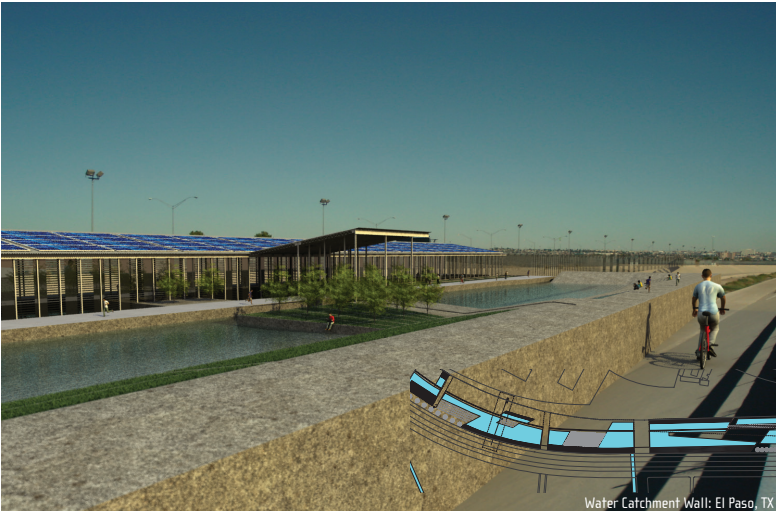


BORDERWALL AS ARCHITECTURE
Water Infrastructure



Water Catchment Wall: El Paso, TX



Flooding: Nogales, AZ

Borderwall as Water Catchment

Water and air quality in the border regions suffer disproportionate rates of degradation and contamination. The 14 metropolitan areas along the border have abysmal air and water quality.

While potable water is the most limited resource in this primarily arid region, the border wall itself has caused severe flooding, blocking natural drainage systems and damming in entire neighborhoods. If water collection were considered pro-actively along the border, there could be large scale positive consequences for abutting communities. For example, the city of El Paso plans to raise \$650 million for a proposed system of storm water catchments throughout the city to ameliorate the consequences of flooding in the rapidly growing desert city.

Dividing El Paso from Juarez is the large concrete basin defining the location where the Rio Grande/Rio Bravo River once flowed. By locating the catchments along the river, a linear park and riparian ecology could once again flow through the two cities. Locating additional rainwater collection shed roofs along the existing wall can increase the amount of water collected, and also create cool, well shaded places where bi-national performances, markets and events could take place. If this resource is then water-banked, it could lead to the eventual re-opening of the river to the city.

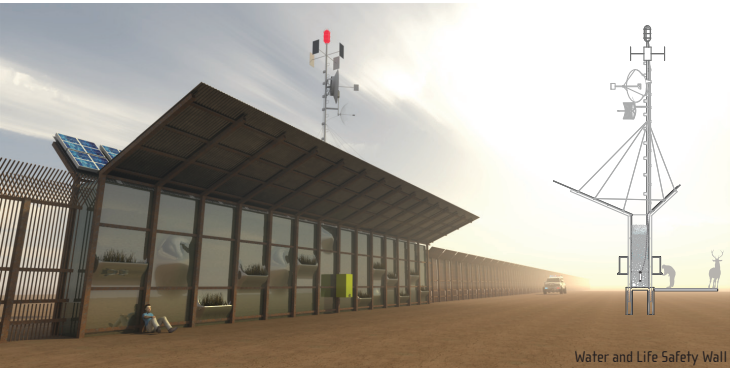


Borderwall as Water Treatment

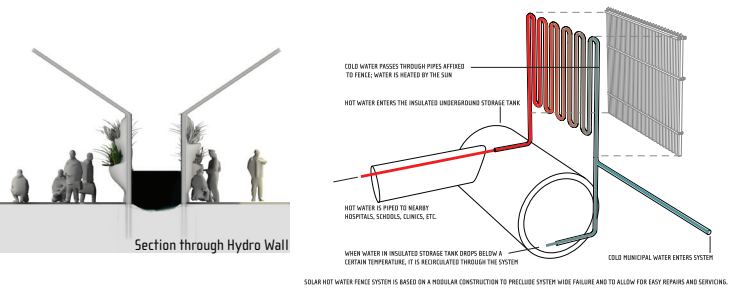
The New River is considered the most polluted river in the United States. It flows north from Mexicali, Mexico, and crosses the border at Calexico, California. New River toxicity is comprised of chemical runoff from farm industry, sewage, and a range of contaminants which at the border checkpoint far exceed U.S.-Mexico treaty limits. The New River then flows through the Imperial Valley, a major source of winter fruits and vegetables, cotton, and grain for both U.S. and international markets.

A wastewater treatment wall located in the 2-mile long wasteland that buffers the dense border city of Mexicali from the agricultural Eden of the Imperial Valley would offer a solution to the “illegal entry” of toxins to the U.S. The pollution problem is expected to worsen as Mexicali’s population—already at 1.3 million—continues to expand without adequate infrastructure. For \$33 million, the same cost as the wall that divides Calexico and Mexicali, a treatment facility with the capacity to handle 20 million gallons/day of effluent from The New River could be constructed. This proposed facility would be comprised of a linear pond filtration and purification system creating a secure and invaluable border.

The positive by-product of the wastewater treatment facility includes methane and water. Methane could be used to generate electricity and light streets. The water could be used to irrigate parks. In fact, the combination of methane and water could fuel the needs for a linear urban park connecting the entire city through a series of lighted, green corridors, creating a healthy social infrastructure between these growing border cities.



Water and Life Safety Wall



Borderwall as Hot Water Generator and Life Safety Beacon

The border wall can be coupled with hot water production, creating low-cost additional resources that supplement the infrastructure of rapidly growing border cities. The massive steel walls are enormous heat absorbing agents, and they could easily be retrofitted with panels that produce hot water, a much-needed amenity in border cities. The hot water could then be used in markets, clinics, hospitals and schools.

When solar energy is coupled with water collection, it also offers a key component for the establishment of life safety beacons along the border. The principal cause of death among migrants attempting to cross the border illegally is exposure to the elements, which causes heat stroke and dehydration. Solar generated electricity could power beacons that inform border patrol of both immigrants or American citizens who find themselves in danger in the harsh extremes of the southern deserts.

The photovoltaic panels would also be designed to collect water runoff; to power atmospheric water extractors; or to pump water from wells or rivers that could be stored, purified and dispensed as needed to distressed crossers in the desert. Engaging the water dispenser, or even approaching the life safety beacon would alert border patrol. Such devices could also ameliorate the effects that access to water has on wildlife, who find themselves unable to travel their natural routes in search of water.

BORDERWALL AS ARCHITECTURE

Solar and Social Infrastructure



Borderwall as Solar Energy

The most untapped potential for solar development in the United States lies along the U.S./Mexico border. What if funds to construct and maintain the border wall were to be re-allocated for the construction of energy infrastructure along the border? This would actually create scenarios in many instances that are more secure than the existing wall, and that simultaneously provide solar energy to the energy hungry cities of the southwest.

Consider the 100-mile stretch of border between Nogales, Arizona and Douglas Arizona where 87 miles of border wall have been constructed at a cost of \$333.5 million, for this same dollar amount, 54 miles of profit generating solar farm could have been constructed, 40 feet wide providing 60 Mega Watts of electricity. That is enough for 40,000 households. Electricity is an important bi-national commodity and many border towns share electrical grids where electricity could be sold across the border. Because transmission lines would also be put in place along the border, reliable electrical infrastructure would be available for both nations to tap. This has important implications when it is understood that, according to the U.S. Department of Energy, “one square foot of solar energy production along the border can power a dishwasher for 1 year”. Solar energy has important economic implications as it relates to jobs as well. In Germany, a country that is a leader in the new energy economy, the 5.3 Gigawatts of solar farms they have built have generated 10,000 jobs.



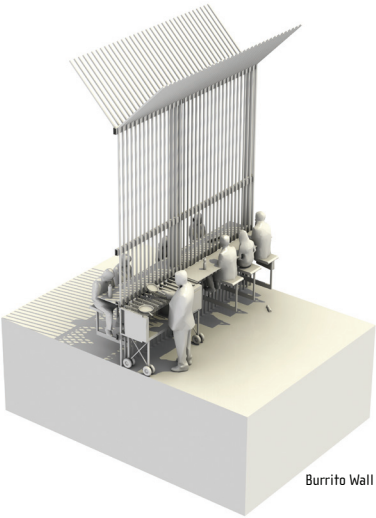
Bike and Pedestrian path Wall - as part of green urban transportation corridor and linear park



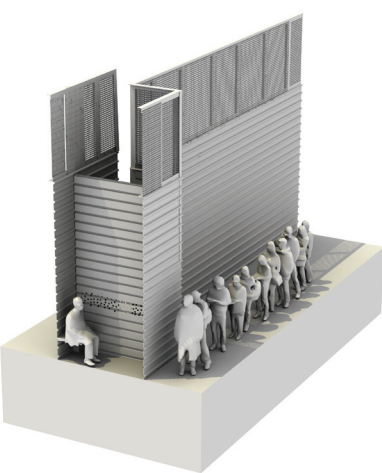
Library Wall

Borderwall as Social Infrastructure

Border towns traditionally lack the infrastructure that allows them to be sustainable, healthy cities. One of the most devastating consequences of border wall security in its present state is the division of communities, cities, neighborhoods and families, and the erosion of social infrastructure. By coupling the borderwall with green space, recreational amenities and bike and pedestrian paths that link in to similar systems already in place through the city, the wall becomes an urban organizer; a civic space articulating points of connection rather than division. The social capital encouraged by these networks produces safety and security, friendship and community, civic identity and economic value. Social capital builds “social infrastructure,” a key element in the success and health of communities. As border populations balloon, designating the space along the wall as a green corridor guarantees that park space rather than urban sprawl knits the two communities.



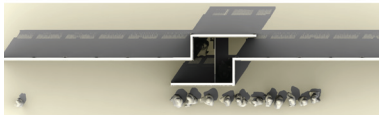
Burrito Wall



Section Through Confessional Wall



Family Visits: San Diego, CA - Tijuana, MX



Plan of Confessional Wall



Cross Border Communion: San Diego, CA - Tijuana, MX

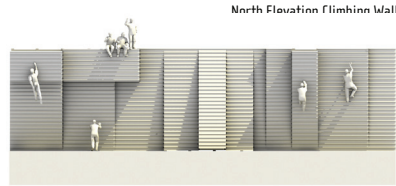
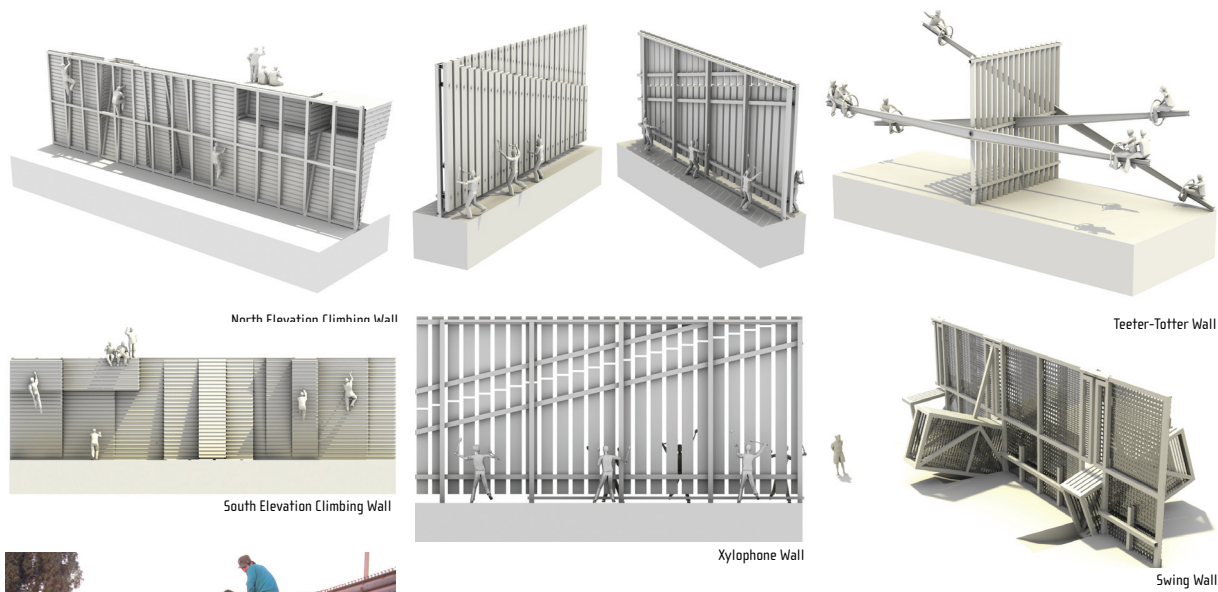
Burrito Wall

Casual exchange is common across the border wall ranging from small talk, long visits with friends and family, and commercial exchanges of items ranging from food and bracelets to illegal merchandise. The Burrito Wall accommodates for a food cart to be inserted into the wall. The proximity to the wall and the security overhang create shade. Seating is built into the wall and food, conversation or a bi-national game of footsies can occur across the border.

Confessional Wall

The division created by the wall often heightens border exchanges. In Friendship Park, a beach park that spans both San Diego, CA and Tijuana, Mexico, intimate exchanges are common. Each Sunday afternoon Holy Communion is offered through the fence – increasingly as an act of civil disobedience. Here the fence serves as an opportunity for confession, with both confessor and priest must ask that his trespasses be forgiven as they must transcend the border to perform the rite.

BORDERWALL AS ARCHITECTURE
Social and Ecological Infrastructure



North Elevation Climbing Wall



Climbing Wall

“Show me a 20 foot fence and I’ll show you a 21 foot ladder” has become a mantra for describing the fence’s inadequacies. Various techniques have been used to surmount the wall. Artist Judi Werthein has created special shoes called Brincos (jumpers) – “crossing trainers” – designed to help illegal immigrants negotiate the sometimes deadly terrain they encounter when crossing the border from Mexico to the U.S. Various makeshift platforms/ramps have also been erected to allow cars to drive over the border fence. Here, the act of climbing the fence becomes not more difficult, but more challenging, as it takes on the language of a rock climbing wall with various routes and grading.



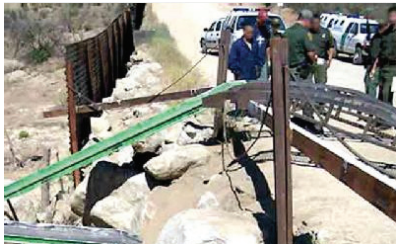
South Elevation Climbing Wall



Musician Glenn Weyant

Xylophone Wall

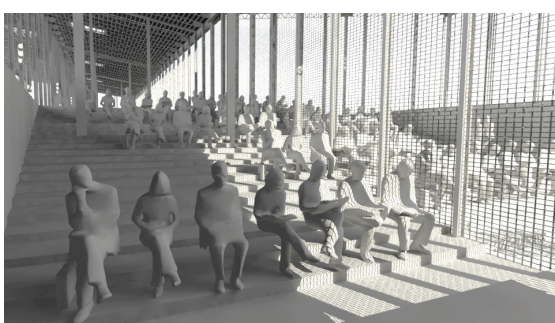
Musician, Glenn Weyant, performs music on the wall that divides Mexico from the United States. Weyant places contact microphones on a section of the wall near Nogales, Arizona, and then he uses a cello bow against the metal of the wall to create exotic and avant-garde sounds. The Xylophone Wall allows for multi-person/bi-national informal and formal performances on the border.



Makeshift ramps and ladders used to breach border wall

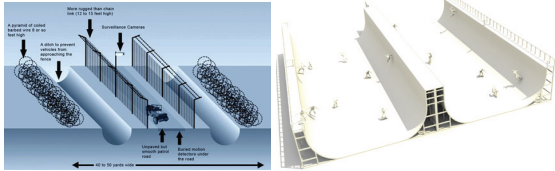
Teeter-Totter / Swing Wall

The trade and labor relationships between the U.S. and Mexico are in delicate balance. Mexicans throng to the U.S. to find work, but often long to live comfortably in their own country. U.S. industry and agriculture is dependant upon immigrant labor pools, yet the Department of Homeland Security, Border Patrol, and Immigration and Naturalization Services have made it increasingly difficult to attract foreign labor. These proposals demonstrate the delicate balances between the two nations.



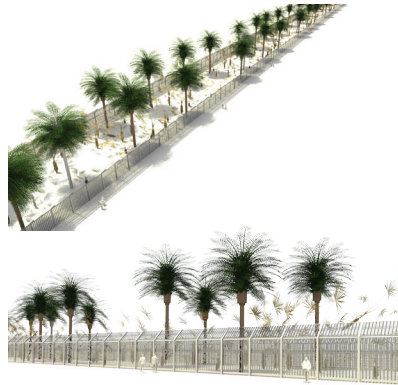
Theater Wall

Many events take place through the border wall, bringing people from both nations together. These include yoga, volleyball, communion, prayer and deaf signing. A Theater Wall would allow for bi-national collaborations in performance, music, theater and film.



Vert Wall

The introduction of the double fence in many areas offers an opportunity to activate this interstitial zone. Vert Wall understands this area as a space of play, while also challenging the strategy of crossing. The double barrel section is remnicient of initial security schemes that involved double ditches. This section also allows for the containment and distribution of water along the border channeling overflow away from flooded regions and diverting water to areas experiencing drought.



Forest Wall

Once found across much of the lower Gulf Coast, sabal palm forests have all but vanished under the plow. The few remaining stands of trees are located in three conservation areas along the path of the border fence. In order to save the sabal palms from being leveled by fence construction, they are being carefully transplanted, one tree at a time.

Simultaneously, along the border with Eagle Pass, TX, Mexicans, have begun to plant the first of 400,000 trees to form a “green wall” in protest of the fence.

Forest Wall adapts the tree-line protest by proposing a double fence condition around the sabal palm preserve. A forest surrounded by a double or triple fence is a perverse take on a reserve – a preservation of an ecology that in a post-border condition could serve to stitch the two sides back together again.