

Architect envisions border wall as good neighbor

March 30 2011, By Kathleen Maclay

The U.S.-Mexico border wall may be here to stay, but a University of California, Berkeley, assistant professor of architecture has some provocative ideas about how to redesign the barrier to slow illegal immigration and at the same time transform it in an economically, environmentally and socially beneficial way, to benefit both countries.

Ronald Rael envisions a wall dotted with multipurpose installations with a life-saving water collection site, a treatment plant for toxic wastewater from the New River, a swing, a volleyball court, a solar farm and even a confessional.

"It would be easy for me to raise a picket sign and as an architect say, 'Down with this wall!'" says Rael. "I have to accept the wall because it exists, but as a designer I see that something better is possible. Why not do something intelligent, something incredible? I envision not just a 'dumb wall,' but a social infrastructure that connects and improves lives on both sides."

Rael says the approximately 700-mile-long series of separation barriers has proven ridiculously expensive, environmentally destructive, culturally hostile, often deadly, ineffective and hobbled by technical problems. He hopes his proposed wall, depicted in a series of drawings available online, can be not only a new model for the United States and Mexico, but for other countries wrestling with similar conflicts.

"Border Wall as Infrastructure," a proposal by Rael San Fratello

Architects, an award-winning Oakland-based team comprised of Rael and partner Virginia San Fratello, was a finalist in the 2010 Working Public [Architecture](#) (WPA) 2.0 Competition organized by UCLA's cityLAB. The contest was inspired by the Great Depression's Work Projects Administration (also known by its earlier name, Works Progress Administration) and by the 2009 American Recovery and Reinvestment Act, the federal government's economic response to the Great Recession.

In keeping with concepts behind the Work Projects Administration, Rael conceived of a wall that serves public works needs while also improving security, boosting the U.S. economy by cleaning up pollution and by supporting conservation, promoting cultural exchange, and saving the lives of illegal immigrants as well as of ill-advised tourists who get lost in the desert.

Rael's designs include practical and pointedly satirical features, but for the most part focus on feasible water, renewable energy and conservation efforts.

Among the highlights:

- Using the massive steel structure of some sections of the wall, water is heated and distributed to clinics, hospitals and schools. A water collection system also provides a drink for wildlife, immigrants and others stranded in the desert, while simultaneously triggering alarms to notify border patrol officers of medical emergencies and illegal crossings.
- An elaborate wastewater treatment plant along the New River that flows from Mexicali into Calexico cleans toxic materials in one of the United States' most polluted rivers.
- A "burrito wall" features a food cart inserted into the wall, allowing people from each side of the border to share a meal, chat and conduct business, all within full view of security.

- A lending library or confessional straddles the borderline, keeping a barrier in place while supporting learning and spiritual health for residents on either side.
- A system of water catchment basins and rainwater collection shed roofs along the wall beside the Rio Grande River further discourage border crossing while guarding against devastating and costly city flooding.

Rael says the wall, authorized by the U.S. Secure Fence Act of 2006 and comprised of a hodgepodge of steel, concrete, wire mesh, heat sensors and even repurposed Vietnam-era landing strips, has been generally evaluated according to the number of border crossings it is estimated to have stopped.

Those "stops" aren't just a matter of turning someone around and sending them home, Rael says; they often are deadly, due to dehydration. There were close to 500 deaths of border crossers reported in 2009 by the U.S. Customs and Border Protection.

In addition, according to a 2009 report by the federal General Accounting Office, there were 3,363 fence breaches, with the average repair cost \$1,300 each.

The problems with the wall don't stop there, Rael says, noting that various environmental, wildlife and Native American heritage legal protections — including portions of the Endangered Species Act, the Solid Waste Disposal Act and National Environmental Policy Act — were waived in order to build the wall. This has led to complaints and sometimes lawsuits from a range of camps that contend the wall threatens wildlife populations by separating them from fresh water sources, promotes flooding and harmfully reconfigures river valleys, wetlands, plains, mountains and forests as well as deserts.

Ironically, Rael says, the wall essentially cedes about 40,000 acres of U.S. land to Mexico because it is built on the U.S. side of the border and sometimes gives up as many as two miles of land from the actual geographic boundary between the two countries. Design proposals by the U.S. Army Corps of Engineers even put part of the University of Texas, Brownsville, on the Mexican side of the fence.

While Rael acknowledges the chances of his plan's implementation are slim, he notes that some unidentified government officials have told him they see merit in individual elements of his border wall redux.

Even so, the wall continues to undergo modifications, although none as dramatic as Rael proposes. Three years ago, as part of a federal court settlement the Department of Homeland Security agreed to redesign its original plan that would have placed a historic battlefield and the University of Texas/Brownsville's golf course on the Mexican side of an 18-foot fence, according to reports in the San Antonio Express-News.

And in January, when U.S. Homeland Security Secretary Janet Napolitano, former governor of Arizona, announced the end to plans for "virtual fence" camera tower systems along the fence, she was quoted by Associated Press as saying there is no "one-size-fits-all" answer to border security.

"Our wall is as unsophisticated as a wall built 2,000 years ago," laments Rael.

In an era of financial limits for government, he says that according to his calculations, the money spent building and maintaining the border fence could be spent to build the equivalent of 300 Seattle main public libraries, 10 Denver International Airports, 204 Disney Concert Halls, 18 miles of the San Francisco Bay Bridge or 500 miles of the High Line Park in New York City.

Rael says he believes that his retrofitted and redefined network would promote security, health and safety within border communities and in the two nations, ultimately producing "the best kind of immigration reform" as it offers up essential resources in a "post-border wall world."

"If it's a swing or a teeter-totter or solar panels, it materially ceases to be a wall," he says.

More information: www.rael-sanfratello.com/?cat=7

Provided by University of California

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