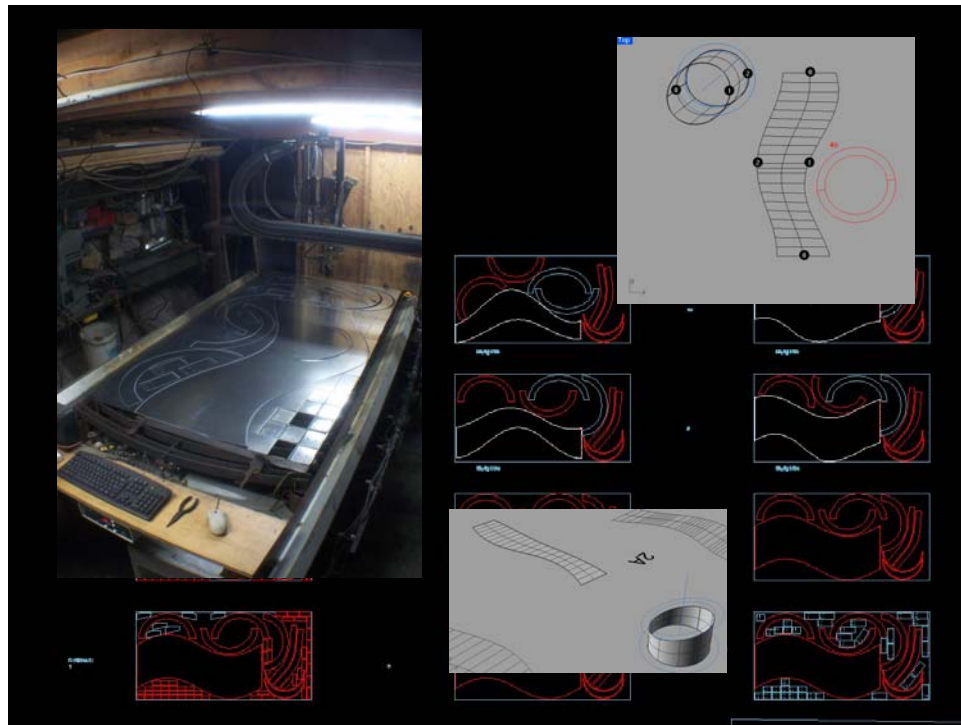
Problem is when you talk about corner, it's preconceived with a notion of part of a box. Corner definition can be simply a condition of where one thing intersects another.



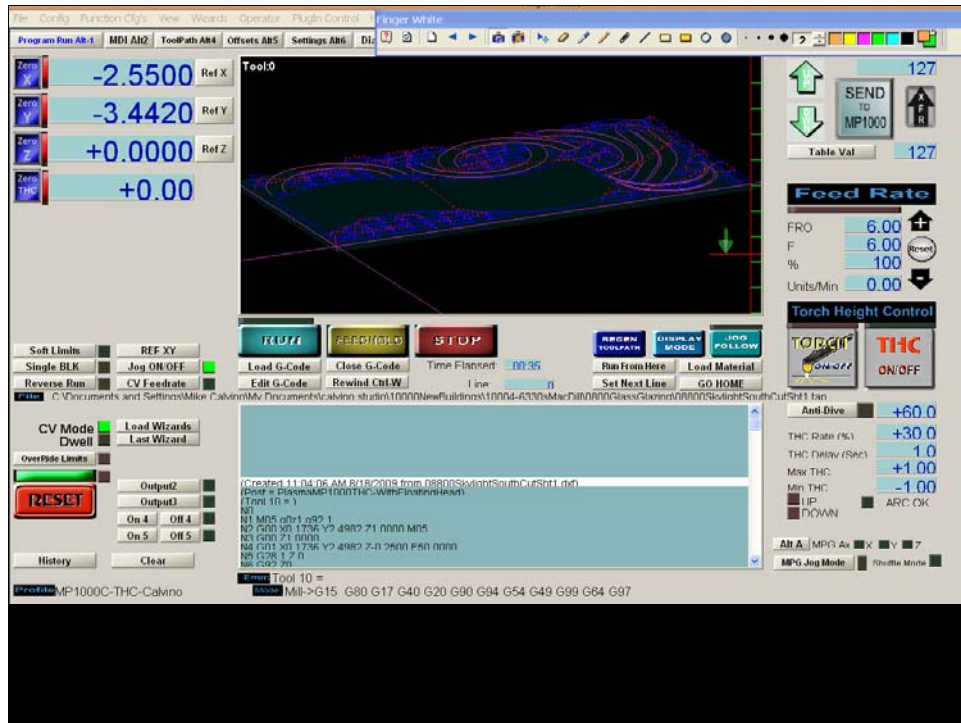
Some methods don't exist and must be developed. Shells to develop the light condition, corner is now defined as that intersection of glazing plane with the shell. How to accomplish this. Case studies looking into how something is accomplished. Technology plays an important part and when taken in proper perspective, it can lead to the accomplishment of things that were, up until that time, not possible.



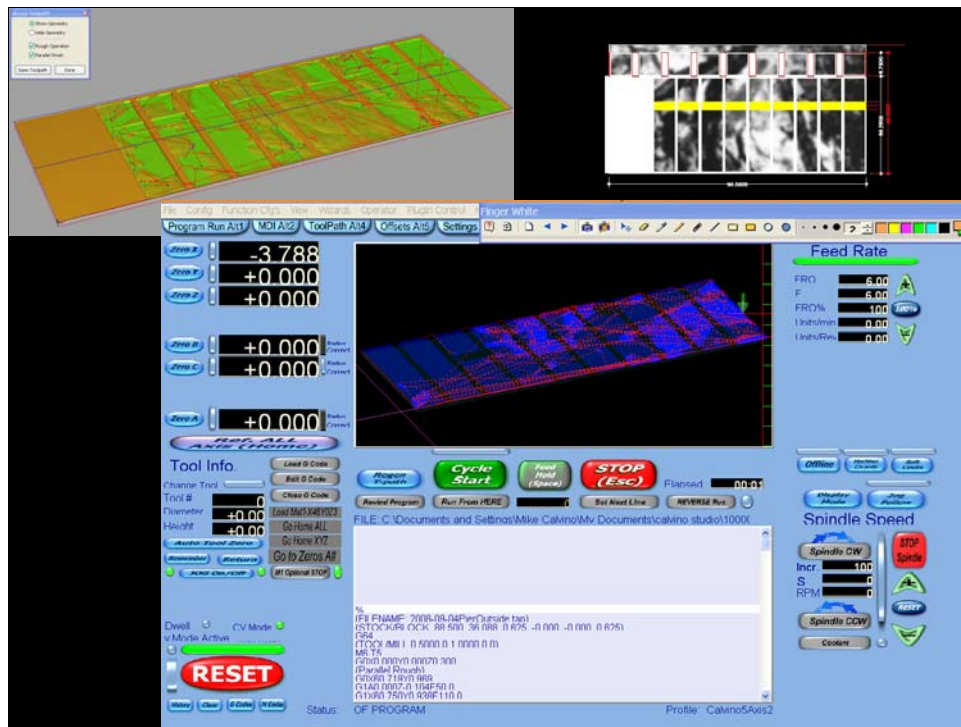
Technology allowing things to become possible in various ways. CNC technology as a tool to access customization and design execution that would otherwise not be possible. The reality of budget constraints can be seen as a positive, developing the CNC machine led to development of the blocks and allowed the fabrication of the angled skylights to control heat gain. Budget control.



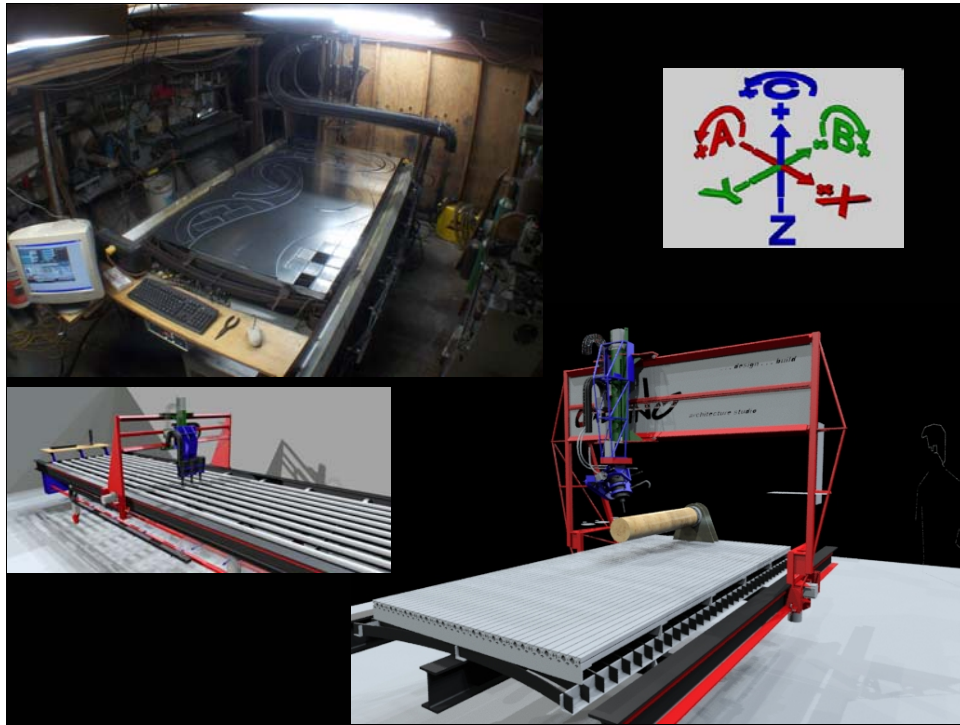
Presentation of CNC technology in terms of process and the steps and components available to produce an idea. This is about cnc 2d work, plasma cutting steel sheet/plate, allowing various shapes to be cut that would otherwise be very costly to outsource.



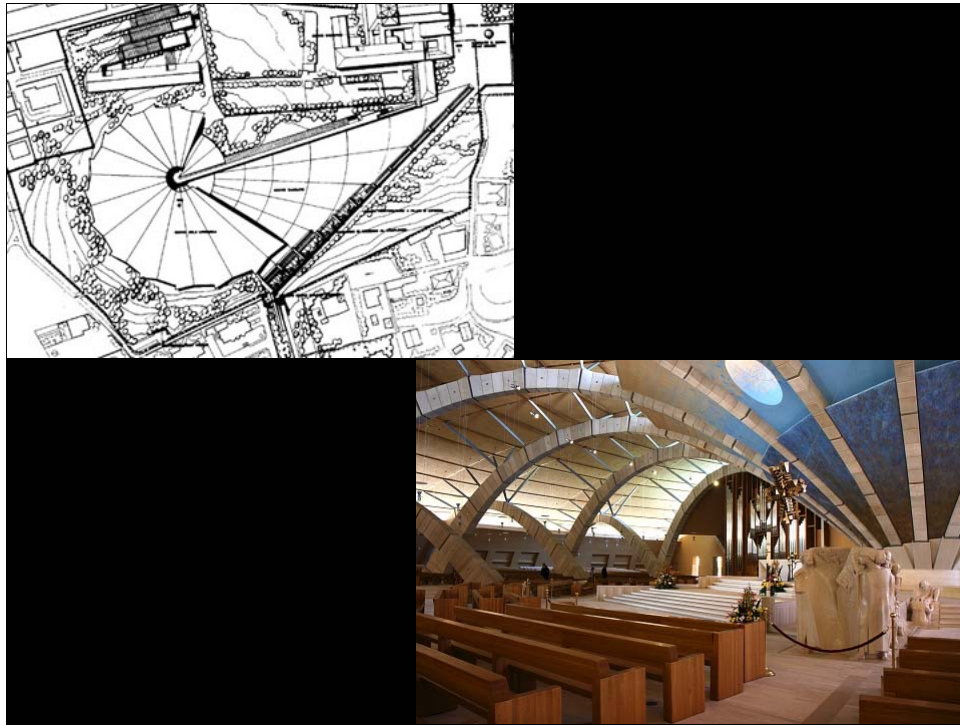
Mach3 screen: CNC control program. www.machsupport.com download the trial version.



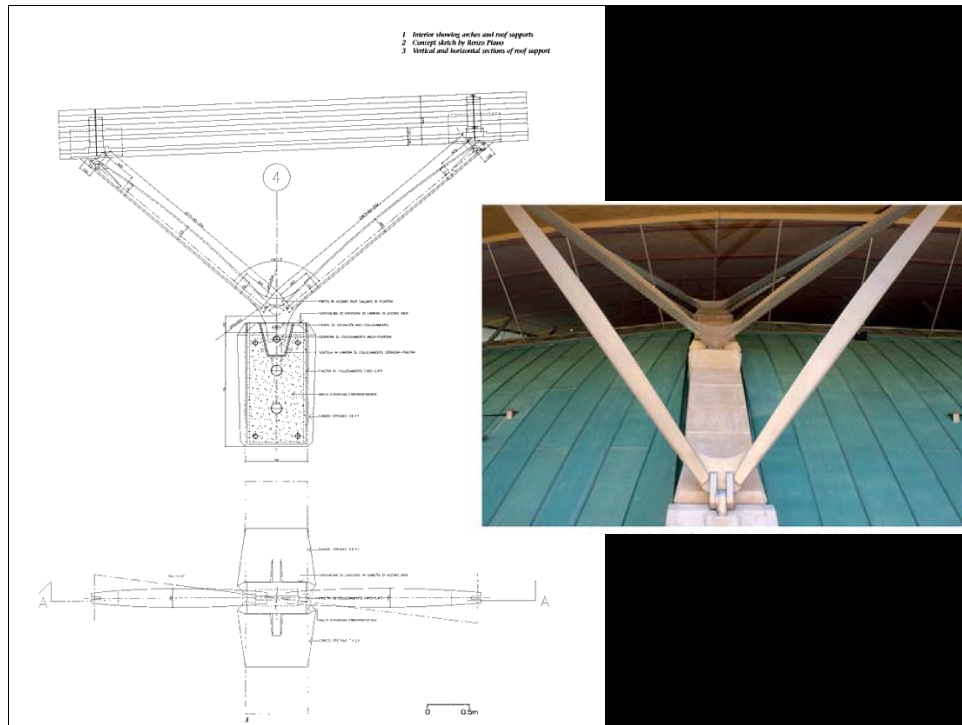
Design concept, first slides, The CAD component, previous slide, the CAM component, lower right, the control software, lower left, and finally the machine, XYZ, XYZBC, etc.



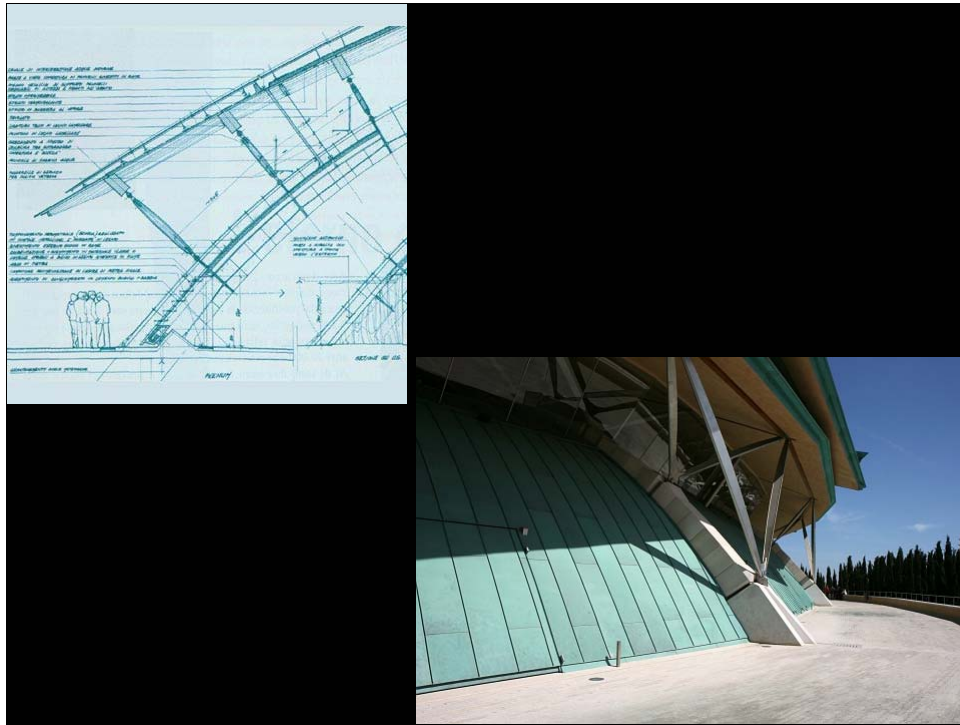
Then there is the machine that is controlled by all of the previous elements to cut, position, shape, etc. the original intent/concept. This will be at least one class content and will be explained in relation to the production of elements to make/realize a portion of a project. Advise to get into the fab lab or do research on CNC technology. CNCzone, <http://cnc4free.org>, www.cnc-toolkit.com. Figure out how it can help you realize what you are trying to do.



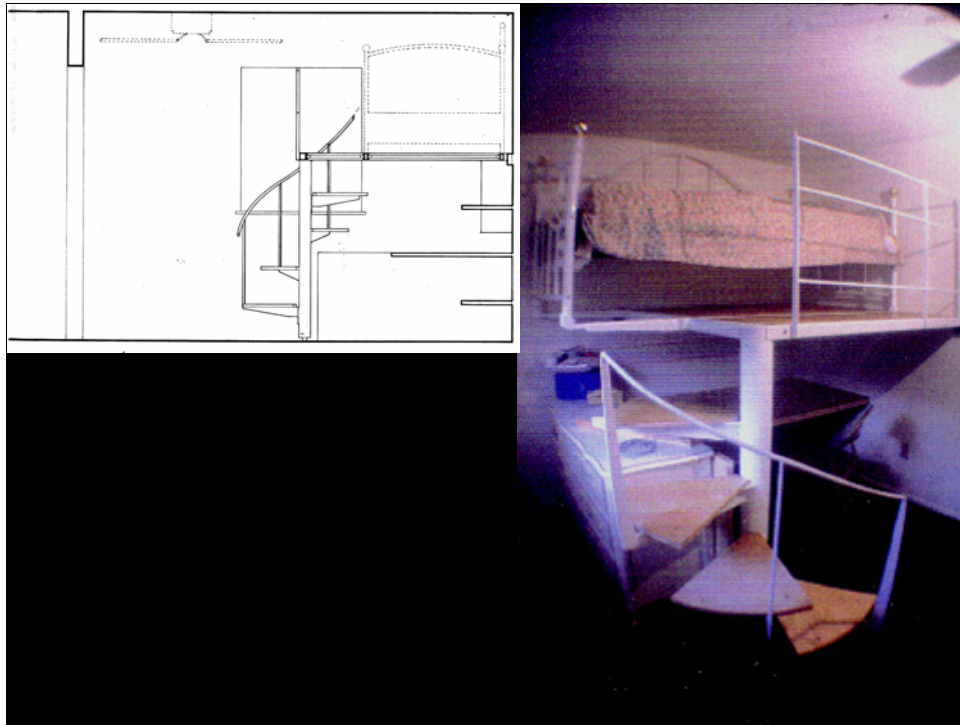
Talk about corners, this project may serve to talk about masonry as well as corner, overhead plane etc.



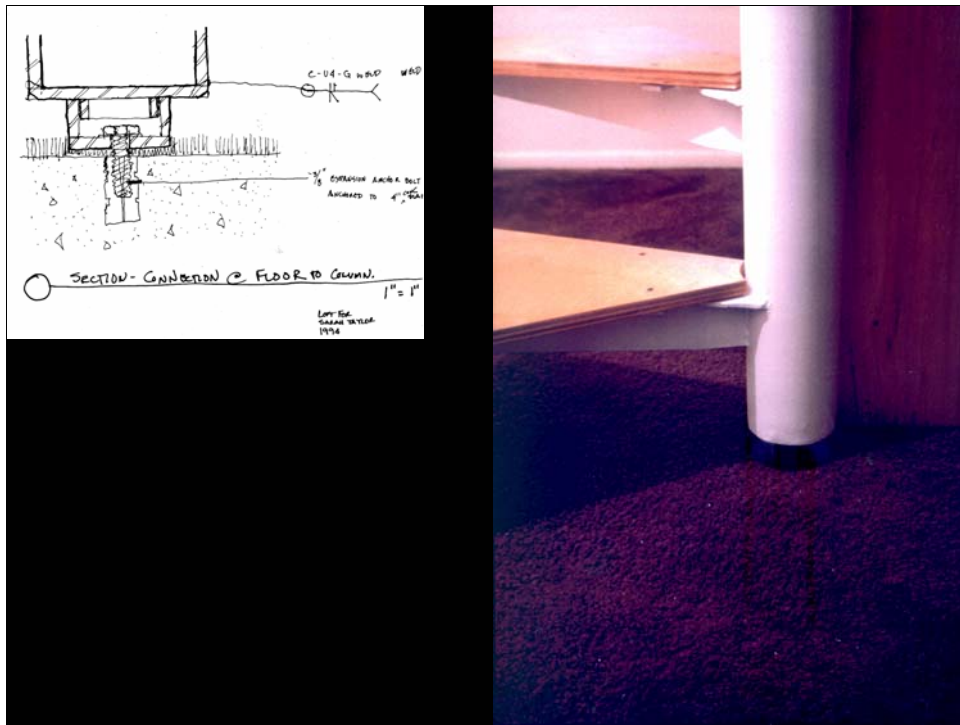
Combination of materials, post-tensioned cables to make composite structure.



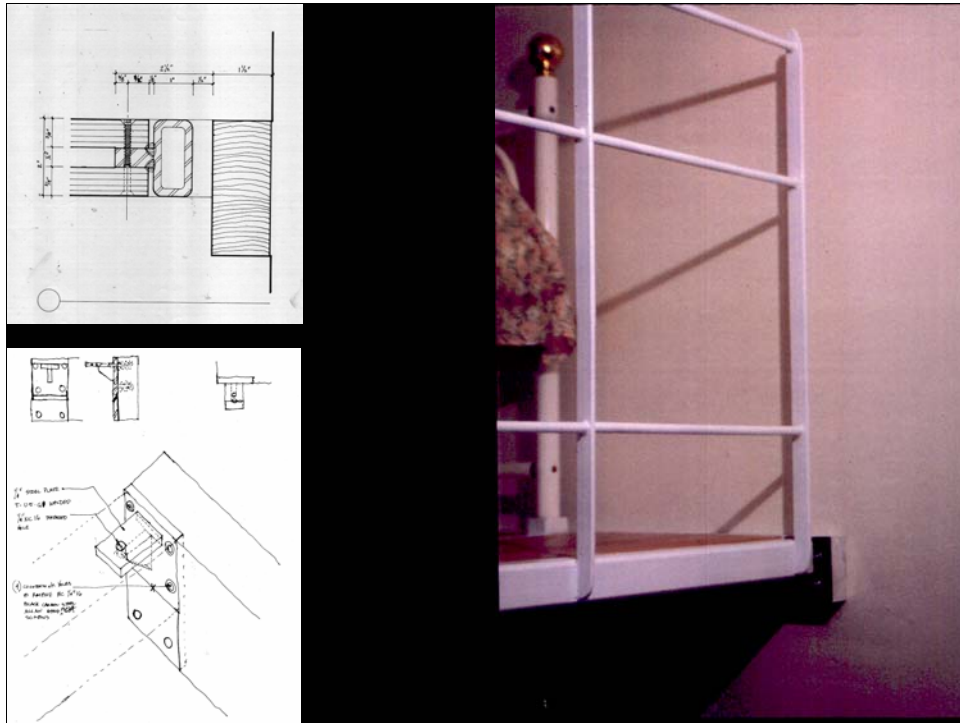
Most projects one looks at in school are of a scale that is in-accessible to the young designer. Smaller scale projects allow access to concepts/materials/processes – these projects were made after years of experience by the architects. How do we access the processes and begin to develop our own methodology and way of designing/working with materials and systems?



Scale can allow one to become familiar with materials and processes at a reasonable pace.



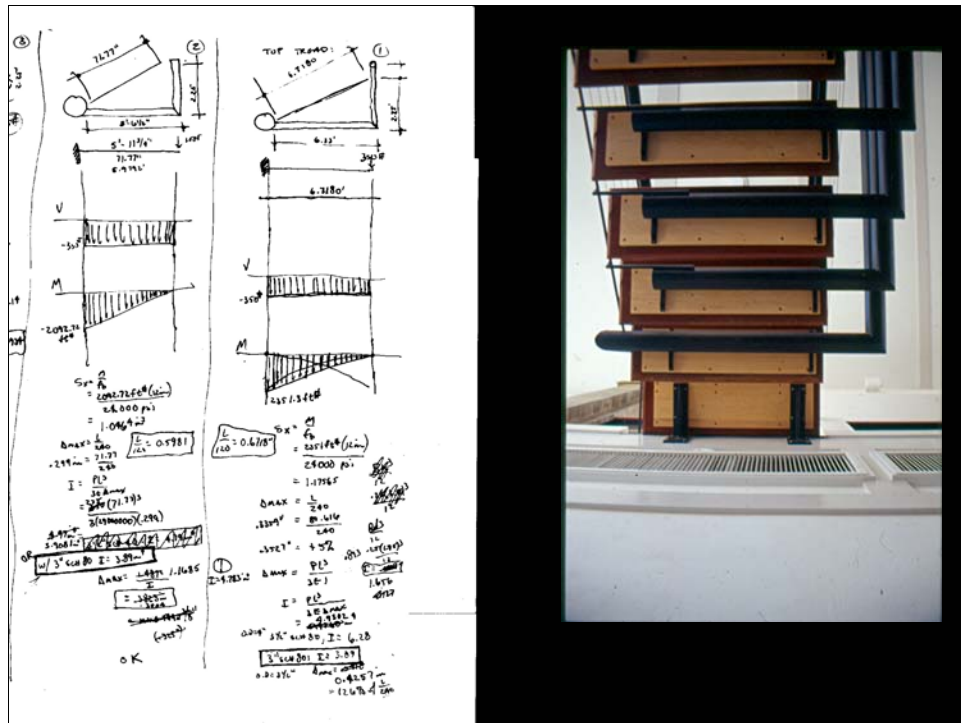
Detailing, design and control the details.



Execution of details is critical to outcome of design intent. Maintain control of detailing.

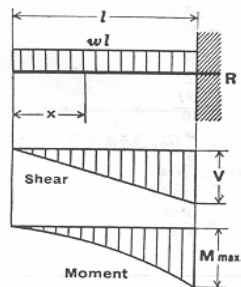


Scale and familiarity with materials. Steel, and its interface with concrete. The base plate drop-in anchor, SS socket cap screw – epoxy, the key element to the connection: deflection in the plate. Mock up showed the difference at $\frac{1}{4}$ actual size.

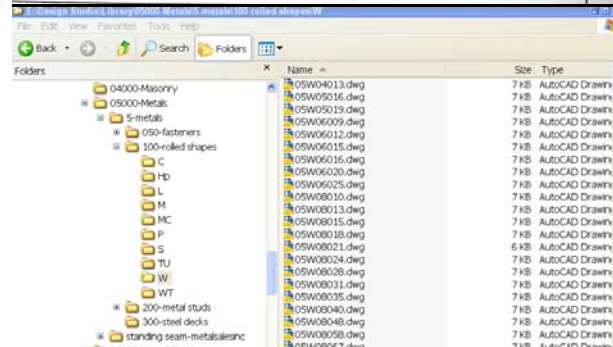
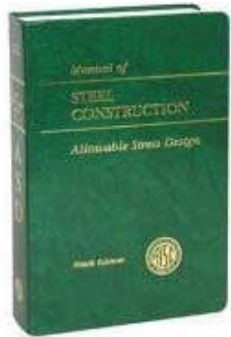


Deflection calculations solving for pipe sizes.

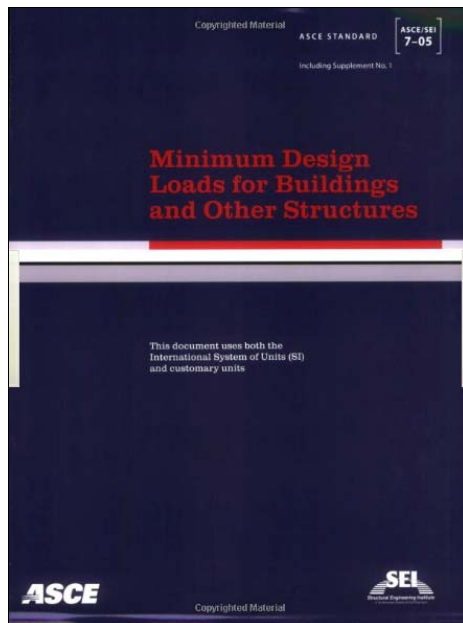
19. CANTILEVER BEAM—UNIFORMLY DISTRIBUTED LOAD



$$\begin{aligned}
 \text{Total Equiv. Uniform Load} &= 4wl \\
 R = V &= wl \\
 V_x &= wx \\
 M_{\text{max. (at fixed end)}} &= \frac{wl^2}{2} \\
 M_x &= \frac{wx^2}{2} \\
 \Delta_{\text{max. (at free end)}} &= \frac{wl^4}{8EI} \\
 \Delta_x &= \frac{w}{24EI} (x^4 - 4l^3x + 3l^4)
 \end{aligned}$$



Alternate texts.



**Minimum Design Loads for Buildings
And Other Structures: SEI/ASCE 7-05**



Florida Building Code

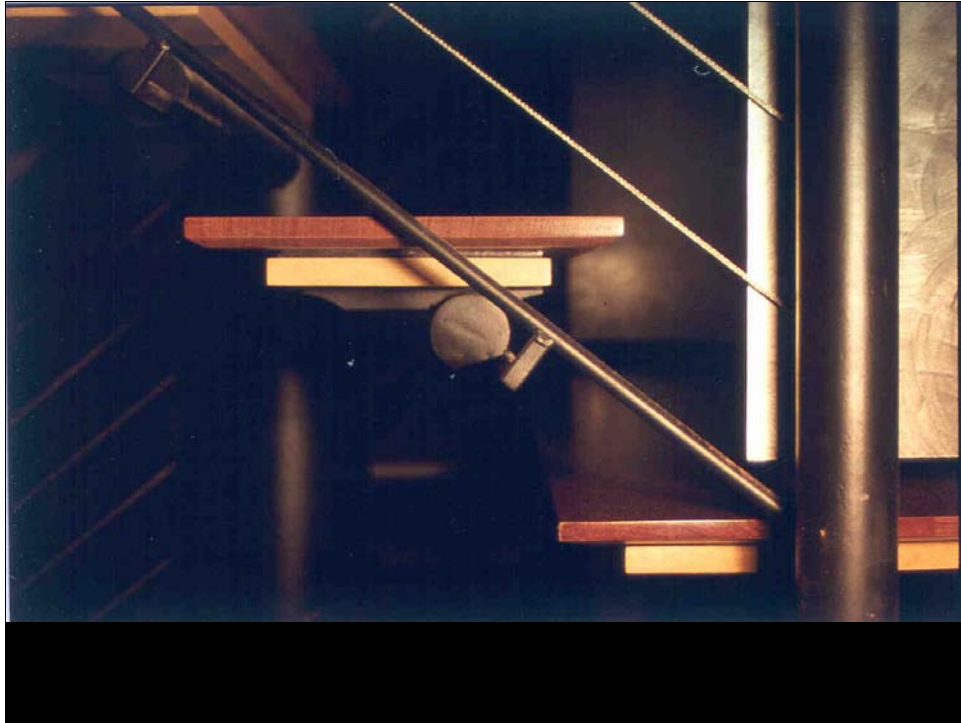
Valuable resources, books for your library, to be used for years to come, especially in practice. Available on Amazon.com.



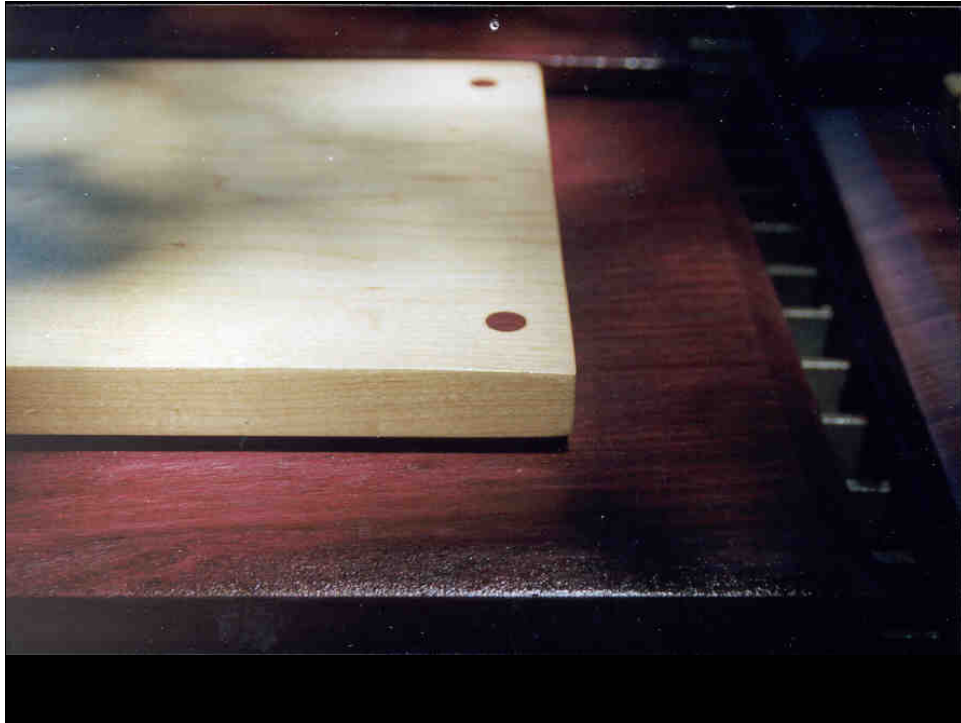
Design the method of fabrication (project execution) so that it is possible with the budget available.



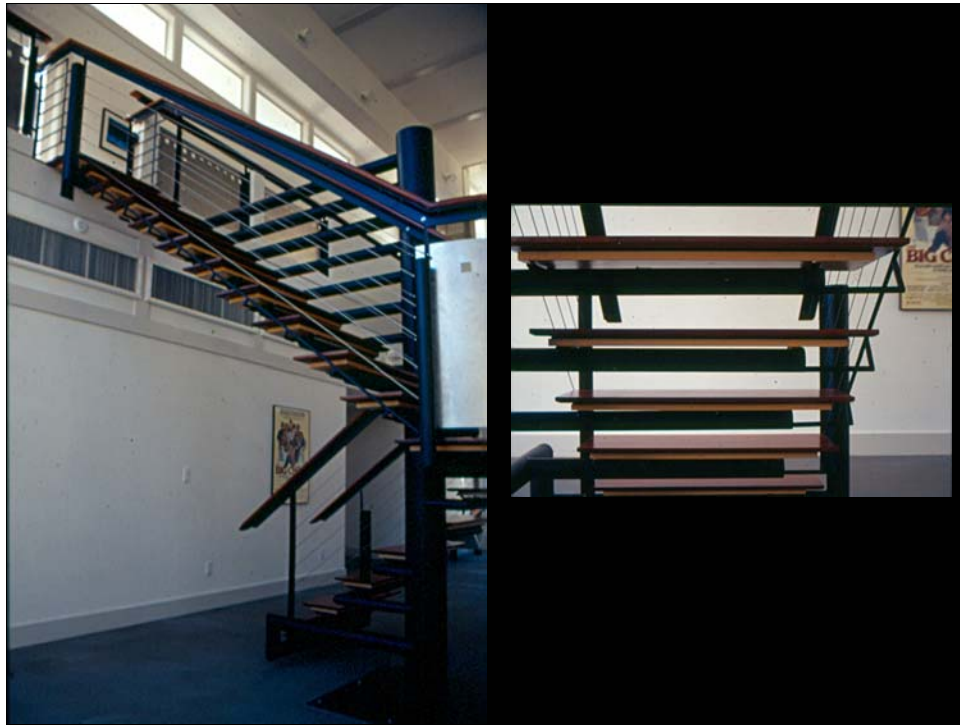
Texture on mill finished stainless. Stainless sheets CNC laser cut, then brushed with a porter cable random orbital sander to give it texture. Contrast with both the steel structure and the wood treads/horizontals.



Detail concept about separation of materials and how the wood parts touch the steel parts.



Purpleheart and maple as a design concept, warmth of the natural wood used where interaction between user occurs. Steel is cold to the touch but is superior in strength.



Smaller scale can allow investigation into concepts and methods that can be applied and practiced at larger scales. The cantilever and interface between steel and wood.



Cantilever, different material, different scale, same concepts, same general calculations, different process of making.



20' cantilever, glued laminated beams, 42" Deep at deepest, two sections, 105'+ long. Crane set, etc.

See <http://www.calvinodesign.com/10021/10021-02-glulams/>
<http://www.calvinodesign.com/10021/10021-02-glulams/installation/>
for more information.



Scale material manipulation

More info go to www.calvinodesign.com

The Ruskin House book is available at www.blurb.com
Become a member at blurb and make your own book/portfolio.

Investigate, design, make.

Questions references: post online