San Francisco-Oakland Bay Bridge

Epic Operation Lifts Bay Bridge Segment Into Place

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Oakland, CA, February 8, 2006 - The new Bay Bridge Skyway project reached another major construction milestone Wednesday, Feb. 8, as Caltrans and its contractors Kiewit FCI Manson and Bigge Crane & Rigging successfully lifted into place an enormous steel bridge section weighing over 1,700 tons. This “transition span” is more than twice the size of the 780-ton concrete deck segments Caltrans is placing on the bridge, and will connect the Skyway and Self-anchored Suspension (SAS) portions of the new east span of the Bay Bridge. Computer-controlled winch devices called “strand jacks” were used to lift the massive section more than 150 feet from the waterline to the top of the deck — a process that took more than 15 hours to complete.

The 200-foot by 85-foot transition span is a steel box girder bridge segment that will carry 5 lanes of eastbound traffic. The second transition span, which will connect the westbound portion of the Skyway and the SAS will be erected later this year.

Because of the box girder’s massive size, four different strand jacks were required to lift the span into place over San Francisco Bay. The east (Oakland) end of the transition span was lifted by cantilevering the strand jacks off the end of the Skyway. To lift the west (San Francisco) end of the span, two towers that stand over 175 feet tall were erected, with a pair of 150-foot beams placed across the towers to hold the strand jacks.

The transition span was fabricated and shipped by barge from Portland, Ore. The barge was positioned under the bridge and then moored for the operation. Once the barge was secured, the box girder was rotated 90 degrees to be in line with the bridge, and the strands from the strand jacks were connected to the box girder for lifting. After lifting this segment to the appropriate elevation, two temporary towers were placed beneath the transition span to support the structure until it can be connected to the completed bridge. Temporary Tower A is located on the Skyway end of the span and will be removed within a few weeks after a concrete closure pour connects the segment. Temporary Tower B, on the SAS side of the bridge, will remain in place until the SAS is constructed.

The Skyway portion of the new Bay Bridge is currently 85% complete and scheduled for completion in late 2007. The entire new Bay Bridge east span is expected to open to traffic in late 2013.