



# 2016 CASE STUDY

Type: Commercial | Issue: CR201603

## Failing Retaining Wall Supported with Ram Jack Tieback System

RAM JACK LOCATION:

### Ram Jack Centro America

[www.ramjackcentroamerica.com](http://www.ramjackcentroamerica.com) | US 727-447-5502 | CR 011-506-8702-1034  
Heredia Province, Heredia, Costa Rica



# HEREDIA WAL-MART | TIEBACKS STRAIGHTEN LEANING WALL

Heredia, Costa Rica

CASE STUDY 2016



Wal-Mart has long extended past the borders of the US and remains a budget-conscious shopping staple even in many remote countries. Located just north of the capitol city of San José, Costa Rica, the newly built Heredia Wal-Mart is one such establishment, providing for the shopping needs of both locals and tourists alike.

## SITUATION

Built aside an existing retaining wall that separated the Heredia Wal-Mart from its neighbors, the excavation process during construction resulted in soil pile-up against the wall, causing it to lean toward the adjacent property. Complicating the situation was a large water tank near the wall that would need to be avoided during any work. In addition, the concrete used

to build the wall was sub-par quality and limited in strength, likely due to being hand-batched many years ago. Temporary shoring beams were installed immediately to ensure the safety of the work crew during any and all construction.

## INSTALLATION OVERVIEW

**Total # of Piles** • 10

**Products Used** • #4550 Wall Tieback Assembly

**Product Type** • Tieback

**Typical Applications** • Ram Jack's 2 7/8" dia. helical lead sections can be used in either tension or compression due to its unique internal threaded connection. Internal threaded connection makes a smooth homogenous pile.



## **PROPOSED SOLUTION**

Ram Jack Centro America proposed excavating the soil near the wall, installing tiebacks through the existing columns supporting the wall, and installing new construction brackets so further tiebacks could be fastened. The tiebacks would both straighten the leaning wall and improve its structural integrity.



## **OUTCOME**

Using a core drill to bore holes through the columns and a jack-hammer to chew through needed sections of the wall, Ram Jack Centro America set itself up for success. Once work started, it became clear that the structural integrity of the wall would not allow it to be moved. Instead of straightening it, Ram Jack Centro America decided to stabilize it in place. When finished, ten piles were installed to an average depth of 24 ft., and numerous tiebacks were installed to support the wall, providing the structural support needed to restore stability. The contractor and engineer were more than pleased with the results. In fact, the contractor has used Ram Jack Centro America for two subsequent jobs!





INTRODUCING THE ALL-NEW

# TECHNICAL MANUAL



## EVERYTHING AN ENGINEER NEEDS

The Ram Jack Technical Manual provides engineers with the information that you will need to understand, design, and specify Ram Jack's helical and driven piles. It also provides information verifying compliance with current building codes and ICC-approved acceptance criteria.

Everything an engineer could ever want and need to know about Ram Jack Helicals and Driven Piles in one book. If you or your firm would be interested in a Ram Jack Technical Manual, please contact your local Ram Jack dealer by emailing [info@ramjack.com](mailto:info@ramjack.com).

Franchise Highlight

## Ram Jack Centro America

Engineers rely on Ram Jack for our proven, code compliant, engineered products and solutions. Our piles and brackets have the highest rating among competitors' products recognized by ESR-1854. Ram Jack has the most products recognized by the ICC—with products in all four applications listed in the ICC Acceptance Criteria AC358. Our ISO 9001:2008 certified manufacturing facility ensures reliable and quality products.



### LOCATIONS

- HUDSON, FLORIDA
- HEREDIA, COSTA RICA

### CONTACT US

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