

Tower Above The Competition



Experiencing the Winds of Change

by Loren Later, Vice President
Knife River Prestress

In 2010, Knife River Prestress established a firm foothold in the Renewables Energy industry with wind tower foundations and tower bases.

By introducing a precast segmental concrete tower base extension, Knife River will help the world's top wind energy companies improve their energy yield.

Knife River's base extension, combined with steel towers, will increase hub heights by 20 to 60 meters to better capture the wind's energy. The geometry of the precast system can be modified to provide the desired dynamic performance required for this hybrid tower.

Precast components can be shipped directly to the wind farm or cast on site. High performance concrete, post tensioning and quality fabrication will meet and exceed expectations and construction schedules, helping select wind companies tower above their competition.



NM PRECASTER

North Fork, Siuslaw River Bridge

Mark MacNeil, Estimator

Knife River worked with Mowat Construction to replace the North Fork Siuslaw River Bridge located on Oregon 126 near Florence. This Oregon Department of Transportation (ODOT) structure was designed by Sean White of ODOT-Region 2, headquartered in Salem, Oregon.

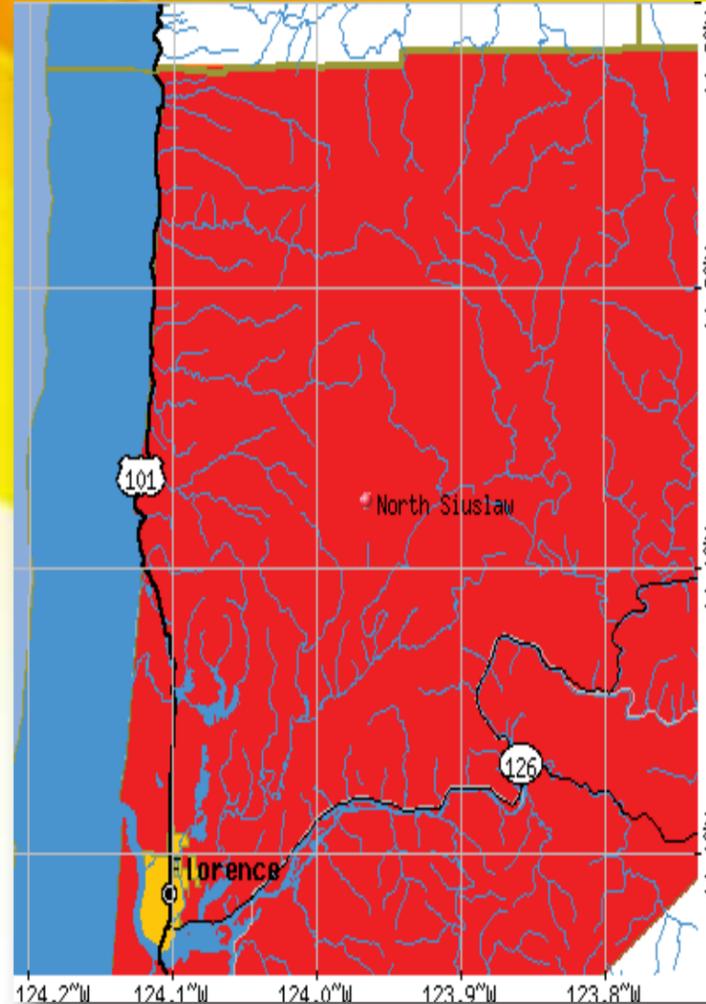
The original 18-span reinforced concrete bridge was constructed in 1960 supported on timber pile trestle bents. Many of the piling needed repair or replacement due to decay. The bridge deck also had multiple ruts as well as no longer meeting current design standards. After a fatal accident at a nearby intersection, the alignment also required modification.

The new two-lane bridge is constructed just south of the existing structure, improving the sight distance at the nearby North Fork Road. The new bridge is designed to meet all current standards, including shoulder width, vehicle crash barrier and earthquake sustainability.

Knife River supplied five spans of prestressed concrete girders to the project. The designer selected four spans of Oregon Standard 84" Bulb Tee's ranging from 135-137 feet in length and one span of Oregon Standard 48" Bulb Tee's for the shorter 92 foot center span.

Knife River also supplied four precast Pylon structures, two at each end of the structure. These serve as decorative reminders of past structures along the coast and really set this bridge apart from other similar structures.

Excellent coordination between Knife River and Mowat Construction insured making this a very successful project, with the contractor substantially ahead of the original April 2011 deadline.



Insulated Wall Panels for Clinics, Healthcare Facilities and Hospitals

Pat Hynes,
 Director of Sales and Engineering

Across the United States, health facilities of every size are recognizing the benefits of building with LEED for hospitals and clinics. Today, too many of Oregon health professional and their patients are spending time in facilities that are inefficient and expensive to operate.

Traditionally, hospitals did not have the new technologies available today to reduce operational costs, foster health and protect patients and employees. A carefully planned green healthcare facility costs less to operate, can be erected faster, and creates less site disturbance and construction waste.

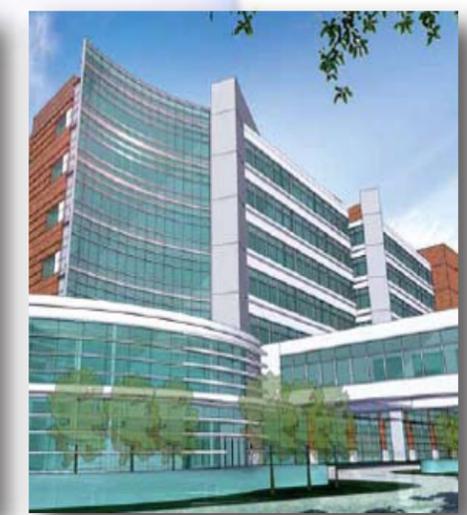
The LEED Rating System (developed by the U.S. Green Building Council) recognizes the unique nature of green design and construction and is the recognized benchmark for building green health facilities.

Health Facility planners on all levels are realizing that going green is essential. By designing and constructing green clinics and hospitals, communities can make a tremendous impact on overall health, recovery time, service staff absenteeism, rehabilitation, doctor and nurse retention, insurance and operational costs.

Knife River Prestress can provide the building products that ultimately offers communities the confidence that their health professionals and their patients will spend their days in an environment that is safe, durable and conducive to healing.

Knife River has embraced carboncast, the Altus, leading edge technology utilizing carbon fiber reinforcing to produce 100% fully-composite panels. These panels have continuous insulation top to bottom and edge to edge, improving thermal efficiency and reducing HVAC equipment requirements and energy costs. Desirable "green" attributes are also enhanced by the fact that there are no cavity walls (insulation is completely encapsulated) preventing moisture and mold from accumulating.

The use of carboncast precast wall construction has shown that, with proper planning, hospital construction time frames can be reduced to allow large facilities to be built in half the normal time. The end result being a benefit to the entire community.



NM PRECAST

Doc Harris Stadium, Camas, Washington

by Zak Perkerewicz, Metro Sales Manager,
Knife River Prestress

On April 13th, Knife River's Prestress Division began delivering precast seating risers for the new Doc Harris Stadium in Camas, Washington. The old Doc Harris Stadium was torn down in December of 2009 and construction of the new stadium has to be completed by the 2010 football season.

The new structure will seat up to 4,000 spectators; 3,000 on the home side and 1,000 on the visitor's side. Knife River will supply 100 "triple" and 10 "double" precast riser units for the project.

Once complete, metal seating benches will be attached to the precast risers. Using precast concrete risers in this application will drastically cut time out of the project schedule.

