Multifamily Housing

Infill Solutions

FOUR MID-RISE, MULTIFAMILY HOUSING PROJECTS SHOW THAT HIGH DENSITY, LOW BUDGETS, AND DIFFICULT SITES CAN BE OPPORTUNITIES FOR GOOD DESIGN, NOT OBSTACLES.

1.

San Francisco, California

David Baker + Partners lends a helping hand to struggling immigrant families living in the Tenderloin district.

2.

Judenburg, Austria

Mack Architects' high-density subsidized housing pays a whimsical tribute to color while using prefabricated components and modest building materials.

3.

Philadelphia, Pennsylvania

With this project, Onion Flats takes its imaginative design approach beyond the drawing board, going on-site to build the property.

4.

San Diego, California

Jonathan Segal Architects invigorates the urban landscape of a San Diego neighborhood with a Modern nine-unit housing complex.

For more information on these projects, go to Building Types Study at **www.archrecord.com**.

PHOTOGRAPHY: © BRIAN ROSE (1); MANFRED SEIDL/ARCHFOTO (2); DON WESTON (3); PAUL BODY (4)

By Jane F. Kolleeny

Following strong growth over the past decade, housing starts will ease off in 2006 to the same level as 2004, according to forecasts of the National Association of Home Builders (NAHB). While this puts the brake on housing construction's rapid pace in recent years, the overall message is positive, and the level of building is considered historically healthy.

During this year's slowdown, multifamily and affordable housing will both do well, says NAHB chief economist David Seiders. Of this activity, infill development—projects on small land parcels close to urban centers—will account for a larger percentage than before, says AIA's chief economist Kermit Baker. With developable land dwindling and the population growing in major urban centers of the U.S., this trend is no surprise. It sets the stage for interesting architectural solutions for buildings that occupy lots deemed difficult until now: peripheral areas or locations in downtrodden or abandoned neighborhoods.

Featured here are four mid-rise, multifamily housing projects. Instead of perpetuating sprawl, these projects offer attractive alternatives to the unchecked development of single-family communities. All of these projects embody a socially responsible approach to design, either by virtue of their use of sustainable technologies or by responding to the needs of low-income residents. Each project expresses a modern sensibility, often working within a modest budget.

Rag Flats, by the firm Onion Flats, brings new life to a blue-collar neighborhood in Philadelphia, transforming an old rag factory into a residential garden community that, among other things, offers a novel interpretation of the Philadelphia "Trinity" row house. For 22 units of subsidized housing at Judenburg West in Austria, Mack Architects used prefabricated panels made of cloth and wood for walls, floors, and colorful clip-on balconies. K Lofts in San Diego, by Jonathan Segal, shows how a Modern nine-unit development on an abandoned lot in a neighborhood of historic houses and apartment buildings can break with convention without diminishing context. At Curran House, set in San Francisco's rugged Tenderloin neighborhood, David Baker brings a spark of hope to a block of aging apartment buildings while housing a group of Asian immigrant families.

In its Home Design Trends Survey (www.aia.org/release_111705_HDTSQ3), the AIA notes that the slowing of home purchases anticipated for 2006 is due in large part to the increasingly high cost of owning a home. This month, we present examples of housing meant for the moderate- and low-income populations marginalized by this trend. ■

Rag Flats
Philadelphia, Pennsylvania

3 **WITH GEOMETRY AND COLOR, ONION FLATS CONCOCTS A SURPRISE MIX OF RESIDENCES BEHIND THE BRICK SHELL OF A FORMER RAG FACTORY.**

By Jane F. Kolleeny

Architect/owners/builders: *Onion Flats—Patrick McDonald, Timothy McDonald, principals; Johnny McDonald, general manager; Kurt Schlenbaker, project manager/designer*
Architect of record: *Weber and Company Architects/Fink und Stange*
Engineers: *Amy Rivera (structural)*
Consultants: *Minus Studios (design/build collaborators); Cover (custom metal design/fabrication); Conservation Services Group (photovoltaic panel system); Kevin Wright, Juan Garcia (solar electronics); Evergreen Solar (solar panel manufacture); Anastasia Hudgins (landscape)*

Size: *25,000 square feet*
Cost: *$3.6 million*
Completion date: *2005*

Sources
Roofing: *Dex-O-Tex*
Wood windows and doors: *Weathershield; Pozzi*
Security: *Seidle Intercom system*
Kitchen cabinets/woodwork: *IKEA*
Paints and stains: *Duron*
Stained concrete: *Schofield*
Tile: *Dal-Tile*
Dumbwaiters: *Butler Mobility*
Radiant heat and water system: *Peerless*

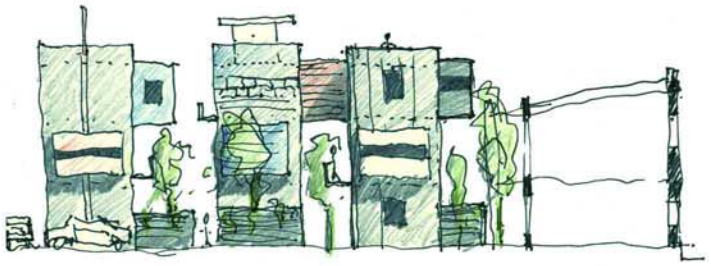
For more information on this project, go to Building Types Study at **www.archrecord.com**.

Think with your hands, not your heads! That's the motto of Onion Flats, a Philadelphia architecture firm founded in 1997 by two brothers, Tim and Patrick McDonald, who were joined by architect/builder Kurt Schlenbaker in 1999. Converting rundown industrial sites into residential and mixed-use projects, the firm has so far completed three developments—Market Flats, Capital Flats, and Rag Flats—doing everything from designing, building, and selling to managing the properties. The practice has no offices; instead, the team goes beyond the drawing board, setting up shop on-site to experiment with built forms. To empower a younger generation of architects, they employ students from architecture schools of three Philadelphia universities where Tim McDonald teaches, and hire friends to handle work in other disciplines as needed.

Program

Though the odor of fish has long since gone, the name Fishtown remains. It refers to an area in Philadelphia near the Delaware River where, in the 1830s, when ice refrigeration was a luxury affordable only by the rich, fresh catch was brought for pickling, salting, or smoking for the less-well-heeled. Today, it is a tightly knit working-class community, where ramshackle houses are passed down through generations of Irish Catholic families.

Here in Fishtown, Onion Flats saw an opportunity to build 11 multifamily housing units in and around a former rag factory. Combining four kinds of dwelling units on the site, the McDonalds purchased the two-story facility from a local masonry contractor and cleaned it up. "The abandoned factory had been used as a dump for 10 years and was occupied by a family of feral cats," says Tim McDonald.



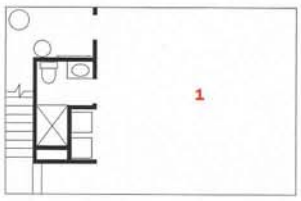
Solution

The factory's shell served as a starting place for various types of dwellings. The original rough-hewn red brick became the front and side walls of two lofts, with two row

PHOTOGRAPHY: © DON WESTON

SITE PLAN

An interior courtyard of honeycomb-patterned paving blocks with grass peeking through the cracks provides parking. Switchback stairs give access to upper floors (right).



BASEMENT

0 3 FT.
1 M.

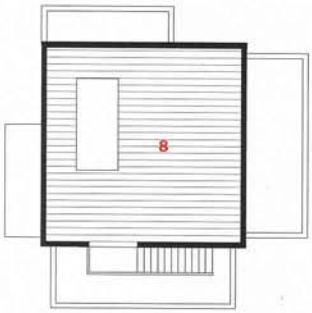
FIRST FLOOR

SECOND FLOOR

THIRD FLOOR

TRINITY UNITS

1. *Den*
2. *Living room*
3. *Kitchen*
4. *Study*
5. *Bedroom*
6. *Bath*
7. *Terrace*
8. *Roof deck*



ROOF FLOOR

houses also on the street-facing side, and a single one-story pavilion and five three-level units filling out the back portion of the site. Called Trinities, the three-story units are one of Philadelphia's most characteristic residential building types. Onion Flats' version of the Trinity stacks the floors irregularly, bumping them out on various sides to add space and open up the walls to insert windows and skylights that bring light into the interiors. "The units were designed so one would rarely need to turn on a light," says the architect.

All 11 units are set around an interior courtyard of bamboo gardens and a parking lot laid with attractive turf pavers. Six photovoltiac cells generate 70 to 100 percent of the electricity for the complex, giving the project a strong green ethos. An underground cistern collects rainwater that is distributed for all nonpotable uses. Shared spaces include a green roof, a community garden, a composting area, and a gym.

To maximize the efficiency of the 20-by-20-foot Trinities, the architects designed the roofs as outdoor living rooms, equipped with phone jacks, Internet connection, electricity, gas, and a dumbwaiter that transports refreshments for rooftop gatherings. The two row houses—designed by Minus Studios, a frequent collaborator with Onion Flats—face the street and are sandwiched between the factory wall and row houses on an adjacent property. Cantilevered elements on the front-facing bedrooms provide space for reading nooks, while rear-facing bedrooms feature balconies. Switchback staircases float over the courtyard, and accessible roofs supplement shallow backyards.

The architects clad the buildings with black-stained, cedar tongue-in-groove panels, alternating with corrugated metal, stucco, and Cor-Ten steel. Inside, bamboo floors, Pennsylvania-slate countertops and tiles, eucalyptus cabinetry, and ceiling fans give the apartments a comfortable, Modern look. Custom-designed steel stairs and bridges both inside and out were fabricated by team members in the welding and wood shops set up temporarily on the premises. Onion Flats assigned small projects to its student employees as part of its mentoring program. "We would give a student the project of designing a door, and then they own that project. It's a very good way for them to build confidence," said Kurt Schlenbaker.

Commentary

Rag Flats shows how a small project can make a difference in a struggling community. Instead of tearing down, Onion Flats rebuilt, demonstrating how sustainable design, hands-on architecture, and community engagement can provide the kind of diverse housing needed to turn around a neighborhood in transition. ■

Some of the kitchen cabinets are composed of a deep burgundy polymer laminate (top left). Floating metal stairways fabricated on-site allow natural light to penetrate the interiors (top right). The 11 units are centered around a courtyard with bamboo gardens. Elegant light fixtures and downspouts are among the custom-made elements on the exterior. Balconies and rooftop living rooms maximize the use of the outdoors, achieving a sense of community life in the shared space of the courtyard (right).