Officials tout clean machines to help Valley air during high-speed rail construction

By Tim Sheehan

The California High-Speed Rail Authority is requiring contractors to use the latest, cleanest-burning diesel heavy equipment for construction of its bullet-train route, including the first 29-mile segment in Madera and Fresno counties. Video by Tim Sheehan with photos by John Walker, The Fresno Bee. THEFRESNOBEE

Construction has yet to begin on the first stretch of California's high-speed rail line through the central San Joaquin Valley. But once significant work does start, officials say the heavy equipment to be used will be some of the cleanest machinery available .

In a show-and-tell event Wednesday at an equipment-staging yard on Golden State Boulevard, near Highway 99 and Herndon Avenue in northwest Fresno, representatives of the California High-Speed Rail Authority, the U.S. Environmental Protection Agency, the state Transportation Agency and the San Joaquin Valley Air Pollution Control District touted how the latest-generation diesel machinery will help ease the effects of earth-moving and heavy construction on the Valley's troubled air.

Jim Laing, a project manager for prime contractor Tutor Perini/Zachry/Parsons, said his company has invested "in excess of $10 million so far" on what the U.S. EPA refers to as Tier 4 equipment — cranes, bulldozers and excavators equipped with engines that emit much less air pollution than earlier generations of machines.

Tutor Perini Corp. of Sylmar, Zachry Construction of Texas and Pasadena-based Parsons Corp. teamed up to win a contract worth about $1 billion to design and build the first 29-mile section of the rail line from the northeast fringe of Madera to the southern edge of Fresno.

The contract includes requirements that contractors and subcontractors use the most modern and clean-burning heavy equipment available to keep air pollution emissions to a minimum. Tier 4 refers to federal air pollution standards that took effect in 2012 for new off-road diesel equipment. Tier 4 engines have cleaner exhaust systems, electronically controlled engines and catalytic converters.

"The equipment we have here behind us is some of the latest equipment available anywhere in the world," said Jeff Morales, the rail authority's CEO. "We included requirements that our contractors use the latest equipment because we want to make sure that as we build this program, we are contributing to improved air quality here in the Central Valley."

Jared Blumenfeld, the U.S. EPA's Pacific Southwest region administrator, praised the rail agency for including the Tier 4 equipment requirements in its construction contracts. The Tier 4 rules, he said, require new equipment to meet the standards, but don't necessary mean that contractors have to use it.

"When you already own equipment and no one puts in their bid package that it needs to be clean equipment, you just bring your old, dirty equipment out and you're polluting the environment," Blumenfeld said. "The San Joaquin Valley really needs all the help it can get."

One of the big reasons that "the Valley has the worst air quality in the nation when it comes to (fine particles) is those trucks," he added, gesturing at the big-rig traffic flowing nearby on Highway 99. "This equipment is the reason we'll be able to change some of that" because another pollution factor is off-road construction equipment.

Among the machines that have been staged at the Golden State Boulevard yard are four huge Liebherr LR1160 crawler cranes, capable of lifting up to 160 tons and have a boom that can be extended to more than 330 feet to handle long-reach construction for trenches, overpasses and bridges above rivers; five Terex 1100 cranes that can lift up to 100 tons with a boom length of up to 155 feet; and a handful of large Case excavators to dig holes and trenches, move earth and demolish buildings.

The low-pollution equipment is in addition to $20 million that the rail agency has committed to the Valley air district to reduce overall pollution in the region through replacing older school buses and diesel irrigation pump engines and retrofitting freight-hauling big rigs, said Samir Sheikh, the Valley air district's deputy pollution control officer. The partnership between the two agencies will "reduce the pollution generated by this project to a point where there is no impact on air quality in the Valley," Sheikh said.

Additionally, said Kate White, the California Transportation Agency's deputy secretary for environmental and housing policy, "the 30,000 metric tons of carbon dioxide generated during construction from Madera to Fresno will be offset by planting thousands of new trees" in the region, along with the use of the new construction equipment.

As far as work moving beyond scattered building demolition to make way for the rail route and into construction, Morales said, "the really exciting thing is that over the next few weeks and months, this equipment won't be sitting in this yard, but will out in the field doing what it's supposed to do, which is getting dirty and making things happen."

Neither Morales nor Laing would commit to a definite construction start date, but "we're getting close," Laing said. For the first major activity, he added, "I expect we'll go back up to the Fresno River and build the Fresno River bridge." Tha structure is anticipated to be an elevated viaduct, between 1,000 and 2,000 feet long, to span the river, Highway 145 and Raymond Road at the east edge of Madera.

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