

FACT OF THE WEEK

* **Post-tensioning** is a method of reinforcing concrete with high-strength steel strands, typically referred to as tendons.

In an excerpt from their <u>article</u> on the subject, the Post-Tensioning Institute (<u>www.post-tensioning.org</u>) explains the process rather simply: "Imagine a series of wooden blocks with holes drilled through them, into which a rubber band is threaded. If one holds the ends of the rubber band, the blocks will sag. Post-tensioning can be demonstrated by placing wing nuts on either end of the rubber band and winding the rubber band so that the blocks are pushed tightly together. If one holds the wing nuts after winding, the blocks will remain straight. The tightened rubber band is comparable to a post-tensioning tendon that has been stretched by hydraulic jacks and is held in place by wedge-type anchoring devices..."

This photo shows a post-tensioning duct on the Valley View Street bridge, which is being reconstructed as part of the WCC project. Post-tensioned steel cables are run through PT Ducts- the three holes pictured in the photo- and are then pulled taut to create tension, providing adequate reinforcement for the new bridge. This process strengthens the concrete and ultimately, makes it more resistant to environmental stress.

EAST SEGMENT - Valley View Street to Seal Beach Boulevard

- Northbound lanes of Valley View Street, between Garden Grove Boulevard and the westbound SR-22 Valley View Street off-ramp, will be reduced nightly Monday, Oct. 24 through Thursday, Oct. 27, from 10 p.m. to 5 a.m. At least one northbound lane of Valley View Street will remain open at all times. This work is necessary to remove false work on the Valley View Street bridge.
- Daytime pile driving will resume Tuesday, Oct. 25 at the southbound I-405 / eastbound SR-22 connector, near the southbound I-405 Bolsa Chica Rd. off-ramp. Pile driving is conducted weekdays between 6:30 a.m. and 3:30 p.m., and is expected to continue until Friday, Nov. 4. Please be advised this work may be loud and disruptive due to vibration and pounding.
- Falsework removal on the Valley View Street bridge is ongoing and is estimated for completion by Friday, Nov. 4.



EAST SEGMENT - Valley View Street to Seal Beach Boulevard (continued)

- The westbound SR-22 to northbound I-405 connector and the southbound I-405 to eastbound SR-22 connector will be closed nightly, Monday, Oct. 24 through Thursday, Oct. 27, between midnight and 5 a.m. For detailed detour information, visit the Closure & Detour Notice for the week of Oct. 23, <u>available here</u>.
- Construction crews are scheduled to shift traffic from the west side of the Valley View Street bridge to the newly constructed east half of the bridge in early-December. Please be advised this work will require a 55-hour weekend closure (from 10 p.m. on Friday until 5 a.m. the following Monday) of Valley View Street from Old Bolsa Chica Road to Tiffany Avenue.
- Paving operations during the day along the northbound and southbound I-405 is ongoing.
- Portions of the northbound I-405 and the Valley View Street straight and loop on-ramps to the westbound SR-22 / northbound I-405 will be excavated to prepare for paving activities. This work will occur at night and may be disruptive to the neighboring community due to equipment noise and back-up alarms.

WEST SEGMENT - Seal Beach Boulevard to I-605



- Daytime pile driving in the center of the I-405 resumed today, as part of the reconstruction of the 7th Street bridge and will continue until anticipated completion date. Pile driving is conducted weekdays, between 7 a.m. and 5 p.m. **Please be** advised this work may be loud and disruptive due to vibration and pounding.
- One lane of the southbound I-405 Seal Beach Boulevard off-ramp will be closed intermittently between the hours of 9 a.m. and 3 p.m., Monday through Friday, over the next few weeks. The lane closure is necessary for utility work and to allow the contractor to safely transport materials to the work area.
- Traffic on the northbound and southbound I-405 freeway (between Seal Beach Boulevard and the I-605 freeway) was shifted to the newly paved outside lanes of the freeway. This traffic shift was necessary to allow crews to begin work in the center of the I-405, in order to reconstruct the support columns for the 7th Street bridge. The WCC team reminds motorists to stay safe, be alert and be sure to drive within the speed limit, as everyone adjusts to this new configuration.
- Construction to rebuild the sound wall along the northbound I-405 behind Martha Ann Drive in Rossmoor has begun and will continue for the next several months. While a majority of this work will be done during the day, portions of the operation will take place at night due to safety precautions. Residents affected by night work will be notified in advance, as this work may be loud and disruptive to neighboring residents.
- The contractor will begin to construct the new center column for the 7th Street bridge and set falsework in the median of the I-405 sometime in mid-November. While an exact date for this work has not been set, sufficient notice will be given in advance of the work.
- Reconstruction of the Bixby Channel is ongoing and will take several months to complete. This work will be done during the daytime and may be loud and disruptive to the neighboring community.
- Demolition, excavation and reconstruction of portions of the Montecito Channel, adjacent to Martha Ann Drive / Copa de Oro Drive and the I-405 / I-605 freeway, is ongoing. This work will be done during the daytime and may be loud and disruptive to the neighboring community.
- Crews will continue concrete paving activities and asphalt concrete placement this week on the northbound I-405 during the day.

NEIGHBORING PROJECTS:



City of Seal Beach

The City of Seal Beach's \$1.3 million project to widen Seal Beach Boulevard between St. Cloud and North Gate Road is under way and is scheduled for completion in late 2011 / early 2012. Please be advised this project includes night and day work. Daytime work may include lane closures on Seal Beach Boulevard and will maintain at least two lanes in each direction at all times. For additional information, please contact Michael Ho, City of Seal Beach Public Works, at (562) 431-2527 ext. 1322 or via email at mho@sealbeachca.gov.

Thank you for your patience and understanding during construction.

For more information about closures and detours for the week of Oct. 23, click here.

