

Member Feature

The Fastest Tall Tower in Texas

by Sally Bickley

Robstown is well-known for its cotton farms. But Robstown has another type of farm called a "tall tower farm." The Federal Aviation Administration requires tall communication towers to be located in one area to reduce hazards to aircraft. The intersection of CR 67 and 28 near Robstown is the "tall tower farm" for the Corpus Christi area.

Two years ago, the tower farm in Robstown made history by being the site of the "Fastest Tall Tower in Texas." H.C. Jeffries Tower Company and Erickson Air-Crane joined forces to build a 981 ft. tall broadcast tower. This was the first time a tower with guy wires was built using a helicopter. A tower that would ordinarily take 4 months to build took only 11 days using the helicopter. The helicopter carried sections of the tower, hoisting them up and placing them on lower sections, to be attached by bolts.

Not just any helicopter can do this type of construction. Erickson Air-Cranes are special helicopters with two jet engines and a long boom. An Air-Crane helicopter costs \$17 million, lifts up to 25,000 pounds and uses 500 gallons of jet fuel every hour. It has two forward pilots and an aft pilot, who places the equipment so the bolt holes align precisely.

Conventional tower building techniques require using a "gin pole," or a long boom attached to the tower. The gin pole lifts additional sections to be bolted on to the tower. As each section is attached, the gin pole



Rear view of the Erickson Air-Crane with two antennas on the ground. The tower was built in June 2000, and was upgraded in January 2002 with 2 additional antennas.



The Erickson Air-Crane helicopters require an entourage of helicopter mechanics, jet fuel trucks and other support vehicles. Their special design allows them to lift 25,000 pounds.

leapfrogs up the tower, to lift another section. Construction shuts down in winds of 20-25 miles per hour because of the difficulty of controlling the cables and tower sections.

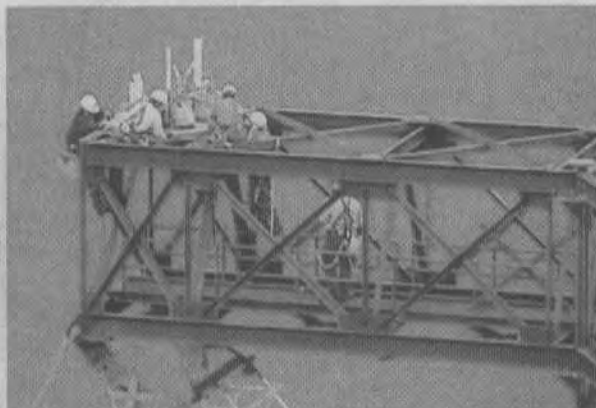
Construction with the Air-Crane can work in up to 30-35 miles per hour wind. The helicopter creates its own downdraft, which cancels out some of the wind. The length of the cables used for lifting and controlling the sections is shorter, and not as subject to stretch or stress from the wind.

The tower in Robstown has a candelabra pedestal array, which allows it to host multiple antennas. KZTV, Channel 10, and Univision are two broadcast tenants of the tower. The tower also provides two-way communications for Duke Energy and Cross Tex Energy, two pipeline companies.

The tall tower received another visit from the Air-Crane in

January 2002. Two additional antennas were attached to the top of the tower. Work was delayed until 11:30 a.m. due to thick fog. Once the crew could see the top of the tower, they lifted and placed two base plates, raised the antennas and completed all construction by 3:00 p.m.

Texas native Herbert Jeffries began his career painting water towers. In 1979, he started building towers. His companies build, maintain and lease space on communication towers. The H.C. Jeffries Tower Company is located in Porter, Texas and owns towers in Freer, Alice, and Oilton in south Texas as well as other locations around the country. Their telephone number is 281-577-8000, and their website is located at www.hcjeffries.com.



The tower crew atop the candelabra pedestal array. This design allows the tower to house multiple antennas. In the photo, only one antenna is erected. The tower now has 3 antennas.



HC Jefferies Tower crew attaches the base plates for two new antennas in January 2002. Attaching the base plates and antennas was accomplished in 3.5 hours.



The Erickson Air-Crane placing the final antenna on the tower. The tower is now at 30% capacity. KZTV, Channel 10 and Univision lease the tower for their broadcast equipment.

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