



Project:

Key Participants

Design

- Quibel Associates, P.C., Michael Strader P. E., Lead Engineer and Civil Engineer, Powells Point, NC
- Pace Collaborative, Jaye Stutzman, P. E., Mechanical & Electrical Engineering, Virginia Beach, VA
- Beacon Architecture & Design, Chris Nason, AIA, Architecture, Kitty Hawk, NC.
- House Engineering P. C. Rick House P. E., Structural Engineer, Kitty Hawk, NC.
- Edwin Andrews & Associates, P. C. Edwin Andrews, Geotechnical Engineer, Raleigh NC

Construction

Hatchell Concrete Inc, Derek Hatchell, General Contractor
Basnight Construction Company, Mr. Jimmy Basnight, Mechanical Contractor

Process & Equipment

F. R. Mahony & Associates, Inc., Ed Quann, President, Amphidrome™ System provider

Represented by

Benjamin O. Paine Company, LLC
Keith Dobie Sr, President

Amphidrome™

WASTEWATER TREATMENT PLANT

H2OBX Waterpark

Powells Point, NC

BENJAMIN O. PAINE
COMPANY, LLC

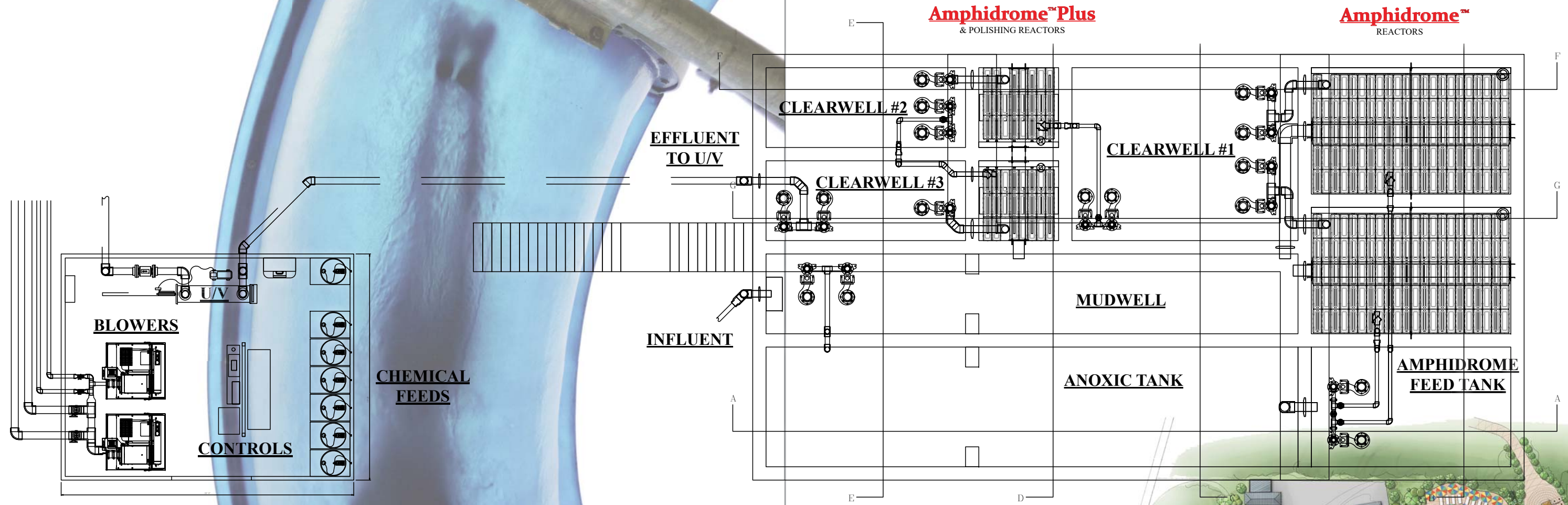
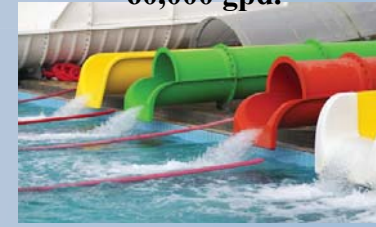
EST. 1870 (CLOSED 1955) RE-OPENED 2014

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BENJAMIN O. PAINE
COMPANY, LLC

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The H2OBX Waterpark wastewater treatment plant will serve the OBX Water Park currently under construction in Powell's Point, NC. The Amphidrome™ plant shown in the drawing on this page is designed for **60,000 gpd.**



Amphidrome™ is a fixed film biological nutrient system developed by W. Keith Dobie Sr., President of F. R. Mahony & Associates, Inc at the time. Rights to the patent were sold to Tetra Corporation, now De Nora. Don McCarty of Tetra assisted in the patenting process and is also named on the patent. Dobie and F. R. Mahony & Associates Inc. received a license to provide Amphidrome™ in the United States. Mr. Dobie sold FRMA to senior employees and is now President of Benjamin O. Paine Company, LLC.

B. O. Paine Company, LLC is a family company where Mr. Dobie worked as a teenager. Benjamin Paine was Mr. Dobie's great grandfather. The company evolved from horse shoes in the mid 1800's to steel rims for wagon wheels to wagon wheels then to railroad car wheel carriages and finally to sharp edge tools. The tool factory was originally powered by a waterwheel and the company owned a reservoir to provide sufficient water to the waterwheel. In a roundabout way, managing the reservoir brought Mr. Dobie into the wastewater field, combining his interest in water with his academic interest in microbiology.

Design Influent
 CBOD 337 mg/l, TKN 60 mg/l, Ammonium Ion as N 45 mg/l and TSS 250 mg/l

Design Effluent
 BOD < 10 mg/l, TSS < 5 mg/l, Ammonium ion < 1 mg/l, Total Nitrogen < 4 mg/l, Total Phosphorous < 3 mg/l
 Fecal Coliforms < 14 colonies/100ml

