



BACKGROUND

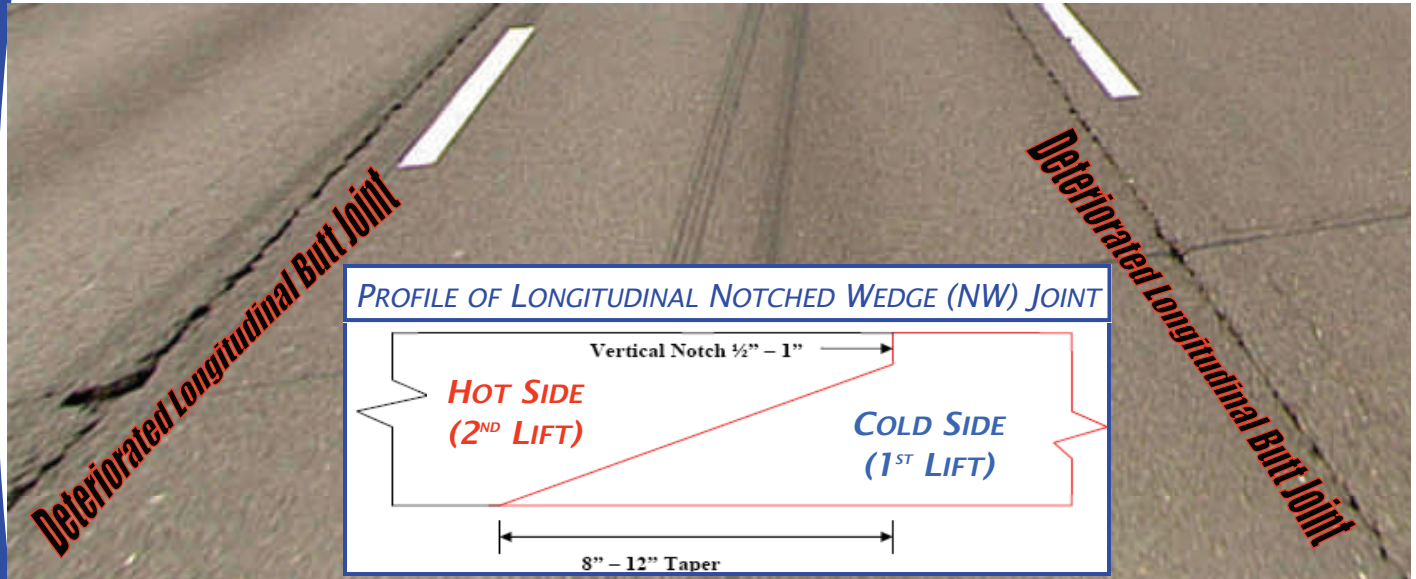
Following up on earlier research performed by several states and the National Center for Asphalt Technology (NCAT) at Auburn University, the University of Connecticut's Advanced Pavement Lab (CAP Lab) was charged with evaluating the longitudinal notched wedge (NW) joint on hot-mix asphalt (HMA) pavements in Connecticut. By placing one lift with a wedge joint on the edge, then placing a second overlapping lift, it was believed the early deterioration of traditional butt joints could be avoided.

Evaluation of Notched Wedge Pavement Joints vs. Traditional Butt Joints for Use in Connecticut

FINDINGS

Results from the NW joint study, when NW joints were compared with butt joints:

- NW joint placement did not impede or disrupt the paving process;
- NW-jointed pavements had higher second-lift density levels and more uniform density profile in both lifts;
- NW joints provided smoother joint crossings for vehicles during construction;
- **BUT:**
- The wedge portion of the NW joint released some large aggregates when exposed to traffic during construction; and,
- During the 2nd lift pass, a "squeezing" of tack coat out of the NW joint was observed.



RECOMMENDATIONS & IMPLEMENTATION

As a result of this research, the following recommendations were implemented:

- For quality acceptance purposes, an averaging method for densities from both the hot side and cold side of a NW joint was developed and used;
- Apply tack coat to only the outer third of the wedge before the 2nd lift is placed;
- Change specifications to allow NW joint usage on 1 1/2" - 3" lift depths; and,
- Paving with the NW joint is implemented and performance will be monitored over time.

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