

Kansas

State DOT Representative Report Questions

National Concrete Consortium

San Antonio, Texas

April 2, 2009

Theme: Ride Quality for Bridges

Please provide your state DOT's perspective regarding the following theme questions. Each NCC state DOT representative will be asked to present their responses to the group during the State Report forum on Thursday morning April 2, 2009.

1. What features of a bridge deck and approach do you consider to have the most impact on ride quality?

Joints on bridges and approaches have the greatest impact to ride quality.

2. How does your state measure ride quality for bridge decks?
 - a. IRI?
 - b. Straight edge (X)?
 - c. Other? We have done some experimental profileograph.
 - d. Specifications?

3. What smoothness thresholds does your DOT require for bridge decks?

1/8" in a 10 ft.

4. How are transitions near localized features (drainage basins, joints) treated in efforts to ensure acceptable ride quality?

- Drains: Limit the projection distance to within 2'-0" of the bridge rail
- Joints: 1:50 transition

5. What corrective actions are required for substandard bridge deck/approach ride quality?

Grinding for minor corrections and overlay for major corrections

6. Does your state initiate a penalty/incentive structure for bridge ride quality?

Grinding that reduces the cover to < 2.5" require an overlay at no cost to the state.

7. Does your state consider ride quality as a scoping item for bridge rehabilitation?

No.

8. Does your state require sequencing (casting positive moment regions prior to negative moment regions) of deck pours during placement of bridge deck concrete for continuously designed decks?

The sequence is shown on the plans as patch-work with Contractor submission for other placements.

9. What method and type of texture does your state apply to your bridge deck surface?

For structures w/ SFO or w/o polymer overlay, tinning and/ or grooving.
For structures w/ polymer overlay seeding with aggregate.

10. How does your state handle transitions/approaches from pavement on to the bridge deck (approach length, profile, joints)?

- Asphalt pavement 50:1 transition, 13' concrete approach attached to abutment
- Concrete pavement use (1) 13' and (2) 10' slabs. The end of the fixed 13' approach is supported by a slab rest on the bridge end and a sleeper foundation on the pavement end.

11. Does your state maintain a database for bridge ride quality?

No.

12. How does your state report its network ride quality for pavements and bridges to the Highway Performance Monitoring System (HPMS) database (network report excludes or includes bridges with pavements)?

We report mean IRI value for pavements only.
Mean: quarter car right quarter car left and average.
We follow the field guide except for bridges.