

Overlays Webinar – Questions and Answers

The questions submitted during the webinar follow with answers that our speakers have provided.

1. This month's FHWA Innovator mentions the potential resiliency benefits of using overlays. Will the new (4'th edition) guide highlight some of the benefits how a concrete overlay improves a pavement's (flood) resiliency?

https://www.fhwa.dot.gov/innovation/innovator/issue85/page_01.html, North Carolina

Yes. That is covered in the Asset Management through the “Use of Concrete Overlays” section in Chapter 1.

2. How soon can you get traffic on a concrete overlay on asphalt in a parking lot? Ohio

The “Guide to Concrete Overlays of Asphalt Parking Lots”

(<https://my.nrmca.org/Main/ItemDetail?iProductCode=2PPCO>) discusses concrete opening parameters noting that “Many concrete overlays can be opened to traffic within 24 hours of placement. Nondestructive strength indicators, like maturity testing, enable engineers to take advantage of this benefit. Opening would also be dependent on mix design and weather conditions.

3. Are there projects where concrete is placed over FDR - is that considered an overlay or new construction? Maryland

Yes, there are several instances where concrete has been placed on top of FDR. The classification of that pavement structure as new construction or overlay may not yet be determined.

4. Has the Illinois DOT done any concrete overlays and if so in what highway districts, Iowa

Yes. Several of the 114 projects listed in The National Concrete Overlay Explorer were constructed by the Illinois DOT, ranging from Interstate pavements to two lane roadways. <http://overlays.acpa.org/webapps/overlayexplorer/index.html>

5. CALTRANS- what is the typical slab length? Joint width (seal/unsealed)? Florida

Caltrans uses a standard slab length of 14 feet for their JPCP overlays when used on high-traffic interstate locations. For low-traffic concrete overlays, the thickness has been reduced to about 6 inches and the joint spacing changed to about 6 feet by 6 feet. We have not sealed the concrete overlays for the low-traffic applications. For high-traffic, instead of “sealing” Caltrans has moved towards single cut of the joints about 3/16 to 1/4 inch wide and filling with hot-pour for projects in high desert and high mountain regions. Concrete overlays in other regions do not get sealed or filled joints.

6. Can use of precast concrete slabs be considered as overlay (bonded and unbonded)? Florida

We have not considered precast concrete slabs as concrete overlays in California. We've done lots of precast pavement but it's all full-depth on a base.

7. Is parking concrete pavement design different from roadway design? New York

Parking lot design involves different load spectrums and jointing patterns dependent on the staging for construction or traffic control. The ACPA Pavementdesigner.org software, available through the ACPA website: <https://www.acpa.org/expert-help/pavementdesigner-org/> provides two design methodologies that address the consideration for parking lot design. Commercial parking areas are typically designed using the ACI 330 method and/or the PCA Street Pave programs included in the Pavementdesigner.org. Intermodal parking areas can be designed using the ACPA AirPave software included as part of the Pavementdesigner.org package.