Specialty Concrete Products ... From A Producer Near You

Concrete precasters offer numerous catalogs of standard products. But the versatility of concrete allows them to accommodate special designs for special situations. For example, there is a diverse array of pre-cast light pole foundations - round bases, square bases, star pedestals and pyramid shaped bases, all in a wide array of sizes, to be used in a wide variety of applications. Specifically, the pyramid shaped foundation with an attached footing was designed to provide added holding power because soil and ground water conditions made it impossible to dig deep.

Pyramid bases being unloaded at Hillview Reservoir.

Another example are the star foundations, manufactured with voids in them to accept a variety of different sweep sizes. These foundations were designed to provide greater holding power for their weight, as the voids tend to hold the compacted backfill over a greater surface area, and the projecting base engages more soil weight against overturning.

Star shape foundation unit.

Signal foundation from concrete ‘legos’. All photos by Roman Stone Construction Co.

A special signal foundation developed by the Long Island Railroad to enable installation with minimal equipment in limited access sites. Each segment is small and light enough to be handled and installed by two people. The base has inserts to receive four long anchor bolts. Next are placed the middle interlocking sections at 90 degrees to each other, followed by the top “donut”. With it's unique geometry engaging the surrounding soil for stability, the resulting shape forms an easily installed, sturdy foundation for signal lights at crossings.

Reef Ball Installation - Fish Condos.

(continued on page 2)
Situated on Long Island and surrounded by water and recreational opportunities, Roman Stone Construction, Bay Shore, NY, is concerned about the environment and the decline of the surrounding natural fisheries. Man's activities and natural disasters have led to a reduction in natural reef systems.

Reef Ball Installation – Fish Condos

Growth in sport fishing, scuba diving and boating has increased the pressures on these systems. The commercial seafood industry is dependent on the ocean to enable larger yet sustainable harvests. Natural reefs cannot rebuild themselves fast enough to meet human demands. Long lasting artificial reefs are useful tools for restoring reef systems to a natural and productive balance – which is why Roman Stone Construction Company joined with The Reef Ball Development Group to supply this unique product for installation in their nearby environs.

Sound Absorptive Concrete Noise Barriers

Hanson Pipe & Products, Pottstown, PA recently supplied over 200,000 s.f. of sound absorbive noise barriers to Howard County, MD for two highway projects. This very attractive system featured an 'Ellicott Stone' finish on the highway side and a double rake on the backside. The H columns were also precast, while the matching cap detail was cast monolithically with the panels. All were stained in the field after installation.

The panels offer an NRC of 0.85. This is achieved using Durisol in the first 3” of concrete cast against the stone form liner, and normal concrete on top of that.

Durisol sound absorbive noise barriers were first installed in Canada in 1977, and today can be found in the U.S. and all over the world. A post and panel system, the vertical post is anchored using poured footings, driven piles or caissons. The panels span horizontally between the posts and rest directly on the footings. Post spacings up to 24 feet can be accommodated, and wall heights over 35 feet have been constructed. Durisol absorptive noise walls have been installed on highways, rail lines, mass transit lines, industrial and commercial complexes, residential subdivisions, electric utility stations, transformer enclosures, roof top machinery surrounds, and tunnel entrances.

PCI Design Competitions for 2005-2006

The Precast/Prestressed Concrete Institute invites schools to participate in the Fifth Annual PCI Architectural Student Design Competition, which will focus on the design of a School of Architecture and University Museum. In addition, college graduates in the Intern Development Program who are not yet licensed architects may enter this competition. The design project must be completed and submitted by May 1, 2006.

And once again, the Engineering Student Design Competition – The Big Beam Contest – is underway. Each student team must work with a PCI Producer Member to build a precast concrete beam. The beams will be tested and prizes awarded for best performance. Applications are due by March 15, 2006 and results by June 15, 2006. (PCANY has application forms and details)

Noise Barriers Add Beauty to BQE

As shown in the Dec. '04 PCANY Newsletter, the noise barriers installed on the Brooklyn Queens Expressway, prove that concrete panels don’t have to be boring. The white stained panels shown here feature a green stripe arching across the bridge, and smaller indented arch reveals cast into each piece. Having eight different surface planes on both sides, the panels were cast vertically with an SCC mix to obtain the near perfect exterior surfaces.

Hanson constructed a dual face rubber mold to produce the attractive architectural panels.

L. C. Whitford obtains PCI Plant Certification

Congratulations to The L.C. Whitford Co., Inc., on gaining recognition under the Precast/Prestressed Concrete Institute Plant Certification Program. Look for their listing in future PCI publications as a PCI Certified Plant.
Carbon Grid  R-24  3-6-3  13-6  10-0  171
(hike?)

Not a football play, just the description of a very efficient and economical load bearing wall panel system installed on the Adler Warehouse in South Brunswick, NJ.

Oldcastle Precast supplied and installed 171 precast panels, totaling 82,100 sf, to complete the skin of this building. To improve energy efficiency and reduce roof insulation, the owner specified an R-24 value for the walls. The panels were made with a 6” insulation core bonded to 3” inner and outer concrete layers. Carbon grid was used as the shear transfer material between the layers.

The 13’-6” wide panels incorporated 9’ x 10’ overhead doors to provide the owner with his required door spacing; typical panels were 10”-0” wide. The very handsome horizontal and vertical feature lines were achieved with magnetic strips attached to the forms. The final finish was field applied masonry paint.

Visit www.pcanyn.org for more information on:
- precast concrete products and their application
- precast concrete producers with links to their websites
- precast concrete association of New York, PCANY

If you would like to receive this newsletter via email instead of hard copy in the mail, send your request and email address to pcany@aol.com.
Bridge Design Manual Seminar

7:30 to 8:30 Registration and refreshments
8:30 to 12:00 morning session with break
12:00 to 1:00 Lunch (included)
1:00 to 4:30 afternoon session with break

Primary Presenters:
Mr. Reid Castrodale, Ph.D., P.E., Carolina Stalite Company, Salisbury, NC
Mr. Eric Thomkildsen, P.E., Collins Engineering, East Greenwich, NY
Mr. Mark Hoover, P.E., Schuykill Products, Cressona, PA
Mrs. Rita Seradarian, P.E., PCI NY/New England, Belmont, MA, moderator

Continuing Education Credits
7.5 Professional Development Hours (PDH) will be awarded for attendance. Certificates of Completion will be given to all seminar participants. Complete information and registration form are inside this newsletter. Seating is limited. Payment or valid purchase order must be received in advance. Dates/Places: January 11, 2006 in New York City & January 12, 2006 in Albany.