

Arch 464
ECS
Spring 2011

Name _____

Quiz #3

"Is the Admiral on Board?"

Read and look at everything before you write!



West facade of the ADU with the three-story main building looming behind.

All photos: Lara Swimmer.

ADMIRAL LIVE-WORK

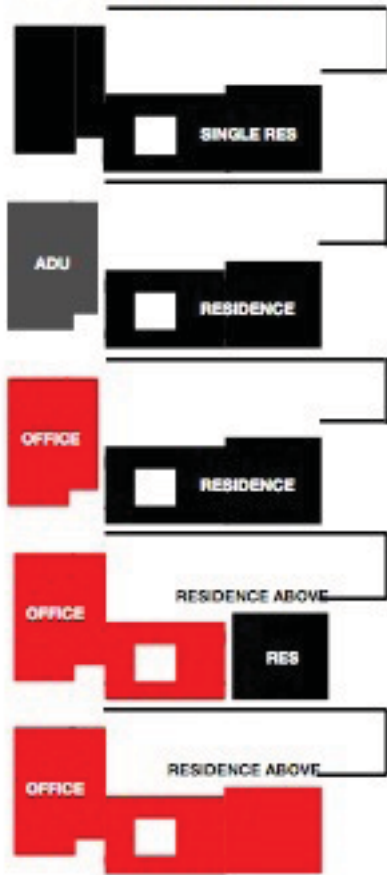
This flexible, through-lot residential project takes advantage of a zoning policy allowing an attached Accessory Dwelling Unit (ADU) of up to 1,000 SF in Seattle homes. In this case, the occupants will initially use an ADU as an open-plan office. The structure stretches from front yard setback to back yard setback. Both ADU and residence can flexibly expand and contract based on the occupants changing needs. The ADU fronts a commercial zone and acts as a buffer for a private courtyard. The elevated house structure, placed on the south side yard setback, turns its back on a 4-story apartment building and opens up to views over charming single family dwellings north to Elliott Bay and downtown Seattle. Private zones of the home are maintained even though more public areas exist on all floors.

The shell of the structure consists primarily of Structural Insulated Panels (SIP's). Panel sizes are optimized and a minimum of panel types are employed. Stick framing is limited to isolated areas for ease of electrical and plumbing distribution and air intake/exhaust.

—Zimmerraystudios

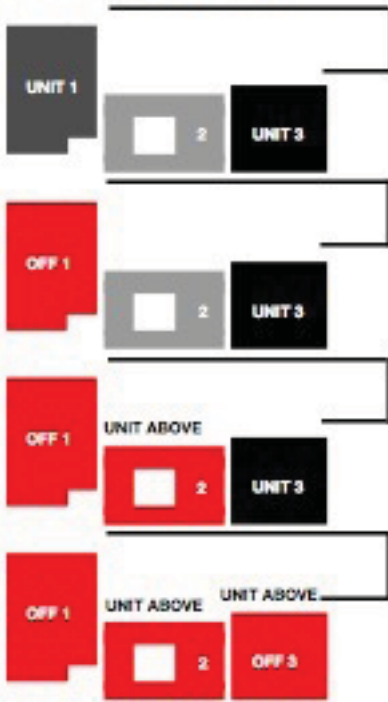
CURRENT ZONE: SF

SINGLE-FAMILY A RESIDENCE W/ ACCESSORY DWELLING UNIT (ADU)



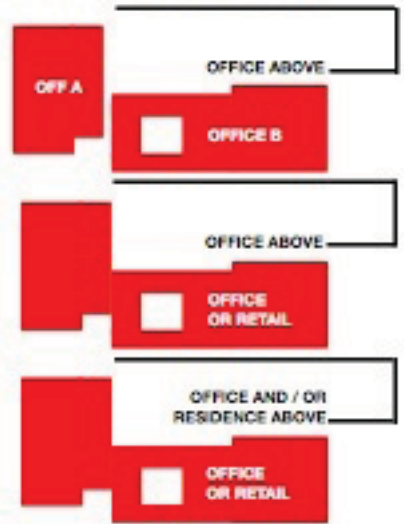
FUTURE REZONE: MF

MULTI-FAMILY AN EASY CONVERSION TO THREE SEPARATE DWELLING UNITS



FUTURE REZONE: NC

NEIGHBORHOOD COMMERCIAL CONVERSION TO OFFICE OR MIXED-USE



Schematic first floor/site plan. North is up.

FLEXIBILITY & ZONING ADAPTABILITY

THESE DIAGRAMS REPRESENT THE GROUND FLOOR CONFIGURATIONS ONLY TWO ADDITIONAL FLOORS AND A ROOF DECK ARE LOCATED DIRECTLY ABOVE

Diagram: Zimmerraystudio



Main building viewed from northeast.

Analysis

1. Given the building siting and orientation point out two features of the design and site that have potential to highlight sustainable design and two features that are detrimental to sustainable design. Fully explain your nominations of these four features.

4 points

1

2

1

2

WITH THE RECENT arrival of their second child, architect Robert Zimmer and his wife, photographer Lara Swimmer, have grown accustomed to planning for the not-quite-knowable. While thinking about their own 4,250-square-foot live/work building in the North Admiral district of Seattle, they got to practice these skills – imagining not just how it would evolve as the kids grew up, but how it might accommodate new zoning in a changing neighborhood. Although the area right now is zoned for multifamily use on two sides and commercial on another, it is becoming more densely developed. So Zimmer designed the building to be adaptable, creating a wing on one side that he uses as his office but could be converted into an accessory dwelling unit or a commercial space. He and his family currently live in the two upper floors, but a new owner might divide it into multiple apartments or office space for multiple tenants. He even designed stacked storage rooms on all three floors so an elevator could be installed there in the future. Flexibility informs the project now as well, with a conference room on the second floor becoming a home theater in the evening.

To stay within a tight budget (\$870,000), Zimmer and his firm, Zimmerraystudios, designed an efficient structure that uses structural insulated panels (SIPs), engineered lumber, and some steel, and created interiors with “luxury in spaces, not finishes,” he says. Exposed structural elements, along with simple materials such as plate steel, oriented strand board, and colored polycarbonate panels, establish an aesthetic that is “rough-and-tumble but elegant at the same time,” says the architect. “I tried to pare it down as much as possible to create open, flexible space for as little money as possible.” At \$205 a square foot, he hit his mark. “It was a fantastic experience designing the project,” he says, “but a horrible experience building it,” due to problems with the contractor, whom he eventually fired. If he had a client, he would have fired the contractor earlier on, admits Zimmer.

Zimmer hates the term “green” because he says all good design takes environmental issues into consideration. But the great majority of the building’s materials and products come from local sources, most within five miles. He also designed the building so solar panels can be installed and rainwater collected. Designing for himself and his family was easy, states Zimmer. What was hard was “taking the financial leap.” C.A.P.



View from the upper floor toward the northwest and Seattle. ADU is in foreground.



Interior finishes are simply exposed structural members.



East facade and south side walkway.

Site Energy

3 points
2. Suggest three site energy features that could be implemented for the building to make it more sustainable and could be integrated with the existing site and building without compromising its aesthetics. Explain each of your suggestions. Use sketches and diagrams to make your intentions clear.

1

2

3



Typical interior finishes (top), the office looking west (bottom) [note: Bob is a UI architecture graduate and his Palouse project, which was installed in the Prichard Gallery is mounted on the west wall!].

Green Improvements

3. Propose three new appropriate strategies that would reduce the building's energy use, its contribution to greenhouse gas emission, and/or its water use and show how these can be integrated into the site and building design scheme.

3 points

1

2

3