

TOPPING OFF THE SELF-ANCHORED SUSPENSION SPAN (SAS) TOWER



The 525-foot-reach of the single tower, one of several unique elements of the new span, will echo the height of the West Span towers while giving the SAS a unique profile.

The latest tower section to be placed has the distinction of being the world's largest cable saddle.

It is one of the few double cable saddles in bridge construction and the largest and heaviest for a suspension bridge. The base is 23.8 feet long and 19.7 feet wide. The saddle's length stretches to 32.8 feet close to the top. At the saddle's curved apex, it is 13.7 feet tall. The saddle weighs approximately 450 tons.



The tower will be complete after the cable is placed and the tower head is attached.

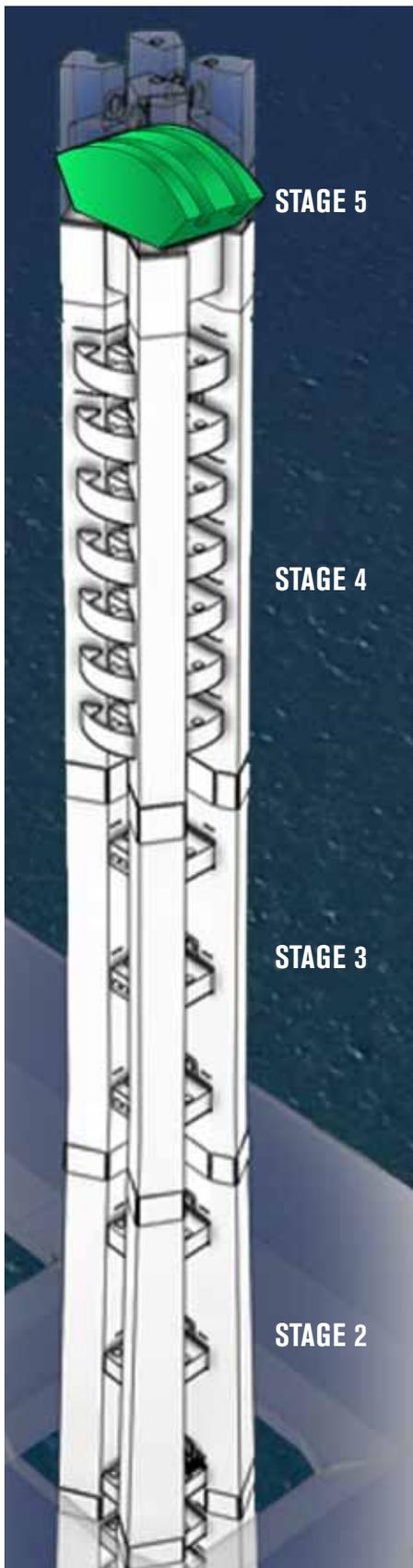
ERECTING THE TOWER SECTIONS

Like the previous tower sections, the cable saddle will be floated on a barge to the construction site and hoisted into place. Two strand jacks, capable of lifting 1,455 tons, will lift the cable saddle nearly 500 feet into the air, and carefully place it at the top.

Crews placed the first tower sections onto the foundation in July 2010, the second set in October 2010, the third in December 2010, the fourth in February, and the grillage (which distributes the weight of the saddle and cable amongst the four tower legs) in April. A test fit of the tower head is scheduled for later this summer.

THE SIGNATURE ELEMENT

The SAS tower construction has added a new dimension to the already astonishing and unprecedented engineering and construction that is synonymous with the seismic retrofit of the Bay Bridge. When completed, the SAS, the signature element of the new East Span, will take its place on the list of iconic Bay Area landmarks.



STAGE 5

STAGE 4

STAGE 3

STAGE 2



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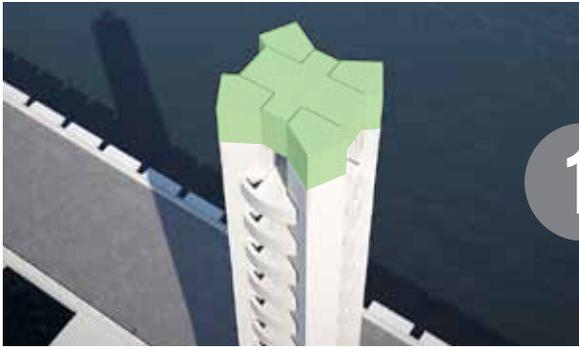
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TOPPING OFF THE SAS TOWER

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



- 1) THE GRILLAGE:** This single section sits atop all four leg sections. The grille will evenly distribute the weight of the cable saddle and cable amongst the four legs.
- 2) THE CABLE SADDLE:** The cable saddle will carry the nearly-mile long single cable over the top of the tower.
- 3) THE MAIN CABLE:** The SAS's single, SAS's cable anchors into the east end of the roadway, travels up and over the single tower to wrap around the west end before traveling back up and over the tower to anchor back into the east end.
- 4) TOWER HEADS:** After the cable is placed, the tower heads are attached to complete the tower's distinctive design.



Crews lifted and placed the SAS tower's grille section in April 2011.