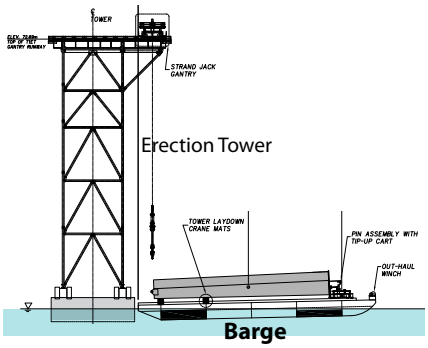
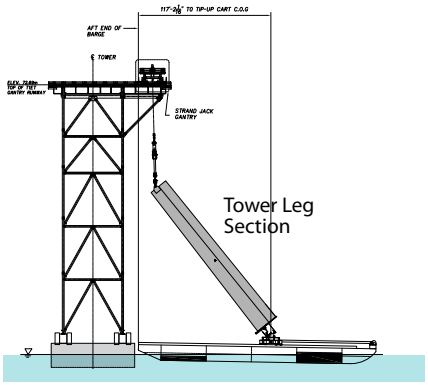
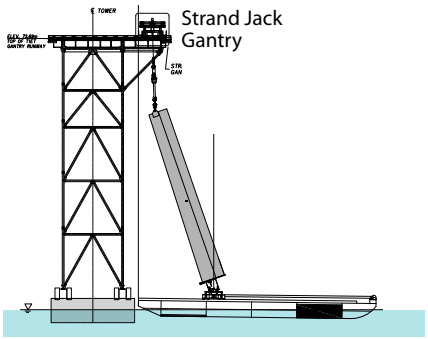
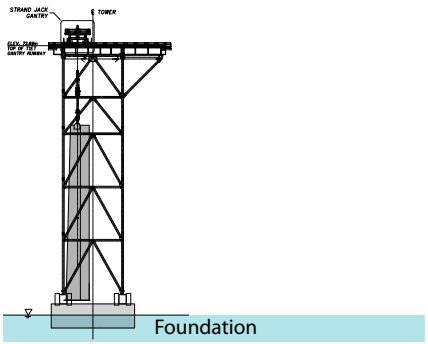
THE SELF-ANCHORED SUSPENSION SPAN (SAS) TOWER

The iconic, stand-alone 525-foot-tall tower of the new Bay Bridge.









If one single element bestows the status of "world-class" on the new East Span of the San Francisco-Oakland Bay Bridge, it is the Self-Anchored Suspension (SAS) Span. This graceful tower will echo the towers of the West Span, while giving the SAS a unique profile.

The erection of the first tower sections marks a new direction for SAS construction – straight up. From tipping up the 2.3-million-pound tower leg sections to building the erection tower and tower crane, vertical construction adds a new dimension to the already astonishing and unprecedented engineering and construction that is synonymous with the seismic retrofit of the Bay Bridge.

The tower is made up of four independent steel legs, each of which is composed of five vertical sections. Cross bracings and shear link beams will connect the four legs. The shear link beams are designed to move independently of the tower to absorb seismic energy during an earthquake and to protect the tower from catastrophic damage. The damaged beams can be individually removed and replaced.

BY THE NUMBERS

165 feet – Height of first SAS tower section being placed

1,200 tons/2.3 million pounds – Weight of first SAS tower section being placed

272 feet – Height of tower crane (crane will grow for higher sections)

1,455 tons/2.9 million pounds – Lifting capacity of strand jack gantry

85 feet – Length of SAS tower's marine foundation (a concrete-encased steel footing box)

73 feet – Width of foundation

21 feet – Thickness of foundation

13 – Number of concrete piles wrapped in steel casings

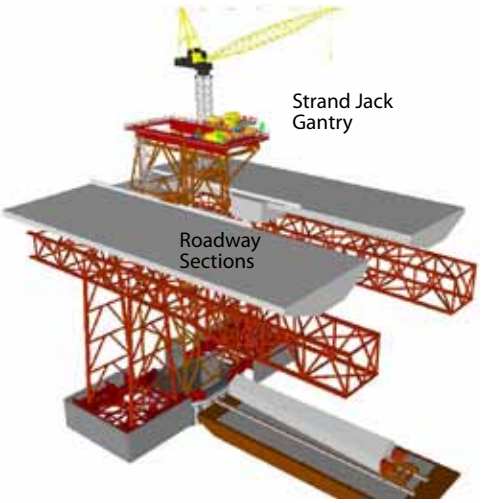
196 feet – Depth of piles anchored into bedrock

236 feet – Height of erection tower for bottom section placement (tower will grow for higher sections)

ERECTING THE TOWER

Prior to erecting the first leg section of the SAS tower, crews will first connect a steel tipping attachment to the tower base plate. The leg sections will be floated on barges to the construction site and erected one at a time. The barge, equipped with rails, will position itself on the open east side of the erection tower.

A strand jack gantry positioned atop the erection tower will lift the top of the tower segment, while a winch-assisted tipping cart will stabilize the segment and help move it down the rails. The tower section will pivot from a horizontal to a vertical position. The strand jack gantry will then lift the segment off the barge and into position onto the foundation.



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