FEATURED PROJECT:
FRESNO TRENCH & SR 180 PASSAGEWAY

NIGHT WORK AT THE CEDAR VIADUCT

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Featured Project

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TRENCH CONSTRUCTION
A crane sets pre-cast concrete girders over the northern section of the Fresno Trench, near downtown Fresno. Nearly 40 girders were placed over two days in August, while closer to State Route 180 (SR 180), work continued on a drainage structure that will relocate a 60-inch storm sewer line to the north side of the highway (Below). Crews have approximately 15 feet more to excavate before they reach the bottom of the trench where a concrete box will be constructed that will carry the trains under SR 180, a rail spur and the Dry Creek Canal.
At the Cedar Viaduct, construction crews have been working day and night to extend the structure across State Route 99 south of Fresno. Concrete support piers are being constructed on either side of the highway and in the highway median as well. Drill shafts have been poured and column work is beginning. The viaduct will eventually be connected to the smaller Muscat Viaduct a little further to the south. One of the largest structures on Construction Package 1, the Cedar Viaduct will be about three-quarters of a mile long when it’s complete.
At the San Joaquin River Viaduct, workers have completed concrete pours for much of the pergola deck that will carry high-speed trains over the existing rail line (above). On the south bank of the San Joaquin River, crews are finishing up construction of the remaining support columns, while on the north bank of the river (below), the final pier cap has been poured. The cast-in-place construction of the deck is progressing and will follow with the completion of the pier caps, tying all the individual components of the structure together. The completed viaduct will form one of the largest structures on this first phase of the high-speed rail project.
At the northern end of Construction Package 1, the overcrossing for Road 27 in Madera County continues to take shape as crews complete the support structures for the coming placement of concrete girders. The first two girders to be placed across the railroad tracks are currently scheduled during a night time closure of the rail line at the end of this month, with two more girders scheduled in late September. A total of 28 girders will be set to create the foundation for the crossing superstructure with the deck tentatively scheduled to be poured in January. As soon as utility relocation begins, embankment work will also commence. The bridge will be more than 600 feet long with the longest span stretching 198 feet.
At Avenue 15, just east of Road 29 in Madera County, the piers for a supporting bent structure have been poured and falsework will soon be erected to form the bent cap. The foundation for the west abutment has been poured and fill dirt has been trucked to the site to build the embankment on the east side.

The section of the Avenue 12 overcrossing that goes over the BNSF freight tracks is beginning to take shape, and workers are currently building retaining wall footings adjacent to the structure. The Avenue 12 overcrossing will include one structure that will take traffic over the high-speed rail alignment and a separate structure further east that will cross the freight tracks.
At the Avenue 11 overcrossing, concrete has been placed for the bridge deck. Next, crews will begin construction of wing walls and the approach slabs that will tie the structure in with the embankment. This crossing, east of Road 30 ½, will take traffic over the high-speed rail alignment in Madera County.

At Avenue 8 in Madera County, rebar is in place for a single span bridge east of State Route 99. Crews are working on the bridge wing walls and bridge deck rebar. The block retaining walls have been completed on either side of the abutments and fill dirt placed to finish the slope leading up to the bridge.
Construction of two overcrossings in CP 2-3 continues with the installation of concrete forms and tying rebar for abutments. At the crossing for Kansas Avenue west of State Route 43, crews tie rebar for columns that will be lowered into drilled shafts and filled with concrete to form the foundation for an abutment. About a mile north, at Kent Avenue, another crew sets concrete forms to begin the construction of an abutment.
Also in Kings County, construction has begun on two new overcrossings, one at Flint Avenue and one at Fargo Avenue east of SR 43 just outside of Hanford. About 49 trucks per hour are hauling approximately 56,000 cubic yards of earth per day to build up the embankments.
The launch of Bruce Fukuji’s career arch can be traced to his days at University of California, Berkeley.

After graduating in 1982, he teamed with five fellow students to form “Two and Three Dimensions,” a consultant firm that helped architecture firms visualize design concepts.

“The culmination of that was working with George Lucas on Skywalker Ranch in Marin County,” Fukuji recalls.

Today, Fukuji is the principal owner of Albany-based Urban Design Innovations. He works as an architect, city planner and urban designer.

Find out why he calls working on high-speed rail one of the most significant endeavors he’s been associated with at buildhsr.com/facesofhsr.

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**contact**

**TONI TINOCO**
CALIFORNIA HIGH-SPEED RAIL
(559) 274-8975
TONI.TINOCO@HSR.CA.GOV

**DAN GALVIN**
CALIFORNIA HIGH-SPEED RAIL
(559) 490-6863
DANIEL.GALVIN@HSR.CA.GOV