

(1) Uses a multidisciplinary team not directly involved in the planning or design of the project, with at least one individual who has training and experience with leading VE analyses;

(2) Develops and implements the VE Job Plan;

(3) Produces a formal written report outlining, at a minimum:

(i) Project information;

(ii) Identification of the VE analysis team;

(iii) Background and supporting documentation, such as information obtained from other analyses conducted on the project (e.g., environmental, safety, traffic operations, constructability);

(iv) Documentation of the stages of the VE Job Plan which would include documentation of the life-cycle costs that were analyzed;

(v) Summarization of the analysis conducted;

(vi) Documentation of the proposed recommendations and approvals received at the time the report is finalized; and

(vii) The formal written report shall be retained for at least 3 years after the completion of the project.

(f) For bridge projects, in addition to the requirements in subsection (e), the VE analyses shall:

(1) Include bridge substructure and superstructure requirements that consider alternative construction materials; and

(2) Be conducted based on:

(i) An engineering and economic assessment, taking into consideration acceptable designs for bridges; and

(ii) An analysis of life-cycle costs and duration of project construction.

(g) STAs and local public agencies may employ qualified consultants (as defined in 23 CFR 172.3) to conduct a VE analysis. The consultant shall possess training and experience with leading VE analyses. A consulting firm or individual shall not be used to conduct or support a VE analysis if they have a conflict of interest (as specified in 23 CFR 1.33).

(h) STAs, and local public agencies are encouraged to use a VECP clause (or other such clauses under a different name) in an applicable project's contract, allowing the construction con-

tractor to propose changes to the project's plans, specifications, or other contract documents. Whenever such clauses are used, the STA and local authority will consider changes that could improve the project's performance, value and quality, shorten the delivery time, or lower construction costs, while considering impacts on the project's overall life-cycle cost and other applicable factors. The basis for a STA or local authority to consider a VECP is the analysis and documentation supporting the proposed benefits that would result from implementing the proposed change in the project's contract or project plans.

(i) Proposals to accelerate construction after the award of the contract will not be considered a VECP and will not be eligible for Federal-aid highway program funding participation. Where it is necessary to accelerate construction, STAs and local public agencies are encouraged to use the appropriate incentive or disincentive clauses so that all proposers will take this into account when preparing their bids or price proposals.

PART 630—PRECONSTRUCTION PROCEDURES

Subpart A—Project Authorization and Agreements

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AUTHORITY: 23 U.S.C. 106, 109, 112, 115, 315, 320, and 402(a); Sec. 1303 of Pub. L. 112-141, 126 Stat. 405; Sec. 1501 and 1503 of Pub. L. 109-59, 119 Stat. 1144; Pub. L. 105-178, 112 Stat. 193; Pub. L. 104-59, 109 Stat. 582; Pub. L. 97-424, 96 Stat. 2106; Pub. L. 90-495, 82 Stat. 828; Pub. L. 85-767, 72 Stat. 896; Pub. L. 84-627, 70 Stat. 380; 23 CFR 1.32 and 49 CFR 1.85.

Subpart A—Project Authorization and Agreements

SOURCE: 66 FR 23847, May 10, 2001, unless otherwise noted.

§ 630.102 Purpose.

The purpose of this subpart is to prescribe policies for authorizing Federal-aid projects through execution of the project agreement required by 23 U.S.C. 106(a)(2).

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§ 630.104 Applicability.

(a) This subpart is applicable to all Federal-aid projects unless specifically exempted.

(b) Other projects which involve special procedures are to be approved, or authorized as set out in the implementing instructions or regulations for those projects.

§ 630.106 Authorization to proceed.

(a)(1) The State Department of Transportation (State DOT) must obtain an authorization to proceed from the FHWA before beginning work on any Federal-aid project. The State DOT may request an authorization to proceed in writing or by electronic mail for a project or a group of projects.

(2) The FHWA will issue the authorization to proceed either through or after the execution of a formal project agreement with the State. The agreement can be executed only after applicable prerequisite requirements of Federal laws and implementing regulations and directives are satisfied. Except as provided in paragraphs (c)(1) through (c)(4) of this section, the FHWA will obligate Federal funds in the project or group of projects upon execution of the project agreement.

(3) The State's request that Federal funds be obligated shall be supported by a documented cost estimate that is based on the State's best estimate of costs.

(4) The State shall maintain a process to adjust project cost estimates. For example, the process would require a review of the project cost estimate when the bid is approved, a project phase is completed, a design change is approved, etc. Specifically, the State shall revise the Federal funds obligated within 90 days after it has determined that the estimated Federal share of project costs has decreased by \$250,000 or more.

(5) The State shall review, on a quarterly basis, inactive projects (for the purposes of this subpart an "inactive project" means a project for which no expenditures have been charged against Federal funds for the past 12 months) with unexpended Federal obligations

and shall revise the Federal funds obligated for a project within 90 days to reflect the current cost estimate, based on the following criteria:

(i) Projects inactive for the past 12 months with unexpended balances more than \$500,000,

(ii) Projects inactive for the past 24 months with unexpended balances of \$50,000 to \$500,000, and

(iii) Projects inactive for the past 36 months with unexpended balances less than \$50,000.

(6) If the State fails to comply with the requirements of paragraphs (a)(3), (4), or (5) of this section, then the FHWA shall revise the obligations or take such other action as authorized by 23 CFR 1.36. The FHWA shall advise the State of its proposed actions and provide the State with the opportunity to respond before actions are taken. The FHWA shall not adjust obligations without a State's consent during the August redistribution process, August 1 to September 30.

(7) For design-build projects, the execution or modification of the project agreement for final design and physical construction, and authorization to proceed, shall not occur until after the completion of the NEPA process. However, preliminary design (as defined in 23 CFR 636.103) and preliminary engineering may be authorized in accordance with this section.

(8) For Construction Manager/General Contractor projects, the execution or modification of the project agreement for preconstruction services associated with final design and for construction services, and authorization to proceed with such services, shall not occur until after the completion of the NEPA process. However, preconstruction services associated with preliminary design may be authorized in accordance with this section.

(9) For Indefinite Delivery/Indefinite Quantity projects, the execution or modification of the project agreement for final design or physical construction, and authorization to proceed, shall not occur until after the completion of the NEPA process.

(b) Federal funds shall not participate in costs incurred prior to the date

of a project agreement except as provided by 23 CFR 1.9(b).

(c) The execution of the project agreement shall be deemed a contractual obligation of the Federal government under 23 U.S.C. 106 and shall require that appropriate funds be available at the time of authorization for the agreed Federal share, either pro rata or lump sum, of the cost of eligible work to be incurred by the State except as follows:

(1) Advance construction projects authorized under 23 U.S.C. 115.

(2) Projects for preliminary studies for the portion of the preliminary engineering and right-of-way (ROW) phase(s) through the selection of a location.

(3) Projects for ROW acquisition in hardship and protective buying situations through the selection of a particular location. This includes ROW acquisition within a potential highway corridor under consideration where necessary to preserve the corridor for future highway purposes. Authorization of work under this paragraph shall be in accord with the provisions of 23 CFR part 710.

(4) In special cases where the Federal Highway Administrator determines it to be in the best interest of the Federal-aid highway program.

(d) For projects authorized to proceed under paragraphs (c)(1) through (c)(4) of this section, the executed project agreement shall contain the following statement: "Authorization to proceed is not a commitment or obligation to provide Federal funds for that portion of the undertaking not fully funded herein."

(e) For projects authorized under paragraphs (c)(2) and (c)(3) of this section, subsequent authorizations beyond the location stage shall not be given until appropriate available funds have been obligated to cover eligible costs of the work covered by the previous authorization.

(f)(1) The Federal-aid share of eligible project costs shall be established at the time the project agreement is executed in one of the following manners:

(i) Pro rata, with the agreement stating the Federal share as a specified percentage; or

(ii) Lump sum, with the agreement stating that Federal funds are limited to a specified dollar amount not to exceed the legal pro rata.

(2) The pro-rata or lump sum share may be adjusted before or shortly after contract award to reflect any substantive change in the bids received as compared to the State DOT's estimated cost of the project at the time of FHWA authorization, provided that Federal funds are available.

(3) Federal participation is limited to the agreed Federal share of eligible costs actually incurred by the State, not to exceed the maximum permitted by enabling legislation.

(g) The State may contribute more than the normal non-Federal share of title 23, U.S.C. projects. In general, financing proposals that result in only minimal amounts of Federal funds in projects should be avoided unless they are based on sound project management decisions.

(h)(1) Donations of cash, land, material or services may be credited to the State's non-Federal share of the participating project work in accordance with title 23, U.S.C., and implementing regulations.

(2) Contributions may not exceed the total costs incurred by the State on the project. Cash contributions from all sources plus the Federal funds may not exceed the total cost of the project.

[66 FR 23847, May 10, 2001, as amended at 71 FR 4995, Jan. 31, 2006; 72 FR 45336, Aug. 14, 2007; 81 FR 86942, Dec. 2, 2016; 85 FR 72931, Nov. 16, 2020]

§ 630.108 Preparation of agreement.

(a) The State DOT shall prepare a project agreement for each Federal-aid project.

(b) The State DOT may develop the project agreement in a format acceptable to both the State DOT and the FHWA provided the following are included:

(1) A description of each project location including State and project termini;

(2) The Federal-aid project number;

(3) The work covered by the agreement;

(4) The total project cost and amount of Federal funds under agreement;

(5) The Federal-aid share of eligible project costs expressed as either a pro rata percentage or a lump sum as set forth in § 630.106(f)(1);

(6) A statement that the State accepts and will comply with the agreement provisions set forth in § 630.112;

(7) A statement that the State stipulates that its signature on the project agreement constitutes the making of the certifications set for in § 630.112; and

(8) Signatures of officials from both the State and the FHWA, and the date executed.

(c) The project agreement should also document, by comment, instances where:

(1) The State is applying amounts of credits from special accounts (such as the 23 U.S.C. 120(j) toll credits, 23 U.S.C. 144(n) off-system bridge credits and 23 U.S.C. 323 land value credits) to cover all or a portion of the normal percent non-Federal share of the project;

(2) The project involves other arrangements affecting Federal funding or non-Federal matching provisions, including tapered match, donations, or use of other Federal agency funds, if known at the time the project agreement is executed; and

(3) The State is claiming finance related costs for bond and other debt instrument financing (such as payments to States under 23 U.S.C. 122).

(d) The State DOT may use an electronic version of the agreement as provided by the FHWA.

(Approved by the Office of Management and Budget under control number 2125–0529)

§ 630.110 Modification of original agreement.

(a) When changes are needed to the original project agreement, a modification of agreement shall be prepared. Agreements should not be modified to replace one Federal fund category with another unless specifically authorized by statute.

(b) The State DOT may develop the modification of project agreement in a format acceptable to both the State DOT and the FHWA provided the following are included:

(1) The Federal-aid project number and State;

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(2) A sequential number identifying the modification;

(3) A reference to the date of the original project agreement to be modified;

(4) The original total project cost and the original amount of Federal funds under agreement;

(5) The revised total project cost and the revised amount of Federal funds under agreement;

(6) The reason for the modifications; and,

(7) Signatures of officials from both the State and the FHWA and date executed.

(c) The State DOT may use an electronic version of the modification of project agreement as provided by the FHWA.

§ 630.112 Agreement provisions.

(a) The State, through its transportation department, accepts and agrees to comply with the applicable terms and conditions set forth in title 23, U.S.C., the regulations issued pursuant thereto, the policies and procedures promulgated by the FHWA relative to the designated project covered by the agreement, and all other applicable Federal laws and regulations.

(b) Federal funds obligated for the project must not exceed the amount agreed to on the project agreement, the balance of the estimated total cost being an obligation of the State. Such obligation of Federal funds extends only to project costs incurred by the State after the execution of a formal project agreement with the FHWA.

(c) The State must stipulate that as a condition to payment of the Federal funds obligated, it accepts and will comply with the following applicable provisions:

(1) *Project for acquisition of rights-of-way.* In the event that actual construction of a road on this right-of-way is not undertaken by the close of the twentieth fiscal year following the fiscal year in which the project is authorized, the State DOT will repay to the FHWA the sum or sums of Federal funds paid to the transportation department under the terms of the agreement. The State may request a time extension beyond the 20-year limit with no repayment of Federal funds,

and the FHWA may approve this request if it is considered reasonable.

(2) *Preliminary engineering project.* In the event that right-of-way acquisition for, or actual construction of, the road for which this preliminary engineering is undertaken is not started by the close of the tenth fiscal year following the fiscal year in which the project is authorized, the State DOT will repay to the FHWA the sum or sums of Federal funds paid to the transportation department under the terms of the agreement. The State may request a time extension for any preliminary engineering project beyond the 10-year limit with no repayment of Federal funds, and the FHWA may approve this request if it is considered reasonable.

(3) *Drug-free workplace.* By signing the project agreement, the State DOT agrees to maintain a drug-free workplace, identify all known workplaces under Federal awards, and fulfill other responsibilities required by 49 CFR part 32.

(4) *Suspension and debarment verification.* By signing the project agreement, the State DOT agrees to verify that contractors are not excluded through suspension or debarment, as required by 2 CFR parts 180, subpart C, and 1200.

(5) *Lobbying certification.* By signing the project agreement, the State DOT agrees to abide by the lobbying restrictions set forth in 49 CFR part 20. In signing the project agreement, the State is providing the certification required in appendix A to 49 CFR part 20.

[66 FR 23847, May 10, 2001, as amended at 85 FR 72931, Nov. 16, 2020]

Subpart B—Plans, Specifications, and Estimates

SOURCE: 43 FR 58564, Dec. 15, 1978, unless otherwise noted.

§ 630.201 Purpose.

The purpose of this subpart is to prescribe Federal Highway Administration (FHWA) procedures relating to the preparation, submission, and approval of plans, specifications and estimates (PS&E), and supporting documents for Federal-aid projects.

§ 630.203

§ 630.203 Applicability.

The provisions of this regulation apply to all highway construction projects financed in whole or in part with Federal-aid highway funds and to be undertaken by a State or political subdivision.

[69 FR 7118, Feb. 13, 2004]

§ 630.205 Preparation, submission, and approval.

(a) The contents and number of copies of the PS&E assembly shall be determined by the FHWA.

(b) Plans and specifications shall describe the location and design features and the construction requirements in sufficient detail to facilitate the construction, the contract control and the estimation of construction costs of the project. The estimate shall reflect the anticipated cost of the project in sufficient detail to provide an initial prediction of the financial obligations to be incurred by the State and FHWA and to permit an effective review and comparison of the bids received.

(c) PS&E assemblies for Federal-aid highway projects shall be submitted to the FHWA for approval.

(d) The State DOT shall be advised of approval of the PS&E by the FHWA.

(e) No project or part thereof for actual construction shall be advertised for contract nor work commenced by force account until the PS&E has been approved by the FHWA and the State DOT has been so notified, except in the case of an Indefinite Delivery/Indefinite Quantity project conforming to the requirements of 23 CFR part 635 subpart F.

[43 FR 58564, Dec. 15, 1978, as amended at 85 FR 72931, Nov. 16, 2020]

Subpart C [Reserved]

Subpart D—Geodetic Markers

SOURCE: 39 FR 26414, July 19, 1974, unless otherwise noted.

§ 630.401 Purpose.

The purpose of this subpart is to prescribe procedures for conducting geodetic control surveys when participation with Federal-aid highway funds in

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the cost thereof is proposed and to encourage inter-agency cooperation in setting station markers, surveying to measure their position, and preserving the control so established.

§ 630.402 Policy.

(a) Geodetic surveys along Federal-aid highway routes may be programmed as Federal-aid highway projects.

(b) All geodetic survey work performed as a Federal-aid highway project will conform to National Ocean Survey (NOS) specifications. NOS will, as the representative of FHWA, be responsible for the inspection and verification of the work to ascertain that the specifications for the work have been met. Final project acceptance by FHWA will be predicated on a finding of acceptability by NOS.

§ 630.403 Initiation of projects.

All projects shall be coordinated by the FHWA Division Administrator, the State highway department and the National Ocean Survey.

§ 630.404 Standards.

(a) Highway purposes may best be served by the establishment of station markings for horizontal control along Federal-aid highway routes at spacings of three to eight kilometers (about 2 to 5 miles) and station markers for vertical control of spacings no closer than one kilometer. These requirements may be waived only with the approval of the Administrator.

(b) Projects should be of sufficient scope to permit efficient use of field parties. Projects should extend at least 30 kilometers. Projects may be coordinated with adjoining States to attain greater efficiency.

(c) Where geodetic station markers cannot be established initially at points readily accessible from the Federal-aid route, or where unavoidable circumstances result in their being established within construction limits, supplemental projects may later be approved to set and survey markers at satisfactory permanent points, preferably within the right-of-way but at points where their use does not introduce traffic hazards.

Subparts E–F [Reserved]**Subpart G—Advance Construction of Federal-Aid Projects**

SOURCE: 60 FR 36993, July 19, 1995, unless otherwise noted.

§ 630.701 Purpose.

The purpose of this subpart is to prescribe procedures for advancing the construction of Federal-aid highway projects without obligating Federal funds apportioned or allocated to the State.

§ 630.703 Eligibility.

(a) The State Department of Transportation (DOT) may proceed with a project authorized in accordance with title 23, United States Code:

(1) Without the use of Federal funds; and

(2) In accordance with all procedures and requirements applicable to the project other than those procedures and requirements that limit the State to implementation of a project—

(i) With the aid of Federal funds previously apportioned or allocated to the State; or

(ii) With obligation authority previously allocated to the State.

(b) The FHWA, on the request of a State and execution of a project agreement, may obligate all or a portion of the Federal share of a project authorized to proceed under this section from any category of funds for which the project is eligible.

[73 FR 50196, Aug. 26, 2008]

§ 630.705 Procedures.

(a) An advance construction project shall meet the same requirements and be processed in the same manner as a regular Federal-aid project, except,

(1) The FHWA authorization does not constitute any commitment of Federal funds on the project, and

(2) The FHWA shall not reimburse the State until the project is converted under § 630.709.

(b) Project numbers shall be identified by the letters “AC” preceding the regular project number prefix.

[60 FR 36993, July 19, 1995, as amended at 68 FR 60033, Oct. 21, 2003]

§ 630.707 [Reserved]**§ 630.709 Conversion to a regular Federal-aid project.**

(a) The State Department of Transportation may submit a written request to the FHWA that a project be converted to a regular Federal-aid project at any time provided that sufficient Federal-aid funds and obligation authority are available.

(b) Subsequent to FHWA approval the State Department of Transportation may claim reimbursement for the Federal share of project costs incurred, provided the project agreement has been executed. If the State Department of Transportation has previously submitted a final voucher, the FHWA will process the voucher for payment.

[60 FR 36993, July 19, 1995, as amended at 73 FR 50196, Aug. 26, 2008]

Subpart H—Bridges on Federal Dams

SOURCE: 39 FR 36474, Oct. 10, 1974, unless otherwise noted.

§ 630.801 Purpose.

The purpose of this subpart is to prescribe procedures for the construction and financing, by an agency of the Federal Government, of public highway bridges over dams constructed and owned by or for the United States.

§ 630.802 Applicability.

A proposed bridge over a dam, together with the approach roads to connect the bridge with existing public highways, must be eligible for inclusion in the Federal-aid highway system, if not already a part thereof.

§ 630.803 Procedures.

A State's application to qualify a project under this subpart will include:

(a) A certification that the bridge is economically desirable and needed as a link in the Federal-aid highway system.

(b) A statement showing the source and availability of funds to be used in construction of the roadway approaches.

(c) A statement of any obligation on the part of the agency constructing the

dam to provide such bridge or approach roads to satisfy a legal liability incurred independently of this subpart.

Subpart I [Reserved]

Subpart J—Work Zone Safety and Mobility

SOURCE: 69 FR 54569, Sept. 9, 2004, unless otherwise noted.

§ 630.1002 Purpose.

Work zones directly impact the safety and mobility of road users and highway workers. These safety and mobility impacts are exacerbated by an aging highway infrastructure and growing congestion in many locations. Addressing these safety and mobility issues requires considerations that start early in project development and continue through project completion. Part 6 of the Manual On Uniform Traffic Control Devices (MUTCD)¹ sets forth basic principles and prescribes standards for the design, application, installation, and maintenance of traffic control devices for highway and street construction, maintenance operation, and utility work. In addition to the provisions in the MUTCD, there are other actions that could be taken to further help mitigate the safety and mobility impacts of work zones. This subpart establishes requirements and provides guidance for systematically addressing the safety and mobility impacts of work zones, and developing strategies to help manage these impacts on all Federal-aid highway projects.

§ 630.1004 Definitions and explanation of terms.

As used in this subpart:

Highway workers include, but are not limited to, personnel of the contractor,

subcontractor, DOT, utilities, and law enforcement, performing work within the right-of-way of a transportation facility.

Mobility is the ability to move from place to place and is significantly dependent on the availability of transportation facilities and on system operating conditions. With specific reference to work zones, mobility pertains to moving road users efficiently through or around a work zone area with a minimum delay compared to baseline travel when no work zone is present, while not compromising the safety of highway workers or road users. The commonly used performance measures for the assessment of mobility include delay, speed, travel time and queue lengths.

Safety is a representation of the level of exposure to potential hazards for users of transportation facilities and highway workers. With specific reference to work zones, safety refers to minimizing potential hazards to road users in the vicinity of a work zone and highway workers at the work zone interface with traffic. The commonly used measures for highway safety are the number of crashes or the consequences of crashes (fatalities and injuries) at a given location or along a section of highway during a period of time. Highway worker safety in work zones refers to the safety of workers at the work zone interface with traffic and the impacts of the work zone design on worker safety. The number of worker fatalities and injuries at a given location or along a section of highway, during a period of time are commonly used measures for highway worker safety.

*Work zone*² is an area of a highway with construction, maintenance, or utility work activities. A work zone is typically marked by signs, channelizing devices, barriers, pavement markings, and/or work vehicles. It extends from the first warning sign or high-intensity rotating, flashing, oscillating, or strobe lights on a vehicle to the END ROAD WORK sign or the last temporary traffic control (TTC) device.

¹The MUTCD is approved by the FHWA and recognized as the national standard for traffic control on all public roads. It is incorporated by reference into the Code of Federal Regulations at 23 CFR part 655. It is available on the FHWA's Web site at <http://mutcd.fhwa.dot.gov> and is available for inspection and copying at the FHWA Washington, DC Headquarters and all FHWA Division Offices as prescribed at 49 CFR part 7.

²MUTCD, Part 6, "Temporary Traffic Control," Section 6C.02, "Temporary Traffic Control Zones."

*Work zone crash*³ means a traffic crash in which the first harmful event occurs within the boundaries of a work zone or on an approach to or exit from a work zone, resulting from an activity, behavior, or control related to the movement of the traffic units through the work zone. This includes crashes occurring on approach to, exiting from or adjacent to work zones that are related to the work zone.

Work zone impacts refer to work zone-induced deviations from the normal range of transportation system safety and mobility. The extent of the work zone impacts may vary based on factors such as, road classification, area type (urban, suburban, and rural), traffic and travel characteristics, type of work being performed, time of day/night, and complexity of the project. These impacts may extend beyond the physical location of the work zone itself, and may occur on the roadway on which the work is being performed, as well as other highway corridors, other modes of transportation, and/or the regional transportation network.

§ 630.1006 Work zone safety and mobility policy.

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 multi-disciplinary team and in partnership with the FHWA. The States are encouraged to implement this policy for non-Federal-aid projects as well.

§ 630.1008 State-level processes and procedures.

(a) This section consists of State-level processes and procedures for States to implement and sustain their respective work zone safety and mobility policies. State-level processes and procedures, data and information resources, training, and periodic evaluation enable a systematic approach for addressing and managing the safety and mobility impacts of work zones.

(b) *Work zone assessment and management procedures.* States should develop and implement systematic procedures to assess work zone impacts in project development, and to manage safety and mobility during project implementation. The scope of these procedures shall be based on the project characteristics.

(c) *Work zone data.* States shall use field observations, available work zone crash data, and operational information to manage work zone impacts for specific projects during implementation. States shall continually pursue improvement of work zone safety and mobility by analyzing work zone crash and operational data from multiple projects to improve State processes and procedures. States should maintain elements of the data and information resources that are necessary to support these activities.

(d) *Training.* States shall require that personnel involved in the development, design, implementation, operation, inspection, and enforcement of work zone related transportation management and traffic control be trained, appropriate to the job decisions each individual is required to make. States shall require periodic training updates that reflect changing industry practices and State processes and procedures.

(e) *Process review.* In order to assess the effectiveness of work zone safety and mobility procedures, the States shall perform a process review at least

³“Model Minimum Uniform Crash Criteria Guideline” (MMUCC), 2d Ed. (Electronic), 2003, produced by National Center for Statistics and Analysis, National Highway Traffic Safety Administration (NHTSA). Telephone 1-(800)-934-8517. Available at the URL: <http://www-nrd.nhtsa.dot.gov>. The NHTSA, the FHWA, the Federal Motor Carrier Safety Administration (FMCSA), and the Governors Highway Safety Association (GHSA) sponsored the development of the MMUCC Guideline which recommends voluntary implementation of the 111 MMUCC data elements and serves as a reporting threshold that includes all persons (injured and uninjured) in crashes statewide involving death, personal injury, or property damage of \$1,000 or more. The Guideline is a tool to strengthen existing State crash data systems.

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every two years. This review may include the evaluation of work zone data at the State level, and/or review of randomly selected projects throughout their jurisdictions. Appropriate personnel who represent the project development stages and the different offices within the State, and the FHWA should participate in this review. Other non-State stakeholders may also be included in this review, as appropriate. The results of the review are intended to lead to improvements in work zone processes and procedures, data and information resources, and training programs so as to enhance efforts to address safety and mobility on current and future projects.

§ 630.1010 Significant projects.

(a) A significant project is one that, alone or in combination with other concurrent projects nearby is anticipated to cause sustained work zone impacts (as defined in § 630.1004) that are greater than what is considered tolerable based on State policy and/or engineering judgment.

(b) The applicability of the provisions in §§ 630.1012(b)(2) and 630.1012(b)(3) is dependent upon whether a project is determined to be significant. The State shall identify upcoming projects that are expected to be significant. This identification of significant projects should be done as early as possible in the project delivery and development process, and in cooperation with the FHWA. The State's work zone policy provisions, the project's characteristics, and the magnitude and extent of the anticipated work zone impacts should be considered when determining if a project is significant or not.

(c) All Interstate system projects within the boundaries of a designated Transportation Management Area (TMA) that occupy a location for more than three days with either intermittent or continuous lane closures shall be considered as significant projects.

(d) For an Interstate system project or categories of Interstate system projects that are classified as significant through the application of the provisions in § 630.1010(c), but in the judgment of the State they do not cause sustained work zone impacts, the State may request from the FHWA, an

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exception to §§ 630.1012(b)(2) and 630.1012(b)(3). Exceptions to these provisions may be granted by the FHWA based on the State's ability to show that the specific Interstate system project or categories of Interstate system projects do not have sustained work zone impacts.

§ 630.1012 Project-level procedures.

(a) This section provides guidance and establishes procedures for States to manage the work zone impacts of individual projects.

(b) *Transportation Management Plan (TMP)*. A TMP consists of strategies to manage the work zone impacts of a project. Its scope, content, and degree of detail may vary based upon the State's work zone policy, and the State's understanding of the expected work zone impacts of the project. For significant projects (as defined in § 630.1010), the State shall develop a TMP that consists of a Temporary Traffic Control (TTC) plan and addresses both Transportation Operations (TO) and Public Information (PI) components. For individual projects or classes of projects that the State determines to have less than significant work zone impacts, the TMP may consist only of a TTC plan. States are encouraged to consider TO and PI issues for all projects.

(1) A TTC plan describes TTC measures to be used for facilitating road users through a work zone or an incident area. The TTC plan plays a vital role in providing continuity of reasonably safe and efficient road user flow and highway worker safety when a work zone, incident, or other event temporarily disrupts normal road user flow. The TTC plan shall be consistent with the provisions under Part 6 of the MUTCD and with the work zone hardware recommendations in Chapter 9 of the American Association of State Highway and Transportation Officials (AASHTO) Roadside Design Guide. Chapter 9 of the AASHTO Roadside Design Guide: "Traffic Barriers, Traffic Control Devices, and Other Safety Features for Work Zones" 2002, is incorporated by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51 and is on file at the National Archives and Record 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. The entire document is available for purchase from the American Association of State Highway and Transportation Officials (AASHTO), 444 North Capitol Street, NW., Suite 249, Washington, DC 20001 or at the URL: <http://www.aashto.org/bookstore>. It is available for inspection from the FHWA Washington Headquarters and all Division Offices as listed in 49 CFR part 7. In developing and implementing the TTC plan, pre-existing roadside safety hardware shall be maintained at an equivalent or better level than existed prior to project implementation. The scope of the TTC plan is determined by the project characteristics, and the traffic safety and control requirements identified by the State for that project. The TTC plan shall either be a reference to specific TTC elements in the MUTCD, approved standard TTC plans, State transportation department TTC manual, or be designed specifically for the project.

(2) The TO component of the TMP shall include the identification of strategies that will be used to mitigate impacts of the work zone on the operation and management of the transportation system within the work zone impact area. Typical TO strategies may include, but are not limited to, demand management, corridor/network management, safety management and enforcement, and work zone traffic management. The scope of the TO component should be determined by the project characteristics, and the transportation operations and safety strategies identified by the State.

(3) The PI component of the TMP shall include communications strategies that seek to inform affected road users, the general public, area residences and businesses, and appropriate public entities about the project, the expected work zone impacts, and the changing conditions on the project. This may include traveler information strategies. The scope of the PI component should be determined by the project characteristics and the public information and outreach strategies

identified by the State. Public information should be provided through methods best suited for the project, and may include, but not be limited to, information on the project characteristics, expected impacts, closure details, and commuter alternatives.

(4) States should develop and implement the TMP in sustained consultation with stakeholders (e.g., other transportation agencies, railroad agencies/operators, transit providers, freight movers, utility suppliers, police, fire, emergency medical services, schools, business communities, and regional transportation management centers).

(c) The Plans, Specifications, and Estimates (PS&Es) shall include either a TMP or provisions for contractors to develop a TMP at the most appropriate project phase as applicable to the State's chosen contracting methodology for the project. A contractor developed TMP shall be subject to the approval of the State, and shall not be implemented before it is approved by the State.

(d) The PS&Es shall include appropriate pay item provisions for implementing the TMP, either through method or performance based specifications.

(1) For method-based specifications individual pay items, lump sum payment, or a combination thereof may be used.

(2) For performance based specifications, applicable performance criteria and standards may be used (e.g., safety performance criteria such as number of crashes within the work zone; mobility performance criteria such as travel time through the work zone, delay, queue length, traffic volume; incident response and clearance criteria; work duration criteria).

(e) *Responsible persons.* The State and the contractor shall each designate a trained person, as specified in § 630.1008(d), at the project level who has the primary responsibility and sufficient authority for implementing the TMP and other safety and mobility aspects of the project.

§ 630.1014 Implementation.

Each State shall work in partnership with the FHWA in the implementation

of its policies and procedures to improve work zone safety and mobility. At a minimum, this shall involve an FHWA review of conformance of the State's policies and procedures with this regulation and reassessment of the State's implementation of its procedures at appropriate intervals. Each State is encouraged to address implementation of this regulation in its stewardship agreement with the FHWA.

§ 630.1016 Compliance date.

States shall comply with all the provisions of this rule no later than October 12, 2007. For projects that are in the later stages of development at or about the compliance date, and if it is determined that the delivery of those projects would be significantly impacted as a result of this rule's provisions, States may request variances for those projects from the FHWA, on a project-by-project basis.

Subpart K—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).

SOURCE: 72 FR 68489, Dec. 5, 2007, unless otherwise noted.

§ 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.

¹The 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/wztc2004r.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>.