In his eerie 1970’s ballad of the Edmund Fitzgerald, Gordon Lightfoot wrote about the fury of the Great Lakes. Oswego, NY is no stranger to the weather systems that sweep across the great expanse of Lake Ontario. Located on the eastern most end of the Lake, it bears the brunt of the storms that are pushed across by the prevailing winds unabated for 193 miles.

Such was the challenge when in 2009 the Port of Oswego Authority decided to build 630 ft. of dockage extending out into Lake Ontario. The structure would have to serve, not only as a boat dock, but also as a breakwater to help protect the inner harbor. In their search for a solution they turned to a company which specializes in waterfront solutions. Marinetek is an International company based in Helsinki, Finland. It currently operates in 40 countries around the world and is the largest marina builder in Europe. Their expertise seemed to

(See “Floating Precast Concrete Docks” continued on page 2)
Floating Precast Concrete Docks (continued from previous page)

be what was needed to provide a functional, durable and attractive product that was also cost effective.

The solution was a precast concrete floating dock system. Marinetek had been building these for years in Finland where they experience many of the same weather conditions as seen in Oswego, NY. The dock would consist of 10 precast pieces. Eight pieces would be 65½ ft. long, 11 ft. 9 in. wide and 4 ft. 3 in. tall weighing in at 103,588 lbs. each. The remaining two pieces would be 52½ ft. long, 11 ft. 9 in. wide and 4 ft. 3 in. tall weighing 81,548 lbs. each. These pieces would all bolt together to form one continuous L-shaped dock. They would be anchored to concrete blocks strategically placed on the lake bottom providing excellent stability to the structure.

Marinetek had the expertise but did not have a manufacturing facility in close enough proximity to the project. Their search for a local precaster with experience and the equipment necessary to handle the heavy weights led them to Jefferson Concrete Corporation of Watertown, NY. In April of 2010, Marinetek shipped a mold from West Palm Beach, Florida to Watertown, NY and also provided training for the Jefferson Concrete Production Team led by Jim Motes. Doug Dickerson would also play a vital role as QC Manager for Jefferson concrete, developing an acceptable mix design and doing the final finish on each piece. Marinetek insisted that every dock they put their name on needed to look the same no matter where it was built. Achieving a consistent finish was one of the most formidable problems the crew had to deal with. These dock sections were being built outdoors and the weather ranged from a wet 40 degree day to a dry and windy 80 degree day and everything in-between.

Accuracy was very important and tolerances were tight. In order for these pieces to float level, everything had to be exactly where it was supposed to be. If the large Styrofoam voids, which were shipped from Florida, were off ¼ inch, the piece would list to one side. The exposed Styrofoam had to be coated to keep marine organisms from burrowing into it. Every piece of metal that went into the mold had to be galvanized.

The handling requirements of the dock pieces were also very demanding.

The cables used to lift the pieces couldn’t deviate more than 3 degrees from vertical. There were also only 2 accept-
Floating Precast Concrete Docks  (continued from previous page)

able blocking areas that could be used for storage or shipping. With so few places to support these large pieces, shipping and storing them without damage became a real concern. Marinetek brought in experts — JPW Erectors out of Syracuse. They modified one of their trailers to conform to the support requirements of these docks. Loading and shipping went flawlessly and all pieces were delivered in excellent condition.

The success or failure of the project would be determined when the 10 dock pieces were set in the water. They would have to float level and have a minimum 21 inches floating out of the water. A resounding success – every piece was level and floated 22 inches out of the water. One who takes a stroll on these docks would not believe they are floating. They are stable platforms, very neat and attractive, expandable and low maintenance.

Our thanks to Gerry Lajoie for writing this fascinating article and Adam Losee for the photos, both with Jefferson Concrete Corp, Watertown, NY.
Welcome New Members

Septic Tank Producer Member – Mr. Courtney J. Miner, Jr., President
C.J. Miner, Inc., 25 Route 28A, Valatie, NY 12184

Associate Member – Ms. Dacia DeTiberus, Business Development Mgr.
The M&P Lab, 2210 Technology Drive, PO Box 724, Schenectady, NY 12301

Professional Member – Mr. Richard Johnson, Executive Vice President
D.R. Johnson & Associates, 16 E. Blackwell St., PO Box 549, Dover, NJ 07802-0546

Professional Member - Mr. Preston Halstead, Office Manager
VHB, 100 Great Oaks Blvd., Suite 109, Albany, NY 12203

CDM, Syracuse, NY, 315-434-3200
Clough Harbour & Assoc. LLP, Albany, NY, 518-453-9361
Coffin Engineering Inc., Albany, NY, 518-786-3511
Delta Engineers PC, Binghamton, NY, 607-431-6912
Dewberry, New York, NY, 212-685-0020
Didonato Associates PE,PC, Buffalo, NY, 716-658-1900
Edwards & Kelsey Engrs., Saratoga Springs, NY, 518-848-9733
Erikson Technologies, Inc, Tampa, FL, 813-869-3317
Fischer Associates PE, LS, PC, Rochester, NY, 585-334-5604
Greenman-Pieden, Inc., Buffalo, NY, 716-633-4844
Hunt Eng Arch Surveyors PC, Horseheads, NY, 607-385-1000
J.R. Johnson & Associates, 16 E. Blackock St., PO Box 549, Dover, NJ (7982-5056)
LaBella Associates, PC, Rochester, NY, 585-454-6110
Lamont Engineers, PC, Calleva, NY, 518-234-6028
Maser Consulting, Chestnut Ridge, NY, 854-325-0411
O’Neill Consulting, Spring Lake, NJ, 732-794-0109
Poli Consulting Engineers, Penfield, NY, 585-388-2045
Ryan-Biggs Assoc., P.C., Troy, NY, 518-272-6526
A H Sample, Inc., Otsego, NY, 607-847-9845
R Samuel Engineers, Henrietta, NY, 585-334-0549
Shumaker Consulting Engineering & Land Surveying, PC, Binghamton, NY, 607-798-8381
Simpson Gumpertz & Heger, Inc., Waltham, MA, 781-907-9000
SJB Services, Inc., Hamburg, NY, 716-644-8110
Slumc, Dehngst & Associates, PC, Latam, NY, 518-785-6000
Steuben County DPW, Bath, NY, 607-784-0479
TransTech Systems, Schenectady, NY, 518-372-6057
TVG Consultants, Elm, NY, 615-655-8842
VHB, 100 Great Oaks Blvd., Suite 109, Albany, NY 12203, 518-452-0300
Watson Engineering, PC, Oerce, NY, 607-223-8900
Watts Architecture & Design, PC, Buffalo, NY, 716-296-1500
WSI-Sells, Briarcliff Manor, NY, 914-747-1120
Wilbur Smith Associates, Latam, NY, 518-783-1882

OFFICERS, DIRECTORS AND STAFF
President: David Van, Odyssey Prestressed
    Vice-President: Joseph Amola, A R Concrete
    Secretary: Mike Wegland, JPCarrara & Sons
    Treasurer: Todd Clarke, Lakelands Concrete Products
    Immediate Past President: Tom Montalbine, Roman Stone Construction
    Associate Member Director: Wally Swiger, A-Lok
    Professional Member Director: Doug Vanderveer, Lamont Engineers
    Seaco Tank Group Director: Ed Pedersen, Acco Sales
    NCCSA Director: Rick Sullivan, Lehigh Northeast Cement Co.
    Executive Director: Carl Buchman, PCANY, 585-249-6564

With this issue, we complete 22 years of continuous monthly publication!