

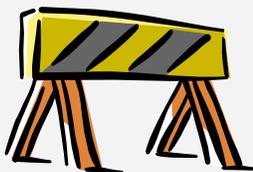
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BJO:JS

Removing Transverse Joint Assembly Shipping Wires for Concrete Pavement - Revised

The Construction Advisory (CA 2005-05) dated March 21, 2005, discussed the department's 2003 standard specification requirements relative to whether or not it is acceptable to cut the shipping tie wires on transverse joint assemblies for Portland cement concrete pavements.

It was noted in CA 2005-05 that field investigations conducted by the department in the 1980's concluded that there were cases where early-age transverse cracking of the pavement had occurred as a result of excessive stresses being built up at the joint assembly when the shipping tie wires were not removed prior to paving. However, a recently conducted national study documented that the additional stresses resulting from not removing the shipping tie wires would be of insufficient magnitude to impact early-age transverse cracking of the pavement. The study further concluded that by cutting the shipping tie wires, there is much more likelihood that the transverse joint assembly will be distorted under the loading imposed by the plastic concrete during paving, which could result in misalignment of the dowel bars and, ultimately, potential lockup of the in-service pavement joints.

The Special Provision for Transverse Joint Assembly Shipping Wires for Concrete Pavement (FUSP 03SP602(N)) describes the upcoming changes to the department's 2012 Standard Specifications for Construction, directing the contractor to not cut and remove these shipping tie wires after the assemblies are staked onto the grade. Further, as noted in Standard Plans Series R-40 and this FUSP, the entire joint assembly is to be rejected if the nominal diameter of the shipping tie wires exceed 0.177 inch (approx. 3/16 inch). Since cutting shipping tie wires may result in distortion of the assembly under loading (as described above), transverse joint assemblies that arrive at the project site with oversize shipping tie wires should be rejected. In other words, cutting of oversized shipping tie wires (in lieu of rejection) should not be permitted.

If your project currently references the 2003 Standard Specifications for Construction and does not include this FUSP, a contract modification can be generated at no cost increase, nor time extension to the project. However, no changes to the current warranty requirements for the project should be made.