

feed to lactating goats. Type C feeds may be manufactured from monensin liquid Type B feeds. The liquid Type B feeds have a pH of 4.3 to 7.1 and their labels must bear appropriate mixing directions, as defined in paragraph (d)(12) of this section. See special labeling considerations in paragraph (d) of this section.

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Dated: November 20, 2007.

Bernadette Dunham,

Deputy Director, Center for Veterinary Medicine.

[FR Doc. E7-23517 Filed 12-4-07; 8:45 am]

BILLING CODE 4160-01-S

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

23 CFR Part 630

[FHWA Docket No. FHWA-2006-25203]

RIN 2125-AF10

Temporary Traffic Control Devices

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Final rule.

SUMMARY: The FHWA is adding a new Subpart K to 23 CFR part 630 to supplement existing regulations that govern work zone safety and mobility in highway and street work zones to include conditions for the appropriate use of, and expenditure of funds for, uniformed law enforcement officers, positive protective measures between workers and motorized traffic, and installation and maintenance of temporary traffic control devices during construction, utility, and maintenance operations. These regulations are intended to decrease the likelihood of fatalities and injuries to road users, and to workers who are exposed to motorized traffic (vehicles using the highway for purposes of travel) while working on Federal-aid highway projects. The regulations are issued in accordance with section 1110 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Public Law 109-59, 119 Stat. 1227, codified at 23 U.S.C. 109(e) and 112(g).

DATES: *Effective Date:* December 4, 2008.

The incorporation by reference of certain publications listed in this rule is approved by the Director of the Federal Register as of December 4, 2008.

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SUPPLEMENTARY INFORMATION:

Electronic Access

This document, the notice of proposed rulemaking (NPRM), and all comments received may be viewed online through the Federal eRulemaking portal at: <http://www.regulations.gov>. The Web site is available 24 hours each day, 365 days each year. Electronic submission and retrieval help and guidelines are available under the help section of the Web site.

An electronic copy of this document may also be downloaded from the Office of the **Federal Register's** home page at: <http://www.archives.gov> and the Government Printing Office's Web page at: <http://www.access.gpo.gov/nara>.

Background

History

In 2004, the FHWA published a final rule updating its regulations on Work Zone Safety and Mobility (23 CFR 630, subpart J). Section 630.1006 of subpart J (Work Zone Safety and Mobility Policy) stated that "Each State shall implement a policy for the systematic consideration and management of work zone impacts on all Federal-aid highway projects. This policy shall address work zone impacts throughout the various stages of the project development and implementation process. This policy may take the form of processes, procedures, and/or guidance, and may vary based on the characteristics and expected work zone impacts of individual projects or classes of projects. The States should institute this policy using a multidisciplinary team and in partnership with the FHWA. The States are encouraged to implement this policy for non-Federal-aid projects as well." This final rule on Temporary Traffic Control Devices provides additional guidance on the development of such Work Zone Safety and Mobility Policies, and specifically addresses the requirements of section 1110 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Public Law 109-59, 119 Stat. 1227, which have been codified at 23 U.S.C. 109(e) and 112(g).

Section 109(e)(2) of title 23, United States Code, states that no funds shall be approved for expenditure on any

Federal-aid highway "unless proper temporary traffic control devices to improve safety in work zones will be installed and maintained during construction, utility, and maintenance operations on that portion of the highway with respect to which such expenditures are to be made. Installation and maintenance of the devices shall be in accordance with the Manual on Uniform Traffic Control Devices." Additionally, section 112(g)(1) requires that "[t]he Secretary, after consultation with appropriate Federal and State officials, shall issue regulations establishing the conditions for the appropriate use of, and expenditure of funds for, uniformed law enforcement officers, positive protective measures between workers and motorized traffic, and installation and maintenance of temporary traffic control devices during construction, utility, and maintenance operations."

A NPRM proposing the creation of a new Subpart K of 23 CFR part 630 was published on November 1, 2006, at 71 FR 64173. The purpose was to emphasize the need to appropriately consider and manage worker safety as part of the project development process by providing guidance on key factors to consider in reducing worker exposure and risk from motorized traffic. The FHWA proposed to require that each agency's policy for the systematic consideration and management of work zone impacts be established in accordance with the recently updated 23 CFR part 630 subpart J (effective October 12, 2007), and address the consideration and management of worker safety as follows:

1. Avoid or minimize worker exposure to motorized traffic through the application of appropriate positive protective strategies including, but not limited to, full road closures; ramp closures; crossovers; detours; and rolling road blocks during work zone setup and removal;
2. Where exposure cannot be adequately managed through the application of the above strategies, reduce risk to workers from being struck by motorized traffic through the use of appropriate positive protective devices;
3. Where exposure and risk reduction is not adequate, possible, or practical, manage risk through the application of appropriate intrusion countermeasures including, but not limited to, the use of uniformed law enforcement officers; and
4. Assure that the quality and adequacy of deployed temporary traffic control devices are maintained for the project duration.

The FHWA received a substantial number of comments in response to the NPRM. On December 19, 2006, at 71 FR 75898, the comment period was extended to February 16, 2007, in response to a concern expressed by the National Committee on Uniform Traffic Control Devices (NCUTCD) that the closing date did not provide sufficient time for discussion of the issues in committee and a subsequent comprehensive response to the docket. The extension provided the NCUTCD and other interested parties additional time to discuss, evaluate, and submit comments to the docket.

A major focus of the comments to the rule as proposed was the need for greater flexibility in selecting and applying the specific strategies advanced for the required policies and procedures. There was also a general interest in providing a balance between the need for ensuring the safety of construction and maintenance workers as they carry out their tasks in work zones, and the safety of road users as they traverse highway work zones.

In developing this final rule the FHWA has carefully considered the comments and suggestions of respondents. Some changes have been made to the overall structure of the rule in order to enhance the clarity and consistency of each section. Other changes have been made to revise the terminology, making it more consistent with the stated intent of section 1110 of SAFETEA-LU, and adjusting the language to clarify the rule's intent.

Among the key issues addressed in the development of this final rule were the following:

- Revisions to terms and definitions to address all treatments and traffic control devices;
- Presentation of treatments as options, not in priority order;
- Provision of appropriate pay items for all traffic control treatments and operations;
- Flexibility on pay items, acknowledging that either lump sum or unit pricing may be appropriate, depending upon circumstances; and
- Reference to the need to manage risks associated with work vehicles and equipment when they are exiting or entering travel lanes.

Summary Discussion of Comments Received in Response to the NPRM

The following discussion provides an overview of the comments received in response to the NPRM, and the FHWA's actions to resolve and address the issues raised by the respondents.

Profile of Respondents

Comments were submitted by a broad cross-section of organizations and individuals, including national organizations representing the interests of State departments of transportation and contractors, respectively; other industry groups representing manufacturers and suppliers of highway construction safety equipment; State and local departments of transportation and public authorities; and law enforcement agencies, as well as private consultants and other individuals. The trade associations providing comments were the Associated General Contractors (AGC) of America; the Association of Road and Transportation Builders of America (ARTBA); the Laborers' Health and Safety Fund of North America (LHSFNA) and the New Jersey State Laborers Health and Safety Fund (NJSLSHF); the NCUTCD; the American Traffic Safety Services Association (ATSSA); the Water Barrier Manufacturers' Association (WBMA); the American Highway Users' Alliance (AHUA); the National Association of County Engineers (NACE); Advocates for Highway and Auto Safety (AHAS); the Maryland Highway Contractors Association (MHCA); and the Colorado Association of Traffic Control Professionals (CATCP). FHWA categorized the comments of the American Association of State Highway and Transportation Officials (AASHTO) with those of State Departments of Transportation (DOTs), because AASHTO represents State DOTs. The AASHTO comments noted that their submission was a consolidated response to the NPRM on behalf of its member States. Many State DOTs provided additional comments individually.

Overall Position of Respondents

Taken as a whole, the responses to the NPRM were supportive of the intent of the rule, noting the vulnerability of highway workers in work zones and the need to reduce work zone hazards to workers and road users alike. Some respondents thought that the rule as proposed went too far in imposing requirements on agencies undertaking highway construction projects, while others felt that the rule as proposed did not go far enough in protecting workers.

In all, there were 80 entries into the docket for comments on the proposed rule. Of these entries, 4 were posted by FHWA (the proposed rule, two background documents providing supporting information to respondents, and a notice extending the comment period for the NPRM). An additional three comments were requests for an

extension of the comment period. Thirteen entries into the docket were duplicates of previous entries, or comments that were substantially the same but provided some additional information in support of the comments. Of the 60 remaining responses to the NPRM, 29 respondents supported the proposed rule; in general, these respondents supported the rule as proposed and agreed with the overall purpose, structure, and language, though their comments may have included specific recommendations for clarification or revisions. Another 27 respondents indicated opposition to the NPRM. These respondents generally opposed the rule as proposed; most of these respondents agreed with the overall purpose of the proposed rule, but may have opposed the structure and language of the NPRM (e.g., most State DOTs agreed with the intent of the rule, but disagreed with some specific language). Other respondents may have been neutral toward the rule as a whole, but had some specific recommendations for changes.

Most respondents restricted their comments to the proposed regulatory language. However, some addressed material contained in the preamble. One respondent suggested that the approach described in the NPRM would have the potential for increased congestion, inconvenience, and increased travel time and cost to deliver goods and services, which would seem inconsistent with the goals set forth in the National Strategy to Reduce Congestion on America's Transportation Network, and that project characteristics, system capacity, and mobility needs may dictate other approaches. FHWA concurs with the comments that safety measures should be implemented on the basis of project characteristics and that agencies should take into consideration the possible impacts of such measures on system capacity and mobility. However, FHWA feels that the final rule provides sufficient flexibility for operating agencies to select measures that will provide an appropriate level of protection both to road users and to workers in work zone activity areas, while maintaining adequate levels of mobility.

Section-by-Section Analysis of the NPRM Comments and FHWA Response

Because of the restructuring of the rule in response to FHWA's review of the comments received, the numbering of sections in the final rule is not entirely consistent with the proposed rule. Therefore, comments will be

addressed below as they relate to the applicable section of the final rule.

Section 630.1102 Purpose

Most State DOTs agreed in general terms with the purpose as written. Twenty State DOTs (out of 26 submitting comments) explicitly endorsed AASHTO's response, which included suggested changes to the language. Among AASHTO's suggestions was that the purpose recognize that road user safety should not be compromised by the implementation of any of the rule's requirements. The Maryland State Highway Administration (SHA) noted that the "section-by-section" discussion in the NPRM for the "Purpose" section says, "[b]y emphasizing worker safety, the proposed rule would attempt to enhance the safety of both the motorist and worker during the project." However, the SHA felt that the proposed rule seems to be tilted in favor of worker safety, and the balance between the safety of workers and those of the traveling public has not been attained.

The FHWA agrees that the objective is to ensure both worker and road user safety. In emphasizing worker safety in the purpose of the proposed rule, the FHWA attempted to provide a better balance between consideration of the safety of workers and those of the traveling public. The FHWA recognizes that the safety of both workers and road users are equally important and has revised the purpose to clearly reflect that this regulation is intended to improve work zone safety for workers and road users alike.

AASHTO's comments also proposed that the final rule should not apply to "all State and local highway agencies that receive Federal-aid highway funding," but rather make the rule applicable to all "Federal-aid projects." AASHTO also suggested that the FHWA consider including a statement encouraging States to implement these requirements on non-Federal-aid projects as well. In the proposed rule, the first and second sentences under "Purpose" were meant to be taken together, thus indicating applicability to Federal-aid highway projects and recipients of Federal-aid highway funding. The language in the purpose section has been clarified to indicate that this final rule applies only to Federal-aid projects. Language has also been added to encourage application of this rule to non-Federal-aid projects as well.

One respondent argued that a primary intent of the rule is to get State DOTs and other agencies to ensure adequate funding to promote worker and road

user safety in the work zone planning and design process. While acknowledging that FHWA and the Occupational Safety and Health Administration (OSHA) have different responsibilities, the respondent suggested that this rule should "strike a common ground between the two." The respondent went on to urge that FHWA take a more expansive view of worker safety, addressing safety within the work space as well as the interface between workers and motorized traffic. Another respondent suggested that the purpose statement should be changed to "establish requirements and provide guidance for addressing worker safety by limiting the exposure to hazards and risks inside the work zone as well as to hazards and risks from motorized traffic." This change would expand the scope of the rule to include worker safety inside the work zone, whether or not there is an intrusion. In response to the comments regarding worker safety from hazards and risks inside the work area, the FHWA agrees that worker safety related to internal operations is important, but believes that workplace safety requirements are outside the scope of this rulemaking effort and this subpart, and fall under the purview of OSHA.

Some respondents observed that the proposed rule would require changes to the Manual on Uniform Traffic Control Devices (MUTCD). The FHWA agrees that some of the provisions included in the regulation may be appropriate for consideration to be added to the MUTCD; the criteria and provisions for positive protection and law enforcement are, for the most part, good information that can be made more readily available by adding it as guidance or support to the MUTCD. Inclusion of such provisions in the MUTCD may be addressed by the FHWA in a separate and future rulemaking action.

Section 630.1104 Definitions

The FHWA made several changes to the terms used throughout the final rule to clarify the meaning of the term "positive protective measures." Changes have been made to the structure of the rule and definitions to strengthen and clarify the intent of the rule, based on the statutory language.

One respondent suggested that all definitions should be consistent with existing definitions in the MUTCD, while at the same time ensuring that new terms are not so similar to existing terms as to cause confusion. It was also suggested that any term not in the current MUTCD should be included in the next MUTCD. The FHWA generally agrees, and inclusion of appropriate

terminology in the MUTCD may be addressed in a separate and future rulemaking action.

In reference to a term used elsewhere in the proposed rule, a respondent suggested that "[t]he term 'live travel lane' as referenced in section 630.1106 should be defined under this section." This wording has been revised in the final rule, now under section 630.1108, to read "travel lanes open to traffic" to better convey its meaning and as a result, the FHWA does not believe a definition is now required.

The terms appearing in the final rule are discussed below:

Agency. The definition for "Agency" was revised to include public authorities.

Exposure Control Measures. This definition was added to address concerns expressed by a number of respondents that terms as presented in the NPRM were somewhat confusing and potentially misleading. "Exposure Control Measures" was added in place of "Positive Protective Strategies" to reflect the fact that strategies were not aimed solely at preventing vehicles from entering the work space, but to reduce worker and road user exposure through a variety of strategies.

Federal-aid Highway Project. This definition was left unchanged.

Motorized Traffic. This definition was modified to clarify the reference to "construction or maintenance vehicles and equipment," and to emphasize that, while protection of workers and road users is equally important, the strategies used to address road users may be different from strategies primarily affecting construction vehicles and equipment, particularly when they are entering or exiting the protected area of the work zone. We declined to accept a comment suggesting that the term "motorized traffic" be expanded to include work vehicles in favor of describing in more detail the need to draw distinctions between vehicles passing through the work zone and vehicles operating within the work zone and its protected areas.

Other Traffic Control Measures. This definition was added to reflect structural changes in the rule that changed the nomenclature for different activities, and to underscore the distinction between the "exposure control measures," "positive protection devices," and any other strategies used to improve worker safety. The term "Intrusion Countermeasures" was eliminated because the measures listed were broader than simply reducing intrusion risk, and the term "Other Traffic Control Measures" is more descriptive of these measures.

Positive Protection Devices. A minor change in the wording was made to clarify that such devices may either contain or redirect vehicles, or perform both functions. The FHWA agrees that the term "contain and redirect" may be confusing, because some devices do not redirect impacting vehicles. Many types of crash cushions and arrestor nets contain vehicles, but do not redirect.

The terms "Positive Protective Strategies" and "Positive Protective Measures" were eliminated, based on the potential confusion involved in using three closely related terms with different meanings. While 23 U.S.C. 112(g)(4) refers to "Positive Protective Measures," the FHWA felt that the intent would be best served by using somewhat different terminology in the final rule.

Work Zone Safety Management. The term "Work Zone Safety Management" was added as an "umbrella" encompassing all actions taken by an agency to ensure the protection of workers and road users in work zones, including the development of policies, procedures, and guidelines for individual projects or programs. This term was added to respond to comments that the terminology in the NPRM was ambiguous and inconsistent with both current practice and the language of section 1110 of SAFETEA-LU.

Section 630.1106 Policy and Procedures for Work Zone Safety Management

Section 630.1106 was reorganized and refined from the proposed rule, largely in response to comments submitted to the docket. Material in the proposed rule was rearranged to separate elements related to overall policies and procedures to be developed by State DOTs from specifics related to particular traffic control strategies and the implementation of work zone safety measures.

Subsection (a) of section 630.1106 describes the nature of the required work zone safety measures and traffic control strategies, and encourages State DOTs to work in partnership with FHWA in developing policies and procedures. This use of the term "partnership" is consistent with existing language in Subpart J—Work Zone Safety and Mobility.

Subsection (b) refers to the MUTCD and the AASHTO Roadside Design Guide (RDG) as sources of information on work zone safety methods and traffic control strategies, and presents some of the project and highway characteristics and factors that the State DOTs should take into consideration when

determining which measures and strategies should be employed.

Several respondents to the NPRM were concerned about the specificity of some of the language in the proposed rule, commenting that the proposed rule imposed requirements without any supporting research indicating that the proposed criteria were appropriate. The FHWA acknowledges that there is no definitive research supporting specific criteria. The language in the final rule has been modified to clarify the intent of the rule, which is to require appropriate consideration and management of worker and road user safety when planning highway construction, maintenance, and utility operations. The new language retains and expands the listing, previously located in subsection (a), of some of the characteristics and factors that should be considered when deciding what work zone safety measures should be used, while giving agencies flexibility in determining the criteria and thresholds that would affect decisions about the use of different strategies.

A comment relating to the specificity of the proposed rule noted that the original language "contains three specific requirements for the use of longitudinal barrier that cause significant concern, as they are restrictive and will have unintended negative consequences if applied unilaterally to all work zones. These requirements include: (1) Stationary work zones lasting two weeks or more; (2) with a design speed of 45 mph or higher; and (3) where workers are within one-lane-width of a live travel lane." In specifying these specific thresholds in the proposed rule, the intent was to use them as triggers for requiring an analysis on the need for positive protection devices rather than as direct requirements for the use of positive protection devices. These factors are now part of a more comprehensive set of considerations, and are not characterized as "requirements." As modified, the final rule still requires consideration of worker and road user safety, but provides more flexibility to agencies along with guidance on the factors that should be taken into account in selecting work zone safety measures.

Several respondents expressed concern about the term "project design speed." The FHWA concurs that "project design speed" is inappropriate. While the intended meaning of this term was the work zone design speed rather than the design speed of the completed project, it may still not reflect the actual traffic speeds through the work zone. The language in the final rule has been

modified to refer to anticipated traffic speeds through the work zone rather than the project design speed.

A respondent to the NPRM observed that "the material in the AASHTO Roadside Design Guide is intended to serve as guidance, not as requirements." The respondent indicated some discomfort with provisions that seem to suggest that the Guide is to be treated as a specific regulation (e.g., actions shall be "consistent with" or "in accordance with" that Guide). The commenter believes that such wording suggests that FHWA will be determining whether a State has acted in accordance with the Guide, even though the Guide itself is, as FHWA stated, a "resource document." Language in the final rule has been modified to make clear that guidance included in the AASHTO Roadside Design Guide is not, and should not be construed as a "regulation."

Another respondent expressed concern that the requirements in section 630.1106 are "arbitrary and overly prescriptive." The respondent believes that States should be required to develop policies that help protect highway worker safety and that they should begin by examining the application of strategies that would avoid or minimize worker exposure, even though in many, if not most cases, these strategies will not be practical. However, the respondent felt that section 630.1106(a) should be "softened," and that this section should be written more as recommendations rather than as requirements. The FHWA has modified the language in this section to emphasize that States have the flexibility to develop policies and procedures that are appropriate to the circumstances of a given project or program.

Subsection (c) deals with law enforcement, directing State DOTs and other agencies undertaking construction projects with Federal-aid funds to develop a policy addressing the use of uniformed law enforcement on such projects. The policy may consist of processes, procedures, and/or guidance, as appropriate.

Overall, there is good support and little or no opposition to the concept of agencies developing a policy for work zone law enforcement. The most significant concerns related to the manner of FHWA involvement in development of the policy, and some of the individual provisions to be included. One respondent argued that the language in the proposed rule, which "states that 'Each agency in cooperation with FHWA, shall develop a policy * * * suggests a possible

interpretation of some type of joint authority for FHWA to decide how States utilize and pay for law enforcement. This would lead to FHWA involvement in a State's internal management, which is not appropriate." In response to this concern, the FHWA changed the term "cooperation" to "partnership." This is the same terminology currently used in Subpart J. Some respondents expressed concern that the proposed rule would have required operating agencies to take responsibility for an area over which they had no control—that is, the integration of law enforcement with work zone safety measures. Another respondent noted the difficulty of ensuring compliance due to the numerous entities involved in law enforcement, including State law enforcement agencies, sheriff departments in multiple counties, and a host of local agencies. The respondent suggested that the rule should include accommodations with numerous and widespread layers of law enforcement involved in safeguarding their roads.

The FHWA recognizes that some highway agencies do not have direct connections to law enforcement agencies. However, the FHWA does not believe that is a valid reason for not developing an agency enforcement policy and procedures as stated in the final rule under section 630.1106(c). The final rule does not impose specific requirements on the use of law enforcement and is not prescriptive. While section 630.1108(e) requires the agency to develop a law enforcement policy, it does not dictate what the policy is to contain. Each operating agency has the flexibility to develop a policy suitable for its situation in consideration of the factors listed. Numerous options can be used to acquire law enforcement services. The rule does not limit the required agency policy to consideration of only the State law enforcement agency. In fact, a number of State highway agencies currently have agreements in place with various local law enforcement agencies as well as State law enforcement agencies. Contractors can hire off-duty officers using contract funds as another alternative. Officer training is one of the issues that need to be addressed when developing whatever inter-agency accords may be needed to implement the agency policy.

A number of States have good policies and programs in place for use of law enforcement in work zones. For example, a comment by the California Highway Patrol (CHP) describes its approach. "California's work zone law enforcement program, the Construction/

Maintenance Zone Enhanced Enforcement Program (COZEEP/MAZEEP), is based on CHP policy and interagency agreements between the California Department of Transportation (Caltrans) and the CHP. The current policy and agreements adequately meet the issues addressed in this proposed rulemaking. However, to improve communication and interaction, CHP and Caltrans are currently working toward joint training for CHP officers and Caltrans staff to clarify the roles and responsibilities of Caltrans and CHP at the COZEEP/MAZEEP details."

Section 630.1108 Work Zone Safety Management Measures and Strategies

Section 630.1108 is reorganized and refined in this final rule. One comment that was made repeatedly by respondents to the NPRM was that the proposed rule was arbitrary and too prescriptive, and that the proposed rule did not permit State DOTs and other affected agencies to make judgments about which work zone safety measures and traffic control strategies would be most appropriate for a given situation. Respondents generally supported a decision process based on an engineering study including consideration of specific work zone factors and existing guidance in the MUTCD and the RDG. An approach that appears to have support from both agencies and industry is to provide a clear listing of the available options, along with a discussion of the factors and existing guidelines that should be considered. Such an approach would also include the specific requirement that the agency policy developed in response to 23 CFR 630.1006 must address both worker and road user safety, and include consideration of the safety options presented in this final rule. FHWA agrees with these observations and has modified the language in the final rule to better reflect the intent of the rule, which is to require appropriate consideration and management of worker and road user safety when planning highway construction, maintenance, and utility operations, while giving agencies flexibility in determining the criteria and thresholds that would affect decisions about the use of different strategies. Throughout the final rule, many of the proposed "shall" statements were modified to emphasize that the proposed strategies or measures represented the types of actions that should be considered, and to make clear that the suggested actions were not being presented in a prescriptive priority order.

Comments from one group of respondents focused on the use of portable concrete barriers (PCB) as a form of positive protection. The respondents observed that, "According to the Roadside Design Guide, 'As with all types of traffic barriers, a median barrier should be installed only if striking the barrier is less severe than the consequences that would result if no barrier existed.' This is due to the fact that the PCB has such high Occupant Risk Values when impacted." The respondents continued, "Due to the fact that the Occupant Risk Values are much greater when impacting PCB than when impacting water-filled barriers, a significant margin of safety could be made available to the motoring public, if water-filled barriers were utilized in place of PCB.... Based on the serious and fatal injuries to vehicle occupants resulting from a number of crashes involving PCBs, we recommend that language be inserted in this section that would disallow PCBs from being installed on the NHS; or installed only in extreme situations. Instead of PCBs, we recommend that water ballast barriers be used exclusively according to accepted design guidelines and only where needed to shield work zone hazards." The FHWA does not agree with the comment or the suggested change. The FHWA does not believe that any significant overall advantage exists for water-filled barrier and it offers some disadvantages such as freezing and icing in cold temperatures. As worded, the rule allows agencies to select from any positive protection devices that meet the performance criteria set forth in NCHRP Report 350, "Recommended Procedures for the Safety Performance Evaluation of Highway Features."

Another respondent enumerated other concerns with respect to the use of PCBs as positive protection devices, expressing concern about the impact of strict requirements on primary roadway widening construction in their State. The respondent noted that in general, PCBs are utilized where there is a grade elevation change and where drop-offs (greater than two inches) adjacent to a travel lane are necessary, for a period of longer than one work day or work shift. The respondent felt that a literal reading of the proposed rule would necessitate placement of PCB at all edges of the roadway adjacent to construction activities. The PCB would occupy roadway width normally available for use as part of the adjacent travel lane, reducing the average 24-foot wide road to only 20 feet of available travel area. The respondent indicated that this

would eliminate opportunities for simultaneous construction on each side of the roadway. Currently, the agency submitting the comment requires construction of temporary pavement in locations adjacent to temporary concrete barrier wall to maintain 12 foot travel lanes. The requirements proposed in this rule would necessitate the construction of miles of temporary pavement to maintain 12 foot travel lanes. Without the temporary pavement, traffic would be restricted to 10 foot travel lanes with a longitudinal barrier on one side of the roadway. The respondent noted that such conditions could be especially hazardous on roadways with substantial truck traffic. Furthermore, the respondent noted that it would be necessary to install breaks in the temporary concrete barrier wall to maintain driveway access, and each break would require the installation of a portable terminal impact attenuator. The respondent felt that in areas with multiple driveways in close proximity to one another, maintenance of a safe installation of temporary concrete barrier wall would be problematic at best. The FHWA agrees that project characteristics need to be considered in decisions involving the use of barriers and language in the final rule requires that the need for positive protection devices be based on an engineering study.

Some respondents commented that the proposed rule did not go far enough, and suggested that the final rule should be strengthened to require minimum work zone safety measures or traffic control measures, based on specific criteria. Others proposed that the final rule should provide a "preference of controls," beginning with consideration of positive protection strategies, followed by consideration of positive protection devices, and then use of intrusion countermeasures. This runs counter to many other comments, which argued for greater flexibility in selection of appropriate work zone safety measures. FHWA concurs with the respondents who argued that there is no definitive research available to support highly prescriptive criteria for when specific work zone safety measures should be deployed. Neither is there evidence that there should be a rigid hierarchy or preference of controls. Instead, FHWA believes that the types of controls appropriate for any given work zone depend on the circumstances (location, volume and speed of adjacent traffic, availability of escape routes for workers, duration of the construction project) and the characteristics of the construction activity (drop-offs,

proximity of workers to travel lanes, etc.). Agencies responsible for the construction project should determine the appropriate traffic control measures either on the basis of an engineering study for the individual project, or based on policies adopted by the agency for certain classes of projects. Traffic control strategies that provide for the safety of both workers and road users may be selected alone or in combination, after considering the characteristics and circumstances of the construction project.

One respondent argued that without permanent barriers, most maintenance workers are left unprotected from vehicle intrusions. The respondent expressed a preference that all work should be performed behind a permanent barrier, but acknowledged that this would not be possible. When permanent barriers could not be used, the respondent stated that the following measures should be mandated: Uniformed on-duty law enforcement officers in marked cars; marked law enforcement cars to pace traffic to reduce vehicular speeds adjacent to the work zone; buffer lanes between workers and the traveling public (Interstate highways with posted speed limits 55 mph or greater should have at least one buffer lane, and those in excess of 70 mph should have a minimum of two buffer lanes); water-filled barriers; and light towers around the work area to alert the public of highway work. FHWA does not agree, nor do most of the other commenters, that all work should be performed behind a permanent barrier. This is unrealistic and does not necessarily provide the best overall safety for all concerned. The suggestions of alternative measures that should be mandated would appear arbitrary in many respects and would limit an agency's ability to consider the entire range of safety treatments in order to obtain the best balance of worker and road user safety, mobility, constructability, and cost.

Another respondent suggested that FHWA should develop its own guidelines or reference non-proprietary products. The respondent also suggested that State agencies should be required to first look to deploy the most protective devices before being allowed to use a less protective measure. The FHWA strongly supports continued research to develop improved guidelines for application of the various treatments. However, the FHWA believes that such research is most appropriate under the National Cooperative Highway Research Program (NCHRP). In fact, NCHRP just recently released a study on the Design

of Construction Work Zones on High-Speed Highways (NCHRP Report 581), which is an excellent example of the kind of emerging research that can guide agencies in designing work zones that will help ensure the safety of both road users and construction or maintenance workers. It appears that by "most protective," the commenter means temporary traffic barrier. The FHWA does not agree that this should always be the priority. The preferred approach is one that would provide the best overall management of safety, mobility, constructability, and cost. Requiring the highest level of positive protection does not necessarily result in the highest level of any of these objectives.

Some respondents provided extensive comments on such issues as the desirability of full road closures, and the need for Federal funding to encourage such actions; requiring "Type I and Type II barricades" in place of plastic or rubber cones and delineators; requiring the use of "pennant flagging or similar durable warning tape" to sequester sections of Portland concrete cement (PCC) that have been freshly laid; requiring the presence of an ATSSA Work Zone Supervisor-qualified person on projects; and to require training for contractors on the use of rolling road blocks. While some of these comments have merit, they are generally beyond the scope of this rulemaking action. However, it should be noted that Subpart J does require that both the contractor and State DOT designate a person responsible for implementing the project TMP and that said individual be properly trained in accordance with Subpart J.

The FHWA agrees with many of the suggestions offered by commenters and has substantially revised section 630.1108 as described below.

Section 630.1108(a) requires that agencies undertaking highway construction projects with Federal-aid funding determine the need for positive protection devices on the basis of an engineering study. This responds in part to comments from respondents that the term "engineering analysis" used in the proposed rule was not in common use among State DOTs and other agencies, but that the term "engineering study" is used in the MUTCD and is well-understood by such agencies. It also serves to address the language in 23 U.S.C. § 109(e)(2), which states that the "[i]nallation and maintenance of the [proper temporary traffic control] devices shall be in accordance with the Manual of Uniform Traffic Control Devices." Section 630.1108(a) also emphasizes that the conditions enumerated in section 630.1106 should

be considered when agencies establish what work zone safety measures should be deployed, and identifies some circumstances under which the use of positive protection measures are required to be considered.

In section 630.1108(a), the FHWA also responds to concerns that undertaking an engineering study for every work zone, including situations where routine maintenance of facilities is to be undertaken, would be cost-prohibitive. The final rule notes that an engineering study “may be used to develop positive protection guidelines for the agency, or to determine the measures to be applied on an individual project.” In other words, agencies may establish a policy, supported by an engineering study, that dictates the types of work zone safety measures and traffic control strategies that must be implemented at a minimum for certain types of work. Engineering studies could also be undertaken for a specific project based on characteristics of the project or of the circumstances surrounding the project. Factors to be considered in developing a policy for providing traffic control measures for different types of projects, or that might trigger an engineering study for a particular project, are enumerated in this subsection. Such characteristics and factors include duration of the construction zone, site characteristics that would provide workers no means of escape from motorized traffic (e.g., tunnels, bridges, etc.), operating speeds of traffic in lanes adjacent to the work zone, and other elements.

Section 630.1108(b) discusses the use of “Exposure Control Measures.” This term was added in place of “Positive Protective Strategies” to reflect the fact that strategies were not aimed solely at preventing vehicles from entering the work space, but to reduce worker exposure through a variety of strategies. One respondent suggested that the use of the phrase “during work zone set up and removal” following “rolling road blocks” should be clarified to indicate that it only refers to rolling road blocks, and not to the other strategies suggested to minimize worker exposure in the proposed rule. Another respondent suggested adding off-peak or night work as another strategy to be considered. The FHWA agrees with these suggestions. Each suggested strategy has been itemized in the final rule for clarity and night or off-peak work, as well as accelerated construction techniques, have been added as additional strategies.

Section 630.1108(c) addresses “Other Traffic Control Measures,” which are designed to reduce the number of work

zone crashes or to minimize the risks and consequences of intrusion of motorized vehicles into the work space. Several respondents to the NPRM took exception to the use of the term “Intrusion Countermeasures” in the proposed rule. Several respondents noted that some of the measures or strategies included under the rubric of “Intrusion Countermeasures” did not have anything to do with preventing a vehicle from “intruding” or penetrating barriers into the work space. FHWA has changed the title of this section and the wording to reflect the fact that this class of measures or strategies includes actions that relate to increased driver awareness and alertness in work zones, as well as improvements in worker training, improved worker visibility, and the use of law enforcement personnel. This section clarifies that no single measure or strategy will be effective in all circumstances, and that strategies should be considered in combination in order to provide the maximum protection reasonably available to protect workers and road users alike.

With respect to specific measures, respondents expressed various levels of support (or opposition) for several strategies. One respondent encouraged FHWA to “strongly recommend automated speed enforcement rather than merely suggesting it.” Automated speed enforcement is one of the available traffic control measures and is included in the list of strategies for consideration. However, the FHWA recognizes that implementation of this strategy would require legislative action by most States. Another respondent noted that “[a]utomated intrusion alarms present a concern due to problems in linking devices in miles-long, drum-protected work zones.” FHWA agrees that intrusion alarms, like most of the other tools listed, may not be suitable for all situations. However, the wording in section 630.1108(c) simply lists it as a tool that may be considered. Several additional measures were added in response to comments, including public and traveler information, and temporary traffic signals.

Section 630.1108(d) provides guidance on the use of law enforcement personnel to increase work zone safety. This subsection emphasizes that, while the use of law enforcement personnel can be effective in increasing driver awareness of work zones and compliance with posted warnings, such law enforcement presence is not a substitute for temporary traffic control devices required by the MUTCD. This subsection describes a number of

circumstances under which the use of law enforcement personnel may be appropriate, particularly “on projects with high traffic speeds and volumes, and where the work zone is expected to result in significant disruption to or changes in normal traffic flow patterns.”

This subsection also addresses the issue of pay items for law enforcement, as required by 23 U.S.C. 112(g). Language from the proposed rule on Federal-aid participation in costs associated with the provision of law enforcement personnel for work zone safety is retained, including the stipulation that “law enforcement activities that would normally be expected in and around highway problem areas requiring routine or ongoing law enforcement traffic control and enforcement activities” are excluded from eligibility for Federal-aid.

Section 630.1108(e) was added to address concerns expressed by a number of respondents to the NPRM noting that there are hazards associated with the entry or exit of construction vehicles and equipment from the protected area of the work zone, whether for delivery of supplies and material or for other purposes. The new section 630.1108(e) acknowledges this situation, which poses risks to both workers and travelers, and states that agency processes, procedures, and/or guidance should “address safe means for work vehicles and equipment to enter and exit traffic lanes and for delivery of construction materials to the work space, based on individual project characteristics and factors.”

Section 630.1108(f) addresses the issue of pay items. FHWA strongly supports the concept of providing appropriate payment for all work zone traffic control features needed to address both safety and mobility impacts of a highway project. Most highway agencies (but not all) and contractors also support this concept. However, the real issue is in how best to accomplish this. The FHWA believes that this issue arose because, even at this time, some agencies provide little or no specific payment for work zone safety features, and in extreme cases, provide only minimal information as to what features are required. Any payment provided is either incidental to other items of work, or is grouped into a single item for traffic control. This approach is unacceptable in that conscientious contractors are at a significant disadvantage because they provide more safety, without payment, than other contractors that choose to neglect safety to achieve a cost advantage. This problem gives rise to

the frequent complaint of the “lack of a level playing field.” The FHWA believes that this is the issue that the wording in the Federal statute attempts to address, and the final rule requires that payment for work zone traffic control features and operations “shall not be incidental to the contract, or included in payment for other items of work not related to traffic control and safety”. A related concern is that contractors may need to include a “contingency factor” in bids to make sure they cover the costs of safety requirements that are not clearly defined in project plans, specifications, and estimates (PS&Es), thus resulting in higher bid prices.

Many agencies include a range of pay items in their project PS&Es that provide adequate payment for traffic control, and provide a range of payment items (both lump sum and unit price) for the various safety features needed. Lump sum and unit price payments represent two different approaches to reimbursing contractors for costs associated with construction activities. In deciding whether to use unit price or lump sum payment methods, agencies generally consider the following:

- Unit price payment should be limited to those items where the quantity can either be quantified in advance, or closely controlled by the agency during construction. If the quantity cannot be predicted and controlled, it gives rise to the potential for unbalanced bidding. Both agencies and many responsible contractors realize these risks, and do not generally support unit price pay items where quantities cannot be predicted and controlled by the agency.
- Lump sum payment reduces the risks of unbalanced bids for features where the actual quantity is dependent upon the manner the contractor selects to accomplish the work. However, to reduce risks to contractors of uncontrolled costs (which may result in higher bids), allowance for contingency payments on lump sum items when the overall quantity or nature of the work changes is desirable and is provided by some agencies.

Section 112(g)(2) of title 23, United States Code, requires “separate pay items for the use of uniformed law enforcement officers, positive protective measures between workers and motorized traffic, and installation and maintenance of temporary traffic control devices”, but does not require unit price pay items. In an attempt for clarity, “positive protective measures” was broken down into “positive protective devices” and “positive protective measures” in the proposed rule. The proposed rule addressed payment for

positive protective devices and uniformed law enforcement officers, but did not require a separate pay item for the installation and maintenance of temporary traffic control devices because the FHWA felt that doing so would not be substantially different from current practice. Separate payment for positive protective strategies was not specifically addressed in the proposed rule as strategies ultimately translate to devices. Based on comments received and a broader interpretation of the language in section 112(g)(2), the final rule addresses pay items in a more comprehensive fashion by supplementing the requirements of 23 CFR 630.1012(d) with additional requirements as well as guidance. This includes the requirement that separate pay items be provided for major categories of traffic control devices, safety features, and work zone safety activities, including but not limited to positive protection devices, and uniformed law enforcement activities when funded through the project.

Section 630.1110 Maintenance of Temporary Traffic Control Devices

This section was relatively non-controversial, and retains most of the wording of the proposed rule. One recurring comment is worth mention again here—numerous suggestions called for use of the term “Guidelines” in lieu of “Standards,” as stated in the language of the proposed rule. Some argued that “The term ‘quality standards’ will result in significant liability for State DOTs, leading to the need for constant inspection and maintenance.” After further consideration, and recognizing that the ATSSA reference noted in the NPRM is a guideline, FHWA agrees that the use of the term “guidelines” in lieu of “standards” would be preferable.

One comment took exception to the use of the term “assure” in the proposed rule. The respondent contended that use of the term “assure” means to put beyond all doubt, and asserted that maintenance of quality standards to the level of certainty would be cost-prohibitive. The language in the final rule has been revised to eliminate use of the term “assure.”

Several comments were made about the use of certain colors on warning signs. The FHWA believes that such recommendations are beyond the scope of the rule and the requirements of section 1110 of SAFETEA-LU.

National Congestion Initiative

The final rule includes measures that could further the goals of the Secretary of Transportation’s National Strategy to

Reduce Congestion on America’s Transportation Network, announced on May 16, 2006.¹ By requiring the development and implementation of guidelines to help maintain the quality and adequacy of temporary traffic control devices on Federal-aid highway projects, the FHWA anticipates that the proposed rule will help reduce congestion by ensuring that road users are always provided with positive guidance while traveling through work zones.

Rulemaking Analysis and Notices

Executive Order 12866 (Regulatory Planning and Review) and U.S. DOT Regulatory Policies and Procedures

The FHWA has determined that this action would not be a significant regulatory action within the meaning of Executive Order 12866 or significant within the meaning of U.S. Department of Transportation regulatory policies and procedures. A recent synthesis of positive protection practices in highway work zones indicates that a wide range of positive protection devices and other safety treatments are already being used by State highway agencies.² This synthesis found that among positive protection devices, portable concrete barriers and shadow vehicles equipped with truck mounted attenuators (SV/TMAs) were being used by nearly every State highway agency. The final rule emphasizes the need to consider worker and road user safety as an integral part of each State highway agency’s process for considering and managing the overall impacts due to work zones. As such, any additional usage of positive protection devices resulting from the proposed action would be incremental to what many State highway agencies are already using to address work zone safety. In addition, consideration of exposure control and other traffic control measures that would avoid or minimize worker exposure to motorized traffic may decrease the overall need for positive protection devices. Accordingly, it is anticipated that the

¹ Speaking before the National Retail Federation’s annual conference on May 16, 2006, in Washington, DC, former U.S. Transportation Secretary Norman Mineta unveiled a new plan to reduce congestion plaguing America’s roads, rail, and airports. The National Strategy to Reduce Congestion on America’s Transportation Network includes a number of initiatives designed to reduce transportation congestion. The transcript of these remarks is available at the following URL: <http://www.dot.gov/affairs/minetasp051606.htm>.

² Transportation Research Board (TRB), National Cooperative Highway Research Program (NCHRP) Project 20–7(174), A Synthesis of Highway Practice—Positive Protection Practices in Highway Work Zones, June 17, 2005. Available in the docket.

economic impact of this rulemaking would be minimal.

The final rule is not anticipated to adversely affect, in a material way, any sector of the economy. In addition, the final rule is not likely to interfere with any action taken or planned by another agency or to materially alter the budgetary impact of any entitlements, grants, user fees, or loan programs.

Regulatory Flexibility Act

In compliance with the Regulatory Flexibility Act (5 U.S.C. 601–612), the FHWA has evaluated the effects of these changes on small entities. This rule applies to all State and local highway agencies that use Federal-aid highway funding in the execution of their highway program. The final rule emphasizes the need to consider worker and road user safety as an integral part of each agency's process for considering and managing the overall impacts due to work zones on Federal-aid highway projects. As noted previously, a recent synthesis of positive protection practices in highway work zones indicates that a wide range of positive protection devices and other safety treatments are already being used by State highway agencies. This synthesis found that among positive protective devices, portable concrete barriers and SV/TMAs were being used by nearly every State highway agency. The FHWA believes that positive protection devices and other safety treatments are also widely used by many local agencies because the FHWA's research indicates that local agencies usually follow State practice with respect to MUTCD guidance. As such, any additional usage of positive protection devices resulting from the proposed action would be incremental to what many local highway agencies are already using to address work zone safety. In addition, consideration of exposure control and other traffic control measures that would avoid or minimize worker exposure to motorized traffic may decrease the overall need for positive protection devices. Accordingly, the FHWA has determined that the final rule will not have a significant economic impact on a substantial number of small entities.

Unfunded Mandates Reform Act of 1995

This final rule would not impose unfunded mandates as defined by the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4, 109 Stat. 48, March 22, 1995). This action would not result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of \$128.1 million or more in any one year period to

comply with these changes. Additionally, the definition of “Federal mandate” in the Unfunded Mandate Reform Act excludes financial assistance of the type in which State, local or tribal governments have authority to adjust their participation in the program in accordance with changes made in the program by the Federal government. The Federal-aid highway program permits this type of flexibility to the States.

Executive Order 13132 (Federalism)

This action has been analyzed in accordance with the principles and criteria contained in Executive Order 13132 dated August 4, 1999, and the FHWA has determined that this action will not have a substantial direct effect or sufficient federalism implications on States that would limit the policymaking discretion of the States and local governments. The FHWA has also determined that this final rule will not preempt any State law or State regulation or affect the States' ability to discharge traditional State governmental functions and does not have sufficient federalism implications to warrant the preparation of a federalism assessment. The amendments are in keeping with the Secretary of Transportation's authority under 23 U.S.C. 109(d), 315, and 402(a) to promulgate uniform guidelines to promote the safe and efficient use of highways.

Executive Order 13175 (Tribal Consultation)

The FHWA has analyzed this action under Executive Order 13175, dated November 6, 2000, and believes that it will not have substantial direct effects on one or more Indian tribes; will not impose substantial direct compliance costs on Indian tribal governments; and will not preempt tribal law. The purpose of this final rule is to improve worker and road user safety on Federal-aid highway projects, and will not impose any direct compliance requirements on Indian tribal governments and will not have any economic or other impacts on the viability of Indian tribes. Therefore, a tribal summary impact statement is not required.

Executive Order 13211 (Energy Effects)

The FHWA has analyzed this action under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use. It has been determined that it is not a significant energy action under that order because it is not a significant regulatory action under Executive Order 12866 and is not

likely to have a significant adverse effect on the supply, distribution, or use of energy. Therefore, a Statement of Energy Effects under Executive Order 13211 is not required.

Executive Order 12372 (Intergovernmental Review)

Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.

Paperwork Reduction Act

Under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501, et seq.), Federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct, sponsor, or require through regulations. The FHWA has determined that this action does not contain information collection requirements for purposes of the PRA.

Executive Order 12988 (Civil Justice Reform)

This action meets applicable standards in Sections 3(a) and 3(b)(2) of Executive Order 12988, Civil Justice Reform, to minimize litigation, eliminate ambiguity, and reduce burden.

Executive Order 13045 (Protection of Children)

The FHWA has analyzed this action under Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. The FHWA certifies that this action would not cause an environmental risk to health or safety that may disproportionately affect children.

Executive Order 12630 (Taking of Private Property)

This action would not affect a taking of private property or otherwise have taking implications under Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights.

National Environmental Policy Act

The agency has analyzed this action for the purpose of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) and has determined that it would not have any effect on the quality of the environment.

Regulation Identification Number

A regulation identification number (RIN) is assigned to each regulatory

action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. The RIN contained in the heading of this document can be used to cross-reference this action with the Unified Agenda.

List of Subjects in 23 CFR Part 630

Government contracts, Grant programs—Transportation, Highway safety, Highways and roads, Project agreement, Traffic regulations, Incorporation by reference.

Issued on: November 29, 2007.

J. Richard Capka,

Federal Highway Administrator.

■ In consideration of the foregoing, the FHWA adds Subpart K to title 23, Code of Federal Regulations, Part 630, as follows:

Subpart K—Temporary Traffic Control Devices

- Sec.
 630.1102 Purpose.
 630.1104 Definitions.
 630.1106 Policy and Procedures for Work Zone Safety Management.
 630.1108 Work Zone Safety Management Measures and Strategies.
 630.1110 Maintenance of Temporary Traffic Control Devices.

Authority: 23 U.S.C. 109(c) and 112; Sec. 1110 of Pub. L. 109–59; 23 CFR 1.32; and 49 CFR 1.48(b).

§ 630.1102 Purpose.

To decrease the likelihood of highway work zone fatalities and injuries to workers and road users by establishing minimum requirements and providing guidance for the use of positive protection devices between the work space and motorized traffic, installation and maintenance of temporary traffic control devices, and use of uniformed law enforcement officers during construction, utility, and maintenance operations, and by requiring contract pay items to ensure the availability of funds for these provisions. This subpart is applicable to all Federal-aid highway projects, and its application is encouraged on other highway projects as well.

§ 630.1104 Definitions.

For the purposes of this subpart, the following definitions apply:

Agency means a State or local highway agency or authority that receives Federal-aid highway funding.

Exposure Control Measures means traffic management strategies to avoid work zone crashes involving workers and motorized traffic by eliminating or reducing traffic through the work zone,

or diverting traffic away from the work space.

Federal-aid Highway Project means highway construction, maintenance, and utility projects funded in whole or in part with Federal-aid funds.

Motorized Traffic means the motorized traveling public. This term does not include motorized construction or maintenance vehicles and equipment within the work space.

Other Traffic Control Measures means all strategies and temporary traffic controls other than Positive Protection Devices and Exposure Control Measures, but including uniformed law enforcement officers, used to reduce the risk of work zone crashes involving motorized traffic.

Positive Protection Devices means devices that contain and/or redirect vehicles and meet the crashworthiness evaluation criteria contained in National Cooperative Highway Research Program (NCHRP) Report 350, Recommended Procedures for the Safety Performance Evaluation of Highway Features, 1993, Transportation Research Board, National Research Council. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. This document is available for inspection and copying at FHWA, 1200 New Jersey Avenue, SE., Washington, DC 20590, as provided in 49 CFR part 7. You may also inspect a copy at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741 6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Work Zone Safety Management means the entire range of traffic management and control and highway safety strategies and devices used to avoid crashes in work zones that can lead to worker and road user injuries and fatalities, including Positive Protection Devices, Exposure Control Measures, and Other Traffic Control Measures.

§ 630.1106 Policy and Procedures for Work Zone Safety Management.

(a) Each agency's policy and processes, procedures, and/or guidance for the systematic consideration and management of work zone impacts, to be established in accordance with 23 CFR 630.1006, shall include the consideration and management of road user and worker safety on Federal-aid highway projects. These processes, procedures, and/or guidance, to be developed in partnership with the FHWA, shall address the use of Positive

Protection Devices to prevent the intrusion of motorized traffic into the work space and other potentially hazardous areas in the work zone; Exposure Control Measures to avoid or minimize worker exposure to motorized traffic and road user exposure to work activities; Other Traffic Control Measures including uniformed law enforcement officers to minimize work zone crashes; and the safe entry/exit of work vehicles onto/from the travel lanes. Each of these strategies should be used to the extent that they are possible, practical, and adequate to manage work zone exposure and reduce the risks of crashes resulting in fatalities or injuries to workers and road users.

(b) Agency processes, procedures, and/or guidance should be based on consideration of standards and/or guidance contained in the Manual on Uniform Traffic Control Devices (MUTCD) and the AASHTO Roadside Design Guide, as well as project characteristics and factors. The strategies and devices to be used may be determined by a project-specific engineering study, or determined from agency guidelines that define strategies and approaches to be used based on project and highway characteristics and factors. The types of measures and strategies to be used are not mutually exclusive, and should be considered in combination as appropriate based on characteristics and factors such as those listed below:

- (1) Project scope and duration;
- (2) Anticipated traffic speeds through the work zone;
- (3) Anticipated traffic volume;
- (4) Vehicle mix;
- (5) Type of work (as related to worker exposure and crash risks);
- (6) Distance between traffic and workers, and extent of worker exposure;
- (7) Escape paths available for workers to avoid a vehicle intrusion into the work space;
- (8) Time of day (e.g., night work);
- (9) Work area restrictions (including impact on worker exposure);
- (10) Consequences from/to road users resulting from roadway departure;
- (11) Potential hazard to workers and road users presented by device itself and during device placement and removal;
- (12) Geometrics that may increase crash risks (e.g., poor sight distance, sharp curves);
- (13) Access to/from work space;
- (14) Roadway classification; and
- (15) Impacts on project cost and duration.

(c) Uniformed Law Enforcement Policy. Each agency, in partnership with the FHWA, shall develop a policy

addressing the use of uniformed law enforcement on Federal-aid highway projects. The policy may consist of processes, procedures, and/or guidance. The processes, procedures, and/or guidance should address the following:

- (1) Basic interagency agreements between the highway agency and appropriate law enforcement agencies to address work zone enforcement needs;
- (2) Interaction between highway and law-enforcement agency during project planning and development;
- (3) Conditions where law enforcement involvement in work zone traffic control may be needed or beneficial, and criteria to determine the project-specific need for law enforcement;
- (4) General nature of law enforcement services to be provided, and procedures to determine project-specific services;
- (5) Appropriate work zone safety and mobility training for the officers, consistent with the training requirements in 23 CFR 630.1008(d);
- (6) Procedures for interagency and project-level communications between highway agency and law enforcement personnel; and
- (7) Reimbursement agreements for law enforcement service.

§ 630.1108 Work Zone Safety Management Measures and Strategies.

(a) *Positive Protection Devices.* The need for longitudinal traffic barrier and other positive protection devices shall be based on an engineering study. The engineering study may be used to develop positive protection guidelines for the agency, or to determine the measures to be applied on an individual project. The engineering study should be based on consideration of the factors and characteristics described in section 630.1106(b). At a minimum, positive protection devices shall be considered in work zone situations that place workers at increased risk from motorized traffic, and where positive protection devices offer the highest potential for increased safety for workers and road users, such as:

- (1) Work zones that provide workers no means of escape from motorized traffic (e.g., tunnels, bridges, etc.);
- (2) Long duration work zones (e.g., two weeks or more) resulting in substantial worker exposure to motorized traffic;
- (3) Projects with high anticipated operating speeds (e.g., 45 mph or greater), especially when combined with high traffic volumes;
- (4) Work operations that place workers close to travel lanes open to traffic; and
- (5) Roadside hazards, such as drop-offs or unfinished bridge decks, that will remain in place overnight or longer.

(b) *Exposure Control Measures.* Exposure Control Measures should be considered where appropriate to avoid or minimize worker exposure to motorized traffic and exposure of road users to work activities, while also providing adequate consideration to the potential impacts on mobility. A wide range of measures may be appropriate for use on individual projects, such as:

- (1) Full road closures;
- (2) Ramp closures;
- (3) Median crossovers;
- (4) Full or partial detours or diversions;
- (5) Protection of work zone setup and removal operations using rolling road blocks;
- (6) Performing work at night or during off-peak periods when traffic volumes are lower; and
- (7) Accelerated construction techniques.

(c) *Other Traffic Control Measures.* Other Traffic Control Measures should be given appropriate consideration for use in work zones to reduce work zone crashes and risks and consequences of motorized traffic intrusion into the work space. These measures, which are not mutually exclusive and should be considered in combination as appropriate, include a wide range of other traffic control measures such as:

- (1) Effective, credible signing;
- (2) Changeable message signs;
- (3) Arrow panels;
- (4) Warning flags and lights on signs;
- (5) Longitudinal and lateral buffer space;
- (6) Trained flaggers and spotters;
- (7) Enhanced flagger station setups;
- (8) Intrusion alarms;
- (9) Rumble strips;
- (10) Pace or pilot vehicle;
- (11) High quality work zone pavement markings and removal of misleading markings;
- (12) Channelizing device spacing reduction;
- (13) Longitudinal channelizing barricades;
- (14) Work zone speed management (including changes to the regulatory speed and/or variable speed limits);
- (15) Law enforcement;
- (16) Automated speed enforcement (where permitted by State/local laws);
- (17) Drone radar;
- (18) Worker and work vehicle/equipment visibility;
- (19) Worker training;
- (20) Public information and traveler information; and
- (21) Temporary traffic signals.

(d) *Uniformed Law Enforcement Officers.* (1) A number of conditions may indicate the need for or benefit of uniformed law enforcement in work

zones. The presence of a uniformed law enforcement officer and marked law enforcement vehicle in view of motorized traffic on a highway project can affect driver behavior, helping to maintain appropriate speeds and improve driver alertness through the work zone. However, such law enforcement presence is not a substitute for the temporary traffic control devices required by Part 6 of the MUTCD. In general, the need for law enforcement is greatest on projects with high traffic speeds and volumes, and where the work zone is expected to result in substantial disruption to or changes in normal traffic flow patterns. Specific project conditions should be examined to determine the need for or potential benefit of law enforcement, such as the following:

- (i) Frequent worker presence adjacent to high-speed traffic without positive protection devices;
- (ii) Traffic control setup or removal that presents significant risks to workers and road users;
- (iii) Complex or very short term changes in traffic patterns with significant potential for road user confusion or worker risk from traffic exposure;
- (iv) Night work operations that create substantial traffic safety risks for workers and road users;
- (v) Existing traffic conditions and crash histories that indicate a potential for substantial safety and congestion impacts related to the work zone activity, and that may be mitigated by improved driver behavior and awareness of the work zone;
- (vi) Work zone operations that require brief stoppage of all traffic in one or both directions;
- (vii) High-speed roadways where unexpected or sudden traffic queuing is anticipated, especially if the queue forms a considerable distance in advance of the work zone or immediately adjacent to the work space; and
- (viii) Other work site conditions where traffic presents a high risk for workers and road users, such that the risk may be reduced by improving road user behavior and awareness.

(2) Costs associated with the provision of uniformed law enforcement to help protect workers and road users, and to maintain safe and efficient travel through highway work zones, are eligible for Federal-aid participation. Federal-aid eligibility excludes law enforcement activities that would normally be expected in and around highway problem areas requiring routine or ongoing law enforcement traffic control and enforcement

activities. Payment for the services of uniformed law enforcement in work zones may be included in the construction contract, or be provided by direct reimbursement from the highway agency to the law enforcement agency. When payment is included through the construction contract, the contractor will be responsible for reimbursing the law enforcement agency, and in turn will recover those costs through contract pay items. Direct interagency reimbursement may be made on a project-specific basis, or on a program-wide basis that considers the overall level of services to be provided by the law enforcement agency. Contract pay items for law enforcement service may be either unit price or lump sum items. Unit price items should be utilized when the highway agency can estimate and control the quantity of law enforcement services required on the project. The use of lump sum payment should be limited to situations where the quantity of services is directly affected by the contractor's choice of project scheduling and chosen manner of staging and performing the work. Innovative payment items may also be considered when they offer an advantage to both the highway agency and the contractor. When reimbursement to the law enforcement agency is made by interagency transfer of funds, the highway agency should establish a program-level or project-level budget that is adequate to meet anticipated program or project needs, and include provisions to address unplanned needs and other contingencies.

(e) *Work Vehicles and Equipment.* In addition to addressing risks to workers and road users from motorized traffic, the agency processes, procedures, and/or guidance established in accordance with 23 CFR 630.1006 should also address safe means for work vehicles and equipment to enter and exit traffic lanes and for delivery of construction materials to the work space, based on individual project characteristics and factors.

(f) *Payment for Traffic Control.* Consistent with the requirements of 23 CFR 630.1012, Project-level Procedures, project plans, specifications and estimates (PS&Es) shall include appropriate pay item provisions for implementing the project Transportation Management Plan (TMP), which includes a Temporary Traffic Control (TTC) plan, either through method or performance based specifications. Pay item provisions include, but are not limited to, the following:

(1) Payment for work zone traffic control features and operations shall not be incidental to the contract, or included in payment for other items of work not related to traffic control and safety;

(2) As a minimum, separate pay items shall be provided for major categories of traffic control devices, safety features, and work zone safety activities, including but not limited to positive protection devices, and uniformed law enforcement activities when funded through the project;

(3) For method based specifications, the specifications and other PS&E documents should provide sufficient details such that the quantity and types of devices and the overall effort required to implement and maintain the TMP can be determined;

(4) For method-based specifications, unit price pay items, lump sum pay items, or a combination thereof may be used;

(5) Lump sum payment should be limited to items for which an estimate of the actual quantity required is provided in the PS&E or for items where the actual quantity required is dependent upon the contractor's choice of work scheduling and methodology;

(6) For Lump Sum items, a contingency provision should be included such that additional payment is provided if the quantity or nature of the required work changes, either an increase or decrease, due to circumstances beyond the control of the contractor;

(7) Unit price payment should be provided for those items over which the contractor has little or no control over the quantity, and no firm estimate of quantities is provided in the PS&Es, but over which the highway agency has control of the actual quantity to be required during the project;

(8) Specifications should clearly indicate how placement, movement/relocation, and maintenance of traffic control devices and safety features will be compensated; and

(9) The specifications should include provisions to require and enforce contractor compliance with the contract provisions relative to implementation and maintenance of the project TMP and related traffic control items. Enforcement provisions may include remedies such as liquidated damages, work suspensions, or withholding payment for noncompliance.

§ 630.1110 Maintenance of Temporary Traffic Control Devices.

To provide for the continued effectiveness of temporary traffic control devices, each agency shall develop and

implement quality guidelines to help maintain the quality and adequacy of the temporary traffic control devices for the duration of the project. Agencies may choose to adopt existing quality guidelines such as those developed by the American Traffic Safety Services Association (ATSSA) or other state highway agencies.¹ A level of inspection necessary to provide ongoing compliance with the quality guidelines shall be provided.

[FR Doc. E7-23581 Filed 12-4-07; 8:45 am]

BILLING CODE 4910-22-P

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs

25 CFR Part 36

RIN 1076-AE51

Homeliving Programs

AGENCY: Bureau of Indian Education, BIA, Interior.

ACTION: Final Rule.

SUMMARY: Under the No Child Left Behind Act of 2001, the Secretary of the Interior is publishing final regulations addressing homeliving programs administered under the Bureau of Indian Education-funded school system.

DATES: *Effective Date:* January 4, 2008.

FOR FURTHER INFORMATION CONTACT: Kevin Skenandore, Director, Bureau of Indian Education, 1849 C Street NW., MS-3609, Washington, DC 20240, phone (202) 208-6123.

SUPPLEMENTARY INFORMATION:

I. Background

A. What Information Does This Section Address?

This section addresses:

—Requirements of the No Child Left Behind Act of 2001 (Pub. L. 107-110; enacted January 8, 2002; “NCLBA” or “the Act”), section 1122.

¹ The American Traffic Safety Services Association's (ATSSA) Quality Guidelines for Work Zone Traffic Control Devices uses photos and written descriptions to help judge when a traffic control device has outlived its usefulness. These guidelines are available for purchase from ATSSA through the following URL: http://www.atssa.com/store/bc_item_detail.jsp?productId=1. Similar guidelines are available from various State highway agencies. The Illinois Department of Transportation “Quality Standards for Work Zone Traffic Control Devices” is available online at <http://dot.state.il.us/workzone/wztcd2004r.pdf>. The Minnesota Department of Transportation “Quality Standards—Methods to determine whether the various traffic control devices are Acceptable, Marginal, or Unacceptable” is available online at <http://www.dot.state.mn.us/trafficeng/otepubl/fieldmanual2007/FM-2007-QualityStandards.pdf>.