

T U C S O N

MEMBER BUILDING CASE STUDY

2030  
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*National Law Center  
for Inter-American Free Trade*



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# MEMBER BUILDING CASE STUDY



## *National Law Center for Inter-American Free Trade*

### ORIGINAL CONSTRUCTION PROJECT



#### Project Background:

The National Law Center works on the modernization and harmonization of commercial law in the Americas, Africa and Asia, contributing to grassroots economic progress and inclusive prosperity to fulfil the United Nation's Sustainable Development Goals through better business laws and practices.

In 1992, Professor Boris Kozolchyk, a foremost international commercial and comparative law scholar, founded NatLaw in Tucson, Arizona. Initially, NatLaw assisted the governments of the North American Free Trade Agreement (NAFTA) region with the development of standard practices for the implementation of certain aspects of the NAFTA Agreement, such as harmonized transportation regulations.

The National Law Center for Inter-American Free Trade (NatLaw) is a 501-c-3 non-profit research and educational institution affiliated with the James E. Rogers College of Law at the University of Arizona, with commitment to economic development and poverty reduction through commercial and regulatory reform.

This building's conceptual design was inspired by Boris's admiration for the Israeli Supreme Court Building. In that building, the "straight line" represents the strict order of law while the "curve" represents the equity that softens the strict order of law. Entry is on the east, opposite the entry street, to honor the city of Tucson as it points one's view towards downtown. The circular drive entry, with flags from 34 countries is also located at the east to pay respect to the natural park environment of the Santa Cruz river and to allow the flags to be seen from interstate 10 to the east.

#### Innovative Measures:

##### Building Construction:

As a custom pre-engineered metal building, materials were selected for permanence – metal, glass and concrete block. Block is left natural without traditional stucco to reduce maintenance. Double block walls, which extend through the exterior organize offices, reduce sound transfer and provide internal thermal mass.

##### Energy:

The east west axis was selected to maximize natural daylighting while reducing direct light and heat gain into the building. Entry on the east end, opposite the access street, permits early day entry with morning sun and reduces solar impact when leaving in the afternoon. Roof insulation is R-38. Windows are double pane. Exterior block walls are insulated on the interior.

##### Water:

Rainwater is harvested from the roof of the building for irrigating planting areas. Reclaimed "purple pipe" water is also used for landscaping.

##### Transportation:

Showers and a dressing room are provided to encourage staff to walk, ride a bike or take public transit to work, rather than drive a car.

#### BUILDING STATISTICS

Owner: NatLaw 501 c-3 non-profit  
Building Type: Research and Education  
Executive Director: Marek Dubovec  
Architect: David Plotkin, DKP Architects, designer with Architect Co., Architect of record  
Location: 440 N. Bonita Ave, Tucson  
Building square footage: 11,000  
Number of floors: One  
Constructed: 2002

#### ENERGY

EUI: 23.6 kBtu/sf/yr  
Baseline EUI: 54.7 kBtu/sf/yr  
2030 Challenge Goal: 27.35 kBtu/sf/yr  
Reduction from Baseline: 57%  
Energy Cost: \$12,750.60  
Cost Savings from Baseline: \$16,902,000

#### WATER

WUI: 8.1 gal/sf/yr  
Baseline WUI: 12.6 gal/sf/yr  
2020 Challenge Goal: 6.3 gal/sf/yr  
Reduction from Baseline: 36%

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