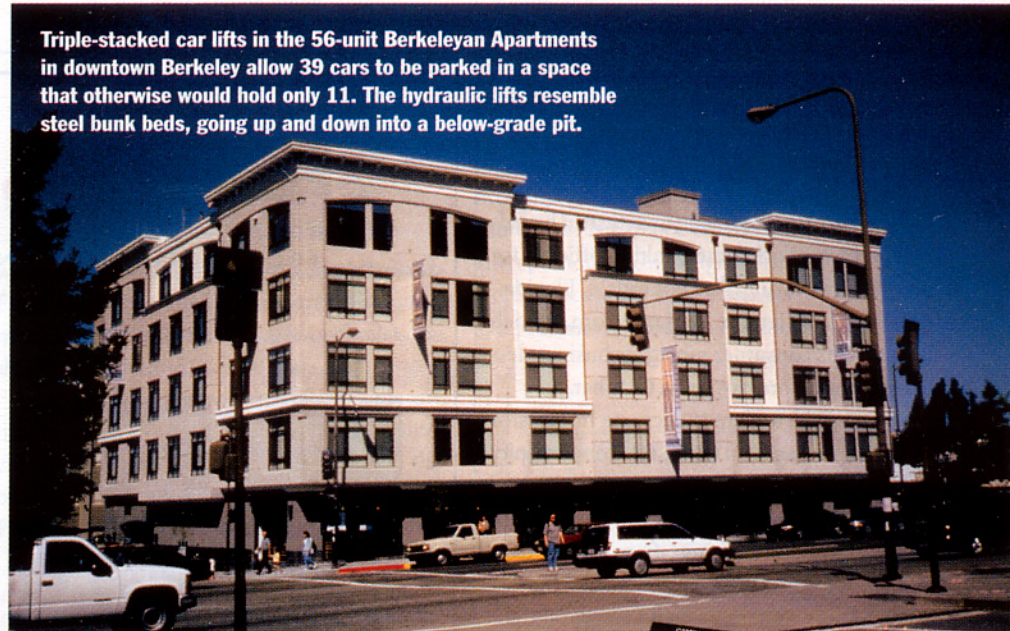


## Pioneering Park Lifts

**S**tackable hydraulic car lifts can be used in urban infill projects to satisfy both smart growth advocates, because of their space-saving features, as well as developers who are attracted by definable economic benefits. The Berkeley, California-based developer Panoramic Interests has used both double and triple stackable car lifts in two recent housing projects in that city. In the 24-condominium Shattuck Avenue Lofts project, double stackable car lifts allow 15 cars to be parked in a space that otherwise would hold nine. In the 56-unit Berkeleyan Apartments, the first new private rental housing in downtown Berkeley built since World War II, triple stackable car lifts allow 39 cars to be parked in a space that otherwise would hold only 11.

In its latest project—the seven-story, 91-unit Gaia Building, now under construction—Panoramic Interests not only is using triple-stacked lifts for 39 cars, but also is going one step further. At least two of those cars, which are owned by the developer, will be available to all tenants through an in-house car-sharing program. Residents will be able to view the in-house television channel connected to all the video cameras in the building to see which car is available in the garage and then to reserve it over the Internet.

Car-sharing programs have been used in Europe for several years and now are operating in Portland and San Francisco. European experience has indicated that one shared car replaces approximately five private vehicles—a number that may not translate to less densely built American cities. “But,” notes Patrick Kennedy, the principal of Panoramic Interests, “if three private cars can be replaced by one shared car, and that one shared car is stored on a triple-stacked lift using the space equivalent to one-third that of the surface-parked car, then the space typically dedicated to one private car



**Triple-stacked car lifts in the 56-unit Berkeleyan Apartments in downtown Berkeley allow 39 cars to be parked in a space that otherwise would hold only 11. The hydraulic lifts resemble steel bunk beds, going up and down into a below-grade pit.**



could be used to provide auto transport for nine households.”

The key feature of park lifts, manufactured by the German company, Klaus Parking Systems, is independent access for all users, unlike surface-mounted lifts, which require the lower car to be moved to get top car down. The Klaus system used by Panoramic Interests resembles steel bunk beds, going up and down into a below-grade pit; therefore, owners can access their cars separately and independently. A separate, key-operated motor controls each stack, so in a worst-case scenario, any me-

chanical malfunction could affect only two cars, unlike in large-scale, multistory robotic parking garages, which can be a source of fear among developers. Allowed to try the system on an experimental basis with the understanding that it could be ripped out if it did not work, Kennedy reports that, much to everyone's relief, it worked well. “In five years' time, the original lifts have never malfunctioned,” he adds. “We have more than 100

now installed, with another 200-plus going into various projects in the coming year.”

Panoramic Interests reports that it has been able to reduce its parking ratios to as little as 0.3:1 to 0.7:1, or one space for only 30 to 70 percent of the number of units. The low ratios are due partly to the inclusion of students and disabled residents, who often do not own cars, in its targeted markets. Also, some projects include as much as 25 percent subsidized units, which have lower demand for parking spaces. The urban location of Panoramic Interests' projects in downtown Berkeley, across

from the campus of University of California-Berkeley and close to a Bay Area Rapid Transit (BART) station, is important to the success of the company's transit-oriented developments. When the impact of triple-stacked parking is added, the effective parking space ratio is as little as 0.1 per unit.

According to Kennedy, the cost/benefit ratio of using park lifts on relatively small urban infill sites, ranging from 6,000 to 20,000 square feet, is highly favorable. At a cost of approximately \$10,000 to \$12,000 per space, the park lifts are comparable with efficient above-ground parking structures. However, he says, the benefits to the developer can easily outweigh the costs for the following reasons:

- The number of developable units on the same site can be tripled.
- Densities of up to 240 units per acre are permitted with the stackable park lifts.
- Only one-quarter to one-third of the space required in a conventional lot is needed.

■ Because only one drive aisle is required, efficiency rapidly can increase with the number of cars in the stack.

■ Valuable ground-floor space can be recovered for retail uses. For example, every project with park lifts that Panoramic has built so far has a ground-floor café, along with shops and offices, that otherwise would not be in the project.

■ The exteriors of projects can be improved, minimizing dull, inert space and enlivening streetscapes with storefronts containing the retail uses that replace parking.

■ The increased rentable space more than doubles the development's potential options and operating income of the ground floor.

■ Security in the parking area is improved because the park lifts reduce the size of that area, the amount of resident activity is increased therein, and the entire parking area is able to be covered easily with a video camera. Also, two-thirds of the cars are made inaccessible to

thieves and vandals; when a car is in the lift ten feet underground or overhead, it is extremely difficult to break into.

■ Operating the hydraulic park lifts costs less than about \$1 a month since they get used only for a few minutes each day and since they need electricity only when they are being raised; lowering them is accomplished by releasing a check valve.

Results like these should cheer both advocates of smart growth as well as developers drawn to the economic benefits of the stackable park lifts. ■

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