

precast solutions

A Magazine for Specifiers and Engineers

SPRING 2013

ARCHITECTURAL

In this issue:

How to Rebuild After Superstorm Sandy

Creative Use of Precast Awards

Recent Advancements in Fabric Forms

Perot Museum

Retail Projects Need Quick Enclosure



PRECAST CONCRETE VENEERS



BEAUTY WITH BENEFITS

Look closely. There's no longer a need for materials that are heavy, expensive, not reproducible, and require expensive maintenance. Precast concrete veneer replaces those hard-to-work-with materials without the difficulties, environmental impacts or other associated concerns. It's the beauty of old-world stone with all the modern benefits.

Precast concrete wall veneer is usually lightweight and easy to install, with products ranging from thin brick veneer to cladding inspired by limestone, travertine and other stone products. Precast concrete can be produced locally and manufactured in a nearly unlimited array of shapes, colors, textures and accessories. Precast concrete floor veneer can replicate tile, pavers, custom patterns, wood, slate and other materials. With precast concrete veneers, if you can imagine it, we can do it!

For additional details and a gallery of possibilities, visit precast.org

precast
makes it possible™

precast solutions®

ARCHITECTURAL ISSUE



4 | NPCA CREATIVE USE OF PRECAST AWARDS

The annual competition recognizes innovative applications of precast concrete.

8 | BREAKING THE MOLD: EXPLORATIONS SHAPING ARCHITECTURAL PRECAST

Innovations in energy efficiencies and forming techniques lead to unimagined designs.

BY MATT ROPER, M.ARCH., LEED AP



12 | TIME, MONEY AND PRECAST

Faster construction with precast concrete equals more sales for national retailers.

BY CARRIE JOHNSON, P.E., AND DOUG TAYRIEN, AIA, LEED AP



16 | SAFER & STRONGER: HOW TO REBUILD AFTER SUPERSTORM SANDY

After the razing of New Jersey's coast, the need for superior building materials like precast concrete wall systems has become abundantly clear.

BY SUE McCRAVEN



24 | PEROT MUSEUM OF NATURE AND SCIENCE: A WORK OF ART AND SUSTAINABILITY

BY CLAUDE GOGUEN, P.E., LEED AP



28 | ENHANCING MECHANICAL CONNECTIONS

Function, ease of construction and surface aesthetics hinge on the proper connections.

BY EVAN GURLEY



SPRING 2013
VOLUME 11 | NUMBER 2

ON THE COVER:

A strong, safe and resilient precast concrete enclosure for this home in Lincroft, N.J., was erected faster than homes built with traditional construction materials. In addition to its superior resistance to storm forces and water penetration, precast concrete offers the homeowner elegant architectural elements, energy savings and a very quiet interior.

www.northeastprecast.com

Precast Solutions (ISSN 1934-4066 print, ISSN 1934-4074 online) is published quarterly by NPCA, the association of the manufactured concrete products industry.

Material in this publication may not be reproduced without written permission from NPCA. Requests for permission should be directed to the editor.

© Copyright 2013 by NPCA.

Publisher: Ty Gable

Executive Editor: Bob Whitmore

Managing Editor: Ron Hyink

Editor: Sue McCraven

Associate Editor: Kirk Stelsel

Graphic Designer: Deborah Templeton

Advertising: Brenda C. Ibitz

Vice President of Development &

Member Services

(317) 571-9500 • (317) 571-9941 (fax)

bitz@precast.org

NPCA

Precast Solutions

1320 City Center Dr., Suite 200

Carmel, IN 46032

(800) 366-7731

(317) 571-9500 (International)

Fax: (317) 571-0041

E-mail: npcaprecast.org



This publication is designed to provide accurate and authoritative information in regard to the subject matter covered; however, National Precast Concrete Association and Precast Solutions act as mediators without approving, disapproving or guaranteeing the validity or accuracy of any data, claim or opinion appearing herein. Information is provided and disseminated with the understanding that National Precast Concrete Association and Precast Solutions are not engaged in rendering engineering, legal, or any other professional services. If engineering, legal, or other professional assistance is required, the services of a competent professional should be obtained. National Precast Concrete Association and Precast Solutions do not assume and hereby disclaim liability to any person for any loss or damage caused by errors or omissions in the material contained herein, regardless of whether such errors result from negligence, accident, or any other cause whatsoever.



NPCA

Precast ... The Concrete Solution

NPCA

CREATIVE USE OF

The National Precast Concrete Association's Creative Use of Precast Awards competition recognizes innovative applications of precast concrete in two categories: Above-Ground and Underground. An independent panel of industry experts served as judges, and awards were presented during The Precast Show 2013 in Indianapolis. For complete descriptions of this year's winning projects, please visit precast.org/awards.



ABOVE-GROUND CATEGORY

FIRST PLACE

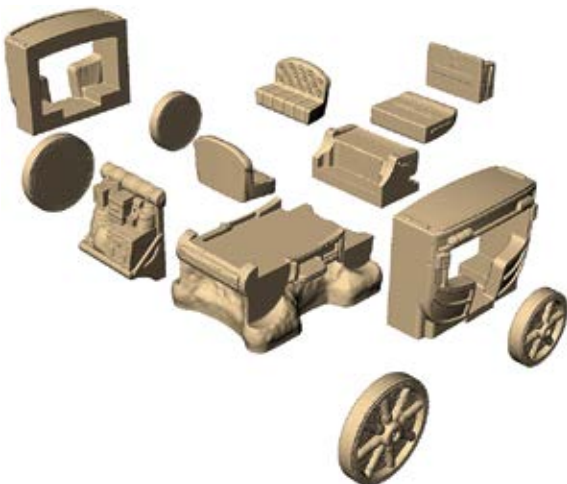
Universal Precast Concrete Inc.

(www.universalprecast.com)

Project: Stagecoach Climber

Location: Yucca Valley, Calif.

The challenge was to produce a realistic, fun-for-kids playground piece while staying within budget constraints, and Universal Precast Concrete met the challenge with a 13-piece, exquisitely detailed precast concrete stagecoach. The realism attained through the intricate design and painting of each piece adds to the authenticity of the replica, which serves as a focal point for the park and an indestructible climbing piece for kids.



PRECAST AWARDS



SECOND PLACE

StructureCast (www.structurecast.com)

Project: Madina Center

Location: Stockton, Calif.

When the project architect set out to design The Madina Center, a new Islamic worship center, he had a specific vision that would bring to life the center's mission and culture. To achieve this look in an efficient and cost-effective manner required a building material that could minimize the project timeline while also providing maximum design potential. The precast concrete solution created by StructureCast included a contract to manufacture and install 56 architectural precast concrete panels. The precast option trimmed the original construction schedule by 15 days, and the panels elegantly captured the architect's vision.



THIRD PLACE

StructureCast (www.structurecast.com)

Project: Tejon Ranch Monument Sign

Location: Tejon Ranch, Calif.

As the second-largest contiguous ranch in the United States, the Tejon Ranch Co. controls more than 270,000 acres. A company that controls so much land needs an impressive sign, and a precast-and-stone design provided the perfect solution. The sign was manufactured in four hefty pieces, with the precast elements ranging from 12,000 lbs to 32,000 lbs. This design not only created an aesthetically pleasing result, but also provided a cost benefit and schedule savings and allowed for a small installation footprint in an environmentally sensitive job site.



HONORABLE MENTION

Northeast Precast LLC (www.northeastprecast.com)

Project: Quarry Retaining Wall

Location: Millville, N.J.



Pacific Precast Inc. (www.precastrail.com)

Project: Martin Luther King Viaduct

Location: Portland, Ore.