August, 1992

NARRATIVE
"REBIRTH OF A LANDMARK – THE HUNTINGTON BEACH PIER"

THE CHALLENGE

The citizens and businessmen of Huntington Beach have lived without their landmark Municipal Pier since July 12, 1988, when it was declared unsafe after fierce storms of the previous January ripped off the end 250 feet, including the two year old "End Cafe". Since that time, a grass roots campaign to rebuild the Pier has gathered momentum. The campaign produced a unique public/private partnership to fund the project, a strong construction team, novel cost–effective construction techniques and, ultimately, a very successful project. Highlights of the campaign included sales of tee shirts and other "Pieraphernalia" by the P.I.E.R. (Persons Interested in Expediting Reconstruction) Citizens Committee which has raised well over $100,000; the annual "Run for the Pier"; the First Annual "Battle of the Surf Bands"; a $92,000 check from the Mayor of Anjo, Japan, our sister city; and a very low bid. The fruits of all that labor culminated in a weekend bash in July that none of the locals will ever forget.

Huntington Beach, originally a farming community along the Orange County coast, south of Los Angeles, was incorporated in 1909. In 1920, oil was discovered and the small village quickly mushroomed into a full–fledged boom town. Pacific Coast Highway was constructed in 1925, opening up access to 8 1/2 miles of virgin beach and ushering in the City's gradual transition to what is now known as "Surf City". By the 50's and 60's, Huntington Beach had become the fastest growing city in the nation. With a population of 181,000, the City is now world renowned for its surfing waves and is becoming a destination resort.

The first Huntington Beach pier, a 1000 foot long timber structure, was built in 1904, five years before the City's incorporation. In 1912, winter storms nearly destroyed the pier, and a $70,000 bond issue was approved by the voters to build a new one. The new 1350 foot long concrete pier, at the foot of Main Street, was dedicated in June of 1914. This pier was the longest, highest and only solid concrete pleasure pier in the United States at that time.

In 1930, the pier was lengthened by 500 feet with a cafe at the end. In 1939, a hurricane destroyed the end of the pier and the cafe. After reconstruction, it was re–opened in 1940. In 1941, the Navy commandeered the pier for submarine watch during World War II.

Forty years had passed when, in March of 1983, storms severely damaged the end of the pier and the cafe necessitating demolition and closure. In September, 1985, the rehabilitated pier re–opened with a new two story "End Cafe", only to be washed away again on January 18, 1988.

THE SOLUTION

In July of 1988, Fluor/Daniel Consultants, of Irvine, California, submitted their final report regarding the structural stability of the pier. Based upon their findings, the pier was declared unsafe and thus closed. Noble Consultants, also of Irvine, developed oceanographic design criteria for wave characteristics, bottom profiles and beach stability. Underwater surveys were conducted by Scientific Surveys, of San Diego, California. The Fluor/Daniel report indicated that repairing the existing pier was not a cost effective approach. Therefore, in April, 1989, the Huntington Beach City Council selected Moffatt and Nichol Engineers, of Long Beach, California to design a new pier.

In July, 1990, construction bids were opened. Riedel International, a 35–year old firm from Portland, Oregon, submitted a remarkably low bid of $8.6 million, $2.8 million lower than the next lowest bidder and $2.6 million under the engineer's estimate. Riedel's Vice President, Jerry Nelson, stated the reasons for coming in with such a low bid, which included: (1) incorporating the pre–casting of concrete deck sections rather than the previously specified cast in–place process, and (2) employing Riedel's own steel trestle from which cranes would accomplish old pier demolition simultaneously with new pier construction. The total cost of the project, including the upcoming construction of five buildings on the pier, is approximately $12.5 million.

The new pier replicates the historic architectural style of the original 1914 concrete pier, complete with arched bents. However, this pier is considerably stronger than the original version in order to withstand not only wave impacts and uplift but also earthquakes. Reinforcing steel is epoxy coated to protect against ocean salt corrosion. The steel in the original pier, exposed to the elements all these years, had virtually turned to dust. The 250 foot portion of the pier that was blown away in 1988 was 8 feet lower than the rest of the pier. The new end of the pier is 13 feet higher than its predecessor, far above the wave zone. It is 1856 feet long, 20 feet longer than its predecessor.

Concept Marine Associates, Inc. of Marina del Rey, California, was hired to perform construction management on the project. Riedel kicked–off construction with erection of the trestle in October of 1990. This was followed by simultaneous demolition and pile driving. Some of the more difficult demolition and construction tasks took place that winter. A one month delay was experienced with the discovery and hazardous abatement of asbestos pipes under the old pier. A portion of the demolition was accomplished using the contractor's "Big Digger" floating crane. This operation proved somewhat difficult considering the winter swells that were encountered. Businessmen were concerned about delays during storms, but pile–driving continued on through the rains. The contractor's project manager, Gary Davis, said "You people down here don't know what rain is." During demolition, a sophisticated piece of equipment called a hydraulic shear was employed on the beach to "bite–off" old concrete pilings with little effort. It reminded one of a giant dinosaur, as it devoured the old pier. The weathered piles were so brittle that, when barely touched, they turned to "Rat Feathers", according to Davis. Riedel also used a custom–built hydraulic sled, named "Rosebud", that assures more accurate pile driving; and a conveyor system that delivered 131 foot–long, 24 inch diameter concrete piles out to the end of the trestle. Gordon Fulton, President of Concept Marine, noted "I've never worked on a project before where the pile driving went so smoothly. We haven't even had a Change Order involving pile driving."

THE RESULTS

The team assembled to build the pier, including Riedel, Concept Marine, Moffatt and Nichol and the City staff worked well together to produce a near–perfect project full of cost–effective construction features. Change Orders amounted to only about 3% of the project costs, and no construction claims were filed. This is quite unusual for a complex marine project.

Funds contributed to the pier come from the City, the County of Orange, the State Coastal Conservancy, the Federal Emergency Management Agency, the P.I.E.R. citizens group, and Anjo Japan. Anjo, our Sister City, conducted its own fund raiser and accumulated $92,000. Also, a vigorous professional fund raising "Landmark" campaign seeking corporate donors is continuing to complete the funding for the pier and pier buildings. Thus far, $2 million in private funds have been raised.

It has become quite apparent, through this process, that an ocean pier is a vital organ in the economic, cultural and historical life of a beach community. This landmark project is not only a passionate issue with the residents, but the downtown merchants consider the pier to be a critical component to their economic survival. This project has proved to be a catalyst between the residents, the business community and City officials. The "Pierfest" July weekend celebration, highlighted by the Saturday ribbon cutting which drew 300,000 people, was not merely a re–opening but more resembled a homecoming or a family reunion.