



Architect Malcolm Wells would like to green this Boston television station and its parking lots (left) by putting them underground (right).

belong there anymore. In fact, he claims that any parking area with more than six cars makes it "car-dominated territory," unfit for humans. Too much of the space in our cities—60 percent in Los Angeles—is given over to the car, and most of it is for parking. According to Jane Holtz Kay in *Asphalt Nation* (Crown, 1997), Houston has 30 parking spaces per resident. One study suggests that during peak traffic hours, about half the people driving through downtown areas are simply looking for a place to park.

The United States has some 200 million of the world's 520 million cars, and until we create better public transit and bike facilities, we will need to park them. Multilevel parking garages—which average 570 spaces in the United States—are obviously preferable to surface lots, which eat up far more land. But most parking garages are ugly, hulking shells of concrete. How can we improve them? More than 20 years ago, Alexander said we should make them smaller and conceal them. Two designers are currently working on ways to do just that.

Gerhard Haag, a German engineer, wants to change the face of the American parking garage through robotics. Mechanical parking was introduced in Europe and Asia in the late 1940s as a solution to overcrowded cities with limited space. Now, as many as 5,000 automated garages operate on

those continents. Soon, Haag's Ohio-based company, Robotic Parking, Inc., will open the only commercially operated automated parking garage in the United States—in Hoboken, New Jersey.

Robotic parking works like this: You drive your car inside the garage entrance, step out, and take a ticket; a computerized system of pallets and elevators parks your car in a minute or two. To retrieve your car, you present your ticket to a machine, and your car arrives in less than two minutes. With the robotic garage, there are "no attendants, no waiting in lines, no idling cars or gas fumes, and the cars stack up in half the space a conventional garage uses," reports Steve Lerner in the National Resources Defense Council's magazine, *The Amicus Journal* (Spring 2000). The Hoboken garage stores 324 cars in a seven-story, 98- by 95-foot structure. And with a

brick facade that blends into the surrounding architectural environment, it doesn't visibly contribute to Alexander's 9 percent ratio.

Another option comes from Cape Cod architect Malcolm Wells, who suggests that parking ramps—and all other human structures—can be completely invisible if we build down instead of up. "I spent 20 years making big parking lots. It was the worst," he says. "But I started to wake up to what I was doing." In his recent self-published book, *Recovering America: A More Gentle Way to Build* (1999), Wells outlines his vision of underground architecture: You shield buildings by covering them with dirt and planting trees, grass, and flowers on top, improving both the natural and the human environment. This is most needed, he asserts, for "the deadly surface that does nothing but provide parking for automobiles." (U)

