

State DOT: California

State Report Questions on NDT Testing

1. What NDT testing methods for concrete materials, concrete pavements, and overlays are you trying?

For structural concrete, we use s'MASH (Impact Response) for locating delimitations as a standard test. We also use Impact-Echo as a nonstandard test for this purpose.

For concrete pavement, California has used falling weight deflectometer (FWD) extensively for evaluation of load transfer efficiency. Recently, we used MIT-SCAN-2 to measure the dowel bar locations within concrete pavement.

2. In your experience, how does the reliability of NDT testing methods compare to traditional testing methods?

The s'MASH test is a lengthy test. There have been cases that the hammer broke. Because of that, this test is sometimes replaced by chain dragging.

We were very satisfied with the quality of our FWD testing.

Our experience with MIT-SCAN-2 was not satisfactory. The results did not show a good correlation between the MIT-SCAN-2 reading and actual core data (there is a full report on this topic that is available upon request). The problem was said to be associated with calibration of the device. It is our goal to move toward NDT whenever a reliable method is available.

Ground Penetrating Radar (GPR) is one of the methods that we are interested in and would like to experiment for pavement.