



U.S. Department of Transportation
Federal Highway Administration

IMPROVED
CONSTRUCTION
AND
MAINTENANCE
TECHNOLOGIES

new strategies to enhance the quality
performance of highway systems

The National Highway Specifications Web Site

Easy, industry-wide access to thousands of state-of-the-art highway specifications at one URL: That is the goal of the National Highway Specifications Web Site Project, a collaborative effort of the Federal Highway Administration (FHWA) and the Association of State Highway and Transportation Officials (AASHTO).

Locating and retrieving current specifications can be laborious and time-consuming. Although State departments of transportation (DOTs) are rapidly moving their construction specifications online, there is considerable variability in how agencies format and maintain their standard specifications, supplements, special provisions, and related documents. State bridge, port, and highway authority documents may not be integrated. In addition, more than 20 national trade organizations and a number of Federal agencies issue specifications and rules that impact the highway construction industry. The AASHTO Guide and FHWA's Manual on Uniform Traffic Control Devices are just two prime examples.

Consolidation of these multiple sources of documentation will benefit highway agencies, contractors, construction engineers, and researchers. Electronic access, indexing, and search facilities will save time and money for all users while improving practice and promoting higher quality in construction end products.

The ambitious aim of the Web Site Project is to gather, organize, and index specifications and related information from public and private organizations so that users throughout the industry can efficiently search, cross-reference, compare, and download current specifications, access related training information, and review and participate in the development of new specifications. Envisioned as a comprehensive, fully searchable electronic "spec library," the site will host a variety of documents:

- Approved construction specifications from departments of transportation in the 50 States, District of Columbia, and Puerto Rico
- Current approved standard specifications and supplements of Federal agencies and national highway-related organizations
- Relevant training materials of the National Highway Institute (NHI)
- Specifications under development such as quality assurance and performance-related specifications

In addition, the site will provide discussion forums on emerging specifications and innovative practices to encourage wider participation in their development.

BUILDING THE PILOT WEB SITE

The National Highway Specifications Web Site Project began with a research and design phase that will culminate in a pilot Web site. In preparation for design, a survey of States and Canadian provinces has determined how DOTs manage and

maintain their specifications and related documents, including how and to what extent they provide electronic access. Research was gathered on current practices concerning electronic construction specifications, as well as information on various types of innovative specifications such as quality assurance, performance-related, and warranty specifications. Together these findings are being used to determine the best overall design for the pilot.

The pilot will incorporate documentation from about five agencies in a logically organized and searchable specifications library. Although this material will represent less than 10 percent of the Web site's final content, most of the user interface and organizational structure is being developed in this phase of the project, as well as the search engine, a key feature of the library.

Documents will be organized by agency and by major category, allowing users to select specifications from a single agency, subset of agencies, or all agencies on a particular topic. This organizational structure will support a wide variety of research needs. For example, a user who is updating an agency's concrete paving specification may want to execute a search that will return the documents corresponding to the AASHTO Guide Specifications Section 501 but not every document within Division 500. A search for the text string "concrete pavement" may return many documents that are not principally concerned with concrete paving, although they contain these words. The solution to this problem will be in how the site is organized and in use of a refined search engine that can accommodate very general and very specific searches.

FHWA will evaluate the major features of the pilot site in Summer 2002 before deciding how to proceed with the final phases of the project, in which the development of the specifications library will be completed and use of the library will be incorporated into NHI's specifications-related training courses.

Once completed, the National Highway Specifications Web Site will be the definitive source for the state of the art in highway construction. It will contain the most recent approved specifications from across the country, emerging specifications utilizing innovative contracting practices, knowledge-based web pages with discussion forums, and related NHI and industry links. The Web site will consolidate the industry's knowledge of highway specifications and make this information available to all users.

To learn more about FHWA resources and the National Highway Specifications Web Site Project, contact your local FHWA division office or:

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Virtual spec library

Many highway agencies are already benefiting from the efficiencies of online construction specifications. The next challenge in this progression is to create a comprehensive, fully integrated, nationwide electronic specifications library.

