Bridging the Gap

Richard D. Browning

Portland, Oregon, is one of the few U.S. cities with affordable housing within easy cycling and walking distance of a vibrant, pedestrian-oriented downtown. But the Willamette River separates downtown from most of the neighborhoods with middle-income housing, posing a major barrier to bicyclists and pedestrians. The river’s seven non-interstate bridges, a gentle decay of collection of structural antiquities, accommodate bicycles, pedestrians and the disabled either grudgingly or not at all. Thousands of people living within sight of their high-rise offices are too intimidated by the gauntlet of bridge crossing to ride a bicycle or walk to work.

Local and state agencies, guided by grassroots agitation from bicycle transportation advocates (who staged mass protest rides) and fortified with the promise of $1 million from the Federal Highway Administration, are now working to make non-motorized users feel more welcome on the bridges.

Citizens, government planners and design consultants formed a task force and spent 18 months defining problems and proposing solutions. The task force decided to pinpoint choke points in the network — places where small, inexpensive improvements could remove significant barriers and open new routes. For example, it recommended making three new curb cuts on the east Burnside bridgehead, a simple act that will make the bridge accessible to wheelchair users. In some cases, however, bridges that were designed for 1970s horse-and-buggies but now carry 1990s traffic volumes present intractable problems that can be solved only by expensive retrofits. The Broadway Bridge typifies the opportunities and dilemmas the seven bridges present. The highest impact project involves removing one automobile lane to create space for two bike lanes on one of the approach viaducts. Traffic studies showed that by adjusting signal controls at approach intersections, the viaduct could accommodate westbound traffic in one lane, not two. The viaduct will be restriped with a single westbound lane, two lanes will continue to serve eastbound traffic and bike lanes will be added on either side (in a kind of poetic symmetry, two standard bike lanes are the same width as one narrow car lane). This project avoids an expensive retrofit, paint and signal re-timing are minor costs.

Unfortunately, pedestrian improvements did not always fare this well. The addition of a sidewalk along part
of the bridge appears to be too expensive to receive funding; because of the narrow bridge width, a cantilevered structure would have been necessary.

Another Broadway Bridge project demonstrates the importance of considering the network of streets leading to and away from a bridge. Street modifications are often proposed on an especially troublesome intersection for bicycles located three blocks from the bridge.

The preliminary design phase of the Willamette River Bridges Accessibility Project was completed in 1994 and the recommendations have been approved by the Multnomah County Commission (reluctant stewards of Portland's bridges). Work on a few of the simplest projects is already complete. A signal button has been modified, signage improved and some curb cuts installed. These improvements may seem trivial by themselves, but when seen in the context of a full bridge access plan, small additions are important contributions to a greater whole.

The attempt to put bikes and pedestrians on an equal footing with cars highlights the inequalities built into traffic planning practice. A plethora of minutely defined standards exists for motor vehicle traffic, but nationally accepted standards for bicycle and pedestrian facilities are anemic.

For example, “level of service” analysis, which measures how easily motorized traffic flows on a street, has never been applied to bicycle traffic in the U.S. "Level of service" standards do exist for pedestrian traffic, but they are seldom used and measure only the density of pedestrians in a space. Delay (caused by detours and signal timing as well as congestion) is not a factor in determining a level of service for pedestrians.

The most remarkable achievement of the project was the way in which it bridged the gap between road designers and non-motorized road users. Traffic engineers attended a series of open forums and made a sincere attempt to respond to public concerns. While design standards for motor vehicles were never broken, they were sometimes bent creatively. A few low-volume facilities — a turning lane on one bridge, an approach ramp on another — were sacrificed to accommodate non-motorized users better.

Pedestrian access to Portland's bridges can be seen as symbolic of human access to the city in general. During the last years of his life, Lewis Mumford reminisced about an unforgettable walk he once took across the Brooklyn Bridge. Halfway across, looking towards Manhattan, he experienced a once-in-a-lifetime flash of enlightenment, feeling as if he contained both the city and the sky within himself.

The world, at that moment, opened before me, challenging me,beckoning me,

demanding something of me that it would take more than a lifetime to give ... I trod the narrow, resilient boards of the footway, with a new confidence that came, not from my isolated self alone, but from the collective energy I had conjured and drawn in. 

Like Mumford, designers of urban infrastructure must draw strength from the varied and collective energies of the city and plan transportation systems that allow human beings to go confidently wherever they please, under their own power and at their own pace.

Note

1. Lewis Mumford, Skies from South (New York: Doubleday, 1982).

Reconfigured span of Burnside Bridge, with added bicycle lanes.