Land Use Implications of High-Speed Rail

Development of high-speed passenger rail will undoubtedly be among the Obama administration's transportation legacies. What happens in California could provide lessons for the rest of America.

Decades in the making, high-speed rail is finally coming to California. In 2008, the state passed a $10 billion bond initiative to build the first leg of its ambitious state-spanning high-speed rail network. These nation-leading plans were rewarded in January with a $2.25 billion federal infusion, part of an $8 billion high-speed rail grant program made possible by the 2009 stimulus bill. When the California network is completed in 2025—with a projected overall tab of $45 billion—the state will have more than 700 miles (1,100 km) of track that will take passengers from San Francisco to Los Angeles in less than three hours, with trains achieving top speeds of 220 miles per hour (354 kmph). What will it mean for land use?

Almost every decision California makes about high-speed rail has important implications for land use—and, by extension, for the future of communities touched by the lines. From the general route the trains take, the number and spacing of stops, and their location within a city or town to how the stations and track are designed—all will affect not only the functioning of the system, but also the future of the state.

California’s express trains will connect major cities, sharing the system with slower, commuter-oriented trains serving more areas. Major lines have largely been identified, but wrangling about stops continues. Affluent areas like Palo Alto and Menlo Park, worried about noise and other disturbances, have sued to keep the trains away. Other areas are jockeying to keep—or add—a stop, believing that their economic future could be at stake.

Stop locations are not the only worry. Trying to build new rail lines can seem like threading a needle. In California, where the lines must traverse productive farmland, parks, mountains, and developed areas alike, conflicts have already arisen. For example, south of Los Angeles, Buena Park just completed a transit-oriented, residential project adjacent to a three-year-old Metrolink commuter-rail station. But the development stands in the path of the planned high-speed rail line, which will not even stop in the city. One city official reported that a rail representative told him, "We either take the condominiums or we take your station."

Planners are trying to work out a solution, but every compromise can cost the system money, time, and speed.

Then there is the question of what will happen around station stops. Development may well intensify in the immediate area around major stations as people and businesses take advantage of the convenience and time savings the line brings. But high-speed rail is no guarantee of compact growth. Stations—both major and minor—could still be surrounded by a sea of parking. And by making ever-larger parts of the landscape readily accessible, the high-speed rail investments could act like a magnet and fuel suburban expansion, drawing development out to ever-growing edges.

"High-speed rail will simply add another layer of access to the far-flung suburbs/exurbs and Central Valley, resulting in more mass-produced subdivisions," comments transportation expert Robert Cervero, a professor of city and regional planning at the University of California at Berkeley.

What happens in California will depend on a lot of things, including the number and location of stops, the final speed of trains, the ultimate price of train tickets, and how well the state implements S.B. 375—California’s attempt to require coordinated land use and transportation planning in the face of climate change. What high-speed rail will mean for land use—in California and elsewhere—is an emerging story. Stay tuned. ULI.