and how development projects would reduce delays at an airport with more than 20,000 hours of annual delay in commercial passenger aircraft takeoffs and landings.

(3) A description of the existing airspace capacity. Describe how anticipated new operations would affect the surrounding airspace and air traffic flow patterns in the metropolitan area in or near which a current or former military airport is located. Include a discussion of the degree to which operations at this airport create airspace conflicts that may cause congestion or whether air traffic works into the flow of other air traffic in the area.

(4) A description of the five year capital improvement plan, including a discussion of major projects, their priorities, projected schedule for project accomplishment, and estimated costs. Capacity related, and/or conversion related projects should be specifically identified, especially those that the airport sponsor proposes to fund under the MAP. A copy of the plan should also be submitted.

(5) A description of projects that are consistent with the role of the airport and effectively contribute to converting the airfield to a civil airport. Projects can be related to various improvement categories depending on the need to convert from military to civil airport use, to meet required civil airport standards, and/or required to provide capacity to the airport and/or airport system. The projects selected, i.e., conversion-related, and capacity-related, must be identified and fully explained based on the airport's planned use. The sponsor needs to submit the airport layout plan (ALP) and the maps or charts that clearly identify and help clarify the eligible projects and designate them as conversion-related or capacity-related. It should be cross referenced with the project costs and project descriptions. Projects that could be eligible under MAP if needed for conversion-related or capacity-related purposes include:

- Modification of airport or military airfield or airport pavements (including widths), marking lighting, pavement strengthening, and imaginary surface standards to meet civil standards.
- Facilities or support facilities such as passenger terminal gates, aprons for passenger terminals, taxiways to new terminal facilities, airport parking, and cargo facilities to accommodate civil use.
- Modification of airport or military utilities (electrical distribution systems, communications lines, water, sewer, drainage) to meet civil standards. Also, modifications that allow civil airport utilities to operate independently if other portions of the base are severed from the airport. (This is important where portions of the base are being transferred to an entity different from the airport sponsor.)
- Purchase, rehabilitation, or modification of airport and support facilities, including aircraft rescue and fire fighting buildings and equipment, airport security requirements, lighting vaults, and reconfiguration or relocation of buildings for more efficient civil airport operations, snow removal equipment.
- Modification of airport or military airfield fuel systems and fuel farms to accommodate civil aviation activities.
- Acquisition of additional land for runway protection zones, other approach protection, or airport development.

Landside:
- Construction of surface parking areas and access roads to accommodate automobiles in the airport terminal area and provide an adequate level of access to the airport.
- Construction or relocation of access roads to provide efficient and convenient ingress and egress to the airport and surface vehicular flows on the airport, including access to passenger, air cargo, fixed base operations, and aircraft maintenance areas.
- Modification or construction of facilities such as passenger terminals, surface automobile parking, and access to cargo facilities to accommodate civil use.

(6) An evaluation of the ability of surface transportation facilities (road, rail, high speed rail, maritime) to provide intermodal connections.

(7) A description of the type and level of aviation and community interest in the civil use of a current or former military airport.

(8) One copy of the FAA approved ALP for each copy of the application, as approved. The ALP should clearly show the capital improvement plan projects. Also include any other information or drawings that would show and/or clarify the five year plan identifying capacity, and conversion related projects, associated costs, schedule, and project justification.

This notice is issues pursuant to section 49 U.S.C. 47118.

Issued at Washington, DC, on October 16, 1995.

Paul L. Galis,
Director, Office of Airport Planning and Programming.

[FR Doc. 95–26353 Filed 10–23–95; 8:45 am]

BILLING CODE 4910–13–M

Federal Highway Administration

[FHWA Docket No. 94–17]

Highway Work Zone Safety Program

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Notice.

SUMMARY: The Federal Highway Administration (FHWA) hereby establishes the National Highway Work Zone Safety Program (NHWZSP). The purpose of the program is to enhance safety at highway construction, maintenance, and utility sites by
improving the quality and effectiveness of traffic operations, safety appurtenances, traffic control devices, and maintenance of traffic bidding practices.

**EFFECTIVE DATE:** October 24, 1995.

**FOR FURTHER INFORMATION CONTACT:** Mr. Joseph J. Lasek, Safety Design and Operations Division, HHS-10 by telephone at 202–366–2174 and telefax, 202–366–2249 or Mr. Joseph Solomey, Office of Chief Counsel, HCC-20, by telephone 202–366–1374, Federal Highway Administration, 400 Seventh Street, SW, Washington DC 20590. Office hours are from 7:45 a.m. to 4:15 p.m. e.t., Monday through Friday, except Federal holidays.

**SUPPLEMENTARY INFORMATION:** Section 1051 of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 (Pub. L. 102–100, 105 Stat. 1914) requires the establishment of a National Highway Work Zone Safety Program (NHWZSP).

Highway work zones occur due to road and structural improvements, maintenance activities, or utility work performed by contractors, public agencies, or utility companies at the request or approval of a government agency. These State and local governments have primary responsibility for planning, designing, and implementing work zones to ensure the safe and convenient travel of highway users as well as the safety of the workers.

The FHWA views its role as providing leadership, guidance, and oversight to improve the overall highway safety construction, maintenance, and utility work zones especially on Federal and Federally-aided projects. The FHWA has exercised its leadership and guidance through the years by developing and updating work zone traffic safety regulations; developing technology and safety information bases; revising the National Manual on Uniform Traffic Control Devices (MUTCD), Part VI, relative to work zone operations; conducting field reviews; developing national training courses for improving the planning, design and operations of work zones; conducting related research; holding national and regional work zone safety conferences; and issuing technology transfer information to assist in the rapid transfer of work zone technology and procedures. On September 8, 1994, FHWA published in the Federal Register (59 FR 46467) a proposal to establish the NHWZSP. Subsequently, a national work zone safety conference was conducted in Washington, D.C. (December 5–7, 1994) with over 230 invited participants representing a broad spectrum of organizations involved with work zones and safety issues. Proceedings of the conference have been published and are being widely distributed. Information obtained from the conference has also been considered in the development of this final version of the NHWZSP.

**Discussion of Comments**

During the public comment period for the September Federal Register Notice, which closed on November 11, 1994, FHWA received written responses from 25 organizations including 13 State Departments of Transportation (DOTs), three national associations, four private companies, a utility company, a labor union, a safety advocacy group, a consultant, and a Federal government safety agency. The responses concerning this program are available for review at the Federal Highway Administration, Public Docket Room 4232, Office of the Chief Counsel, 400 Seventh Street, SW, Washington, DC 20590.

Of the 25 responses received, eight fully supported the program or supported it with selected reservations; 16 expressed no position on the program in general, but had comments on specific items; and one expressed a specific reservation on elements of the program.

The 25 responses included some 162 total individual comments on aspects of the program. Many of the comments had similar themes and were the basis for making changes in producing the final product. Some of the changes only involved adding clarifying language, while others added information or modified the program substantially. The comments that have resulted in substantive changes or were of significance are summarized in the following discussion. The content and location of changes in the NHWZSP are provided in the Discussion of Comments section.

**Objective and Scope**

Two respondents—one private industry and one national association—recommended that the NHWZSP should recognize highway worker safety. Although this was intended, it was not specifically covered. The Objective and Scope of the NHWZSP has been revised to specifically include “highway workers.” Additionally, FHWA is addressing the needs of highway workers by promoting the use of the Strategic Highway Research Program (SHRP) work zone safety devices mentioned in paragraph 4, subparagraph a (C.4.a), such as the intrusion alarms which warn workers of vehicles entering their work area. FHWA is also supporting training courses that address worker safety, such as “Design and Operation of Work Zone Traffic Control.”

Two respondents—two State DOT’s—recommended that the NHWZSP address the needs of older drivers in work zones. The FHWA has amended the Objective and Scope to include “elderly drivers.” Also, to assess the needs of elderly drivers FHWA is conducting a study, “Human Factors Study of Traffic Control in Construction and Maintenance Zones.” The results from this study will be used to revise work zone operations where needed to better accommodate elderly drivers.

Three respondents—two State DOT’s and one national association—recommended that the NHWZSP should involve all levels of an agency’s personnel, all aspects of industry and public agencies. The FHWA agrees with this recommendation and has amended the Objective and Scope to include the entities for which the program applies. The FHWA will also consider this in any guidance material that may be issued in the future.

**Standardization**

Two respondents—a State DOT and a safety advocacy group—commented on the updating of 23 CFR part 630 Subpart J, “Traffic Safety in Highway and Street Work Zones.” One respondent recommended strengthening Subpart J and making unit pay items mandatory. The other response recommended more State and local government flexibility in bidding practices. The FHWA will consider these divergent viewpoints during the updating of Subpart J over the next year. No change was required in the NHWZSP based on these recommendations.

Nine respondents—five State DOT’s, two private companies, a safety advocacy group, and one national association—commented on minimum retroreflectivity guidance. Three respondents recommended that minimum retroreflectivity standards should be developed, two respondents recommended that they should be deferred or limited in application, one State DOT recommended they should not be developed, and the remaining three respondents commented on the subject content or the phasing of any proposed guidance. The FHWA is working to develop standards for minimum levels of retroreflectivity for all signs and pavement markings as required by the 1993 Department of Transportation Appropriations Act. The establishment of retroreflectivity standards for all signs and pavement
markings for incorporation into the Manual of Uniform Traffic Control Devices (MUTCD) will be addressed through a separate rule making process.

Eight respondents—six State DOT’s, one private company and a safety advocacy group—commented on determining the crashworthiness of work zone related traffic control devices and safety appurtenances. Four respondents support the NHWZSP’s proposed crash testing program. Two respondents expressed concern about the cost and the need to consider accident experiences as well as the nature of specific work zone appurtenances in determining their crashworthiness. Remaining respondents recommended specific appurtenances for crash testing. The FHWA believes it is important to have safe crashworthy equipment and traffic control devices in work zones similar to what is required on the other portions of a highway. However, there is no need for rational decision making in developing an appropriate crash test program for these devices. This would consider the relative degree of risk, the potential use of computer simulation in lieu of crash tests, and in service experience. No change to the program was considered necessary based on the received comments.

Three respondents—two State DOT’s and one private company—recommended using procedures and layouts for short term work that require a lesser number of traffic control devices. Although the comments do not directly relate to the NHWZSP content, they are deserving of a response. The FHWA considers that the new Part VI of the Manual on Uniform Traffic Control Devices provides adequate flexibility for short term work zones. Suggestions for specific changes to the MUTCD traffic control figures or clarifying language may be submitted to the FHWA for consideration in future revisions to Part VI.

Compliance

Two respondents—one State DOT and a consultant—recommended more emphasis be placed on development and implementation of traffic control plans (TCP). The FHWA agrees with the importance of using good traffic control plans for work zones and in complying with them during the life of the project. The current Federal regulations (23 CFR 630, Part J) emphasize their contribution for improving work zone safety. Also, the FHWA is providing further emphasis on TCP’s in new work zone training courses, especially the two courses—“Developing Traffic Control Plans and Strategies” and “Design and Operation of Work Zone Traffic Control.” Additionally, FHWA will emphasize implementation and compliance with TCP’s in the review process used by State and local highway agencies and in the periodic FHWA regional reviews.

Seven respondents—four State DOT’s, two national associations, and a safety advocacy group—commented on certification of flaggers and work site supervisors. Two respondents recommended that certification should not be mandated. Two respondents recommended requiring certification programs. Other respondents provided recommendations on the subject content of any proposed certification program. The FHWA recognizes that differences exist concerning certification requirements for flaggers and work site supervisors, and determined it would be inappropriate to mandate a certification program at this time. However, FHWA recognizes the potential for increased safety and Section C.2.c.(1) is modified to promote the use of training and certification for flaggers and work site safety supervisors. Additionally, FHWA will collect and disseminate information on certification programs.

Three respondents—one State DOT, one private company, and a utility—recommended that more emphasis should be placed on increasing safety in work zones by improving laws and improving cooperation between highway agencies and law enforcement agencies. FHWA agrees and has modified the NHWZSP [See Section C.2.c.(3)] to promote greater coordination and cooperation between highway agencies and law enforcement agencies. FHWA will incorporate information on the cooperative involvement of law enforcement agencies into current training courses and field review procedures.

Evaluation

Eight respondents—five State DOT’s, one national association, a safety advocacy group, and a Federal government safety agency—commented on annual reviews. Five respondents supported this section and three commented on the scope of the annual review process. FHWA has revised the NHWZSP [See Section C.3.b.(2)] to clarify its intent to conduct or participate in reviews on a periodic basis. Since the FHWA is shifting emphasis in its oversight responsibilities from a project review orientation to a program and system review orientation, these types of reviews will allow the FHWA to participate in program evaluations and analyze national trends at a time of reduced resources.

Seven respondents—four State DOT’s, two private companies, and a labor union—supported the need for better work zone crash data or commented on aspects of work zone accident reporting. Two respondents recommended that accident data should be collected within existing State traffic records systems, two respondents recommended better accident data collection, and the other respondents supported better accident data collection with reservations about the extent of any data collection effort.

The recent National Work Zone Safety Conference also provided strong support for collecting and using better work zone crash data elements. Section C.3.a. was revised to reflect the efforts FHWA will initiate to improve work zone crash data at both the national and state level, while recognizing the difficulty in gaining acceptance for any major accident data collection effort.

Innovation

Four respondents—three State DOT’s and one private company—proposed the NHWZSP provide incentives (funds) to develop new technology. While FHWA agrees with the concept of using incentives to support development of new technology, this cannot be included in the NHWZSP at this time because there is no authorizing legislation to provide (fund) incentives.

Four respondents—three State DOT’s and one private company—recommended that the NHWZSP should focus on improving communications among contractors, highway users, and highway agencies. One respondent recommended that FHWA focus on improving communications and information flow, two respondents recommended specific actions that would communicate information, and one respondent recommended that FHWA should develop a national information network. The development of a national clearinghouse for work zone information was also strongly supported at the recent National Work Zone Safety conference. FHWA agrees that improving information flow about nationwide work zone safety data and activities is important. In response to the recommendations Section C.3.c.(2) has been added which identifies FHWA’s intent to investigate establishing a national clearinghouse for work zone information.

NHWZSP Implementation

Five respondents—three State DOT’s, one national association, and a safety advocacy group—recommended that a work zone safety program be included
in the State's Safety Management System. The FHWA agrees and has added Section C.2.c.(2) encouraging that highway work zone safety should be part of each State's Safety Management System.

National Highway Work Zone Safety Program

A. Introduction

Section 1051 of ISTEA requires the Secretary of Transportation to "* * * develop and implement a work zone safety program which will improve work zone safety at highway construction sites by enhancing the quality and effectiveness of traffic control devices, traffic control plans, and bidding practices for traffic control devices and services."*

Section 1051 is the result of Congressional concern for the continuing number of fatalities and injuries occurring annually in work zones and its desire to improve work zone safety for highway users and workers. In response to these concerns, the FHWA developed the National Highway Work Zone Safety Program (NHWZSP) based upon FHWA experience, National Transportation Safety Board findings and recommendations, docket comments, annual work zone safety reports, research reports, and technical articles.

The NHWZSP is the structure FHWA will follow in planning, developing, implementing, and monitoring work zone safety and operational activities nationally. By including basic activities necessary to improve work zone safety in the NHWZSP, it also serves as a model for State and local governments to follow in developing or revising their own work zone safety improvement programs.

B. Objective and Scope

The objective of the National Highway Work Zone Safety Program is to enhance safety and operational efficiency of highway work zones for highway users—motorists, pedestrians, motorcyclists, bicyclists, including the elderly highway users—and highway workers. The program is applicable to all public highways and streets. Early implementation will particularly emphasize activities on the National Highway System. The program elements should be considered for application by all public highway agencies and utility companies, the highway industry, and highway users. The intent is to have a continuing active program which will be reviewed at least biennially.

C. Work Zone Program

The NHWZSP consists of four components—standardization, compliance, evaluation, and innovation. Each component contains key elements supporting the component, and for each element there are planned or recommended FHWA activities that will aid in its implementation. In addition, each listed activity may support more than one program component.

1. Standardization—Update Existing Work Zone Safety Related Standards and Develop New Standards Where Needed

Standardization of traffic control devices, operational features, traffic control plans or layouts, contract specifications, and use of recognized industry wide good work zone management practices encourages uniformity of application and a common understanding of these items by highway agencies, contractor's personnel, equipment and material suppliers, and the traveling public. This promotes quicker recognition and better understanding of what is required to achieve compliance and assure a higher level of safety in work zones.

The following elements are pertinent to having appropriate national and State standards and guidelines contribute to improved work zone safety:


(1) FHWA will review current work zone problems and update the regulation to reflect current needs and emphasis including reinforcement of guidance on bidding practices, work zone accident collection and analysis at both project and program levels, compliance with traffic control plans, and work zone speed limits.


(1) FHWA will maintain and continually update Part VI of the MUTCD for direct use by highway agencies, contractors, utility companies, and the highway industry in general.

(2) FHWA will develop retroreflectivity standards for work zone signs and pavement markings as part of an overall FHWA objective to meet the retroreflectivity requirements included in the 1993 U. S. Department of Transportation Appropriations Act.

c. Standards, procedures, and criteria for establishing the crashworthiness of work zone safety appurtenances.

(1) FHWA will propose a pooled funded crash testing program using the latest accepted criteria and standards approved by the FHWA. This will also include development of clarifying or additional guidance related to the use of crashworthy devices in work zones.

2. Ensure Compliance

Experience in work zone operations indicates that ensuring compliance with existing standards and guidelines at all times would substantially improve the safety and operation of work zones. The common causes of noncompliance include—underestimating project needs or complexity, failure to accurately implement the traffic control plan initially or modify it due to changing conditions, and gradual deterioration of devices over the life of the project.

Elements considered important to ensuring compliance with work zone related standards and guidelines are—

a. Procedures and specifications which help achieve or maintain an acceptable level of quality for traffic control plan applications, including all traffic control devices and safety appurtenances used in work zones.

(1) FHWA will develop inspection methods to identify devices that have been improperly installed or inadequately maintained to increase the contractors' compliance and highway agencies' enforcement of contract traffic control provisions. This activity includes promoting the National Highway Institute's training course—"Inspection of Work Zone Traffic Control Devices," which provides guidance to inspectors for ensuring an acceptable quality level of installed and maintained work zone traffic control devices.

(2) FHWA will identify and promote those procedures and specifications that will help improve the efficiency and effectiveness of work zone operations (ex. special incentive/disincentive provisions for timely completion of work) and increased safety.

b. Public awareness and education programs designed to sensitize highway users on the uniqueness and risk of driving in work zones and to change highway user behavior accordingly.

(1) FHWA will promote the development and implementation of public education and awareness programs, including exploring the potential of developing, in cooperation with our partners, a single national work zone safety campaign that could be locally adapted and used by each State.
(2) FHWA will consider other outreach activities to advance the concept of safer driving in work zones.

  c. Full use of available resources and guidance material to achieve better compliance with traffic control plans, specification, and procedures.

(1) FHWA will provide guidance to highway agencies on training/ certification programs for flaggers and work site safety supervisors, and promote their use.

(2) FHWA will encourage State and local highway agencies to include work zone safety in their Safety Management Systems to assure it is properly considered in the planning, design, and implementation stages.

(3) FHWA will promote greater coordination and cooperation between law enforcement and highway agencies in the planning, design, and implementation of traffic control plans. Also, provide information on effective State and local laws, regulations, and procedures that enhance the safety and operations of work zones.

3. Improve Evaluation of Work Zones

   Evaluation is a necessary tool for analyzing failures and identifying successes in work zone operations. Through evaluation, it is possible to identify opportunities for countermeasures and to measure the benefits of current ones. The following elements contribute to increased evaluation capabilities and improved program related data:

   a. Accurate and sufficient work zone crash data.

(1) The FHWA will assist State highway agencies in evaluating their programs and improving their procedures for collecting and analyzing work zone accident and incident data.

(2) The FHWA, in cooperation with the National Highway Traffic Safety Administration (NHTSA) and others, will provide a single definition of work zone related accidents for universal use, and identify the minimum data elements that should be collected for compiling the fatalities and injuries occurring in work zones.

   b. Independent project and work zone program oversight to identify safety deficiencies.

(1) The FHWA will encourage State and local highway agencies to have a system of independent project site and program process reviews to identify desirable safety changes.

(2) On a regional basis, the FHWA will periodically review a sampling of active highway construction, maintenance, and utility projects. The review will include a detailed analysis of traffic control plans and their revisions, the validity and condition of the traffic control devices (both day and night), and appropriate management and enforcement activities.

   c. A national information exchange system for feedback on positive activities for improving work zone safety.

(1) The FHWA will provide an annual report summarizing efforts being made by the States to reduce deaths and injuries occurring in work zones and the effectiveness of such efforts.

(2) The FHWA will explore, in cooperation with others, the potential for establishing a national work zone safety information clearinghouse.

   d. A specific problem assessment program to identify possible cause and effect factors for unique work zone problems and identify potential solutions.

(1) The FHWA will evaluate specific work zone related problems or issues of national significance as they occur. Scope and extent of evaluation will be determined on a case by case basis. Active participation by States and FHWA field offices will be encouraged.

4. Implement Innovative Technologies and Procedures

   The use of innovative technologies and procedures can help improve highway user and worker safety, and traffic flow through work zones. Such innovations consist of the development of new products and procedures and more effective use of existing ones through increased training. Elements supporting innovation and increased effectiveness are:

   a. Acceptance and adoption of new technology.

(1) The FHWA will encourage the State and local highway agencies and others to use the Strategic Highway Research Program (SHRP) Work Zone Safety Products that have been proven successful. These include those that provide added protection for workers, such as, the flashing stop/slow paddle and the intrusion alarm.

(2) FHWA will encourage the increased use of innovative protective safety devices, such as Truck Mounted Attenuators for short-term and intermediate-term stationary work zones, and automated shadow vehicles for mobile and short-term work zones.

(3) FHWA will encourage the use of techniques identified in the 1992 report to Congress entitled, "Traffic/ Congestion Management During Highway Construction" to minimize disruptions to traffic during construction of highway projects.

   b. An ongoing research and evaluation program for new work zone safety products, devices and procedures.

(1) FHWA will encourage the States to support work zone safety research and new technology evaluation programs to be able to more quickly adopt viable products and devices.

(2) FHWA will conduct research on condition-responsive work zone traffic control systems and operations applicable to longer-term construction areas. An example is the "Vehicle Queue Backup Warning System" being developed to warn motorists and workers of situations which could produce hazards such as traffic stoppage at critical locations.

(3) FHWA will research work zone human factors driving needs with emphasis on the elderly driver.

   c. A continuing training program for highway agency staffs and contractor personnel where appropriate.

(1) FHWA will develop and conduct a comprehensive work zone safety training program. This program will encompass subjects ranging from an understanding and application of basic concepts to procedures for developing complex work zone strategies. The work zone training program courses will be available through the FHWA's National Highway Institute (NHI).

D. NHWZSP Implementation

   1. The FHWA will continue to develop and implement the activities included in this NHWZSP and will support implementation of specific findings of the National Work Zone Conference held December 5-7, 1994, in Washington, DC.

   2. Each FHWA Division Administrator will work in partnership with the State highway and other appropriate agencies to develop and implement a Statewide highway work zone safety program patterned after the NHWZSP that meets State and local needs.

   3. Each FHWA Division Administrator should encourage the State highway agency to include work zone safety as a part of its Safety Management System.

   Authority:

Rodney E. Slater,
Federal Highway Administrator.
[FR Doc. 95–26226 Filed 10–23–95; 8:45 am]
BILLING CODE 4910–22–P