

Christopher Cordell

2012 : Professional Portfolio

Context *where I've been, what I've done*



key : lessons learned

what I have learned	who I learned it from
to explore	Michael Groves professor, ASU
finesse	Maijin Chen professor, ASU
to bend the rules	Ken DeCore professor, ASU
the desire for doing	Claudio Vekstein professor, ASU
precedent	John Meunier professor, ASU
surface	Wendell Burnette professional contact
building process	Andy Byrnes owner, The Construction Zone
composition	Benjamin Riley professor, IIT
rigor	Thomas Brock professor, IIT
to trust your hand	John DeSalvo professor, IIT
graphic process	Martin Felsen professor, IIT

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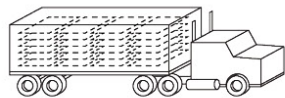
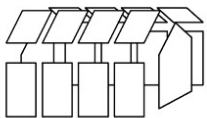
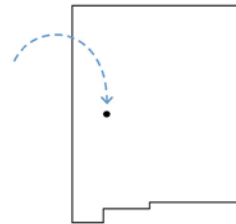
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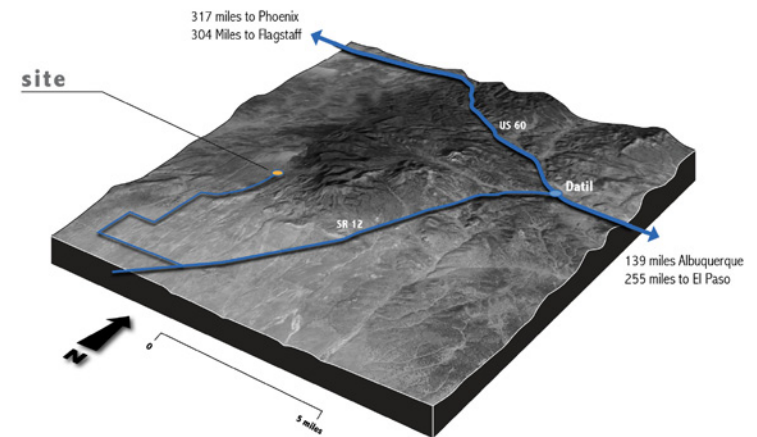
Remote Home *a prefabricated, system-based solution to rural living*

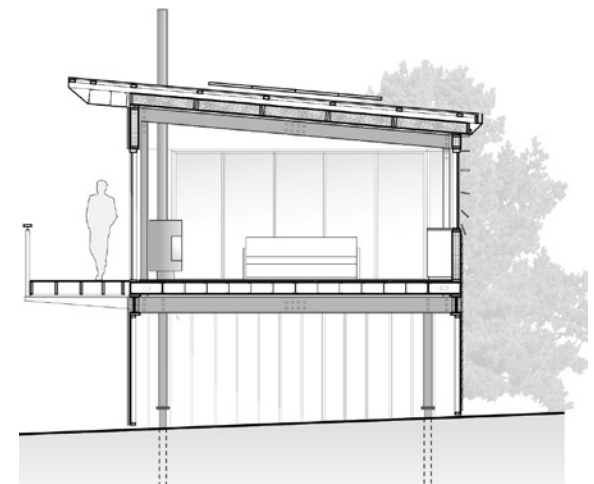
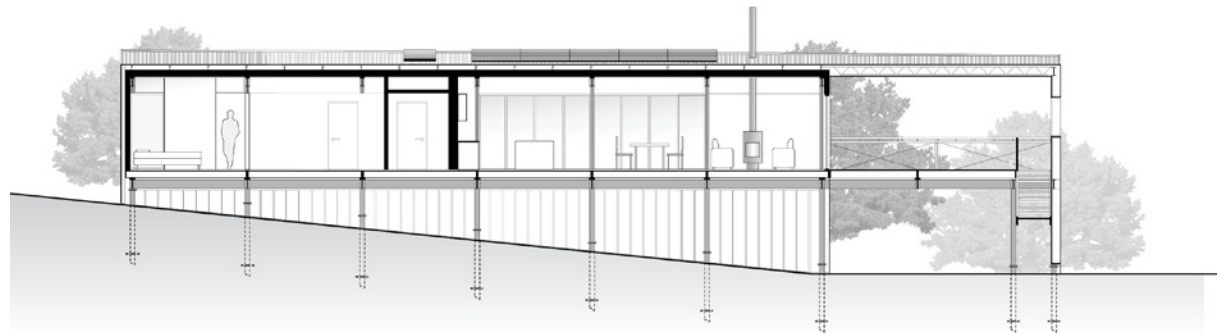
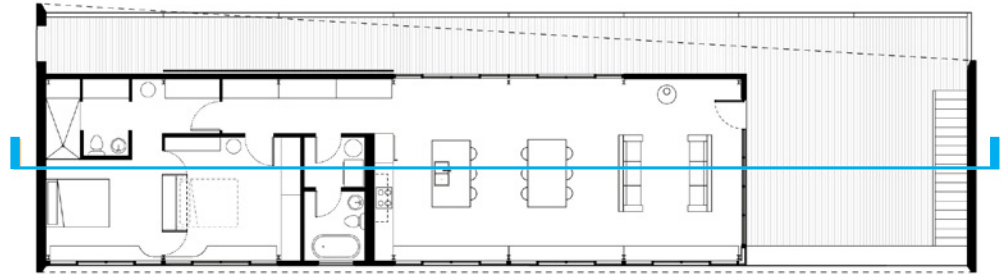
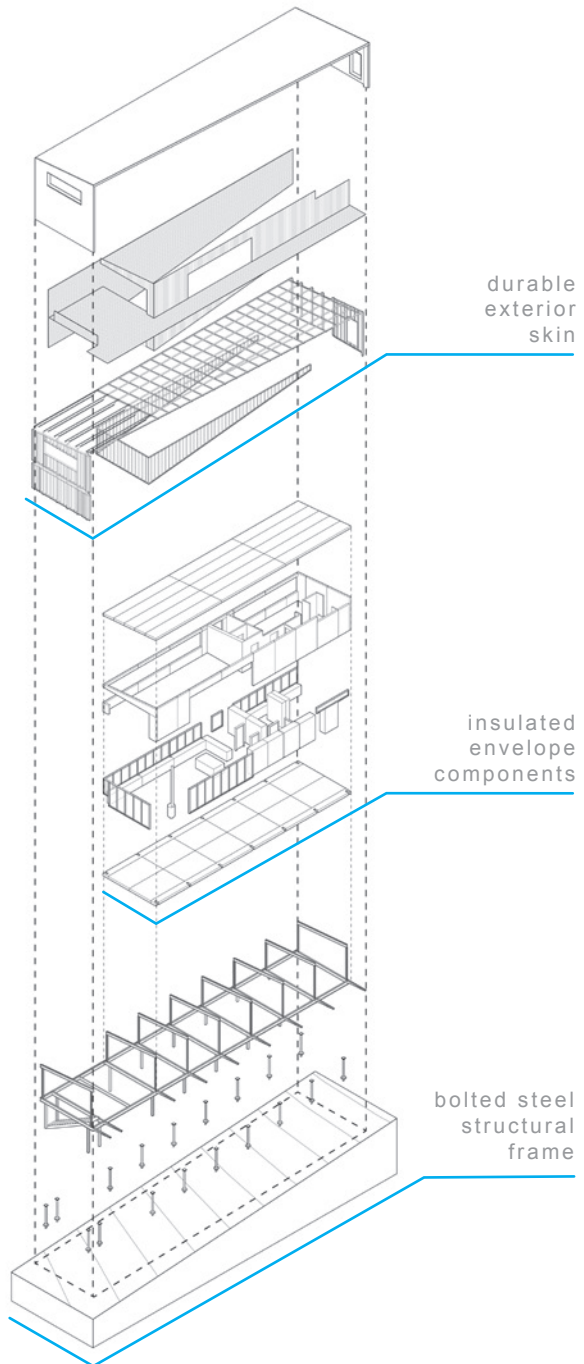


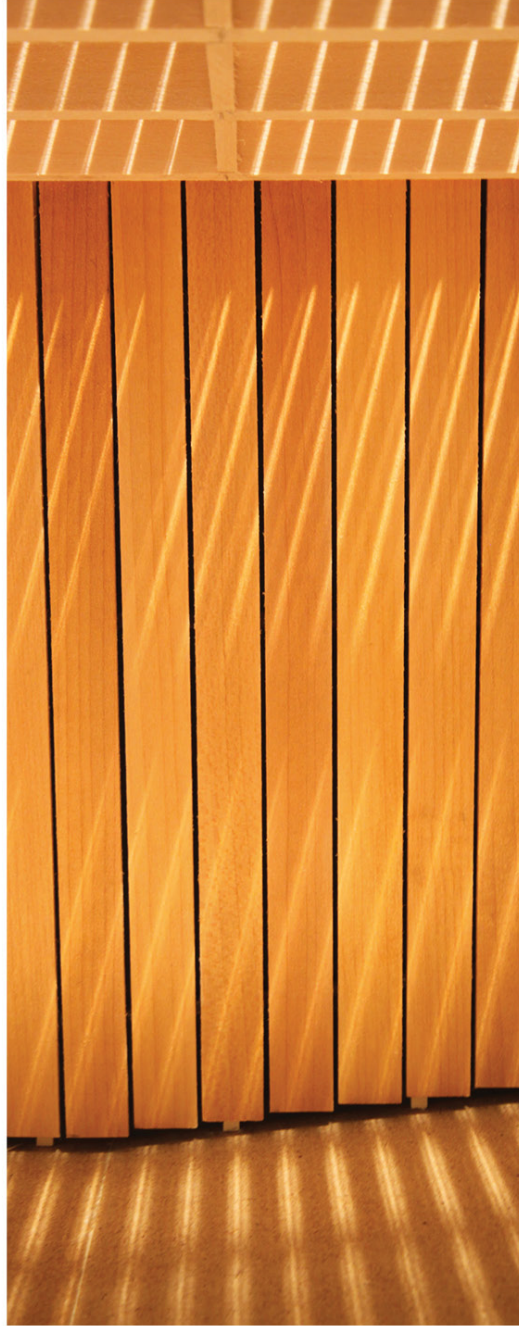
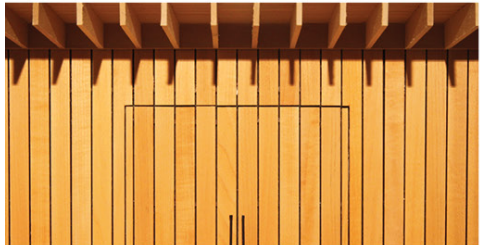
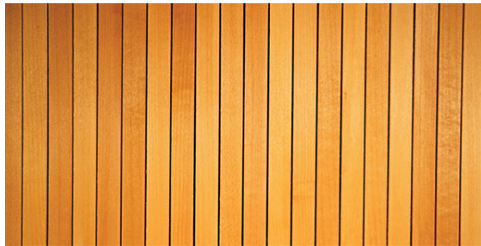
The new realities of the building industry demand a more sensitive approach when creating homes. This project defines a system of construction rather than a specific structure to help address issues of material waste, energy efficiency, and resource consumption, all with the final goal of creating a beautiful, livable home. Extensive research was done to identify the appropriate form of prefabrication (component based) for remote sites in addition to making assembly a relatively easy process for a savvy homeowner. The house is based around a bolted steel frame structure with a Structurally Insulated Panel envelope, and durable, locally-sourced materials for the building skin.



component fab ○.....> transport ○.....> owner assemble

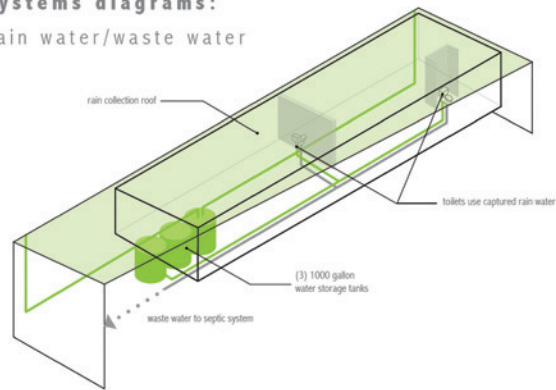




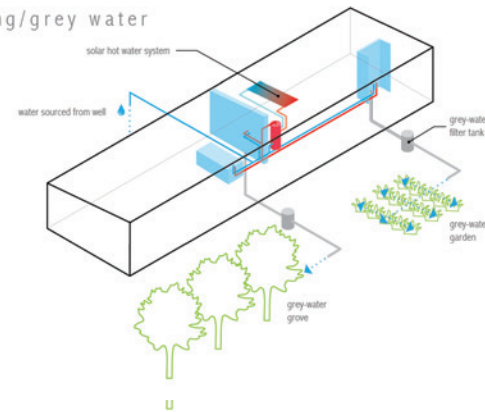




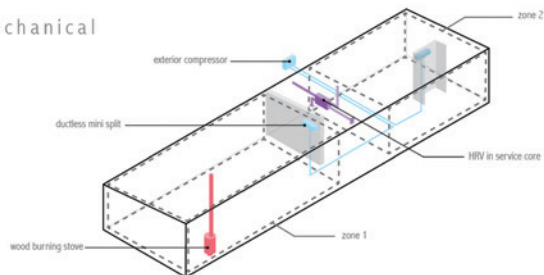
systems diagrams: rain water/waste water



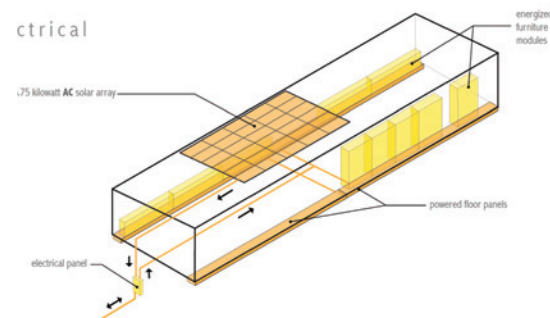
plumbing/grey water



mechanical



critical



systematic and sensible

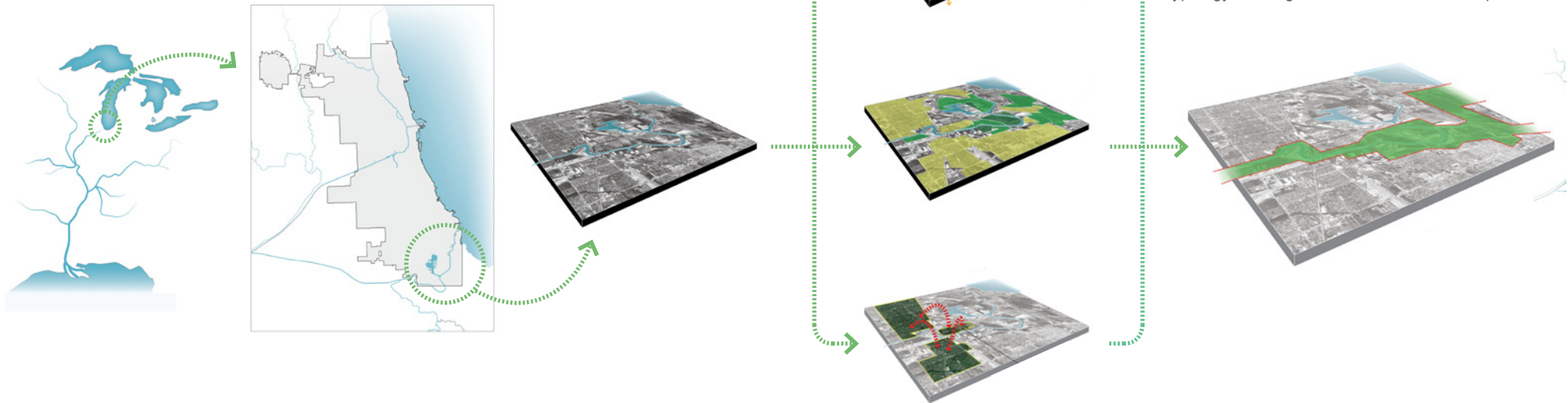
All of the systems within the house are designed to be compact, efficient, and typically within a “closed loop”. Rainwater harvesting, grey water irrigation, solar power and compact ventilation units keep the house’s carbon, and more importantly for this region, water impact to a minimum. Additionally, all of the materials in the project have been chosen for their recycled content or ease of being recycled.

Calumet DAM *a new ecological / economic gateway to the Great Lakes*

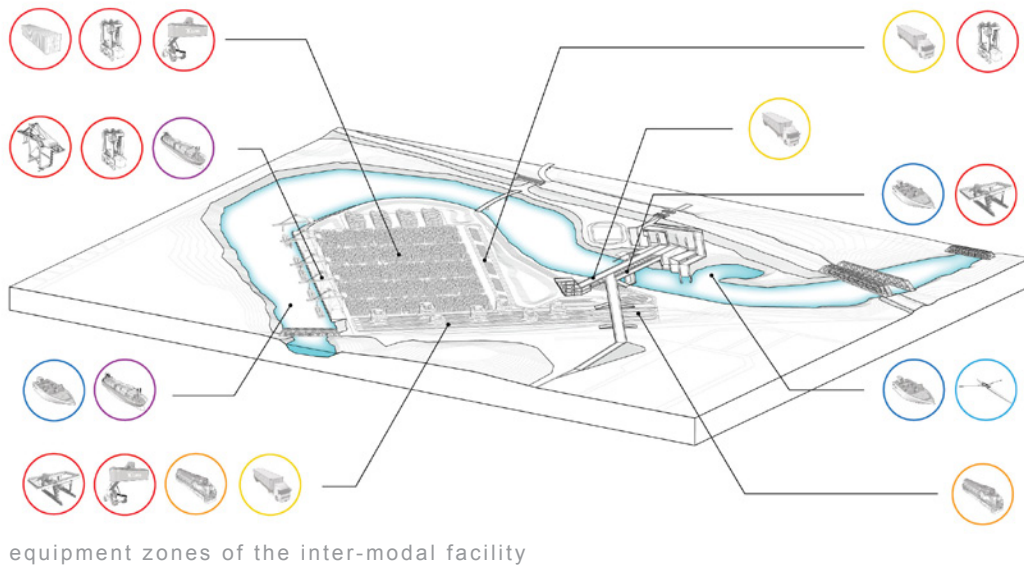


One of Chicago's greatest resources is the abundant fresh water and rich marine habitat afforded to it by its location on the shores of Lake Michigan. However, the city has exploited that resource in many ways, drawing excessive amounts from the lake, dumping sewage overflow rather than treated water back into the lake, and reversing the natural flow of the Chicago river so that it now empties into the Mississippi River Basin. Additionally, Chicago suffers from a bottleneck of transportation routes, once a boon but now a traffic nuisance. Add to these pressures the threat of invasive species, and a new hybrid architectural solution is needed to deal with these issues.

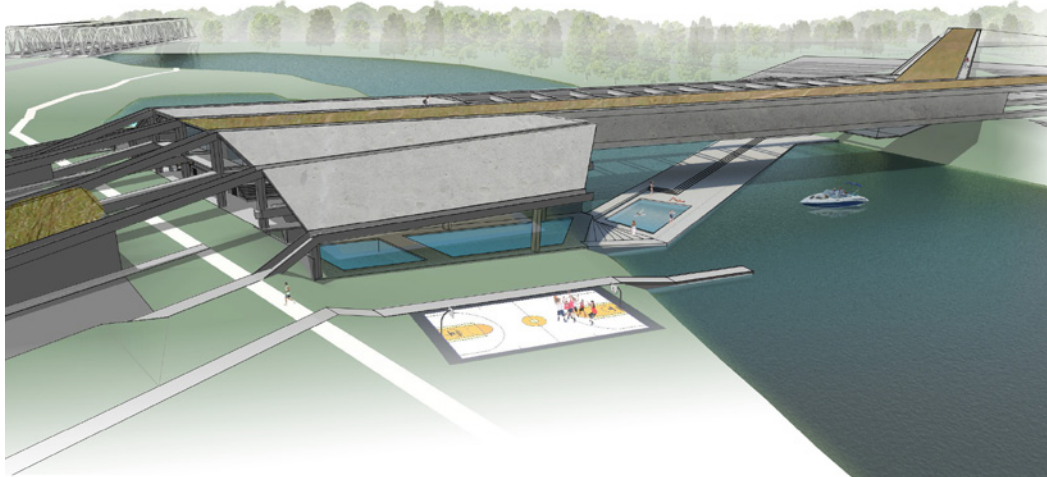
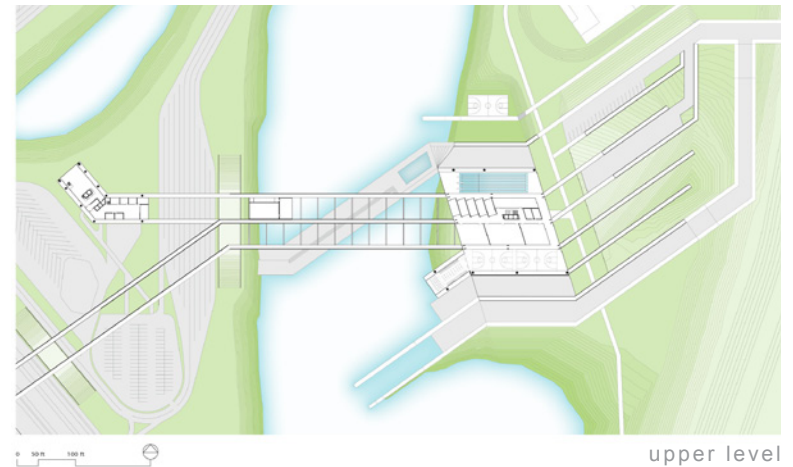
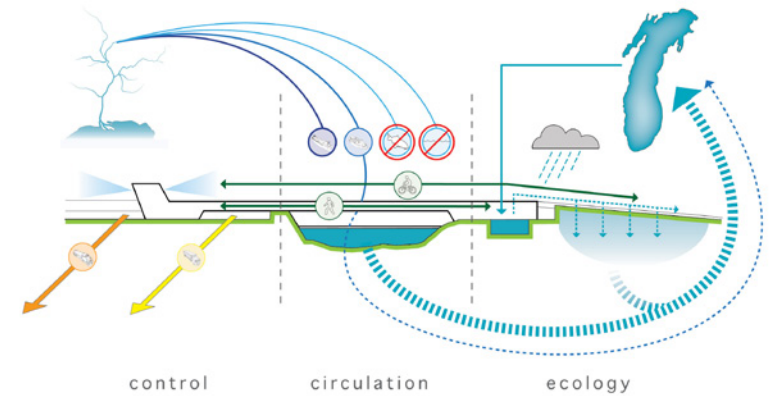
This CAL-SAG DAM in south Chicago is that solution. It combines a hydrological barrier to re-divide the Great Lakes watershed from that of the Mississippi, a new inter-modal transit facility to capitalize on the growing barge traffic in the Great Lakes, and a community center to engage and benefit some of the poorest neighborhoods in the Chicago Area. Combining all of these functions into a single architectural solution not only allows the seemingly dissimilar programs to benefit from one another, it has the added benefit of creating a new **ecological corridor** that reestablishes the rich riparian habitat that has been decimated by decades of industrial pressure along the Cal-Sag Channel. The separation of the Inter-modal facility along the channel gives back a "person-powered" area of waterfront undisturbed by barge traffic and adds a southern gem along Chicago's Emerald Necklace of public parks. In total the combination of programs into a dynamic facility creates an unprecedented architectural and infrastructural typology that is greater than the sum of its parts.

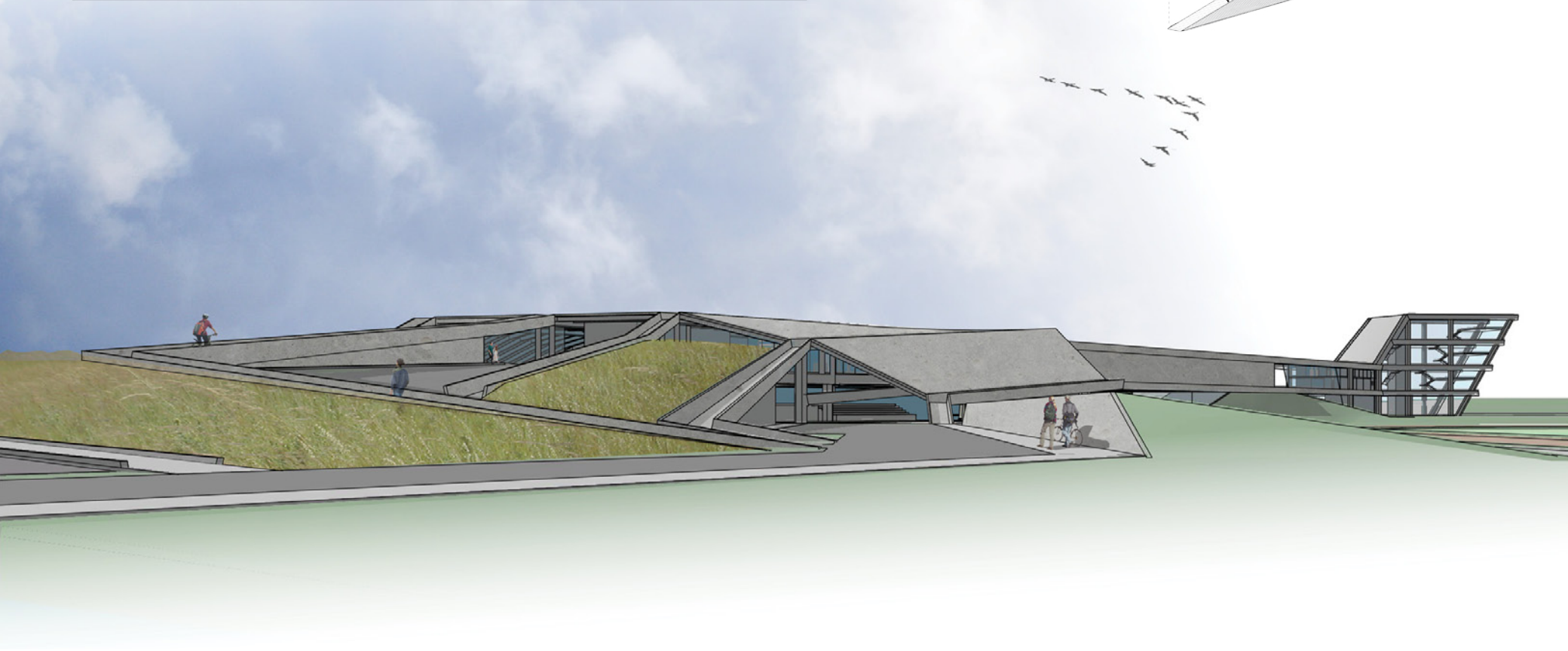
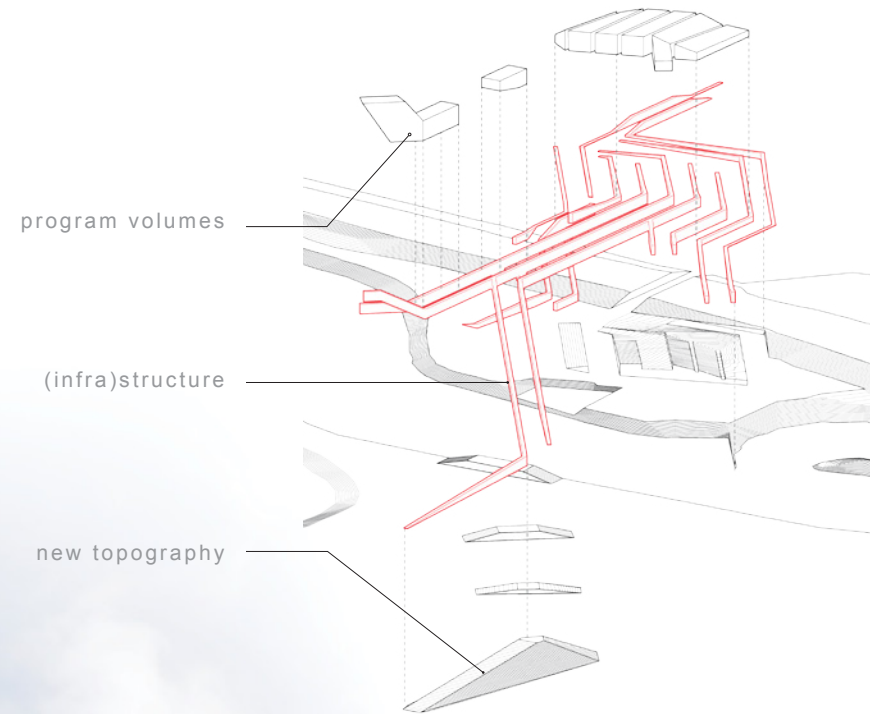


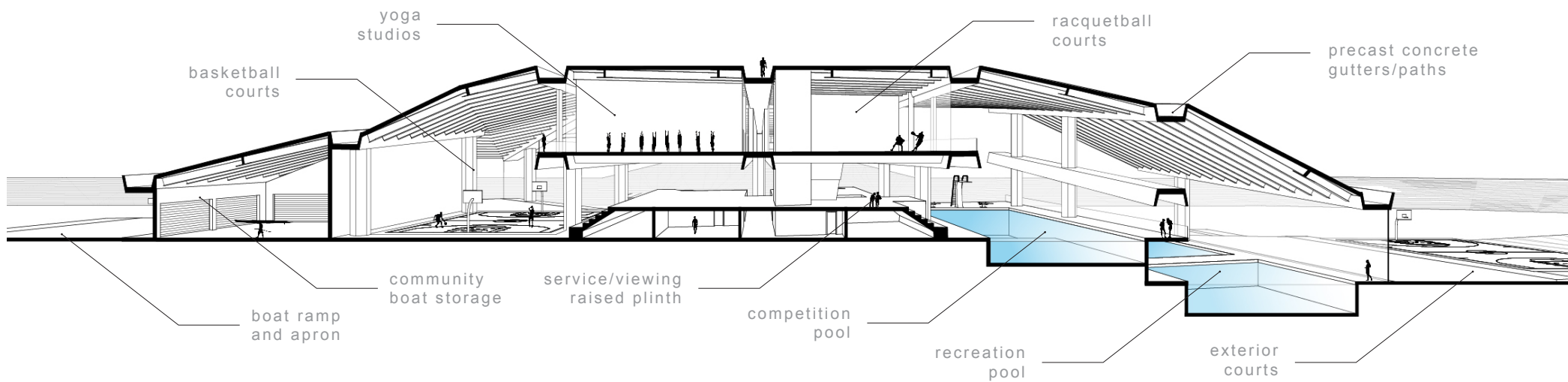
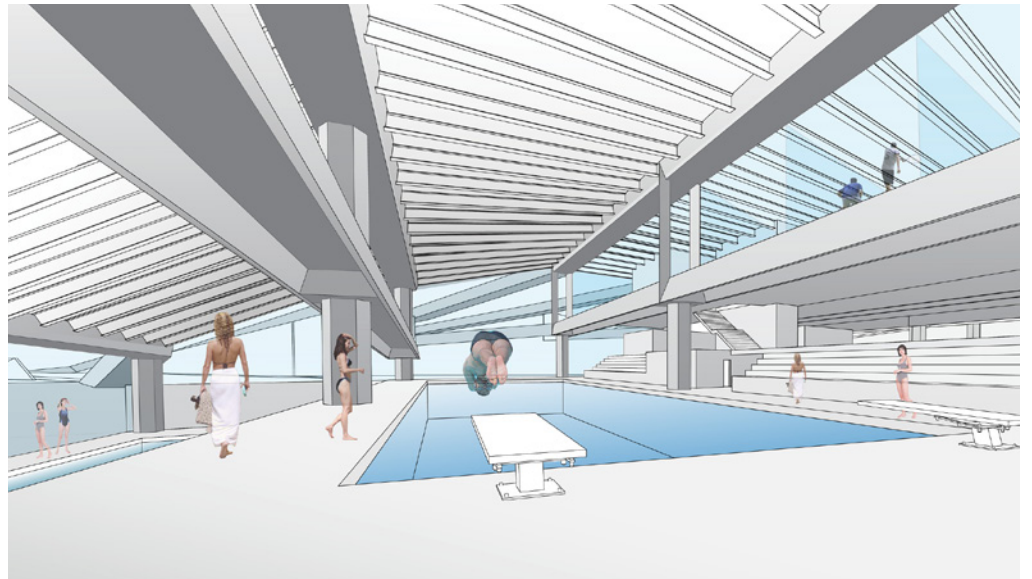
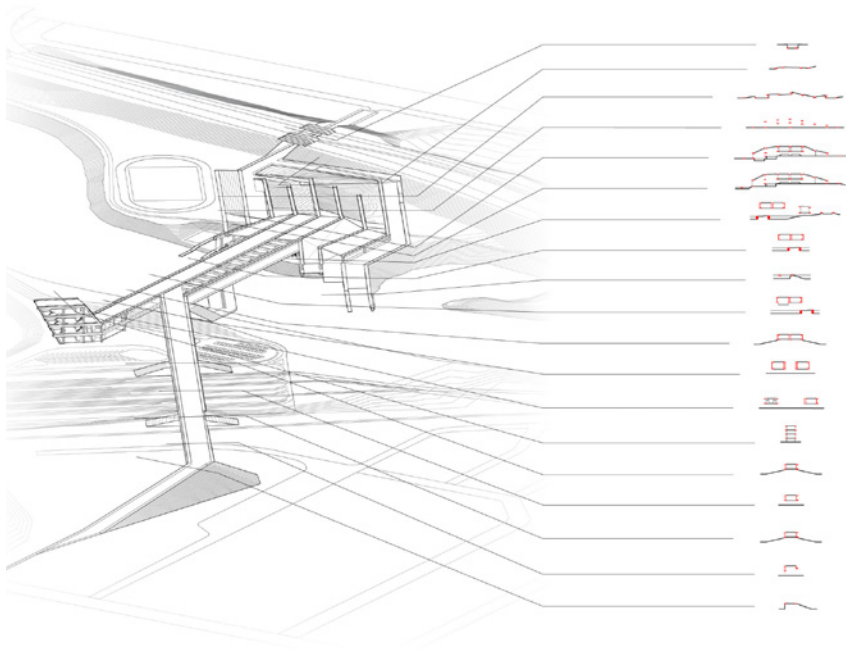
Great Lakes Chicago Cal-Sag channel hybrid opportunities a new ecological zone



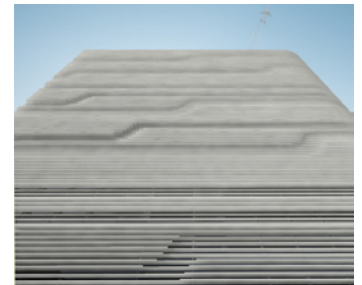
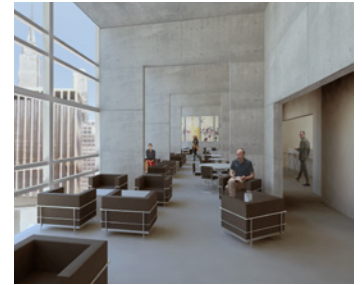
The functional demands of the inter-modal facility are extremely rigorous and require strict zoning of program elements. The main DAM facility alternately bridges *and* blocks traffic flows to direct heavy, medium and light equipment through the site. The structure as a whole *acts a filter* for water, animals, vehicles and pedestrians to create a piece of infrastructure with a positive ecological impact.



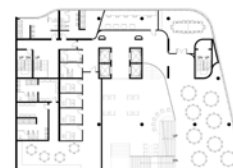
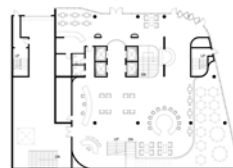


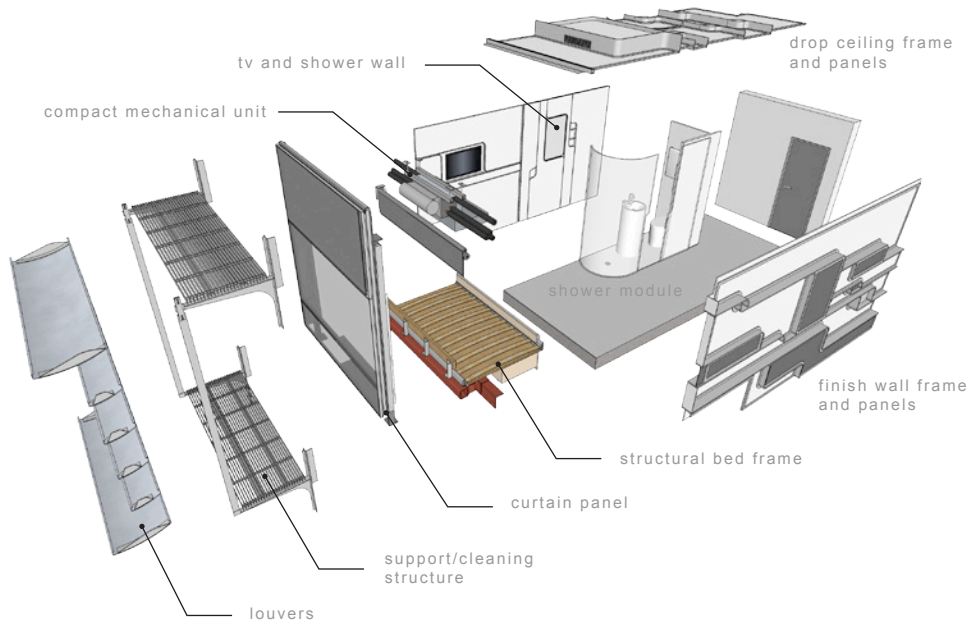
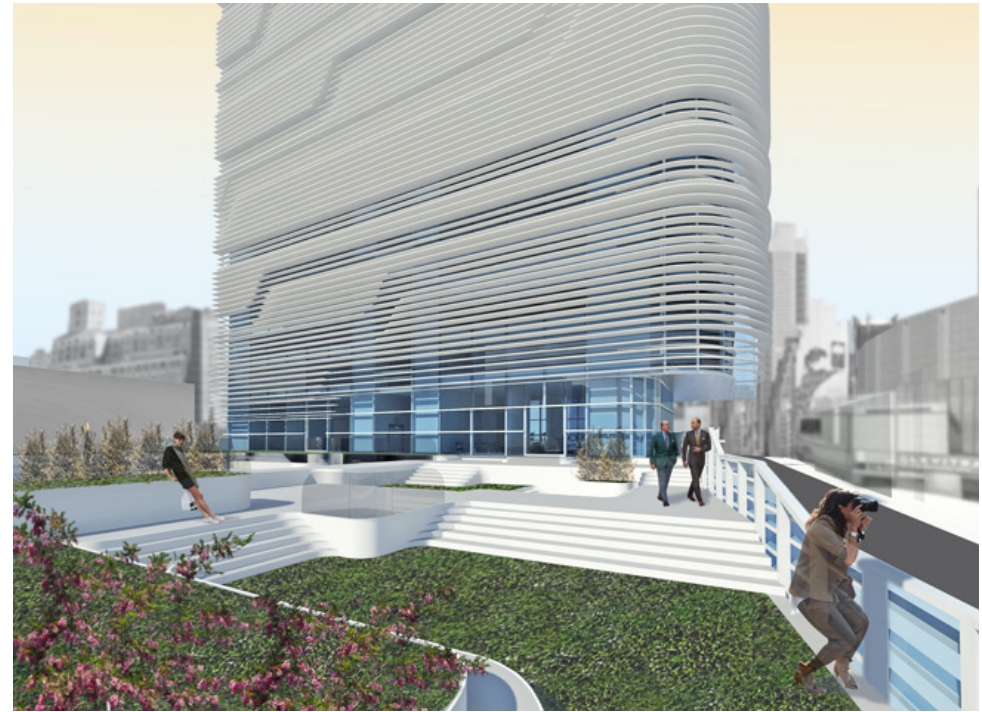
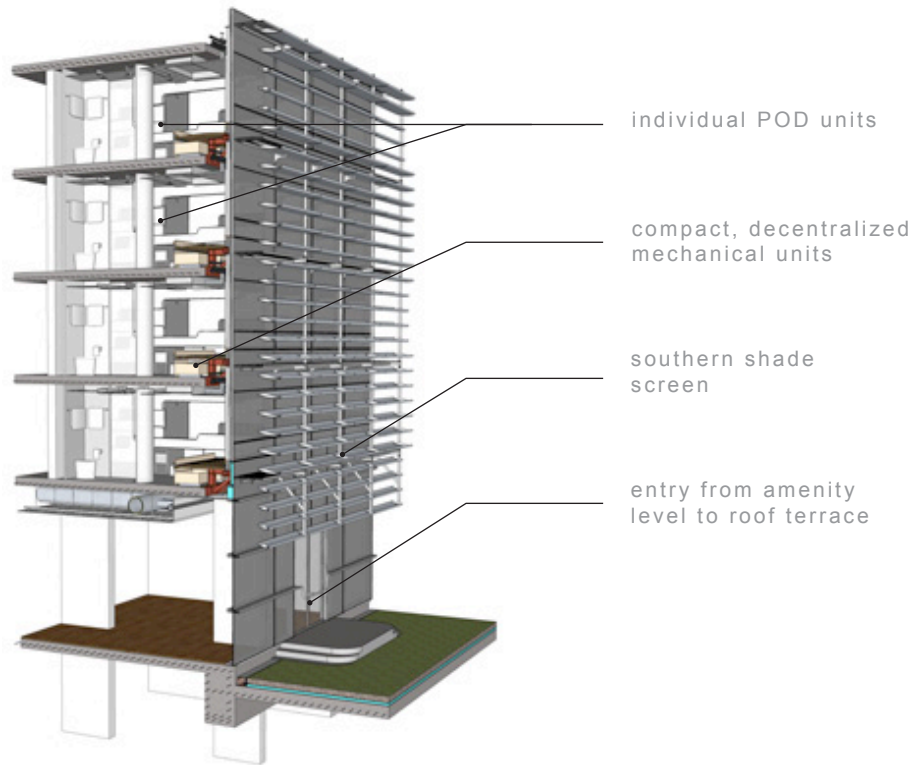


Chelsea POD Hotel *minimal space, maximum luxury*



Recently a new trend in American luxury travel has emerged: minimal sleeping space with more and larger public amenity space, all the while richly appointed. This “POD” hotel on a tight site in New York City delivers on that premise with tightly integrated POD rooms and beautiful public spaces, including a roof garden and sky lounge.





Professional Experience

The Construction Zone LTD, 2007-2010

After graduating with a Bachelors of Science in Architecture from Arizona State University I immediately started work at the design/build firm The Construction Zone. This unique firm has the ability to self perform concrete, framing, glazing and millwork and collaborates with well renowned architects around the country.

Working at The Construction Zone gave me the special opportunity to straddle the line between in-office design work and real-world construction. Working on a number of projects with different architects (although focussing on primarily three) I was able to learn many design processes and philosophies, while at the same time gaining hands-on training from some of the best craftsmen in the Phoenix area.

At The Construction Zone we were often asked to work in parallel with the design architects (many times our own designers) to help realize their architectural intention with functional, refined details. Many architects knew that they could present us with "design intent" drawings, knowing that our office could coordinate their intent with the built artifact. We were hired because we were "architects that built for architects".

A majority of my time was spent on-site managing construction and drawing shop drawings. I often met with architects and clients, as well as sub-contractors and city officials. I believe the experience I gained at The Construction Zone has given me the ability to design and manage in concert with implementing intelligent production.



Desert Courtyard House

Scottsdale Arizona

Architect: Wendell Burnette Architects

Architectural Superintendent, 3 years

Responsibilities:

glazing and building envelope, architectural metals, structural millwork, custom doors, R&D, shop drawing, architectural consultation, trade coordination, sub-contractor coordination, tracking and billing



Byrnes Residence Addition

Phoenix, Arizona

Architect: The Construction Zone LTD

Architectural Superintendent, 2.5 months

Responsibilities:

concrete and framing, subcontractor coordination, shop drawing, scheduling



Brown Residence

Scottsdale, Arizona

Architect: Lake Flato Architects

Asst. Architectural superintendent, 5 months

Responsibilities:

finish carpentry and millwork, finish flooring, architectural metals, sub-contractor coordination, pools, landscaping and site work

All photos by Bill Timmerman

Desert Courtyard House at a glance:

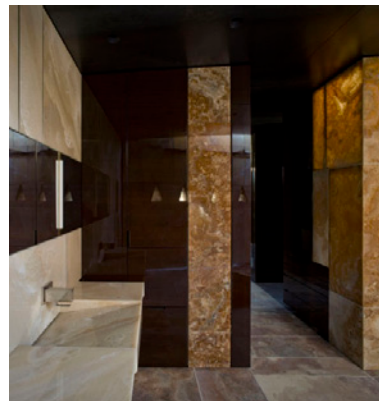
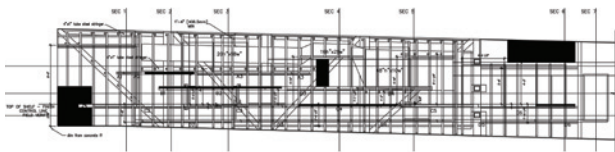
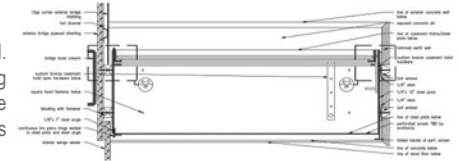
Architectural Metals and Finishes

Almost a third of the finished surfaces in the house are metal, and nearly all fixtures and hardware are custom fabricated. It was my responsibility to work collaboratively with the architect to define the intent, draw shop drawings, and then work with fabricators to realize the final products. Working in this environment inspired me to learn how to weld and fab various metals and being a part of the production continues to inform my detailing.



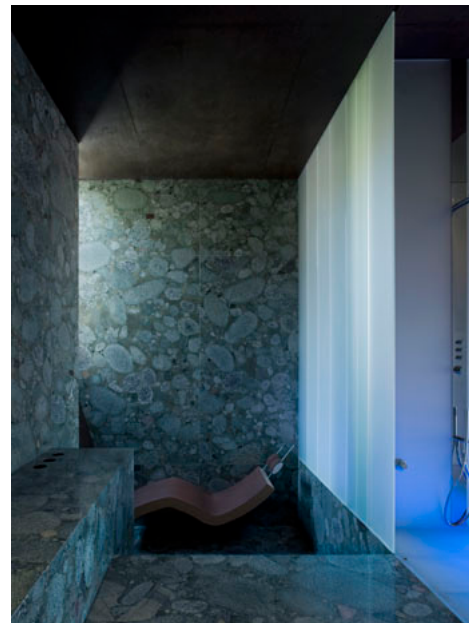
Custom Glazing and Doors

All doors and glazing was custom designed and fabricated. Often they were one and the same, with 13 foot pivoting pieces of glass along the West wall. This meant I learned the implications of *active architecture*, with its functional demands along with its experiential possibilities.



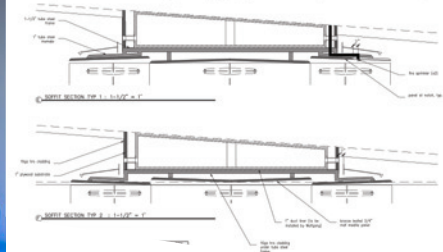
Custom Millwork

All of the millwork in the home is custom and in many cases structural. Additionally, the concept of the millwork is that it is "volumetric", meaning that rather than being simple planes the doors of the millwork turned corners and became three-dimensional. This demanded careful planning for adjacencies and precise tolerances.

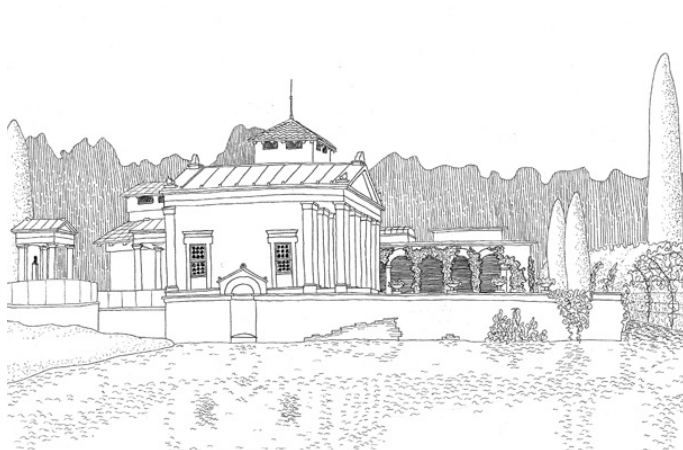
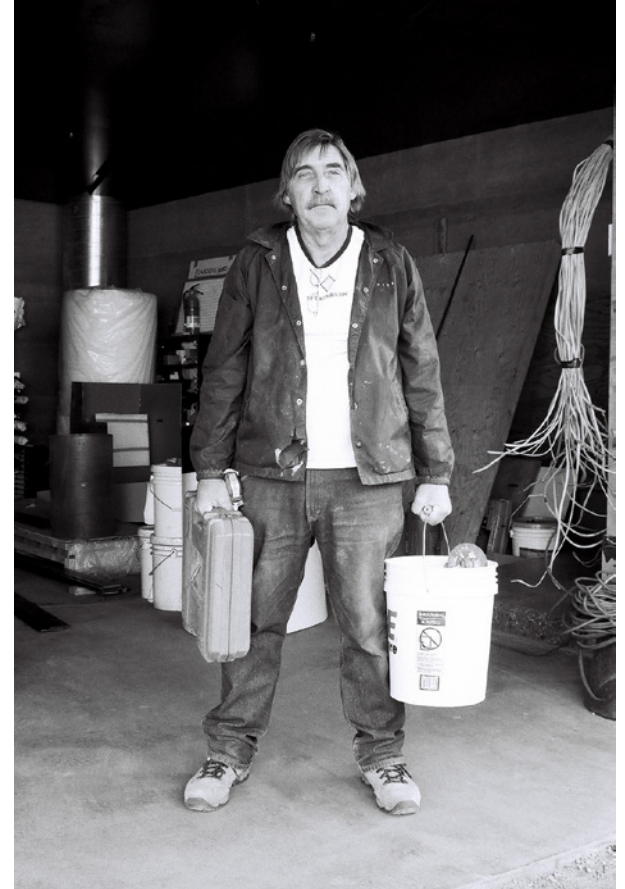
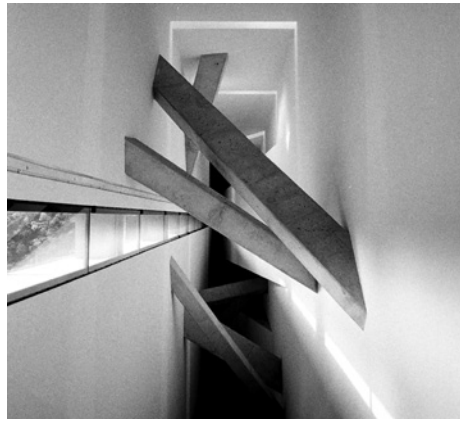


Shop Drawing and R+D

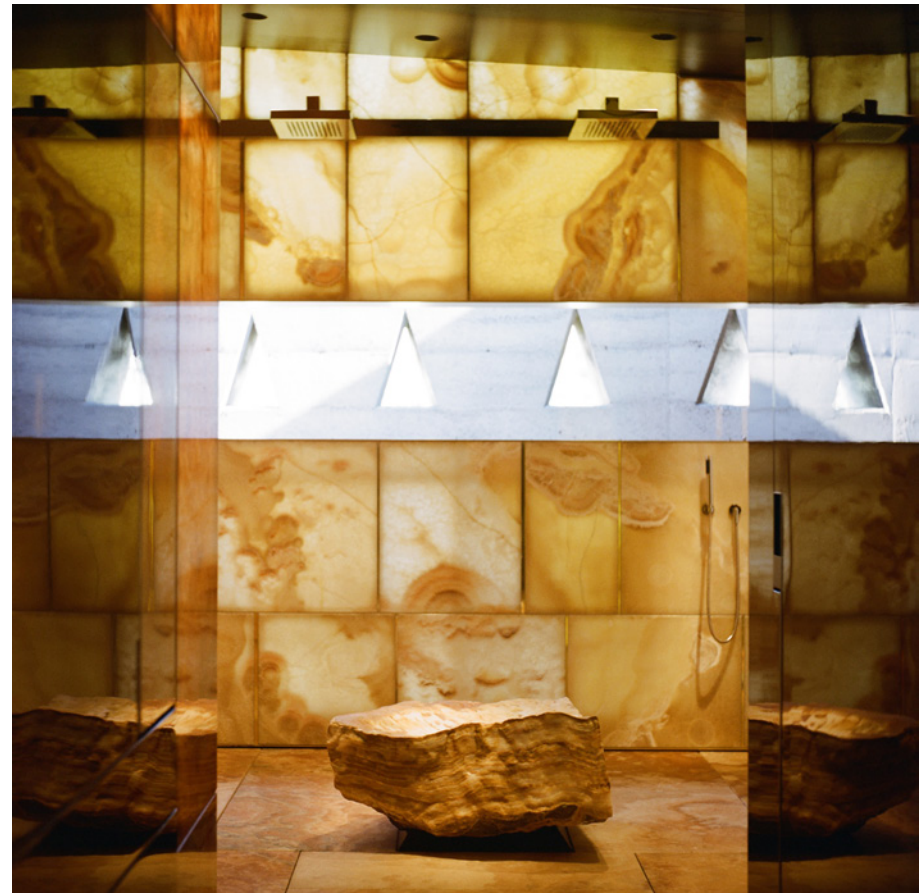
All of the custom work in the home pushed the limits of Construction Zone's knowledge and necessitated on-site testing and development. New techniques were used in rammed-earth formwork, steel installation, glass installation and carpentry. I worked with both the designers and fabricators to help develop these techniques and feel that the problem solving and managing skills I learned during this will serve me well into the future.



Photography/Sketch



Using film photography and sketching as a way to explore and document space are effective in similar ways: they are both analogue practices, and accordingly they force the observer to slow down and contemplate the process of creation. I use these techniques to capture and learn from the spaces around me and look for more and more places and techniques to grow this vocabulary.





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