CSS: Designing for the times

Cultural trends in the 1960s awakened public interest in human impacts on the landscape—including road building. By the mid-1990s, a consensus emerged in the U.S. that new approaches were needed to integrate highway development with community and environmental sensitivities.

In response, the Federal Highway Administration, American Association of State Highway and Transportation Officials and other agencies developed a comprehensive program to change the way highway projects are performed, reaching for the goal of “context sensitive solutions.” Efforts included CSS workshops, pilot programs and NCHRP Report 480, *A Guide to Best Practices for Achieving Context Sensitive Solutions*.

Primarily written for transportation agency personnel, this report also helps other stakeholders better understand the issues. Key research tasks included visits to five pilot states that were selected to work with FHWA and AASHTO in defining and institutionalizing CSS principles and practices.

A lasting contribution

“I’ve done a lot of NCHRP research over the years, but this project appears to have longer-lasting effect, and I think it will have a longer shelf life,” says principal investigator Tim Neuman of CH2M Hill. “Context sensitivity has garnered an awful lot of interest, and I know of a number of state DOTs that have been influenced by Report 480.”

Minnesota DOT served as one of the five CSS pilot states. “When Report 480 came out, it was the best available snapshot of where things stood with CSS and the states and organizations that were starting to embrace it, and we incorporated the report into our training reference manual,” says Scott Bradley, Mn/DOT landscape architecture chief and chair of the Transportation Research Board Task Force on Context Sensitive Design/Solutions.

Communicating CSS principles

“CSS is a broadly informed, thorough process that relies on sound professional engineering and other judgments, but the whole philosophy and principles aren’t always clearly understood,” Bradley says. “Some of the approaches discussed in the report, such as risk management and safe and feasible solutions, help validate the CSS process for agencies and assure them that it’s not about unacceptable compromises and throwing safety and standards out the window.”

Guidance on liability, risk management

Phil Bell, associate landscape architect for New York State DOT, says New York has made the principles of CSS discussed in Report 480 part of the department’s official guidance for project development.

“Our design, construction and planning staff all used the information in Report 480,” Bell says. “Some of the most important things we’ve taken away from the report are the case studies and the discussions about effective decision making and tort liability. We drew on the ideas about tort liability for a two-day training workshop on that issue.”

Ben Buchan, state urban design engineer for Georgia DOT, says that GDOT also found the information on tort liability in Report 480 to be particularly useful. “We set up our own in-house CSS manual online,” Buchan says, “and rather than do a separate section on tort liability and risk management, we deferred to Report 480 for that discussion.

“A host of people use this manual,” Buchan continues. “We initially developed it as a resource for our in-house and consultant staff, but some of the state’s local governments also use it.”