



Studio 3

Elkhart, Indiana

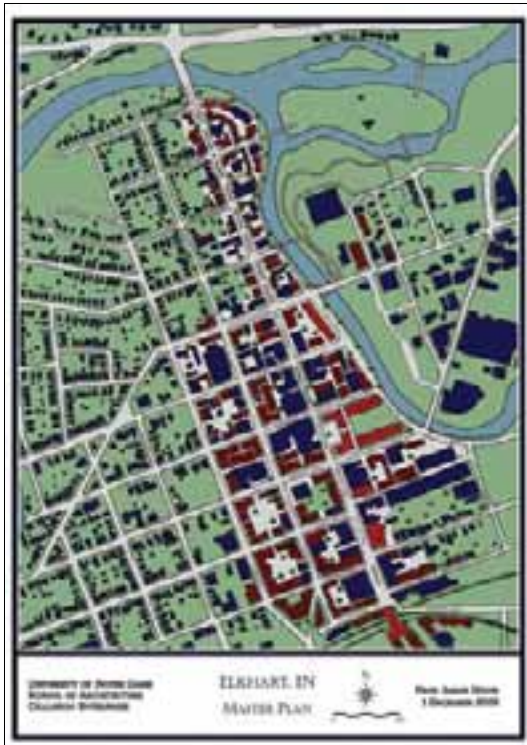
Fall 2006

This studio started with a discussion of a homeless shelter and just grew. It was our first use of modular building technology. Despite the unfortunate recent demise of one of our local partners, the Elkhart Housing Partnership, work is ongoing to make it possible to build the residential infill that students designed for specific lots in Elkhart's State Street/Division Street Historic District.

ELKHART WAS A THRIVING, ECONOMICALLY vibrant urban place around the turn of the previous century, with a walkable downtown centered on railroad and trolley transportation. As postcard views of Main Street show, it had a “street wall” of two- and three-story business buildings right on the sidewalk line, which defined public space and whose window displays offered pedestrians plenty to see and talk about. Some fine buildings and some of that urban feel remain, as does the river, which provides a potentially scenic and dramatic entrance to downtown from the north. But surface parking, drive-through businesses, and empty lots discourage walking downtown: not only do they push destinations farther apart, they give passers-by nothing to look at, and they create a sense of insecurity and vulnerability to fast traffic. Elkhart does enjoy a new riverside walkway, but businesses still turn their backs (and their dumpsters) on the water.

Over the years, downtown as a whole has been increasingly laid out for cars more than for pedestrians. Similarly, individual downtown buildings are now designed on a residential scale rather than an urban scale, drive-through banks being one unfortunate example. Fortunately modular homes aren't unfamiliar technology in Elkhart, where RVs and manufactured housing are big business. Students quickly learned that this form of construction can be helpful in rebuilding and infilling downtowns and neighborhoods, as modular units can be erected quickly. Directed by Sallie Hood and Ron Sakal, fifteen fifth-year Notre Dame students participated in this studio, striving to repair the gaps in Elkhart's urban fabric.

Students proposed and designed residential infill for 15 sites, most of them in the State Street-Division Street Historic District and the adjacent downtown. Proposed buildings—including both single-family and duplex residences, both affordable and market-rate—were sized and



Elkhart Redevelopment Plan
Studio



Infill Modular House
Z. Stewart

styled to fit in with nearby buildings' historic character, in keeping with the goals of the Elkhart Housing Partnership and the technical abilities provided by Champion Enterprise's modular construction systems. These residential proposals would offer ample porches, about 1,900 square feet of living space, three bedrooms, and three baths.

Students also made a variety of site proposals and designs for urban-scale mixed-use buildings downtown, with the idea of enabling more people to live there. More people make the area livelier, provide more customers for local businesses, and reduce the need to use a car for every errand. Ample parking can still be provided, but not at the expense of urban space. Instead, underground parking (some of which already exists), parking structures, and automated parking systems can keep cars handy but unobtrusive.



Infill Modular House
A. Icaza

Most student designs used Champion's Caledonian steel modular system where appropriate. It's essentially a series of strong, customizable, stackable steel boxes (in this case usually faced with brick). The Caledonian system has been used in the UK for buildings up to 18 stories; generally it requires at least five stories to be economically feasible. Core elements like elevators and stairs are usually built on site. It allows commercial, office, residential, and other uses, and the residences can be either market-rate or affordable.

North End of Main Street

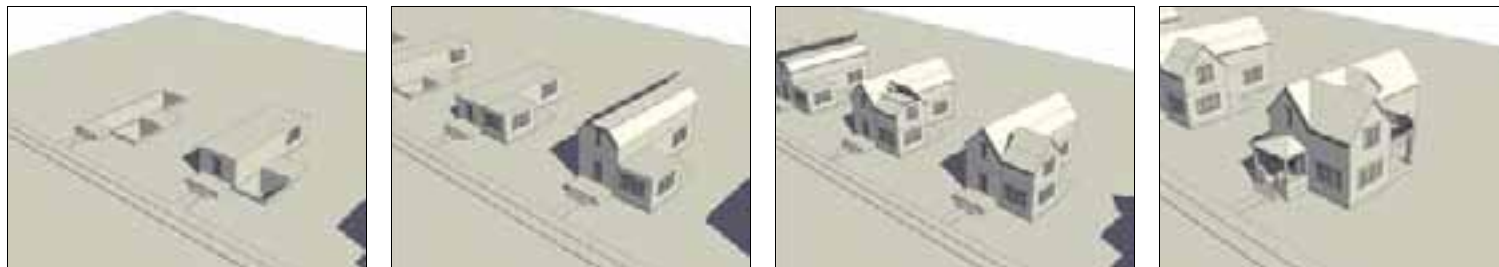
Most towns would kill for a naturally dramatic river-bridge entryway; Elkhart has squandered it, sinning against both common sense and good design. Students prepared two alternative design schemes that would replace the surface parking lot east of North Main Street at the river, but would leave the drive-in bank in place, wrapping it with other uses. Cars formerly parked in the lot would be diverted to secure automated parking located nearby and underground, and in its place a new mid-rise building would provide downtown a fitting landmark, gateway, and anchor. Above a commercial ground floor, the building would rise 6-10 stories, including a variety of residential units—one- and two-bedroom apartments in one version, or two- and three-bedroom condominiums in the other. This development would also make the area around Island Park more welcoming to pedestrians (see pp. 66–67).



Mixed-Use Modular Building
K. Weckman



Infill Modular House
K. Weckman



Modular House On-Site Assembly Diagram
K. Weckman



Infill Modular House
J. Larew



Marketplace Building Section
L. Richa



Elkhart Modular Townhouses
M. Lee



Infill Modular House
E. Lee

Mixed-Use Market Square

Four blocks south, between Main and Waterfall Drive south of Jackson, two student proposals would semi-enclose the block to form a market square, accessible to the public and providing life to the city. Ground floor and corners would be built on site, the rest would use modular construction. Two distinctive designs proposed a block-long seven-story building fronting on Waterfront Drive, with ground-floor retail, various sizes of apartments above, and easy access to market stalls in the center of the block (see p. 71).

Town Square and Main Street

The oversize block between Main Street, the river, High, and Franklin, is a vaguely defined space that looks empty and usually is. Student proposals took advantage of the existing green space, river views, and underground parking. One set of mixed-use mid-rise buildings would define a small square opening onto Main Street. Behind that, two other mid-rises would flank the existing lawn, defining a space sloping down to Waterfall Drive. The southern flanking building would include an eight-screen cinema, restaurant with river view, retail, apartments (1-3 bedrooms), and common space on the roof offering excellent views. These buildings are arranged to give a feeling of enclosed outdoor space without detracting from the view between Main Street and the river (see p. 65).

Main & Marion

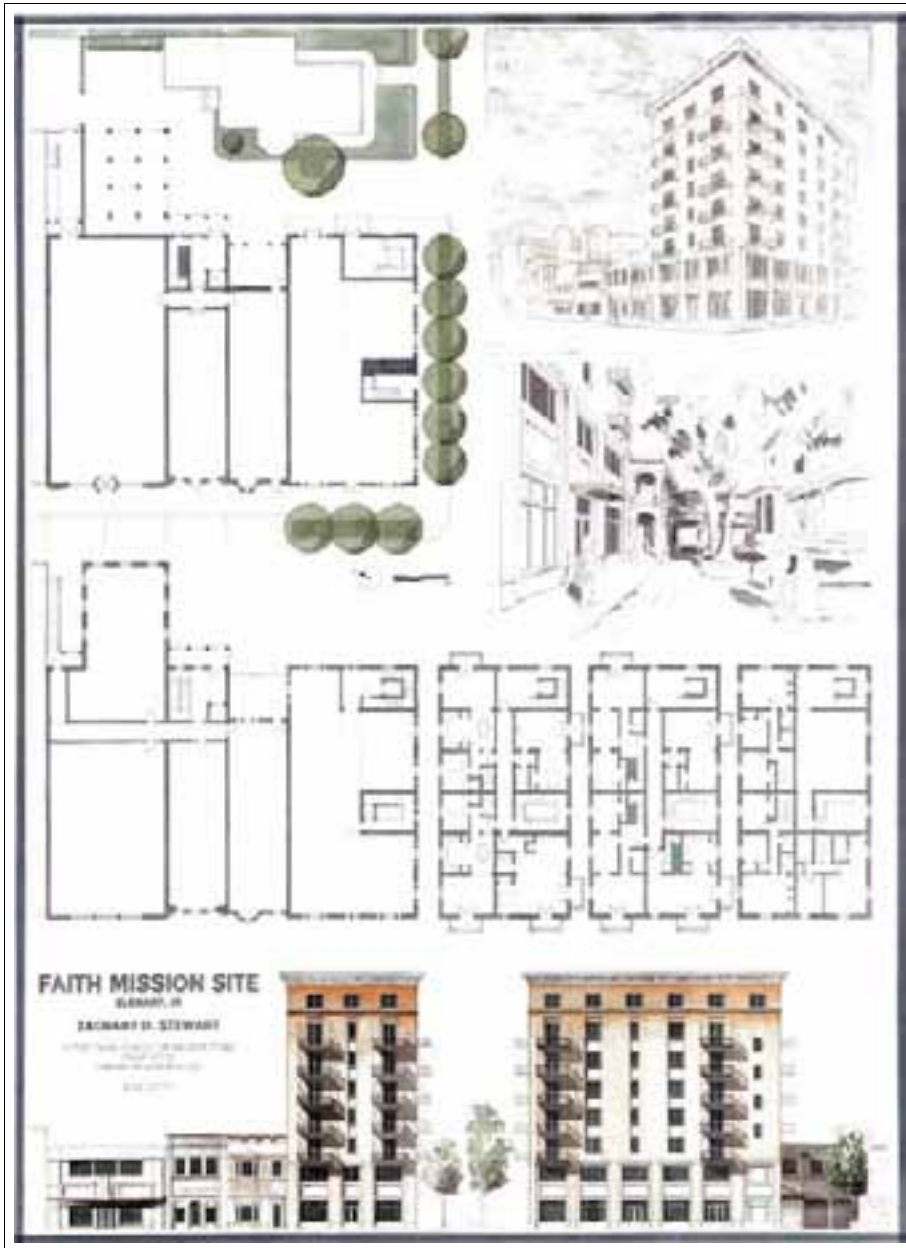
One block south, students proposed two versions of a mid-rise building that would occupy a grassy lot at the northeast corner of Main and Marion. This spot presents a special design challenge, as the space is relatively small (about 60 by 155 feet) and sits near important civic buildings in a variety of sizes and styles—the Elco Theater, the Chamber of Commerce, the former Hotel Elkhart, the Midwest Museum of Art, and a new outpost of Indiana University South Bend. Both student proposals reflect the neighboring Hotel Elkhart without imitating it, providing retail on the ground floor, apartments in between, and the option of an office or loft on top (see p. 67).



Infill Modular House
M. Dominguez



Infill Modular House
B. Gonzalez



500 S. Main St. — Mixed-Use Modular Building
Z. Stewart



Mixed-Use Modular Building
P. Schaeffing

Faith Mission Site

Students proposed three different schemes for the half-block at Division and the 500 South block of Main, where four two-story buildings and a small theater have been modified to serve the needs of the Faith Mission. All proposals aimed in different ways to introduce a variety of uses, restore historic character where possible, and enhance the existing alley for an outdoor social and business space. One proposal (“total preservation”) would maintain and restore existing Main Street facades, but treat the interior as one large two-story building. The commercial ground floor would be built on site, and the residential units above would be Champion wood modules. The second proposal (“partial preservation and new construction”) would preserve the significant facades, but replace the two brick buildings nearest the corner with an eight-story mid-rise, the first two stories site-built to match the other frontages on the block. The third proposal (“new construction”) would involve a six-story all-modular mid-rise that would house retail space, offices, and ten apartments ranging from 800 to 1,350 square feet (see p. 64).



Train Station—Mixed-Use Modular Building
E. Lee, M. Lee

Railroad Station and South

The south end of Main Street is dominated by the one-story post-WW2 US Post Office and its parking lot, Elkhart's Amtrak station, the New York Central Railroad Museum, and a farmers market, with railroad tracks dividing the area. Students proposed a reconfiguration of buildings to make the site more attractive and more legible to pedestrians, and to better link the south side of the tracks to downtown. They proposed replacing the Post Office parking lot with townhouses and a parking garage; turning the present Amtrak station into a railroad-themed restaurant; moving the museum across the tracks from it; and building a monumental new train station over the tracks and on an axis continuing Main Street, with townhouses and then a farmers market to the south. Between the new museum and the new train station, old railroad cars could be grouped and converted to small shops and restaurants. The new plan provides a visual end point for Main Street while extending its pedestrian path on south, and humanizes both sides of the railroad tracks (see p. 71).

A journey of a thousand miles begins with a single step; the journey of remaking urban Elkhart begins with the first reclaimed parking lot. Even a few strategic changes can show the way toward a more distinctive and delightful place in which to live, work, shop, and do business.

Clients

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Mayor, City of Elkhart

David J. Young
Executive Director, Elkhart
Housing Partnership, Inc.

Crystal Welsh
Community Development Manager,
City of Elkhart,
Office of Planning and Development

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Isabel Gonzalez

Alejandra Icaza

Jacquelyn Kramer

James Larew

EunRyung Lee

Michelle Lee

Lauren Richa

Philip Schaeffing

Martin Snow

Zachary Stewart

Kevin Weckman

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Artist, Chicago, Illinois

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Senior Planner, City of Elkhart, Office
of Planning and Development

**Members of the Caledonian
Building Systems Ltd. (a subsidiary
of Champion Enterprises, Inc.)
team from the United Kingdom**

**Members of the Champion
Enterprises team at the plant
in Topeka, Indiana**

**Members of the School of Architecture
Faculty, University of Notre Dame**

ELKHART HOUSING PARTNERSHIP, INC. / DECEMBER 27, 2006

Dean Lykoudis,

Thank you for the generosity of Notre Dame and the School of Architecture in bringing the Regional Studio to Elkhart. The experience has been tremendous for the Elkhart Housing Partnership and the City of Elkhart. The Studio has helped EHP to look at its surroundings differently and has influenced our future development opportunities. We are especially excited about pursuing the mid-rise modular buildings as engineered by Champion Homes. Regional Studios such as the one held in Elkhart provide a community with much-needed design advice which would not be affordable under normal circumstances. Furthermore, the students receive constructive advice from a number of different sources such as government officials, developers and neighborhood residents. I hope that the Regional Studio is simply the beginning of a long and fruitful relationship between the University of Notre Dame School of Architecture, the City of Elkhart and the Elkhart Housing Partnership.

Sincerely,

DAVID J. YOUNG
Executive Director

Dear Sallie,

... Thank you for engaging your students in helping Elkhart to design and improve our neighborhood. We are thrilled to have your team's talent and credibility making Elkhart more of a city for life. Well done! Let me know how I can help.

DAVID L. MILLER
Mayor
Elkhart, Indiana

Student Reflections

In the fall of our fifth year, fifteen of us were enrolled in the urban design studio under Professors Sallie Hood and Ron Sakal. Initially, we had an idea of what was expected in such a class. We understood that we had to unite as one group in order to accomplish a single project for a community. The best way to meet our goals was to transform our studio into an office-like environment. Sure, this was quite a contrast for us considering that in previous studios at Notre Dame, we worked as individuals creating single projects. Yet, we were definitely mentally prepared for such an exciting and new challenge, and we were finally ready to fuse all of our design talents together. It was at this point that we learned exactly what kind of challenge we would be tackling. We were the first class to be involved in the Center for Building Communities!

The CBC was a new program with a focus in design using modular construction. Modular construction? How is it built? How do we begin to design something that is supposed to be pre-fabricated, and how

will it look in the end? As a whole, the class was somewhat confused and filled with questions. Sallie and her partner Ron, however, kept the effort alive by laying out answers to our questions. In an effort to stimulate our creativity and open our eyes to a new way of thinking, we embarked on several field trips. Our first venture was to a modular housing manufacturing plant in Topeka, Indiana, where we learned about the process, construction, and finished product. We also went on site to see how these homes were placed. We were all amazed at the process and how seamless it appeared. With this new perspective and information, we were confident that we could do so much for our chosen community of Elkhart, Indiana. As a group, our main goal was to introduce traditional and new creative concepts to the world of modular construction. We offered numerous options and possibilities, and we even challenged the manufacturers with our innovative ideas to create more than just a building that works. In the end, we presented beautiful and functional urban buildings and homes incorporating modular construction.

We also pulled off a compelling presentation to our peers and people of Elkhart. All of our work was highly appreciated, and we enjoyed creating a new vision. We achieved our goal of incorporating a variety of aesthetically pleasing designs into a modern type of construction while learning of all the benefits as well. Thus, we all learned and proved that we can offer more than just a pretty building. In fact we did so with practicality, efficiency, and style. As students, we learned to appreciate designing for a middle class community rather than a wealthy suburban home owner. We also loved working as team.

Most of us have now gone our separate ways into different offices, cities, and even countries. Yet we face the world with the realization that most of our future in design will incorporate the same challenges as we experienced with this community. The Elkhart studio was a learning experience for all that were involved, and the lessons of this challenge continue to further our educations in architecture

Redevelopment Plan



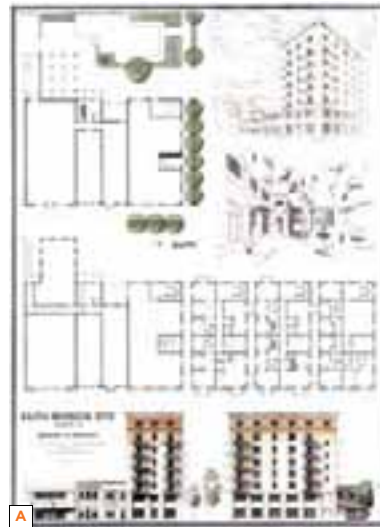
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B

A Elkhart Redevelopment Plan, Studio; B Elkhart State/Division Historic Center, R. Sakal

500 Main Street



A



B



C



D



E



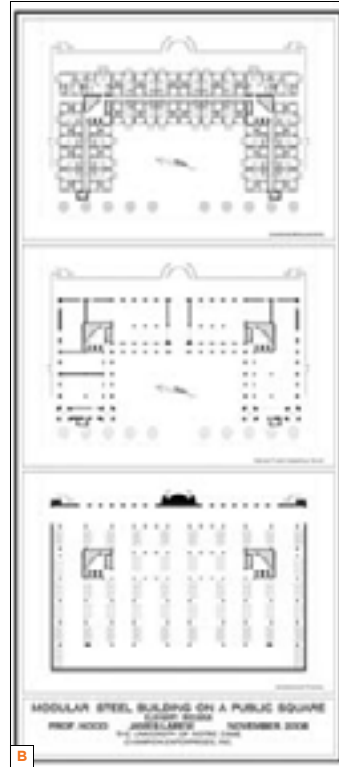
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A 500 S. Main Mixed-Use Modular Building, Z. Stewart; B 500 S. Main Mixed-Use Modular Building, P. Schaeffing; C 500 S. Main Alley—Proposed Mews, Z. Stewart; D 500 S. Main Mixed-Use Block, J. Kramer; E 500 S. Main Alley—Proposed Mews, J. Kramer; F 500 S. Main Alley—Existing, Unknown

Mixed Use Modular Building



A



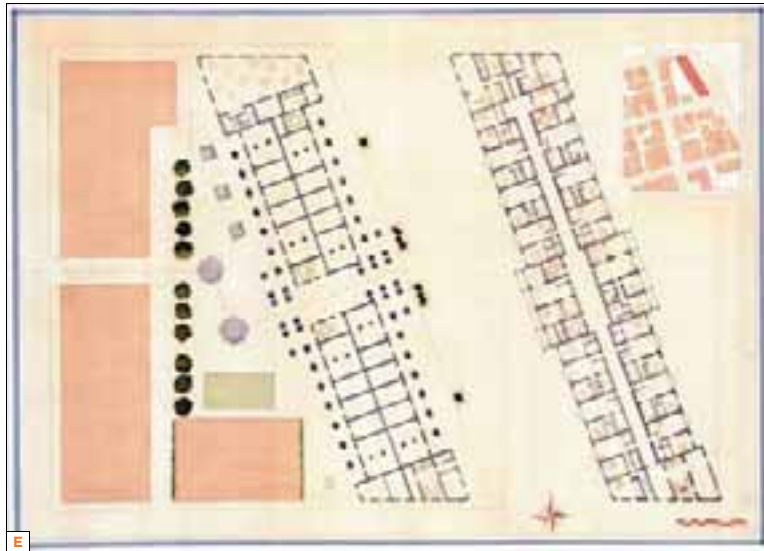
B



C



D



E



F



G

A-B Modular Building Mixed-Use, J. Larew; C-F Modular Building Mixed-Use, A. Icaza; G Modular Building Mixed-Use, I. Gonzalez

North Main Street



A



B



C



D



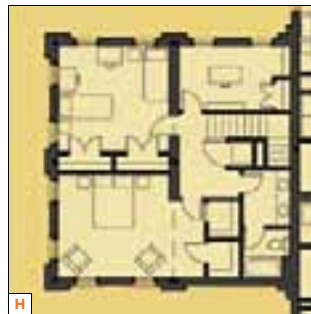
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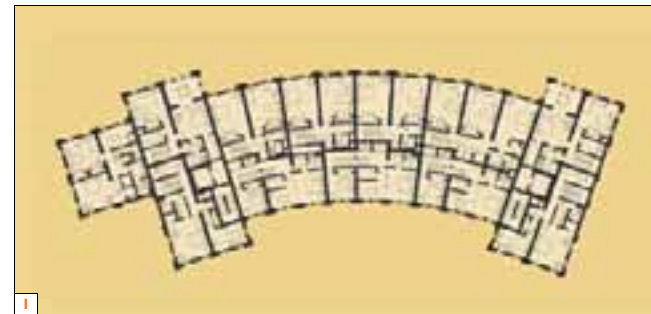
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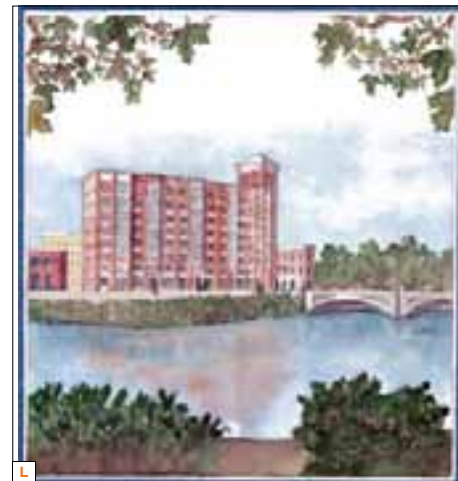
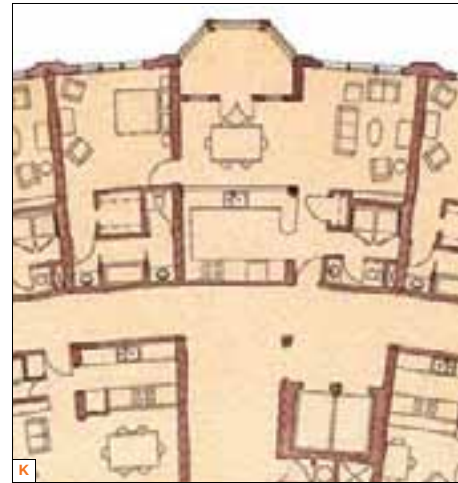
H



I

- A Master Plan—North Side, Studio;
- B Proposed Mixed-Use Building—North Main Street, K. Weckman;
- C Mixed-Use Modular Building, K. Weckman;
- D Existing Conditions, Unknown;
- E Mixed-Use Modular Building, K. Weckman;
- F Existing Conditions, Unknown;
- G-H Corner Unit, K. Weckman;
- I Mixed-Use Modular Building Plan, K. Weckman

Mixed-Use Modular Building



J Mixed-Use Modular Building Plan, M. Snow; K Typical Tower Unit, M. Snow; L Mixed-Use Modular Building, M. Snow



A Infill Modular Apartment Building, B. Gonzalez

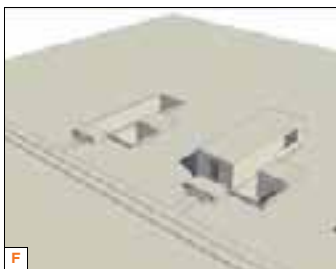
Mixed-Use Modular Building



B Infill Modular Apartment Building, M. Dominguez; **C** Neighborhood Buildings, Unknown; **D** Existing Conditions, Unknown; **E** Redevelopment Infill Plan, Studio; **F-I** Existing Conditions, Unknown

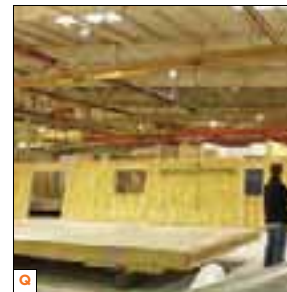
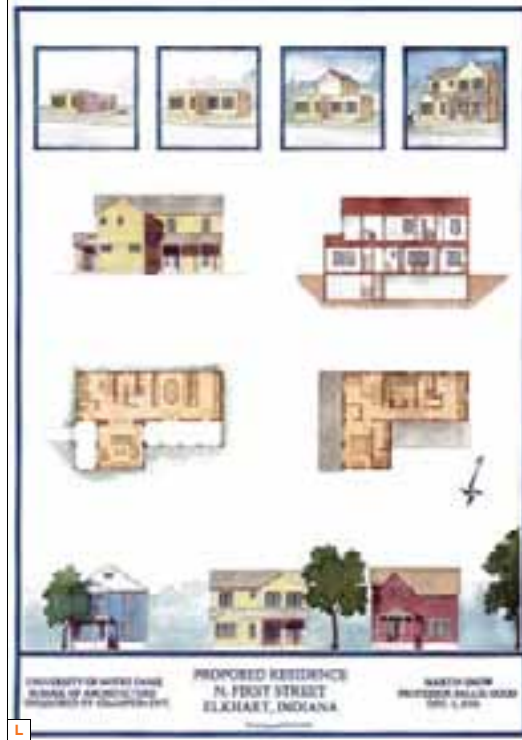
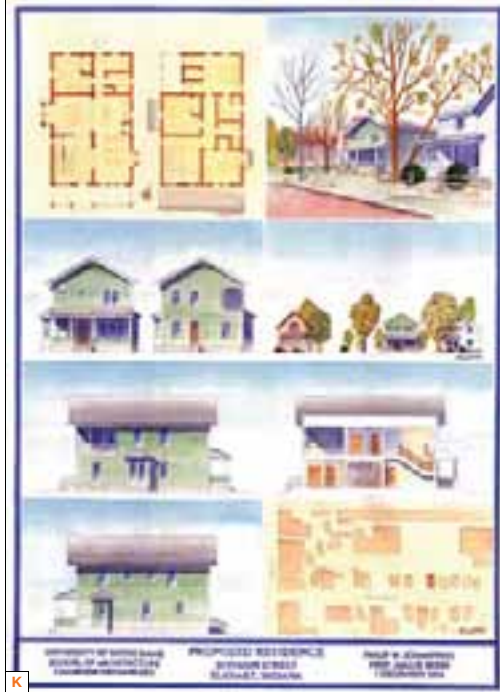


Infill Modular Houses



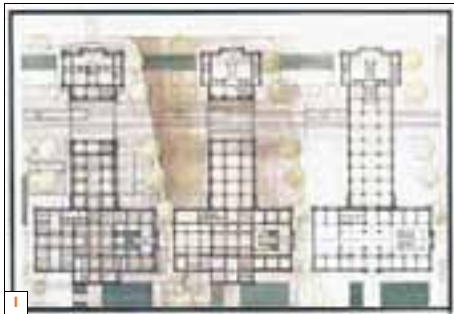
A Infill Modular House, A. Icaza; **B** Infill Modular House, B. Gonzalez; **C** Infill Modular House, I. Gonzales, Z. Stewart; **D** Infill Modular House, Z. Stewart; **E** Infill Modular House, J. Larew; **F-I** Modular House On-Site Assembly Diagram, K. Weckman

Infill Modular Houses



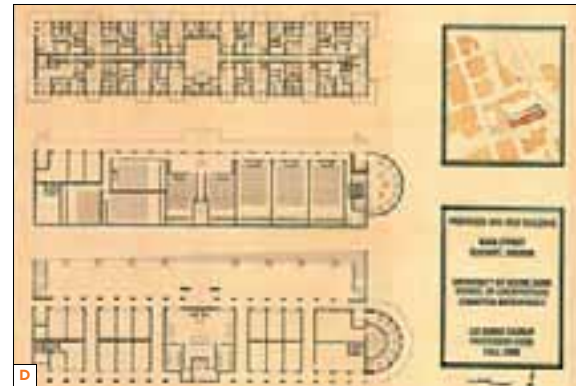
J Infill Modular House, M. Dominguez; K Infill Modular House, P. Schaeffing; L Infill Modular House, M. Snow; M Infill Modular House, K. Weckman; N Infill Modular House, J. Kramer; O Infill Modular House, E. Lee; P-Q Champion Enterprises Topeka, IN Plant, Unknown; R Infill Modular House, L. Righa

Train Station



A-C, E Existing View, E. Lee, M. Lee; D Train Station and Apartment Building, E. Lee, M. Lee; F Train Station Mixed-Use Modular Building, E. Lee, M. Lee; G-I Train Station and Apartment Building, E. Lee, M. Lee

Market Square



A Mixed-Use Modular Building, L. Faarup; B-C Market Square Mixed-Use Building, L. Richa; D Mixed-Use Modular Building, L. Faarup; E Market Square Hotel, L. Richa; F Market Square Hotel, M. Fullwood; G-H Existing Conditions, Unknown; I Market Square Existing Conditions, Unknown; J Market Square Proposed Plan, Studio