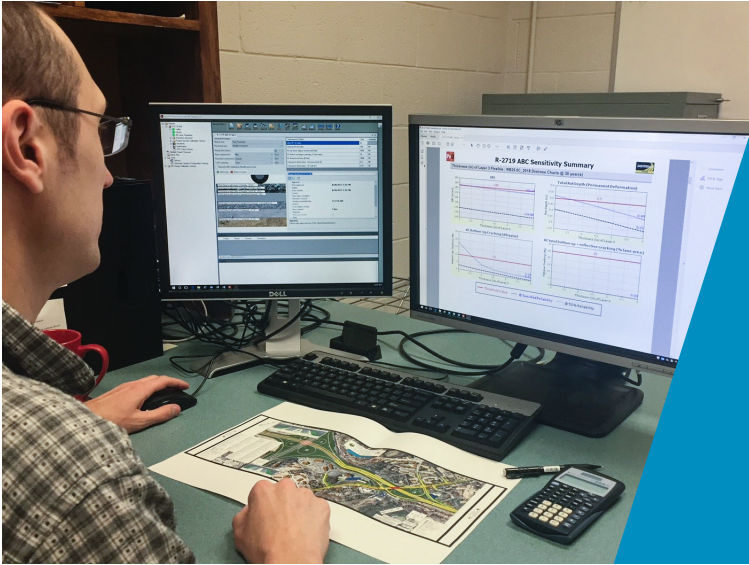


N.C. DEPARTMENT OF TRANSPORTATION

Materials and Tests Unit

Pavement Design and Analysis Section

A section of the Materials and Tests Unit, the Pavement Design and Analysis Section is responsible for providing all 14 NCDOT Highway Divisions with pavement engineering, including design, materials evaluation, performance analysis, and economic analysis for both new and current pavement structures on all state maintained routes.



PAVEMENT DESIGN OF FLEXIBLE, RIGID & COMPOSITE PAVEMENTS

- **Review** Pavement Management System data to confirm the scope of work & determine preliminary design & appropriate construction strategies.
- **Design** flexible and rigid pavements for both Central & Division let projects, resurfacing and overlay projects, as well as spot safety projects.
- **Write** scope & perform review on pavement design alternatives.
- **Review** municipal & town pavement designs on state- maintained routes.
- **Train** Division staff on AASHTO 93' pavement design procedures, giving each division the ability to select pavement design alternatives on select projects.

FALLING WEIGHT DEFLECTOMETER

- Normally used in conjunction with our Coring and DCP testing.
- Applies a movable load that simulates the weight of a moving wheel along the pavement.
- Helps evaluate the physical properties of the current pavement.
- Used to determine the structural capacity of pavement for potential resurfacing or overlay design
- Can also determine if pavement is being overloaded.



PAVEMENT CORING RIG & DYNAMIC CONE PENETROMETER

- PCR performs inspections and investigations on both flexible and rigid pavements to determine their structure and condition.
- DCP can test the subgrades in-situ resistance to penetration which translates to a subgrades strength.
- This information is crucial in determining the best pavement design and/or rehab activity (i.e. necessary overlay thickness).

To request one or more of our services, please contact us by emailing pavementrequest@ncdot.gov or calling (919) 325-4000.