



Description of the Work

After the completion of the new Eastern Span of the San Francisco-Oakland Bay Bridge in 2013, the old bridge, not seismically resilient, needed to be removed. The truss deck, approximate 1.97 miles long, included five 504-foot spans. The contractor proposed to dismantle this section by cutting and lowering each complete span on a barge to then be transported to a yard for proper disposal. This strategy had several advantages: easy lead paint mitigation, no need of temporary supports and safer/faster dismantling in a land location. The weight of each 504-foot section (approx. 1,700 Ton each) presented a unique challenge for conventional lowering methods.

Freyssinet/Hebetec Scope

Freyssinet, Inc. provided the heavy lifting equipment required for the lowering operation with onsite technical assistance. 4 sets of strand lifting units. Strands were arranged in coilers so that after each lowering operation they can be easily recovered and moved safely to the next span. During the lowering operation, the 8 lifting units were controlled simultaneously by a central PLC in a control desk allowing for full monitoring of load and displacement during the operations. Each maneuver was completed in less than 6 hours, including the time for cutting the truss, lowering and transferring the load to the barges. The 5 spans were dismantled safely in less than 6 months.

General Contractor :

CEC/Silverado Contractors JV

Owner :

CALTRANS

Beginning of works :

February 2016

End of works :

August 2016

Facts



Weight per Steel Truss 1,700 Ton
Lowering Distance 45 m

Handling equipment

Strand Jack H-600 4 units
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Hydraulic PA-4-30 4 units
EV-55 Fork 1 unit



Pictures are a courtesy of Caltrans