

Trent 884-17, Trent 892-17, Trent 892B-17, and Trent 895-17 turbofan engines of the affected design in the worldwide fleet. We estimate that 114 engines installed on airplanes of U.S. registry would be affected by this proposed AD. We also estimate that the prorated cost of the life reduction per engine would be approximately \$246,000. Based on these figures, the total cost of the proposed AD is estimated to be \$28,044,000.

### Regulatory Findings

We have determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the proposed regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a summary of the costs to comply with this proposal and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under **ADDRESSES**. Include "AD Docket No. 2003-NE-08-AD" in your request.

### List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

### The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend 14 CFR part 39 as follows:

### PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

**Authority:** 49 U.S.C. 106(g), 40113, 44701.

#### § 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

**Rolls-Royce plc:** Docket No. 2003-NE-08-AD.

### Comments Due Date

(a) The Federal Aviation Administration must receive comments on this airworthiness directive (AD) action by July 7, 2003.

### Affected ADs

(b) None.

### Applicability

(c) This AD is applicable to Rolls-Royce plc (RR) RB211 Trent 875-17, Trent 877-17, Trent 884-17, Trent 892-17, Trent 892B-17, and Trent 895-17 turbofan engines with intermediate pressure (IP) turbine discs P/Ns FK21117 and FK33083 installed. These engines are installed on, but not limited to Boeing 777 airplanes.

### Unsafe Condition

(d) This AD was prompted by reports of two IP turbine blade release incidents as a result of dust caps separating from the blades. Subsequently, the manufacturer applied improved modeling techniques for analysis, which revealed higher than predicted operating temperatures at the IP turbine disc rim and surrounding area due to inflow of annulus exhaust gases. The actions specified in this AD are intended to prevent uncontained IP turbine disc failure and damage to the airplane.

### Compliance

(e) Compliance with this AD is required as indicated, unless already done.

(f) To prevent uncontained IP turbine disc failure and damage to the airplane, do the following:

(1) Remove IP turbine disc P/N FK21117 from service at or before accumulating 8,600 cycles-since-new (CSN), and remove IP turbine disc P/N FK33083 from service at or before accumulating 3,000 CSN.

(2) After the effective date of this AD, do not install any IP turbine disc P/N FK21117, that exceeds 8,600 CSN, or any IP turbine disc P/N FK33083, that exceeds 3,000 CSN.

### Alternative Methods of Compliance

(g) Alternative methods of compliance must be requested in accordance with 14 CFR part 39.19, and must be approved by the Manager, Engine Certification Office, Engine and Propeller Directorate, FAA.

### Material Incorporated by Reference

(h) None.

### Related Information

(i) The subject of this AD is addressed in CAA airworthiness directive 002-01-2003, dated January 14, 2003.

Issued in Burlington, Massachusetts, on April 30, 2003.

**Francis A. Favara,**

*Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.*  
[FR Doc. 03-11267 Filed 5-6-03; 8:45 am]

**BILLING CODE 4910-13-P**

## DEPARTMENT OF TRANSPORTATION

### Federal Highway Administration

#### 23 CFR Part 630

[FHWA Docket No. FHWA-2001-11130]

RIN 2125-AE29

### Work Zone Safety and Mobility

**AGENCY:** Federal Highway Administration (FHWA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM); request for comments.

**SUMMARY:** The FHWA proposes to amend its regulation that governs traffic safety in highway and street work zones. The FHWA recognizes that increasing road construction activity on our highways can lead to an increase in congestion and crashes, as well as loss in productivity and public frustration with work zones. These proposed changes are intended to facilitate consideration of the broader safety and mobility impacts of work zones in a more coordinated and comprehensive manner across project development stages.

**DATES:** Comments must be received on or before September 4, 2003.

**ADDRESSES:** Mail or hand deliver comments to the U.S. Department of Transportation, Dockets Management Facility, Room PL-401, 400 Seventh Street, SW., Washington, DC 20590, or submit electronically at <http://dmses.dot.gov/submit>. All comments should include the docket number that appears in the heading of this document. All comments received will be available for examination and copying at the above address from 9 a.m. to 5 p.m., e.t., Monday through Friday, except Federal holidays. Those desiring notification of receipt of comments must include a self-addressed, stamped postcard or you may print the acknowledgment page that appears after submitting comments electronically. Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70, Pages 19477-78) or you may visit <http://dms.dot.gov>

**FOR FURTHER INFORMATION CONTACT:** Mr. Scott Battles, Office of Transportation Operations, HOTO-1, (202) 366-4372; or Mr. Raymond Cuprill, Office of the

Chief Counsel, HCC-30, (202) 366-0791, Federal Highway Administration, 400 Seventh Street, SW., Washington, DC 20590-0001. Office hours are from 7:45 a.m. to 4:15 p.m., e.t., Monday through Friday, except Federal holidays.

#### SUPPLEMENTARY INFORMATION:

##### Electronic Access and Filing

You may submit or retrieve comments online through the Document Management System (DMS) at: <http://dmses.dot.gov/submit>. Acceptable formats include: MS Word (versions 95 to 97), MS Word for Mac (versions 6 to 8), Rich Text File (RTF), American Standard Code for Information Interchange (ASCII)(TXT), Portable Document Format (PDF), and WordPerfect (versions 7 to 8). The DMS 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 by using a computer, modem and suitable communications software from the Government Printing Office's Electronic Bulletin Board Service at (202) 512-1661. Internet users may also reach 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

###### Overview of the Proposal

The principal mission of the U.S. Department of Transportation (USDOT) is to provide the American people with a transportation system that is safe, effective, and secure. Transportation is vital to our Nation's economy, national security, and quality of life. We depend on transportation for access to jobs, to enable us to conduct our business, to supply us with services and goods, and to facilitate our leisure and recreational activities. When we take appropriate action to address our mobility needs, we can also improve the safety of our system and enhance our natural and human environment. We also find that there is a decrease in safety and a degradation in environment when we do not address critical mobility issues on our highway system. To help attain the mission of the USDOT, the FHWA has identified strategic goals in the areas of safety, mobility and productivity, environment, National security, and organizational excellence. Under the "mobility and productivity" area, the FHWA has identified "congestion reduction" as one of the vital few strategies. One way to reduce congestion

is to improve the performance of our Nation's "work zones."

The FHWA proposes to amend 23 CFR part 630 subpart J, "Traffic Safety in Highway and Street Work Zones." Work zones cause safety and mobility impacts on the traveling public, businesses, workers, and transportation agencies, resulting in an overall loss in productivity and growing frustration. These work zone impacts are exacerbated by growing congestion in many locations. The FHWA recognizes the trends of increased road construction, growing traffic, increased crashes, and public frustration with work zones. These trends call for a more broad-based understanding and examination of the safety and mobility impacts of work zones on road users, other affected parties, and workers. Better addressing work zone safety and mobility requires consideration of work zone issues starting early in project development and continuing through project completion.

The current regulation has a broadly stated purpose of providing guidance and establishing procedures to ensure that adequate consideration is given to motorists, pedestrians, and construction workers on all Federal-aid construction projects. However, the content of the current regulation is focused primarily on the development of traffic control plans (TCPs), the operation of work zones on two-lane, two-way roadways, and other provisions that address project responsibility, pay items, training and process review and evaluation. These provisions in the current regulation primarily address the issue of traffic control through the work zone itself. At the time this regulation was written, the TCP was an important concept that was and still is essential for work zone safety. Today's environment includes new challenges due to growing congestion, increasing reconstruction and public frustration with work zones. TCPs for work zones are still essential, but they are no longer a sufficient approach for managing work zone impacts that may extend to an area much bigger than the actual work area. The proposed changes to 23 CFR part 630 subpart J are intended to facilitate consideration of the broader safety and mobility impacts of work zones in a coordinated and comprehensive manner across project development stages. The following is a summary of key proposed changes:

- Title change of 23 CFR part 630 subpart J to "Work Zone Safety and Mobility."
- State transportation departments (hereinafter referred to as "States") to develop and adopt work zone safety and

mobility policies. These policies will support the systematic consideration of the safety and mobility impacts of work zones during project development; and address the safety and mobility needs of all road users (*i.e.*, motorists, pedestrians, bicyclists, and persons with disabilities), workers, and other affected parties (*i.e.*, public facilities such as parks, recreational facilities, fire stations, police stations, and hospitals; and private parties such as businesses and residences) on Federal-aid highway projects.

- States to conduct work zone impacts analysis during project development to better understand individual project characteristics and the associated work zone impacts. This will facilitate better decisionmaking on alternative project options and in the development of appropriate work zone impact mitigation measures.
- States to develop Transportation Management Plans (TMPs) for projects as determined by the State's policy and the results of the work zone impacts analysis. A Transportation Management Plan (TMP) documents the mitigation strategies identified during this analysis. The TMP facilitates a more comprehensive approach to manage the safety and mobility impacts of work zones, by including a Transportation Operations Plan (TOP) and a Public Information and Outreach Plan (PIOP) in addition to the current requirement for a Traffic Control Plan (TCP).
- Provisions that allow States to be more creative and performance oriented in their procurement processes by allowing flexibility to choose either method-based or performance-based specifications for their contracts.

###### Statement of the Problem

Work zones are a necessary part of meeting the need to maintain and upgrade our aging highway infrastructure. As much of the Nation's transportation infrastructure approaches the end of its service life, preservation, rehabilitation, and maintenance become an increasing part of our transportation improvement program.<sup>1</sup> The Transportation Equity Act for the 21st Century (TEA-21), (Pub. L. 105-178, 112 Stat. 107) enacted in June 1998, provides for a 40 percent increase in transportation funding over the total provided in the Intermodal Surface

<sup>1</sup> FHWA report, "Meeting the Customer's Needs for Mobility and Safety During Construction and Maintenance Operations," September 1998. This report is available electronically at: [http://safety.fhwa.dot.gov/fourthlevel/pro\\_res\\_wzs\\_links.htm](http://safety.fhwa.dot.gov/fourthlevel/pro_res_wzs_links.htm) or may be obtained by writing the FHWA Office of Safety at, 400 7th Street, SW., Washington, DC 20590.

Transportation Efficiency Act of 1991 (ISTEA), (Pub. L. 102-240; 105 Stat. 1914; Dec. 18, 1991).<sup>2</sup> Much of this funding is being spent on performing capital improvements and maintaining existing roads, since comparatively few new roads are being built.

At the same time, traffic volumes continue to grow and create more congestion. As vehicle travel continues to increase significantly faster than miles of roadway, we have a growing congestion problem that is exacerbated by work zones. From 1980 to 1999, the U.S. experienced a 76 percent increase in total vehicle-miles traveled, while total lane miles of public roads increased only by 1 percent.<sup>3</sup> Congestion affects normal vehicular movement including that of cars, trucks, and buses, and is frustrating and costly to both individuals and businesses. Studies indicate that over the years, "extremely" or "severely" congested highway miles more than doubled from 1982 to 1997, while uncongested miles dropped by almost half. The Texas Transportation Institute (TTI) estimated that the cost of congestion was approximately \$78 billion in 1999. The combination of heavier traffic volumes passing through a road network with more work zones increases the operational and safety impacts of those work zones on the road network. Recent analysis shows that of this congestion, work zones on freeways cause an estimated 24 percent of nonrecurring delay, resulting in lost capacity of 60 million vehicles per day (VPD) in the summer, and that of 64 million VPD in the winter.<sup>4</sup> According to FHWA estimates, about 12.8 percent of the National Highway System is under construction at any time during the summer roadwork season, leading to 3,110 work zones.<sup>5</sup>

<sup>2</sup> Statement of Vincent F. Schimmoller, Deputy Executive Director, FHWA, USDOT, Before The House Committee on Transportation and Infrastructure, Subcommittee on Highways and Transit, Hearing on Work Zone Safety, July 24, 2001. An electronic copy of this statement may be obtained at: <http://www.house.gov/transportation/press/press2001/release100.html>.

<sup>3</sup> "Status of the Nation's Highways, Bridges, and Transit: Conditions & Performance (C&P) Report to Congress," FHWA, 1999. A copy of this report may be obtained electronically at: <http://www.fhwa.dot.gov/policy/1999cpr/>.

<sup>4</sup> "Temporary Losses of Capacity Study," FHWA, November 5, 2001. A copy of this report may be obtained by writing the FHWA Office of Highway Operations, at 400 7th Street, SW., HOP, Washington, DC 20590.

<sup>5</sup> Interim results from an FHWA study entitled, "Snapshot of Peak Summer Work Zone Activity." This study is currently underway and is expected to be completed in June 2003. Copies of the final report may be obtained electronically at <http://www.ops.fhwa.dot.gov/wz/workzone.htm> or by writing the FHWA Office of Highway Operations, at 400 7th Street, SW., HOP, Washington, DC 20590.

Work zones continue to have adverse impacts on traveler and worker safety. Work zone fatalities reached a high of 1,079 in 2001,<sup>6</sup> while over 40,000 people were injured in work zone related crashes in the same year.<sup>7</sup> From 1997 to 2001, over 4,000 people were killed in work zone crashes, with over 220,000 injured; and about 300 workers died in road construction activities during the same time frame, as indicated by the Bureau of Labor Statistics' Census of Fatal Occupational Injuries.<sup>8</sup>

Over the years, highway professionals have devised and implemented several strategies and innovative practices for minimizing the disruption caused by work zones, while ensuring successful project delivery. For example, more work is done during night time to minimize the impacts of work zones on the traveling public by avoiding work during the more heavily traveled daytime hours. However, the current and expected level of investment activity in highway infrastructure (a significant portion of which is for maintenance and reconstruction of existing roadways) implies that increasingly, work will be done under traffic. In 1997, 47.6 percent of highway capital outlay was spent on system preservation (resurfacing, restoration, rehabilitation, reconstruction).

In addition to increased road construction, growing traffic, and increases in crashes, public frustration with work zones indicates that more effort is required to meet the needs and expectations of the American public. The results of a recent FHWA nationwide survey, reported in "Moving Ahead: The American Public Speaks on Roadways and Transportation in Communities,"<sup>9</sup> illustrate the American public's frustration with work zones. Work zones were cited as second only to poor traffic flow in causing traveler dissatisfaction. The top three improvements indicated by the public as a "great help" to improve roadways and transportation are related to roadway repairs and work zones. They

<sup>6</sup> The statistics on work zone crashes for the year 2002 were not officially available at the time this NPRM was drafted.

<sup>7</sup> Fatal Analysis Reporting System (FARS) maintained by the NHTSA. More information is available electronically at: <http://www-fars.nhtsa.dot.gov/>.

<sup>8</sup> The Bureau of Labor Statistics' Census of Fatal Occupational injuries is available electronically at <http://www.bls.gov/iif/oshcfoi1.htm>.

<sup>9</sup> The results of the survey are available in "Moving Ahead: The American Public Speaks on Roadways and Transportation in Communities," FHWA Publication No. FHWA-OP-01-017, 2000. A copy of this publication is available electronically on the FHWA Web page at: <http://www.fhwa.dot.gov/reports/movingahead.htm>.

are: (a) More durable paving materials (67 percent); (b) repairs made during non-rush hours (66 percent); and (c) reducing repair time (52 percent). The use of better traffic signs showing expected roadwork, and better guide signs for re-routing traffic to avoid roadwork, were also cited as being of "great help," by 40 percent and 35 percent of the respondents, respectively. Many travelers indicated a preference to have the road closed completely for moderate durations in exchange for long-lasting repairs. About 67 percent of respondents expressed support for one-week long road closures, and 37 percent expressed support for one-month long road closures; while 16 percent of respondents expressed support for a three-month closing, and 10 percent or fewer would support longer closings (six months to a year).

Further, the contracting industry is under pressure to expedite construction and minimize disruption by reducing their work hours, compressing their schedules and shifts, and increasing night work. They have expressed concerns that these pressures affect worker safety, reduce productivity, and may compromise quality. Therefore, a balance must be achieved between construction needs and the safety and mobility needs of the traveling public.

While safety and mobility are two distinct challenges posed by the circumstances faced on highways, it is important to realize that both these elements are closely tied to one another. Studies and data analyses over time indicate that as congestion builds, crash rates increase; and as crashes increase, more congestion occurs. Therefore, it is important to develop comprehensive mitigation measures that alleviate the impacts of work zones and ultimately improve transportation safety and mobility.

#### *Legislative and Regulatory History*

Section 1051 of ISTEA required the Secretary of Transportation (Secretary) to develop and implement a highway work zone safety program to improve work zone safety at highway construction sites by enhancing the quality and effectiveness of traffic control devices, safety appurtenances, traffic control plans, and bidding practices for traffic control devices and services. The FHWA implemented this provision of ISTEA through non-regulatory action, by publishing a notice in the **Federal Register** on October 24, 1995 (60 FR 54562). (Hereinafter referred to as "the notice.")

The purpose of this notice was to establish the National Highway Work Zone Safety Program (NHWZSP) to

enhance safety at highway construction, maintenance and utility sites. In this notice, the FHWA indicated that having appropriate National and State standards and guidelines would contribute to improved work zone safety. To attain these National and State standards and guidelines, the FHWA identified the need to update its regulation on work zone safety, 23 CFR part 630, subpart J.

The notice indicated that the FHWA would review current work zone problems and update the regulation to better reflect current needs including reinforcement of guidance on bidding practices, work zone crash data collection and analysis at both project and program levels, compliance with traffic control plans, and work zone speed limits. While the focus of this notice was "work zone safety," it also identified the need "to minimize disruptions to traffic during construction of highway projects."

#### *Discussion for Considering Policy and Regulation Change*

Since establishing the NHWZSP, the FHWA identified work zone safety and mobility as major concerns to the traveling public, businesses and transportation agencies. Therefore, the FHWA undertook several efforts to better address the unique safety and mobility challenges posed by work zones, including research and development, and compilation of best practices and guidelines. The FHWA is now in the process of updating 23 CFR part 630 subpart J, which governs traffic safety in highway and street work zones. An examination of the current provisions in 23 CFR part 630 subpart J indicate that they reflect the needs and issues that were relevant at the time the regulation was developed, but are no longer comprehensive enough to address the complex issues of today and the future.

The current regulation has a broadly stated purpose of providing guidance and establishing procedures to ensure that adequate consideration is given to motorists, pedestrians, and workers on all Federal-aid construction projects. However, the content of the current regulation is focused primarily on the development of traffic control plans (TCPs), the operation of work zones on two-lane, two-way roadways, and other provisions that address project responsibility, pay items, training and process review and evaluation. These provisions in the current regulation primarily address the issue of traffic control through the work zone itself. At the time this regulation was written, the TCP was an important concept that was

and still is essential for work zone safety. Today's environment however, includes new challenges due to growing congestion, increasing reconstruction and public frustration with work zones.

More road work is being done under ever increasing traffic—this leads to further congestion, delays, and increases in fatalities and crashes, thereby placing contractors and workers under pressure and leading to public frustration with work zones. These circumstances and consequences call for a more broad-based examination of the current regulations. TCPs for work zones are still important and essential, but they are no longer a sufficient approach for managing work zone impacts that may extend to an area much bigger than the actual work area.

Through research conducted over the years, and based on feedback from State agencies and the public, the FHWA believes that in order to comprehensively improve work zone safety and mobility, there needs to be a systematic consideration of the safety and mobility impacts of work zones across the different project development stages, and the development of appropriate mitigation measures that help alleviate these impacts. The proposed amendments to 23 CFR part 630 subpart J are intended to facilitate consideration of the broader safety and mobility impacts of work zones in a coordinated and comprehensive manner across project development stages.

As a first step towards the consideration of amending 23 CFR part 630 subpart J, the FHWA issued an advance notice of proposed rulemaking (ANPRM), aimed at identifying the key issues that should be considered if the current regulation were to be updated. The ANPRM entitled "Work Zone Safety" was published in the **Federal Register** on February 6, 2002, at 67 FR 5532. The ANPRM comment period ended on June 6, 2002.

Pursuant to the end of the ANPRM comment period, we conducted several outreach sessions with the transportation community to discuss the issues addressed by the ANPRM and to provide a synopsis of the comments received on the ANPRM. The following is a list of the outreach efforts that were undertaken by the FHWA:

- ANPRM presentation and open forum at the 2002 annual meeting of the American Association of State Highway and Transportation Officials (AASHTO) Design Subcommittee, June 13, 2002, Savannah, Georgia;
- ANPRM presentation and open forum at the 2002 annual meeting of the AASHTO Subcommittee on Traffic

Engineering annual meeting, June 17, 2002, Minneapolis, Minnesota;

- ANPRM presentation and open forum at the 2002 annual meeting of the AASHTO Maintenance Subcommittee, July 17, 2002, Mobile, Alabama;

- ANPRM presentation and open forum at the 2002 annual meeting of the AASHTO Subcommittee on Construction, August 6, 2002, Rehoboth Beach, Delaware;

- ANPRM public meeting at Chevy Chase, Maryland, September 19, 2002;

- ANPRM outreach meeting with North Carolina DOT, September 24, 2002; and

- ANPRM public meeting at Chevy Chase, Maryland, September 25, 2002.

Given today's issues and the feedback obtained from the ANPRM and continued outreach with the transportation community, the FHWA believes that it is in the Nation's best interest to amend the regulation to recognize the need to comprehensively consider work zone safety and mobility. Through this NPRM the FHWA seeks to embed full consideration of the safety and mobility impacts of work zones into the project development process, and provide for worker safety and efficient construction. The proposed changes seek to bring about such consideration in a manner that provides flexibility to States to apply the regulations to their unique operating environments, their policies and procedures, and individual project requirements.

#### **Overview of the ANPRM**

In the ANPRM, the FHWA identified a broad range of work zone issues that apply to planning, designing, and implementing Federal-aid highway projects. The issues posed in the ANPRM correspond to an over-arching theme that aims to reduce the need for recurrent roadwork, the duration of work zones, and the disruption caused by work zones. These issues were posed as questions to elicit comments, guidance, and suggestions. The ANPRM indicated that in order to adequately meet the safety and mobility expectations of our customers (road users, workers, and all other affected properties), changes may be required to the project development process to fundamentally include consideration of the safety and mobility impacts of work zones, while providing for worker safety and efficient construction. Such a customer-oriented approach necessitates examination of the complete project development cycle. Therefore, the questions in the ANPRM were grouped into categories that generally correspond to the major steps in project development. These categories are:

- General (wide-ranging policy and regulatory considerations);
- Transportation Planning and Programming;
- Project Design for Construction and Maintenance;
- Managing for Mobility and Safety In and Around Work Zones;
- Public Outreach and Communications; and
- Analyzing Work Zone Performance.

Commenters were also encouraged to include discussion of any other issues they considered relevant to this effort.

#### Discussion of Comments and Responses to ANPRM

The following discussion summarizes the comments received on the ANPRM and the subsequent outreach efforts conducted by the FHWA. The FHWA's responses to these comments and the proposed actions are also provided. The discussion provides a general sense of the issues addressed in the comments.

The ANPRM and associated documents are available in the docket at <http://dms.dot.gov>, under Docket No. 2001-11130. To better understand the summary of the ANPRM comments, reviewers are encouraged to download a copy of the ANPRM from the docket.

We received 84 responses to the docket. Of these, 67 provided responses to the specific questions raised in the ANPRM, while the remaining 17 provided a set of general comments only.

The general comments provided by the 17 respondents who did not answer the specific questions in the ANPRM were not directly attributable to any of the specific issues raised in the ANPRM—however, their comments were synthesized and summarized to provide a general understanding of their position on work zone safety and mobility issues.

The 67 respondents who provided comments on the specific questions raised in the ANPRM provided both direct and indirect responses that indicated whether or not they were in support of a particular issue. A direct response constituted a definite “Yes” or “No” type response from the respondent, while an indirect response constituted a verbatim response to the question, which was then analyzed and interpreted as to what the respondent's position was. In cases where the respondent's position was not interpretable whether he/she was in support of an issue, we indicated that the respondent's position was unclear. Also, not all respondents answered all the questions in the ANPRM, which were indicated as “no response” in the summary of ANPRM comments.

The ANPRM comments analysis shows percentages of responses across several categories, for example, Yes—60 percent, No—20 percent, No Response—10 percent, Unclear—10 percent. The purpose of presenting the ANPRM responses along the lines of percentages is not to assign statistical significance to the responses, but to present a general cross-section of the responses and also to present a general idea of the respondents' position on different issues.

The percentages showing the profile of ANPRM respondents are based on all the responses (84), while the percentages showing the break-up of respondents' position on different issues is based on the 67 respondents who provided comments on the specific questions in the ANPRM.

About 70 percent of the respondents were from the public sector or represent public sector interests, 18 percent of the respondents were from the private sector or catered to private sector interests, 6 percent of the respondents represented both public and private sector interests, while the remaining 6 percent did not indicate their affiliation.

The break-up of the agency types of the different respondents present the following statistics. About 65 percent of the respondents belonged to Departments of Transportation (DOTs) (either State or local), 2 percent of the respondents represented private sector equipment/technology providers; 5 percent of the respondents belonged to other public agencies (Federal and other State agencies); 6 percent of the respondents were either private individuals or consultants or contractors; 15 percent of the respondents represented trade associations and special interest groups, including the American Traffic Safety Services Association (ATSSA), the American Road Transportation Builders Association (ARTBA) and the Associated General Contractors (AGC) of America; and 6 percent of the respondents did not indicate their agency affiliations.

The AASHTO compiled the ANPRM questions into a survey and distributed it amongst its member agencies. Several State DOTs provided their responses through AASHTO's survey, while others submitted their comments individually. AASHTO, as an agency, did not provide specific comments on the ANPRM, but stated its general position on work zone safety and mobility based on the responses from its member agencies. AASHTO indicated general agreement amongst its respondents on the need to have a National policy to improve safety and mobility in highway construction

and maintenance, and that the policy should be issued in the form of guidance.

It was also noticeable that a majority of the respondents' primary job function involved either traffic, engineering, safety or design. There was very little participation on the planning community, contractors, and law enforcement personnel.

#### ANPRM “General” Section—Comments Summary

The “General” section in the ANPRM addressed wide-ranging policy and regulatory considerations regarding work zone safety and mobility. The ANPRM stated that the FHWA was considering a wide range of options, including revising and expanding the regulations in 23 CFR part 630, subpart J, and that, alternatively, the FHWA was also considering policy guidance. This section was therefore primarily aimed at identifying whether or not the FHWA should advocate a new National policy on work zone safety and mobility, and whether the policy should be advocated through regulation or through policy guidance.

When asked if there should be a National policy to promote improved safety and mobility in work zones, 81 percent of the respondents who commented on specific questions in the ANPRM, said yes; 16 percent said no; and about 3 percent did not respond. Of the respondents who said yes, 76 percent belonged to DOTs, 2 percent were from other public agencies, 4 percent represented private agencies, 13 percent were from trade associations, and 6 percent did not indicate their agency affiliation. When asked if the National policy (if it were to be developed), should be issued as regulation or in the form of best practices and guidance, 64 percent of the respondents who commented on specific questions in the ANPRM said that the policy should be advocated through guidance and best practices; 18 percent said that the policy should be advocated through regulation; about 4 percent of the responses were unclear; while 14 percent did not respond.

Of the respondents who indicated that the policy should be advocated through guidance and best practices, 90 percent belonged to DOTs, 2 percent represented other public agencies, 5 percent belonged to trade associations, and 2 percent did not indicate their agency affiliation. Further, a few respondents (about 16 percent of respondents who provided comments on specific ANPRM questions) indicated that there need not be a new policy. Instead, they suggested that existing

regulations and guidelines need to be enforced better. In general, respondents also acknowledged that mobility considerations should be incorporated in planning, designing and implementing work zones.

When queried about the adequacy of the current regulations, about 40 percent of respondents who provided comments on specific questions in the ANPRM indicated that the current regulations are not adequate for addressing work zone safety and mobility concerns at all stages of project evolution; while 34 percent indicated that the current regulations are adequate. The remaining respondents who commented on specific questions in the ANPRM did not provide information that led to any conclusive inference as to whether the current regulations are adequate or not. Of the respondents who indicated that the current regulations are not adequate, 56 percent belonged to DOTs, 4 percent represented other public agencies, 7 percent were from private agencies, 30 percent belonged to trade associations, and 4 percent did not indicate their agency affiliations. All the respondents who stated that the current regulations are adequate belonged to DOTs.

In response to the need for stratifying work zone regulations according to varying levels and durations of risk to road users and workers, and disruptions to traffic, about 76 percent of respondents who provided comments on specific ANPRM questions recommended that work zone regulations should be stratified. Of these, 75 percent belonged to DOTs, 4 percent were from private agencies, 16 percent represented trade associations, and 6 percent did not indicate their agency affiliations. The different stratification factors that were presented in the ANPRM included: duration, length, lanes affected, Average Daily Traffic (ADT), road classification, expected capacity reduction, potential impacts on local network and businesses. Out of these factors, ADT, road classification and expected impacts /capacity reduction were often referred to as the most appropriate stratification factors. However, while it was evident that regulations should be stratified, several respondents also indicated that it may be cumbersome to implement such stratification, and it may lead to confusion in interpretation of regulations.

Currently there are four different definitions of the term "work zone", as stated in the Manual on Uniform Traffic Control Devices (MUTCD), the National Committee on Uniform Traffic Laws and Ordinances (NCUTLO), the National Highway Traffic Safety Administration

(NHTSA), and by the American National Standards Institute (ANSI) (proposed).

The MUTCD defines a work zone as an area of a highway with construction, maintenance, or utility work activities, and that it is typically marked by signs, channelizing devices, barriers, pavement markings, and/or work vehicles. The MUTCD also states that a work zone extends from the first warning sign or rotating/strobe lights on a vehicle to the END ROAD WORK sign or the last temporary traffic control device.

The NCUTLO adds to this definition by stating that a work zone may be for short or long durations, and may include stationary or moving activities. The NCUTLO also provides examples for the different types of work zones, and indicates that the work zone does not include private construction, maintenance or utility work outside the highway.

The NHTSA definition for work zone is very similar to that of the MUTCD, the difference being that NHTSA indicates work zones may or may not involve workers or equipment on or near the road, and that work zones may be stationary or moving, and short term or long term in nature.

The ANSI, in its Manual on Classification of Motor Vehicle Traffic Accidents, American National Standard—ANSI D-16, is proposing a definition for work zone, which is similar to the NCUTLO definition.

The ANPRM inquired whether there ought to be a common National definition for the term "work zone." About 84 percent of the respondents who provided comments on the specific questions in the ANPRM indicated that there should be a common National definition for "work zone." Of these, 77 percent belonged to DOTs, 2 percent were from other public agencies, 2 percent belonged to private agencies, 14 percent represented trade associations, and 5 percent did not indicate their agency affiliations. In response to specific language for a common national definition, a majority of the respondents suggested adopting either the MUTCD or the ANSI definition. Several respondents mentioned that adopting a common National definition for work zone will enhance and standardize work zone data collection and crash reporting processes.

#### *ANPRM "General" Section—FHWA Response and Proposed Action*

The ANPRM comments indicate strong support for the development of a National policy on work zone safety and mobility and document the need to amend FHWA's current regulations in

23 CFR part 630 subpart J to address both safety and mobility issues associated with work zones. The respondents indicated that the preferred method for FHWA to advocate the regulation is by establishing a broad policy, supported by detailed guidelines for implementation. The FHWA therefore proposes to amend its regulation in 23 CFR part 630 subpart J to include the consideration of work zone mobility in addition to safety.

The proposed amendments would result in a broad regulation that addresses a wide range of issues, and provide implementation flexibility to States in meeting their individual program goals and needs. Therefore, the proposed amendments to the regulation recognize the need for stratification, and provide flexibility to States in applying the provisions of the regulation to different projects, based upon their respective program goals and their understanding of the needs and work zone impacts of individual projects.

With regard to the issue of a common National definition for work zone, the ANPRM comments indicate the need for a common National definition for work zone. However, the FHWA realizes that the four different definitions for work zone are essentially similar in content and implication. Therefore, for the purposes of this regulation, we propose to incorporate the MUTCD definition for work zone. Further, one of the reasons the FHWA raised the issue of a common National definition for the term "work zone," was to gauge public opinion on whether there is any recognition that the impacts of work zones may not always be restricted to the work zone itself, and that the impacts may be felt in the advance area of the work zone, other roadway corridors, the regional transportation network and on other modes of transportation. This concept of broader impacts of work zones is however addressed in the proposed amendments by incorporating it into the definition of "work zone impacts," rather than incorporating it in the definition of work zone itself.

The definition and explanation for the phrase "work zone impacts" is available in the section-by-section discussion of this NPRM and the "Definitions and explanation of terms" section of the proposed regulation language.

#### *ANPRM "Transportation Planning and Programming" Section—Comments Summary*

The purpose of the Transportation Planning and Programming section was to identify whether the road user safety and mobility impacts of work zones, and work zone safety requirements are

considered in Statewide, metropolitan and corridor transportation planning and programming. Further, it also endeavored to assess the feasibility of incorporating such considerations in transportation planning and programming.

When asked if road user impacts of work zones are considered in transportation planning and programming, about 24 percent of respondents who provided comments on specific questions in the ANPRM indicated that user-impacts are not currently considered in transportation planning; 9 percent did not respond; 18 percent of the responses were unclear; while 49 percent indicated that user impacts are indeed considered in transportation planning. Even though 49 percent of the respondents said yes, many interpreted the question as addressing early project-level planning verses the transportation planning processes that develop long-range and short-term transportation plans (LRTP's and TIP's). Therefore, there is a significant amount of ambiguity in the responses to this question.

When asked if work zone impacts should be considered in metropolitan, statewide and corridor level transportation planning, on average, about 30 percent of the respondents who provided comments on specific questions in the ANPRM said yes to metropolitan and statewide planning, while 25 percent said no. Of the respondents who indicated that work zone impacts should be considered in metropolitan planning, 74 percent belonged to DOTs, 4 percent were from private agencies, 13 percent represented trade associations, and 9 percent did not indicate their agency affiliations. Of the respondents who indicated that work zone impacts should be considered in statewide planning, 86 percent belonged to DOTs, 5 percent were from private agencies, 5 percent represented trade associations, and 5 percent did not indicate their agency affiliations. On the other hand, a slightly higher number of respondents who provided comments on specific questions in the ANPRM, 48 percent, indicated that work zone impacts should be considered in corridor planning, while only 9 percent said no. It is noticeable that about 40 percent of the respondents who provided comments on specific questions in the ANPRM did not respond to any of these issues, which indicates the level of ambiguity in the responses.

There were mixed responses to the adoption of crosscutting policy level considerations to account for the safety and mobility impacts of work zones in

transportation planning and programming. Examples of such crosscutting policy-level considerations include the use of more durable materials, life-cycle costing, complete closure of facilities, information sharing on utilities, etc. The purpose of adopting policies on such cross-cutting issues is to facilitate a streamlined approach to incorporate work zone considerations into transportation planning and programming, and to serve as decisionmaking tools that help make better decisions to mitigate the impacts of work zones, while planning, programming, designing, and implementing projects. Most respondents did not interpret the question appropriately, leading to several responses that did not address this issue directly.

*ANPRM "Transportation Planning and Programming" Section—FHWA Response and Proposed Action*

The provisions in the proposed amendments do not have a direct effect on the transportation planning processes (*i.e.*, LRTP and TIP) that consider and develop transportation plans at a regional or metropolitan level. The responses to the questions in the transportation planning and programming section were ambiguous, with several respondents either choosing not to answer the questions or misinterpreting the questions as addressing early project-level planning verses the transportation planning processes that develop long-range and short-term transportation plans (LRTP's and TIP's). Further, 23 CFR part 630 subpart J falls under the "Engineering and Traffic Operations" area, and does not exercise authority over the "Planning and Research" areas.

The proposed changes do not have any implications on the transportation planning processes that develop LRTP's and TIP's. However, based on current industry trends and needs and on ongoing research, the FHWA believes that it is important to consider the impacts of work zones while developing transportation plans by accounting for these impacts at the regional, network and corridor levels, and suitably coordinating projects so as to minimize these impacts. Certain State DOTs, for instance, the California Department of Transportation (Caltrans), consider the impacts of work zones at the systems planning level by evaluating the feasibility of the implementation of multiple projects in their respective districts. The FHWA intends to conduct further research and outreach to better understand how work zone impacts can be incorporated in the transportation

planning and programming processes, and to further develop the necessary tools and guidelines that will help States implement such consideration.

*ANPRM "Project Design for Construction and Maintenance" Section—Comments Summary*

The purpose of the Project Design for Construction and Maintenance section in the ANPRM was to identify strategies and practices to make better decisions on alternative project designs that may lead to reductions in the need for recurrent road construction and maintenance work, the duration of work zones and the disruption caused by work zones. Examples of such considerations include life-cycle cost analysis, alternative project scheduling and design strategies, such as, full road closures and night time work, using more durable materials, coordinating road construction, estimation of user costs/impacts, risk and reward sharing with contractors, and constructability reviews for projects.

The ANPRM queried the public on how the FHWA can encourage considerations in project design and decisionmaking that may lead to reductions in the need for recurrent road work, the duration of work zones and the impacts of work zones. Examples of such considerations include life-cycle cost analysis; alternative project scheduling and design strategies, such as, full road closures and night time work; using more durable materials; coordinating road construction; estimation of user costs/impacts; risk and reward sharing with contractors; and constructability reviews for projects. The following is a summary of suggested methods for FHWA to facilitate these considerations<sup>10</sup>:

- Several respondents suggested that FHWA develop procedures and practices and provide guidelines for States to be able to incorporate such considerations. A few respondents referred to the "Work Zone Best Practices Guide" as a good starting point.
- A few respondents (primarily State DOT's and a few trade associations) suggested that the FHWA provide funding incentives for States that adopt such practices.

<sup>10</sup> We do not indicate percentages for this ANPRM question as it was primarily a qualitative question that asked for suggestions on methods to best incorporate considerations in project design to reduce recurrent road work, the duration of work zones and the impacts of work zones. What is presented is a summary of the most popular suggestions and often repeated suggestions from the respondents.

- Very few respondents suggested mandatory requirements in this regard.
- Some of the respondents suggested regulations on use of life-cycle costing to make policy-level decisions on choice of highway material.

When asked if “user-cost” could be a useful factor in decisionmaking for alternative project designs, about 10 percent of the respondents who provided comments on specific questions in the ANPRM said no; 10 percent did not respond; 1 percent of the responses were unclear; while an overwhelming majority of 79 percent said yes. Of the respondents that said yes, 85 percent belonged to DOTs, 4 percent were from private agencies, 10 percent represented trade associations, and 2 percent did not indicate their agency affiliations. When asked if analytical tools should be used for the evaluation of various work zone design alternatives and their estimated impacts, 1 percent said no; 39 percent did not respond; 18 percent of the responses were unclear; while 42 percent said yes. Of the respondents that said yes, 79 percent belonged to DOTs, 3 percent were from private agencies, 14 percent represented trade associations, and 3 percent did not indicate their agency affiliations.

When asked whether utility delays have been cited as obstacles to efficient project delivery, several respondents said yes; while a smaller number said no. Several suggestions were made on how best to address utility delays in project design.

*ANPRM “Project Design for Construction and Maintenance”  
Section—FHWA Response and Proposed Action*

The ANPRM comments led the FHWA to conclude that the respondents acknowledge the need to account for work zone impacts of projects and the associated costs to the public; and to consider alternative strategies in project design and decisionmaking such as, choice of longer-lasting materials, complete road-closures, work during night-time and off-peak hours, innovative contracting techniques, and utility coordination. It is also clear that the respondents prefer guidance in this regard rather than regulation, and that very restrictive regulations may affect innovation and creativity in the development of work zone impact mitigation strategies. Therefore, the FHWA proposes to amend the current regulation by introducing a new section on work zone impacts analysis that will govern decisionmaking on project design strategies and work zone impacts mitigation alternatives. These proposed

amendments provide flexibility to States in scaling the level of detail required for the impacts analysis and evaluation of alternative project options according to the unique characteristics of each project and their respective program goals.

*ANPRM “Managing for Mobility and Safety In and Around Work Zones”  
Section—Comments Summary*

Technology is constantly evolving and there are many methods that can be applied to managing traffic in and around work zones. The application of Intelligent Transportation Systems (ITS) for purposes, such as, traffic management, automated enforcement, and traveler information is a useful method to improve transportation safety and mobility. The current and future safety and mobility challenges presented by work zones may require Traffic Control Plans (TCPs) to include traffic management, enforcement and operations considerations (such as ITS based traffic control and traveler information, speed management and enforcement, incident and emergency management, *etc.*), security considerations, and other considerations (for example, utility location and coordination information). The purpose of the managing for mobility and safety section was therefore to identify the need for expanding the content of TCPs and to outline improved methods and strategies to manage, operate, and enforce work zones.

In general, several respondents indicated the need for comprehensive traffic mitigation planning for work zones across all stages of project development and delivery that would reduce the safety and mobility impacts of work zones, by incorporating appropriate mitigation strategies.

About 70 percent of the respondents who commented on specific questions in the ANPRM indicated that the scope of TCPs should be expanded to consider sustained traffic management, operations and enforcement; about 12 percent said no; 12 percent did not respond; while 6 percent of the responses were unclear. Of the respondents that stated that the scope of TCPs should be expanded, 77 percent belonged to DOTs, 2 percent were from other public agencies, 4 percent were from private agencies, 15 percent represented trade associations, and 2 percent did not indicate their agency affiliations. Based on the general preference of the respondents to the ANPRM, and on subsequent outreach sessions conducted by the FHWA, it is evident that the scope of TCPs should be expanded to account for sustained

traffic management, operations and enforcement for some projects.

With respect to the deployment of uniformed police officers in work zones, it was evident from the ANPRM comments that several States have increasingly been deploying uniformed police officers on roadway construction projects. Respondents indicated that these practices are successful in increasing motorist compliance, regulating work zone travel speeds, and in reducing crashes.

When asked if TCPs should consider the security aspects of the construction of critical transportation infrastructure, about 30 percent of the respondents who commented on specific questions in the ANPRM said no; 15 percent did not respond; 9 percent of the responses were unclear; while 46 percent said yes. Further, when asked if TCPs should consider the security aspects of work zone activity in the vicinity of critical transportation or other critical infrastructure, 33 percent of the respondents said no; 13 percent did not respond; 6 percent of the responses were unclear; while 48 percent said yes. Several respondents commented that TCP’s may not be the most appropriate vehicles for security considerations. Security considerations, where applicable, need to be addressed to the extent possible in other comprehensive security planning efforts. Such security plans should involve work zone considerations. At the same time, many respondents also indicated that emergency-related traffic management implications do apply to work zones, *e.g.*, keeping work zone lanes open during emergency evacuations such as hurricanes, and other natural or man-made disasters.

When asked if more flexibility should be allowed in the development of TCPs, 30 percent of the respondents who commented on specific questions in the ANPRM said no; about 25 percent did not respond; 7 percent of the responses were unclear; while 37 percent said yes. Of the respondents that said yes, 80 percent belonged to DOTs, 4 percent were from other public agencies, 8 percent represented trade associations, and 8 percent did not indicate their agency affiliations. While a significant percentage of the respondents said “no”—they qualified their assertion by stating that flexibility should be allowed in terms of allowing participation from law enforcement, public, and contractors in TCP development, but it should ultimately be the project owner—State DOT or other transportation agency who should develop and approve TCPs. Further, it may be noted that § 630.1010(a)(4) of the



current regulation states the following with regards to flexibility in TCP development: "Provisions may be made to permit contractors to develop their own TCP's and use them if the State and FHWA find that these plans are as good as or better than those provided in the plans, specifications, and estimates (P.S. & E.)." The current regulation also requires a responsible person from the State, at the project level, to ensure that the TCP and other safety aspects of the contract are effectively administered. Representatives of the contracting industry have also indicated that they are reluctant to develop their own TCPs primarily because of liability concerns, and because there is an impression that contractors may do this by cost-cutting at the risk of safety.

When asked if certification should be required for TCP developers, about 34 percent of the respondents indicated no; 27 percent did not respond; about 5 percent of the responses were unclear; while 34 percent said yes. All respondents who said no were from DOTs. Of the respondents that indicated yes, 78 percent belonged to DOTs, 17 percent represented trade associations, and 4 percent did not indicate their agency affiliations. Most States currently require TCPs to be signed and sealed by licensed Professional Engineers (P.E.). A few respondents recommended that all TCP developers be certified, or have undergone the Traffic Control Supervisor (TCS) training. Some respondents suggested the use of "pre-qualified" designers and contractors for the development of TCPs, to avoid the possibility of unsafe or inadequate TCPs. The regulation currently states that all persons responsible for the development, design, implementation, and inspection of traffic control shall be adequately trained.

When asked how TCPs should address considerations that are required by the Americans with Disabilities Act (ADA) (Pub. L. 101-336, July 26, 1990, 104 Stat 327, as amended), several respondents reasserted that TCPs should include ADA considerations<sup>11</sup> for urban projects with pedestrian and other urban issues. They recommended several ways for including ADA considerations in TCPs. Also, several

respondents indicated that TCPs should address ADA considerations only when ADA considerations are already being met by the job-site (prior to deployment of the work zone).

When asked if mobility and safety audits should be required for work zones, 28 percent of the respondents who commented on specific questions in the ANPRM said no; about 13 percent did not respond; 3 percent of the responses were unclear; while 55 percent of the respondents said yes. About 95 percent of the respondents who said no belonged to DOTs. Of the respondents who said yes, 81 percent belonged to DOTs, 3 percent were from private agencies, 14 percent represented trade associations, and 3 percent did not indicate their agency affiliations. The current regulation mentions the need for training for personnel responsible for traffic control inspection, but there are no statements that require work zone safety inspections or mobility/safety audits. Several States have policies that require work zone traffic control and safety inspections to be performed by their construction and safety inspectors.

*ANPRM "Managing for Mobility and Safety In and Around Work Zones" Section—FHWA Response and Proposed Action*

The responses to this section indicate strong support for expanding TCPs to address sustained traffic management, operations and safety to help mitigate the impacts of work zones. Sustained transportation management and operations strategies include transportation systems management, ITS, traveler information, incident management, procedures for work zone operations during emergencies, and conduct of mobility audits. Additional considerations include transportation operational safety considerations such as enforcement in work zones, speed monitoring and management, and conduct of safety audits.

The proposed amendments therefore include provisions that facilitate the consideration of transportation management and operations components that address sustained management, operations and safety. These amendments include provisions for flexibility in decisionmaking on the need for such strategies, and their scope and level of detail, based upon individual project requirements and work zone impacts. As suggested by the ANPRM comments, the proposed changes would provide for flexibility as to who develops the TCP and the transportation management and operations strategies, with ultimate responsibility belonging to the State.

The issue of certification for TCP developers and/or other personnel responsible for design, development and implementation of work zone safety and mobility requirements was addressed by proposing to include provisions in the regulation that require training for State personnel involved in work zone related decision making, with provisions that allow for flexibility in implementation commensurate with the State's needs.

Since security aspects of construction related to critical infrastructure are best addressed in other comprehensive security planning efforts, the proposed changes do not address this issue. With regard to ADA considerations for work zones, we propose language that refers to the appropriate sections of the Code of Federal Regulations (CFR) that address Federal ADA compliance.

*ANPRM "Public Outreach and Communications" Section—Comments Summary*

To reduce the anxiety and frustration of the public, it is important to sustain effective communications and outreach with the public regarding road construction and maintenance activity, and the potential impacts of these activities. This also increases the public's awareness of such activities and their impacts on their lives. The lack of information is often cited as a key cause of frustration for the traveling public. Therefore, this section of the ANPRM attempted to identify the key issues that need to be considered from a public outreach and information perspective.

An overwhelming majority of the respondents were supportive of reaching out to the public and keeping them informed about planned and ongoing construction and maintenance activities. When asked if projects with substantial disruption should include a public communications plan, 10 percent of the respondents who commented on specific questions in the ANPRM said no; 9 percent did not respond, while 81 percent indicated yes. Of the respondents who indicated yes, 81 percent were from DOTs, 2 percent belonged to private agencies, 13 percent represented trade associations, and 4 percent did not indicate their agency affiliation. Several States have recognized the need for communicating with the public, both on an ongoing basis, and for specific projects, and have been using various communications techniques and media sources for getting the word out.

<sup>11</sup> The U.S. Access Board, the Federal agency charged with developing accessibility guidelines for buildings and facilities under the ADA and other statutes, is currently completing work on proposed guidelines for sidewalks, street crossings, and related pedestrian facilities in the public right-of-way that will include accessibility provisions for work zones that are on or along pedestrian routes. Draft proposed guidelines for public rights-of-way accessibility were posted to the Board's Web site at [www.access-board.gov](http://www.access-board.gov) in June 2002.

*ANPRM "Public Outreach and Communications" Section—FHWA Response and Proposed Action*

There is strong support for public outreach and communications with regard to work zones, and several transportation agencies are already undertaking concerted efforts to better inform the public about the safety and mobility aspects and impacts of work zones. The proposed changes to the regulation therefore facilitate the consideration of public information and outreach strategies as part of the work zone impacts mitigation mechanisms; with flexibility for States in the choice of the different strategies and their scope and level of detail, based upon individual project requirements and work zone impacts.

*ANPRM "Work Zone Performance Monitoring and Reporting"—Comments Summary*

Evaluation is a necessary tool for analyzing failures and identifying successes in work zone operations. Work zone performance monitoring and reporting at a nationwide level has the potential to increase the knowledge base on work zones and help better plan, design and implement road construction and maintenance projects. The purpose of this section in the ANPRM was to identify the adequacy and appropriateness of the current data reporting, and the need for enhanced and increased reporting of data on work zones by States. The following data issues were addressed: work zone characteristics, work zone mobility performance, and work zone safety performance.

When asked if States should report information on work zone characteristics, about 46 percent of the respondents who commented on specific questions in the ANPRM said no; 12 percent did not respond; 12 percent of the responses were unclear; while 30 percent said yes. Of the respondents that said no, 91 percent belonged to DOTs. Of the respondents that said yes, 70 percent belonged to DOTs.

When asked if States should report information on work zone mobility performance, 40 percent said no; 21 percent did not respond; 1 percent of the responses were unclear; while 37 percent said yes. Of the respondents who said no, 89 percent belonged to DOTs. Of the respondents who said yes, 72 percent belonged to DOTs.

When asked if the current work zone safety data collection methods and efforts are adequate and appropriate, 36 percent said no; 28 percent did not

respond; 3 percent of the responses were unclear; while 33 percent of the respondents said yes. Of the respondents who said no, 72 percent belonged to DOTs. Of the respondents who said yes, 95 percent belonged to DOTs. Most of the respondents indicated that the mobility measures mentioned in the ANPRM were appropriate, and that the currently used safety measures are appropriate as well. Several respondents indicated that although reporting information on work zone characteristics, mobility performance and safety performance would be useful, they cautioned against requiring unwieldy data collection by States that are already strapped for cash and personnel. A fair number of respondents also indicated the need for more standardized crash reporting policies and procedures.

*ANPRM "Work Zone Performance Monitoring and Reporting" Section—FHWA Response and Proposed Action*

While establishing the benefits of data collection and reporting on the safety and mobility performance of work zones, the ANPRM comments are mixed with respect to regulations that mandate such data collection and reporting. The current provisions in the regulation require States to analyze crashes and crash data to correct deficiencies on individual projects and improve the content of future TCPs. We propose to retain this provision, with the option to include other safety performance measures (e.g., speed variance) as appropriate. Since performance monitoring serves as a basis for process and content improvement in work zone impacts mitigation, we propose to add a new provision that encourages States to analyze work zone mobility data. There are no proposed requirements on the type of analysis or the actual mobility parameters that should be analyzed.

**General Discussion of the Proposal**

*Summary of ANPRM Resolution and Areas Receiving Strong Support*

The following is a summary of the areas that are strongly supported by respondents to the ANPRM:

- There is support for a National policy on work zones that explicitly addresses both safety and mobility. The policy should be broad and address a wide range of issues. The FHWA should support the policy by providing appropriate guidance to States. There needs to be flexibility in the implementation of regulations, thereby enabling creativity and innovation in work zone impacts mitigation.

- The policy should stratify work zone regulations and allow flexibility to States in applying the regulations appropriately to individual projects, based on the State's program goals and the work zone impacts of the project.

- Work zone considerations should be mainstreamed and institutionalized in State procedures.

- Comprehensive work zone impacts mitigation plans should be developed. These plans should consider the work zone safety and mobility impacts of projects early in project level planning, and progress through the later stages of project development. Alternative project options including design, procurement and construction strategies that minimize these impacts should be developed and evaluated. We get strong validation that the costs borne by users as a result of the impacts of work zones could be a useful factor in decisionmaking for evaluating alternative project designs. Work zone induced user-costs are derivatives of the safety and mobility impacts of work zones. Therefore, as part of considering work zone safety and mobility in project development, there needs to be an analysis of the impacts of work zones, which will then lead to development and evaluation of alternative project designs and mitigation strategies. States should however have the flexibility to scale their work zone impacts analysis and evaluation of alternative project options and mitigation strategies, based on the severity of anticipated work zone impacts due to individual projects.

- The scope of TCPs should be expanded to address sustained traffic management and operations considerations. There needs to be flexibility for States in enlisting participation from law enforcement, the public and contractors in developing TCPs, but ultimate responsibility for the project should lie within the State.

The FHWA believes that the increasing pressures for work zone safety and mobility, growth of reconstruction, and the concern voiced by road users require reconsideration of how we plan, design and construct roadway projects to focus on highway and worker safety, as well as meet the mobility needs of our customers. Therefore, the purpose of the proposed regulation is to:

- Reduce the safety and mobility impacts of highway work zones on road users, workers, businesses, and society, and maximize the availability of the roadway for efficient traffic movement while ensuring worker safety and efficient construction.

- Enhance the way construction projects are currently conceived,

planned, designed, and executed to more fully consider work zone impacts on road users, workers, and other affected parties.

#### *Summary of Proposed Changes*

We propose changing the title of 23 CFR part 630 subpart J to "Work Zone Safety and Mobility" to more accurately represent the impacts of work zones on the public. To this end, we propose to update the "Purpose" and "Policy" sections of the current regulation to emphasize the consideration of both the safety and mobility of work zones. We also propose to amend and relocate some of the language that is currently in the "Background" section to the "Purpose" section. The "Background" section of the current regulation contains a reference to the MUTCD, and its purpose and applicability. We propose to amend this reference to the MUTCD and include it in a new section entitled, "References".

The current regulation indicates that its purpose is to assure that adequate consideration is given to all motorists, pedestrians, and construction workers on all Federal-aid construction projects. We propose language in this section to indicate that work zones have impacts on bicyclists, and persons with disabilities, in addition to motorists, pedestrians and workers. We propose to introduce the term "road users," which encompasses motorists, pedestrians, bicyclists, and persons with disabilities. We also propose language to indicate that work zones impact other parties in addition to road users and workers. We therefore propose to introduce the phrase "other affected parties," which may include public facilities like parks, recreational facilities, fire stations, police stations, and hospitals, and private parties such as businesses and residences.

Further, in the "Purpose" section we propose to provide a brief synopsis of the safety and mobility impacts that work zones have on road users, workers and other affected parties. We also propose to indicate that these safety and mobility impacts of work zones are exacerbated by growing congestion in many locations, and that addressing these issues requires considerations that start early in project development and continue through project completion.

The "Background" section of the current regulation recognizes the importance of traffic control for work zone safety, and presents the MUTCD as a guide that provides basic principles and standards for the design and application of traffic control devices. We propose to amend this reference to the MUTCD and include it in a new

section entitled, "References". We propose to retain the current language that refers to the MUTCD as a guide for traffic control, but augment it with language that recognizes that there are considerations in addition to traffic control that are required to comprehensively address the safety and mobility impacts of work zones.

We propose to add a new section entitled, "Definitions/Explanation of Terms" to explain the meaning and implications of certain terms that are key to understanding and interpretation of the proposed provisions in the regulation. The inclusion of this proposed new section results in a change in the section numbering scheme.

We propose minor changes to the current section on "Implementation" to clearly indicate the responsibilities of States and those of the FHWA Division Administrators, and to convey that States and their respective FHWA Divisions are encouraged to work together to ensure conformance with, and implementation of the requirements of this proposed regulation.

We propose reorganizing the requirements that are currently under the "Contents of the Agency's Procedures" into a new section entitled, "State Transportation Department Policy and Procedures." The purpose of this reorganization is to clearly delineate policy level and project level requirements. The major proposed changes to the regulation are located in this section. Most of the proposed changes are developed around the consideration and analysis of the work zone safety and mobility impacts of projects, and the development of mitigation measures that are contained within a Transportation Management Plan (TMP) for projects.

The section on "State Transportation Department Policy" consists of proposed requirements that specify the following: development of a "Work Zone Safety and Mobility Policy"; provision of work zone related "Training" to personnel; conduct of "Process Review and Evaluation"; and collection and analysis of "Work Zone Performance Data."

The proposed requirement for the development of a "Work Zone Safety and Mobility Policy" is new. We propose that States develop their own "work zone safety and mobility policies" that will support the systematic consideration of work zone impacts across all stages of project development; and address the safety and mobility needs of all road users, workers, and other affected parties on all Federal aid highway projects.

The proposed requirements on "Training" are part of the current regulation with proposed changes that encourage documentation of the training provided, and the provision of periodic training updates to appropriate personnel.

The "Process Review and Evaluation" requirements are in the current regulation, and we propose to modify the requirements to provide flexibility to States with regard to the conduct of the reviews, and the frequency and the type of reviews. We also propose to encourage States to address these reviews in their respective stewardship agreements with the FHWA Divisions.

We propose to remove the language on work zone crash data collection and analysis from the current "Process Review and Evaluation" section, and include it in a new paragraph entitled, "Work Zone Performance Data." In this paragraph we propose changes that encourage the collection and analysis of work zone mobility performance data in addition to crash data.

In the project level requirements we propose a section that outlines systematic "Project Impact Analysis and Management Procedures" to include the following: conduct of "Work Zone Impacts Analysis"; development of a "Transportation Management Plan (TMP)"; development of provisions for "Pay Items" for work zone traffic control and management; and assignment of "Responsible Persons" for projects.

We propose a new section on Work Zone Impacts Analysis. It proposes to require an analysis of work zone impacts for projects, and provides flexibility to States in scaling the level of detail of the analysis based on the anticipated work zone impacts of individual projects. It also proposes that if States determine that a project is anticipated to have minimal sustained work zone impacts, they may exempt the project from the impacts analysis.

The TMP would be a new requirement and would include updated requirements on the Traffic Control Plan (TCP). We propose to delete the current language on TCP requirements for two-lane/two-way operations on highways as they are available in the MUTCD. In addition to the TCP, the TMP may consist of a Transportation Operations Plan (TOP), and a Public Information and Outreach Plan (PIOP). The proposed requirements indicate that TMPs are required for all projects, but the TCP is the only mandatory component of TMPs. The need for the other two components of the TMP, namely the TOP and the PIOP, is dependent upon the State's policy

requirements and the severity of work zone impacts due to the project.

The "Pay Items" paragraph is an existing requirement with proposed changes that would allow both method based and performance based specifications for procurement. The "Responsible Persons" paragraph is an existing requirement with proposed changes that would require a responsible person for projects from the contractor in addition to the responsible person from the State.

By incorporating the proposed changes in 23 CFR 630 part subpart J, the FHWA intends to facilitate creative thinking and innovation by the States to mainstream work zone safety and mobility considerations in their policies and procedures, and in their normal project development process at appropriate levels. We believe that the approach we have adopted in our proposed changes will allow for flexibility to States in the application of the regulation according to their unique circumstances and operating environments, their program goals, and the needs of individual projects. The FHWA will continue to research best practices for work zone safety and mobility and share them with States. This will enable practitioners to modify best practices and incorporate creative and innovative approaches that best suit their needs.

### Section-by-Section Discussion

#### *Section 630.1002 Purpose*

Section 630.1002(a). The current regulation states that the purpose of this subpart is to provide guidance and establish procedures to assure that adequate consideration is given to motorists, pedestrians, and workers on all Federal-aid construction projects. We propose to restate that the purpose of this subpart is to address the safety and mobility needs of all road users (motorists, pedestrians, bicyclists, and persons with disabilities), workers, and other affected parties on all Federal-aid projects. These proposed changes are intended to achieve the following:

- Convey the notion that adequate consideration should be given to all road users, rather than just motorists, pedestrians and workers. Therefore we propose to add the term "all road users," which is inclusive of "motorists, pedestrians, bicyclists, and persons with disabilities."

- Convey the notion that, in addition to road users, work zones may have safety and mobility impacts on other parties that are affected by the highway or street project. We therefore propose to include the phrase "and other

affected parties," after "workers." Affected parties may include: public facilities like parks, recreational facilities, fire stations, police stations, and hospitals; and private parties such as businesses and residences.

- Emphasize the importance of work zone safety and mobility, by restating the purpose statement to specifically indicate that adequate consideration should be given to the "safety and mobility" needs of road users (motorists, pedestrians, bicyclists, and persons with disabilities), workers, and other affected parties.

Section 630.1002(b). In this paragraph, we propose to indicate that work zones cause safety and mobility impacts on road users, workers, and affected properties. We propose to highlight one of the key issues that we face today and in the future by stating that work zone impacts are exacerbated by growing congestion in many locations. We therefore, propose to assert that addressing the safety and mobility issues of work zones requires considerations that go beyond the installation of appropriate traffic control devices, and that these considerations should start early in project development and continue through project completion.

#### *Section 630.1004 References*

We propose to include a new section entitled, "References" which contains amended language from the "Background" section of the current regulation.

The "Background" section of the current regulation recognizes the importance of traffic control for work zone safety, and presents the MUTCD as a guide that provides basic principles and standards for the design, application, installation, and maintenance of various types of traffic control devices during highway construction projects, maintenance operations, and utility work. Further, it discusses the limitations of the MUTCD, the efforts taken by transportation agencies in developing guidelines for work zone traffic control, and the need for greater uniformity in work zone traffic control and more attention to proper implementation of the MUTCD.

We propose to amend this reference to the MUTCD and include it in a new section entitled, "References". We propose to retain the current language that refers to the MUTCD as a guide for traffic control, but augment it with language that recognizes that there are considerations in addition to traffic control that are required to comprehensively address the safety and mobility impacts of work zones.

We propose to retain the sentence that describes the content and implications of the MUTCD with regards to provision of guidelines and standards for traffic control. We identify that the MUTCD does not address the other actions that should be taken to help comprehensively mitigate the safety and mobility impacts of work zones. We recognize the efforts taken by transportation agencies to mitigate the safety and mobility impacts of work zones, but note that a more coordinated and comprehensive effort is required to bring about greater consideration of such work zone safety and mobility impacts.

#### *Section 630.1006 Definitions and Explanation of Terms*

This section is a new section which proposes to include definitions for the terms, "Work Zone," "Work Zone Impacts," "Transportation Management Plan (TMP)," "Traffic Control Plan (TCP)," "Transportation Operations Plan (TOP)," and "Public Information and Outreach Plan (PIOP)." We propose to add these definitions because they are considered relevant to the proposed changes, and would have direct implications on the application of the regulation by States.

#### *Section 630.1008 Policy*

We propose to change the section number for the "Policy" section from § 630.1006 to § 630.1008. This section states FHWA's policy on work zone safety and mobility for all Federal-aid highway projects. We propose to include elements that would address the "mobility" needs in addition to those that would address the safety needs of all road users, workers, and other affected parties. We propose to amend the last sentence of the paragraph to indicate that States are encouraged to implement these procedures for non-Federal-aid projects, maintenance and utility operations as well.

#### *Section 630.1010 Implementation*

We propose to change the section number for the "Implementation" section from § 630.1008 to § 630.1010. The proposed content of this section is very similar to that of the current regulation. This section outlines the role of the FHWA Division Office, and that of the State in implementing the provisions in the regulation. We propose to modify the first sentence of this section to convey that in addition to reviewing the State's implementation of its procedures, the FHWA shall also be responsible for reviewing the "conformance" of the State's procedures with this regulation. We also propose to

append the same sentence with language to convey that the implementation of the regulations is a collaborative process between the State and the FHWA Division Office, by adding the words, "as agreed upon by the FHWA and the State." This conveys that the State and the FHWA Division Office may work together to develop appropriate procedures and determine the most suitable intervals for the FHWA Division Administrator to review the State's implementation of its procedures. We do not propose any modifications to the second sentence in this section. We propose to modify the last sentence in this section of the current regulation by deleting the word "major" in "or revisions" so as to eliminate ambiguity in interpretation.

#### *Section 630.1012 State Transportation Department Policy and Procedures*

We propose to reorganize the section entitled "Contents of the agency procedures," under a new title, "State Transportation Department Policy and Procedures." The purpose of this reorganization is to clearly delineate policy level and project level requirements for States. We propose to change the section number for this section from § 630.1010 to § 630.1012. Our proposed changes to this section are explained in the following paragraphs.

This section consists of two main requirements, which are: § 630.1012(a) State Transportation Department Policy, and § 630.1012(b) Project Impact Analysis and Management Procedures.

In § 630.1012(a) "State Transportation Department Policy" we propose policy level requirements for States to support the consideration of work zone safety and mobility impacts in the project development process.

In § 630.1012(a) we propose to add the requirement for a "Work Zone Safety and Mobility Policy." This would be a new requirement, where we propose that States shall develop their own "work zone safety and mobility policies" that will support the systematic consideration of work zone impacts across all stages of project development; and address the safety and mobility needs of all road users, workers, and other affected parties on all Federal-aid highway projects. All stages of project development include early project level planning through project design, traffic control and operations planning. Such policies would facilitate easier and more streamlined decision making during project development by providing a standardized approach, and by serving as an implementation guide to practitioners who are involved in

planning, designing, and implementing road projects.

In § 630.1012(a)(1)(i) we propose to make these policies scaleable according to each State's unique requirements, and that the State may apply its policy to different projects based on the severity of work zone impacts of the project.

In § 630.1012(a)(1)(ii) we propose to recommend that the State involve personnel from different departments and representing the different project development stages in the development of the policy. The proposed language is general and would allow flexibility in the role and makeup of the team. Such a team may be responsible for the analysis and evaluation of the safety and mobility issues related to work zones, and the development, improvement, and institutionalization of the resultant project options as well as the work zone design and impact mitigation strategies for different types of projects. Such a multidisciplinary team may serve as a standing committee of experts on work zones, and may help make informed decisions during the appropriate stages of project development on how best to design and build projects, and mitigate the impacts of work zones. The State may include other stakeholders (*i.e.*, other transportation agencies, police, fire, emergency medical services, and regional transportation management centers), and industry representatives (*i.e.*, engineers, contractors) in developing these policies.

The content of the policy would be determined by the State. The following are examples of topics that may be addressed in these State policies:

- *Project Classification.* A project classification system would be a process to classify road projects into different types, based on the severity of work zone impacts. This classification process would allow the State to apply appropriate policies and practices for the design, implementation, and management of work zones and their impacts, that are best suited to specific project types. The different parameters that affect work zone impacts of projects include, but are not limited to: Road classification; area type (urban, suburban, rural); traffic demand and travel characteristics (lanes affected, Average Daily Traffic, expected capacity reduction, Level of Service); type of work; complexity of work being performed (duration, length, intensity); level of traffic interference with construction activity; and potential impacts on local network and businesses. Project classification systems may range from a simple scheme to classify projects into high impact and low impact, to a multi-

dimensional matrix of projects that helps decisionmaking on appropriate work zones treatments for different types of projects. At this time, there are no recommended tiers of projects, and States may develop their own classification system that best suits their needs. It is noteworthy that a simple and straightforward classification system would ensure that it is practical and is also easy to adopt and apply.

- *Work Zone Performance Standards.* Performance standards would establish the safety and mobility performance requirements for work zones for different types of projects, and thereby drive appropriate planning, design and operational strategies that help achieve the set requirements. An example of a performance standard for work zones would be the establishment of a traffic management policy that outlines performance standards for different types of projects. Such a traffic management policy may also outline methods that prescribe limits on lane closures, thresholds on delays and queues due to work zones, and restrictions on work hours so as to achieve the mobility performance standards for different types of projects. The traffic management policy may also include safety performance standards that outline requirements for crash reduction.

For example, the Ohio Department of Transportation (ODOT) has developed and adopted a policy that sets limitations on the number of lanes that may be closed for construction activities on freeways and "freeway look-alikes" (other highways that are similar to freeways). Such performance standards for decisionmaking during the early project planning and preliminary design stages would provide designers and traffic control and operations planners an understanding of the limitations that they are working under, thereby resulting in more comprehensive and complete designs and traffic control and operations plans, which may not require extensive changes during the final stages of design, or during the actual construction phase.

- *Development of Recommendations on Project Options, and Work Zone Design and Impacts Mitigation Alternatives that Suit Different Project Types.* After the establishment of a project classification system and appropriate performance standards, the State may then develop recommendations on alternative project planning and design solutions and strategies that best minimize the work zone impacts for different project types. The availability of Statewide policies and procedures on the most suitable

project options and work zone design and impacts mitigation strategies for the different types of projects would streamline decisionmaking, and ultimately make project delivery more efficient and effective, and work zones less disruptive. Examples of alternative project options and design strategies would include recommendations on work zone strategies (e.g., night work, full-closure); design strategies (e.g., traffic control, choice of materials, use of positive separation); contracting strategies (e.g., low bid, design-build, A+B bidding, incentive/disincentive contracting); and mitigation strategies (e.g., use of intelligent transportation systems, traveler information, real-time work zone monitoring, management and enforcement).

Section 630.1012(a)(2) "Training." The proposed requirements in the "Training" section are part of the current regulation in § 630.1010(d). We propose to modify the current language in this section by adding the words "work zone related transportation management and" after the word inspection. This would indicate that training related to work zones is not limited to just subjects that address traffic control for work zones. The proposed language reads as follows: "All persons responsible for the development, design, implementation, operation, and inspection of work zone related transportation management and traffic control shall be adequately trained." We propose to add another sentence that encourages documentation of the successful training received by the appropriate personnel, and the provision of periodic training updates that reflect changing industry practices. The proposed amendment would encourage States to keep records of training provided to personnel, and also to periodically provide training updates that are reflective of changing industry practices. The State may choose the most appropriate intervals for providing training updates.

Section 630.1012(a)(3) "Process Review and Evaluation." The current requirements on "Process Review and Evaluation" are stated in § 630.1010(e) and we propose to relocate the current language to § 630.1012(a)(3). We propose to add language that would provide flexibility to States on the frequency and the type of reviews. The current regulation requires States to annually review randomly selected projects throughout their jurisdiction for the purpose of assessing the effectiveness of their procedures. We propose to lessen the burden on States by changing the word "shall" to "is encouraged", and by changing the

requirement for "annual" reviews to "periodic" reviews. With increasing construction activity, and demand for time and resources of State personnel, the requirement to conduct such reviews on an annual basis may overburden States, resulting in perfunctory reviews for the sake of meeting a regulatory requirement. We believe that it is in the States' best interest to conduct reviews of processes and projects at appropriate intervals, so that they can continually improve their processes with regards to work zones and meet the needs of their customers better.

Further, we also propose to remove the requirement for the review and approval of the State's review results by the FHWA Division Administrator. We believe that the process reviews and improvements would be better achieved by a cooperative agreement and understanding between the State and the FHWA Division, which may be addressed in the stewardship agreement. We also propose to encourage States to include an FHWA representative in the process reviews. An overarching proposal would be to include both "safety and mobility" considerations in the reviews.

Section 630.1012(a)(4) "Work Zone Performance Data." The current regulation consists of requirements on analysis of construction zone accidents and accident data. These requirements are currently presented under the "Process Review and Evaluation," § 630.1010(e)(2). We propose to relocate the language on work zone crash data collection and analysis from the current "Process Review and Evaluation" section and include it under the title, "Work Zone Performance Data." In § 630.1012(a)(4)(i) we propose to retain the crash and crash data analysis requirements, but change "construction zone accidents and accident data" to "crashes and crash data." We also propose that States may include other safety performance measures in the analysis. This would be to reflect the trend of increasingly deploying ITS and other automated systems for work zones that indirectly help collect better safety performance data on work zones. Such safety performance measures would include data on speed variance and video data on work zone traffic flow that may help identify potential safety improvements.

In § 630.1012(a)(4)(ii) we propose to add language that would encourage States to collect and analyze work zone mobility performance data to continually improve work zone practices and policies. Examples of mobility performance data would

include delay, travel time, traffic volumes, speed, and queue lengths. The purpose of these proposed changes is to bring to the attention of States that both safety and mobility performance measurement and analysis is an essential part of ensuring that we develop and adopt the most effective and efficient practices for improving work zone safety and mobility, thereby delivering on the expectations of our customers.

In § 630.1012(b) "Project Impact Analysis and Management Procedures" we propose to require project level procedures that would analyze the work zone impacts of alternative project options and design strategies, and would develop mitigation measures that help manage the work zone impacts. The proposed requirements are: "Work Zone Impacts Analysis", "Transportation Management Plan (TMP)", "Pay Items", and "Responsible Persons."

Section 630.1012(b)(1) "Work Zone Impacts Analysis." This would be a new requirement that would require States to analyze the work zone safety and mobility impacts of alternative project options and work zone design strategies, and develop appropriate measures to mitigate the work zone impacts. The purpose of this impacts analysis would be to understand the type, severity and the extent of the work zone impacts associated with the different project alternatives, and to incorporate appropriate mitigation measures and strategies in project design, traffic control, transportation management and operations, and construction. We propose to provide flexibility to States in the performance of these impacts analyses by indicating that the scope and level of detail of the analysis would vary based on the States' policies and their understanding of the anticipated severity of work zone impacts due to the project. For projects with minimal sustained work zone impacts, the State would be exempt from performing a detailed project specific impacts analysis.

States would be encouraged to start the impacts analysis early in project development, and depending on the anticipated severity of work zone impacts due to the project, continue the analysis through project design, and traffic control and operations planning. This means that States would be encouraged to adopt a gradual systematic process for the impacts analysis by initially identifying the anticipated work zone impacts of the project during early project level planning, and based on this identification determine whether a more

detailed impacts analysis is required during the subsequent stages of project development. As proposed, States would be required to document the results of the work zone impacts analysis, the project options, the work zone design strategies, and mitigation measures identified during the process.

In § 630.1012(b)(1)(i) we propose to encourage States to establish a team that would include representatives of the project development stages to discuss, evaluate and document work zone issues, and take responsibility for the development of the project design and work zone mitigation strategies. The size and constitution of the multidisciplinary team and the level of involvement required may vary according to the anticipated work zone impacts. As proposed, we suggest that non-State personnel and affected parties may also be included in this team as appropriate. Such non-State personnel and affected parties may include other transportation agencies, such as counties, cities, local municipalities, Metropolitan Planning Organizations (MPOs), transit providers, police and other emergency response agencies, and representatives of affected businesses and residences.

In § 630.1012(b)(1)(ii) we propose language that states that the impacts analysis would be a systematic process that may require the use of appropriate analytical tools, depending on the degree of detail required for the analysis. Such tools would include transportation modeling and/or simulation software. We also propose that the impacts analysis consist of three main activities that are explained as follows:

In § 630.1012(b)(1)(ii)(A) we propose to include a requirement for States to understand the project, traffic and travel characteristics, and identify the work zone impacts of the project (including impacts of multiple projects at the corridor and network levels, as appropriate).

States may begin by fully understanding the project, traffic and travel characteristics and needs early on in project planning. Based on this understanding the work zone impacts and the parties affected by the work zone can be better identified. States may then develop an overall project design and impacts mitigation strategy. Based on the level of understanding gained from the early analysis, States may decide upon the level of detail that is required for analyzing the work zone impacts of alternative project options and design strategies, and developing the most appropriate mitigation

measures. Project, travel, and traffic characteristics may include:

- Traffic demand and volumes, seasonal and temporal variations in demand (hourly, daily, weekly), occurrence of special events, percentages of different vehicular volumes (cars, trucks, buses), type of travel (commuter or tourist), freight corridor, transit corridor, business issues, and other such similar characteristics; and

- State policy requirements on impacts analysis and mitigation requirements for the specific project type and/or regional requirements on work zone impacts mitigation and management.

The work zone impacts of the project may include consideration of the following:

- Impacts of the project at both the corridor and network levels to include parallel corridors, alternate routes, the transportation network, and other modes of transportation, impacts of other work zones in the vicinity of the project, either at the corridor level or the network level;

- Impacts on nearby transportation infrastructure, such as, key intersections and interchanges, railroad crossings, public transit junctions, and other junctions in the transportation network;

- Impacts on evacuation routes in the vicinity of critical transportation or other infrastructure;

- Impacts on affected public properties, including parks, recreational facilities, fire stations, police stations, and hospitals; and

- Impacts of the project on affected private properties, including businesses and residences.

In § 630.1012(b)(1)(ii)(B) we propose to add language that discusses the development and evaluation of alternative project options including design, procurement, and construction strategies that minimize the work zone impacts of the project.

This activity would constitute the development of alternative project options and the evaluation of the respective work zone impacts, so as to mitigate and manage the impacts to the best extent possible. The number of alternative project options and design strategies and the level of detail of the analysis of the work zone impacts would depend on the State's understanding of the individual project needs and the anticipated severity of work zone impacts due to the project. Examples of alternative project options would include design, procurement, and construction strategies such as:

- Temporal alternatives for work performance such as season, month, day

of week (weekend vs. weekday), and time of day (night time vs. day, off-peak vs. peak);

- Alternative lane closure strategies such as full-closure, partial closure, cross-overs, multiple lane closure, single lane closure; and impact of alternative traffic management strategies on lane-closure decisions;

- Alternative design solutions that address the durability and economy of maintenance of the roadway;

- Alternative design solutions and strategies that impact decision making on Right of Way (ROW) acquisition;

- Alternative construction staging plans, and construction techniques and methodologies (e.g., accelerated construction techniques) that may have varying types and severity of work zone impacts; and

- Alternative contracting methodologies such as low-bid, design-build, A+B bidding, and incentive/disincentive contracting.

In § 630.1012(b)(1)(ii)(C) we propose to add language that would address the development of transportation management recommendations that mitigate the work zone impacts of the project for the chosen project option, including traffic control, transportation operations and safety, and public information and outreach strategies.

As a final activity in the impacts analysis, this process would develop appropriate transportation management recommendations that would mitigate the work zone impacts of the project. Such transportation management recommendations would include traffic control requirements, transportation operations and safety requirements, and public information and outreach requirements. These requirements would be grouped and documented in the TMP, which is explained in the following paragraphs.

Traffic control requirements would include recommendations on strategies to safely and efficiently handle traffic flow through the actual work zone itself. Examples of traffic control requirements would include recommendations on lane closure widths, work zone and work area configuration, tapers, and the choice and positioning of traffic control and safety devices.

Examples of transportation operations recommendations would include the following:

- The deployment of Intelligent Transportation Systems (ITS) technologies for work zone traffic monitoring and management;

- Provision of real-time traveler information to the public, including information provision on Web sites;

- Application of transportation systems management (TSM) and corridor management strategies, including mitigation treatments for alternate routes (for *e.g.*, traffic signal timing adjustment on affected corridors), and alternate modes (for *e.g.*, public transit subsidies, incentives and special programs);

- Coordination of transportation management with existing regional Transportation Management Centers (TMCs);

- Conduct of mobility and safety reviews and audits;

- Speed enforcement and management in work zones using either police officers or through automated techniques;

- Incident management plans for work zones; and

- Policies on work zone traffic management during emergency situations, for *e.g.*, hurricane evacuations or other natural disasters.

Examples of public information and outreach recommendations may include the following communications requirements:

- Provision of project and work zone information prior to the commencement of the work in order to make the public aware of the expected work zone impacts and the State's actions to mitigate the impacts;

- Provision of recommendations to the public on commuter alternatives, such as information on alternate routes and alternate modes;

- Provision of information on changing conditions on the project during the course of its implementation (for *e.g.*, changes in lane closure scenarios, construction staging, construction times, alternate routing); and

- Obtaining public input into the development of appropriate work zone impacts mitigation strategies during the planning and design phases of the project; the refinement of work zone traffic management and mitigation strategies during the course of the project implementation; and public feedback on performance of the work zone and project after the completion of the project.

Examples of public information and outreach sources that the State may consider for the public information and outreach plan would include the following:

- Dissemination of information through brochures, pamphlets and media sources including newspapers, television and radio channels, and Web sites;

- Public meetings and hearings;

- Coordination and cooperation with affected public and private parties;

- Establishment of telephone hotlines; and

- Focus groups, surveys, and market research for obtaining input and feedback from the public.

In § 630.1012(b)(2) we propose to establish the requirement for a Transportation Management Plan (TMP). The TMP would be a new requirement with the current requirements on the Traffic Control Plan (TCP) updated and rolled into it. The TMP would document the work zone mitigation and management strategies recommended by the work zone impacts analysis.

In § 630.1012(b)(2) we propose language to indicate that a TMP would document the mitigation strategies identified during the work zone impacts analysis. We propose that a TMP would have three coordinated components, namely the Traffic Control Plan (TCP), the Transportation Operations Plan (TOP), and the Public Information and Outreach Plan (PIOP). We propose to indicate that the content and degree of detail of the TMP will vary according to the severity of work zone impacts due to the project. We propose to require that States shall develop TMPs for projects based on their policy requirements and the severity of work zone impacts due to the project. We then propose to outline the requirements for the individual TMP components in § 630.1012(b)(2)(i)—“TCP,” § 630.1012(b)(2)(ii)—“TOP,” and § 630.1012(b)(2)(iii)—“PIOP.” The proposed content for these sections are explained in the following paragraphs.

In § 630.1012(b)(2)(i) we outline the proposed requirements for a Traffic Control Plan (TCP). As proposed, the TMP would include a TCP or provisions that would allow contractors to develop a State approved TCP prior to the start of work. This means that TCPs would be developed for all projects. It also means that States may involve contractors in the development of TCPs based on their understanding of the construction staging and strategies.

We propose to retain the current language on the definition of TCPs, and include the consideration of mobility by stating that it is a plan for safely and efficiently handling traffic through a specific highway or street work zone or project. We propose that TCPs may range in scope from a very detailed TCP designed solely for a specific project, a section of the MUTCD, or reference to approved standard plans or State transportation department manual. We also propose that for projects that have minimal work zone impacts, the TCP

would be the only component of the TMP.

The scope of the TCP would be determined by the anticipated construction staging and scheduling, and the traffic safety and control requirements identified in the work zone impacts analysis. The plans, specifications, and estimates (P.S. & E.s) would include either a State-prepared TCP; or provisions for contractors to develop a TCP, approved by the State, prior to start of the work. We also propose to retain the current language that the TCP shall be consistent with the provisions of the MUTCD.

We propose to delete the current language in the regulation that addresses TCP requirements for the work zone operations of two-lane, two-way highways as that language is available in the MUTCD. The reason why we propose to include the TCP as a component of the TMP is to present the need for a synergistic, coordinated approach to developing and implementing traffic control and transportation management strategies.

In § 630.1012(b)(2)(ii) we outline the requirements for a Transportation Operations Plan (TOP). We propose to include the development of a TOP as part of the TMP for projects. We propose that States would include a TOP in the TMP if recommended by the results of the work zone impacts analysis. A TOP would include considerations that address the safety and mobility of the transportation system by adopting strategies for the sustained operations and management of the work zone impact area. Such strategies would include transportation systems management; corridor management; and traffic management operations and safety (*i.e.*, ITS based traffic control and traveler information, speed management and enforcement, incident and emergency management, safety reviews and audits). We propose to recommend that States coordinate the TOP with stakeholders (*i.e.*, other transportation agencies, police, fire, emergency medical services, and regional transportation management centers).

We propose to indicate that the scope of the TOP would be determined by the transportation operations and safety requirements identified in the work zone impacts analysis. We propose that the TOP may be included in the P.S. & E.s. This would provide the State flexibility to contract the TOP as part of the overall contract for the project, or hire a separate contractor for implementing the TOP. We also propose that provisions may be made in the P.S.&E.s for contractors to develop a TOP, approved by the State, prior to the



start of work. This would provide the State an opportunity to involve the contractor in the development of the TOP.

In § 630.1012(b)(2)(iii) we outline the requirements for a Public Information and Outreach Plan (PIOP). We propose to include the development of PIOPs as part of the TMP for projects. We propose that States would include a PIOP in the TMP, if recommended by the results of the work zone impacts analysis. A PIOP would consist of project level communications that would ensure that affected road users, the general public, residences and businesses, and the appropriate public entities are informed about the project, the expected work zone impacts, and the changing conditions of the project. Through the PIOP we propose to encourage States to provide adequate (*i.e.*, frequent, current, and near-real-time where appropriate) information for the affected parties to make informed travel decisions that help alleviate the work zone impacts of the project.

We propose to identify that the scope of the PIOP would be determined by the public information and outreach requirements identified in the work zone impacts analysis. We propose that the State may choose to include the PIOP in the P.S.&E.s. This would provide the State the flexibility to contract the PIOP as part of the overall contract for the project, or hire a separate contractor for implementing the PIOP. We also propose that alternatively, States may choose to include provisions in the P.S.&E.s for contractors to develop a PIOP, approved by the State, prior to the start of work. This would provide the State an opportunity to involve the contractor in the development of the PIOP.

In § 630.1012(b)(3) we propose to amend the requirements for "Pay Items." This is an existing requirement, with proposed changes that would allow both method based and performance based specifications for procurement, and emphasize the need for unit pay items in the case of method based procurement for TCPs. It also proposes to allow the State flexibility in including the other TMP components in the P.S.&E. package.

In § 630.1012(b)(4) we propose to amend the requirements for "Responsible Persons." This is an existing requirement, with proposed changes that would require a responsible person at the project level from the contractor, in addition to the responsible person from the State.

### Compliance Date

We propose that the compliance date be 3 years after the effective date of the final rule. This would allow States time to implement the proposed requirements.

### Rulemaking Analyses and Notices

All comments received before the close of business on the comment closing date indicated above will be considered and will be available for examination using the docket number appearing at the top of this document in the docket room at the above address. We will file comments received after the comment closing date in the docket and will consider later comments to the extent practicable. We may, however, issue a final rule at any time after the close of the comment period. In addition to late comments, we will also continue to file, in the docket, relevant information becoming available after the comment closing date, and interested persons should continue to examine the docket for new material.

### Executive Order 12866 (Regulatory Planning and Review) and DOT Regulatory Policies and Procedures

The FHWA has determined that the proposed rule would not be a significant regulatory action within the meaning of Executive Order 12866 and would not be significant within the meaning of Department of Transportation regulatory policies and procedures. It is anticipated that the economic impact of this action would be minimal.

These proposed changes are not anticipated to adversely affect, in a material way, any sector of the economy. In addition, these changes are 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.

Based upon the information received in response to this NPRM, the FHWA intends to carefully consider the costs and benefits associated with this rulemaking. Accordingly, comments, information, and data are solicited on the economic impact of the changes described in this document or any alternative proposal submitted.

### Regulatory Flexibility Act

In compliance with the Regulatory Flexibility Act (Pub. L. 96-354, 5 U.S.C. 601-612), we have evaluated the effects of this rule on small entities. This rule applies to State departments of transportation in the execution of their highway program with respect to work zones. The implementation of the proposed provisions in this rule will

therefore not affect the economic viability or sustenance of small entities. Accordingly, the FHWA certifies that the proposed action will not have a significant economic impact on a substantial number of small entities.

### Unfunded Mandates Reform Act of 1995

This proposed action does not impose unfunded mandates as defined by the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4, March 22, 1995, 109 Stat. 48). The actions proposed in this NPRM would not result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of \$100 million or more in any one year (2 U.S.C. 1532). Further, in compliance with the Unfunded Mandates Reform Act of 1995, the FHWA will evaluate any regulatory action that might be proposed in subsequent stages of the proceeding to assess the affects on State, local, and tribal governments and the private sector.

### Executive Order 13132 (Federalism)

This proposed action has been analyzed in accordance with the principles and criteria contained in Executive Order 13132, dated August 4, 1999, and it has been determined that this proposed action does not have a substantial direct effect or sufficient federalism implications on States that would limit the policymaking discretion of the States. Nothing in this document directly preempts any State law or regulation or affects the States' ability to discharge traditional State governmental functions.

### 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 of 1995

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 proposed rule contains a requirement for data and information to be collected and maintained in the support of design, construction, and operational decisions that affect the safety and

mobility of the traveling public related to highway and roadway work zones. In order to streamline the process, the FHWA intends to request that the OMB approve a single information collection clearance for all of the data in the proposed regulation.

The FHWA estimates that a total of 83,200 burden hours per year would be imposed on non-Federal entities to provide the required information for the proposed regulation requirements. Respondents to this information collection include State Transportation Departments from all 50 States, Puerto Rico, and the District of Columbia. The estimates here only include burdens on the respondents to provide information that is not usually and customarily collected.

The FHWA is required to submit this proposed collection of information to OMB for review and approval, and accordingly, seeks public comments. Comments regarding any aspect of these information collection requirement, including, but not limited to: (1) Whether the collection of information is necessary for the performance of the functions of the FHWA, including whether the information has practical utility; (2) the accuracy of the estimated burden; (3) ways to enhance the quality, utility and clarity of the collected information; and (4) ways to minimize the collection burden without reducing the quality of the information collected.

#### **Executive Order 13175 (Tribal Consultation)**

The FHWA has analyzed this proposed action under Executive Order 13175, dated November 6, 2000, and believes that this proposed action 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. This rulemaking primarily applies to urbanized metropolitan areas and National Highway System (NHS) roadways that are under the jurisdiction of State transportation departments. The purpose of this proposed action is to mitigate the safety and mobility impacts of highway construction and maintenance projects on the transportation system, and would 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 proposed action under Executive Order 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution or Use. We have determined that this proposed action will not be a significant energy action under that order because any action contemplated will not be a significant regulatory action under Executive Order 12866 and will not be likely to have a significant adverse effect on the supply, distribution, or use of energy. Further, we believe that the implementation of the proposed provisions by State departments of transportation would reduce the amount of congested travel on our highways, thereby reducing the fuel consumption associated with congested travel. Therefore, the FHWA certifies that a Statement of Energy Effects under Executive Order 13211 is not required.

#### **National Environmental Policy Act**

The FHWA has analyzed this proposed action for the purposes of the National Environmental Policy Act of 1969 (42 U.S.C. 4321–4347 *et seq.*) and has determined that this proposed action will not have any effect on the quality of the environment. Further, we believe that the implementation of the proposed provisions by State departments of transportation would reduce the amount of congested travel on our highways. This reduction in congested travel would reduce automobile emissions that are induced by congested travel, thereby contributing to a cleaner environment.

#### **Executive Order 12630 (Taking of Private Property)**

The FHWA has analyzed this proposed rule under Executive Order 12630, Governmental Actions and Interface with Constitutionally Protected Property Rights. The FHWA does not anticipate that this proposed action would affect a taking of private property or otherwise have taking implications under Executive Order 12630.

#### **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 proposed action under Executive Order

13045, Protection of Children from Environmental Health Risks and Safety Risks. The FHWA certifies that this proposed action will not cause an environmental risk to health or safety that may disproportionately affect children.

#### **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.

Issued on April 29, 2003.

**Mary E. Peters,**

*Federal Highway Administrator.*

In consideration of the foregoing, the FHWA proposes to revise title 23, Code of Federal Regulations, part 630, subpart J as set forth below:

#### **PART 630—PRECONSTRUCTION PROCEDURES**

1. The authority citation continues to read as follows:

**Authority:** 23 U.S.C. 106, 109, 115, 315, 320, and 402(a); 23 CFR 1.32; and 49 CFR 1.48(b).

2. Revise subpart J of part 630 to read as follows:

#### **Subpart J—Work Zone Safety and Mobility**

|          |  |
|----------|--|
| Sec.     |  |
| 630.1002 | Purpose.   |
| 630.1004 | References.  |
| 630.1006 | Definitions and explanation of terms.                  |
| 630.1008 | Policy.  |
| 630.1010 | Implementation.  |
| 630.1012 | State transportation department policy and procedures. |
| 630.1014 | Compliance date.                                       |

#### **§ 630.1002 Purpose.**

(a) This subpart provides guidance and establishes procedures to assure that adequate consideration is given to the safety and mobility of all road users (motorists, pedestrians, bicyclists, and persons with disabilities<sup>1</sup>), workers,

<sup>1</sup> The Americans with Disabilities Act (Pub. L. 101–336, 104 Stat. 327 (1990)) requires that people with disabilities not be discriminated against and provided the same opportunities as non-disabled

and other affected parties on all Federal-aid projects.

(b) Work zones impact the safety and mobility of road users, workers, businesses, and other affected parties. These safety and mobility impacts are exacerbated by growing congestion in many locations. Addressing these issues requires considerations that start early in project development and continue through project completion. These considerations go beyond the installation of appropriate traffic control devices.

#### § 630.1004 References.

Part 6 of the Manual On Uniform Traffic Control Devices (MUTCD)<sup>2</sup> sets forth basic principles and prescribes standards for the design, application, installation, and maintenance of the various types of traffic control devices for highway and street construction, maintenance operation, and utility work. However, the MUTCD does not address the other actions that should be taken to help mitigate the safety and mobility impacts of work zones. Although agencies responsible for road projects have taken some steps to consider work zone safety and mobility impacts in project development, a coordinated and comprehensive effort is required to bring about greater consideration of such work zone safety and mobility impacts.

#### § 630.1006 Definitions and explanation of terms.

As used in this subpart:

*Public Information and Outreach Plan (PIOP)* means project level communications that ensure that affected road users, the general public, residences and businesses, and the appropriate public entities are informed about the project, the expected work zone impacts, and the changing conditions on the project.

people. This applies to issues of access in work zones (Title II & III, ADA). Since 1991 there have been specific design standards. Americans with Disabilities Act Accessibility Guidelines (ADAAG) that provide minimum requirements for all environments including temporary work done by utility companies. The existing ADAAG standards are codified at 28 CFR part 36 as Appendix A. Compliance with the ADAAG standards or with the Uniform Federal Accessibility Standards (UFAS), (which is codified at Appendix A to 41 CFR part 101-19.6) constitutes compliance with Federal ADA accessibility requirements.

<sup>2</sup> The MUTCD Millennium Edition (official FHWA publication is in electronic format only) is available at the URL: <http://mutcd.fhwa.dot.gov>. A looseleaf binder format of the MUTCD is published by a partnership of the American Association of State Highway and Transportation Officials (AASHTO), the American Traffic Safety Association (ATSSA), and the Institute of Transportation Engineers (ITE), and is available for purchase at the URL: <http://www.aashto.org/bookstore>.

*Traffic Control Plan (TCP)* means a plan for safely and efficiently handling traffic through a specific highway or street work zone or project.

*Transportation Management Plan (TMP)* means a document which outlines various transportation management strategies to alleviate work zone impacts of projects. These strategies address traffic control, transportation operations and safety, and public information and outreach, which are aligned in the TMP as three coordinated components: a traffic control plan (TCP), a traffic operations plan (TOP), and a public information and outreach plan (PIOP). The content of the TMP will vary based on the severity of work zone impacts due to a project.

*Transportation Operations Plan (TOP)* means considerations that address the safety and mobility of the transportation system by adopting strategies for the sustained operations and management of the work zone impact area. The TOP consists of strategies that address transportation systems management; corridor management; and traffic management operations and safety (*i.e.*, Intelligent Transportation Systems (ITS) based traffic control and traveler information, speed management and enforcement, incident and emergency management, safety reviews and audits).

*Work zone*<sup>3</sup> means 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 rotating/strobe lights on a vehicle to the END ROAD WORK sign or the last temporary traffic control device.

*Work zone crash* 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. Includes collision and non-collision crashes occurring on approach to, exiting from or adjacent to work zones that are related to the work zone.

*Work zone impacts* means the deviation from normalcy of the transportation system induced by work zones, resulting in impacts on the safety and mobility of road users, workers, and other affected parties. 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, and complexity of the project. These impacts may extend beyond the physical location of the work zone itself, and may be felt 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 to which the influence of the work zone extends.

#### § 630.1008 Policy.

It is the policy of the Federal Highway Administration that each State Transportation Department (hereinafter referred to as "State") shall develop and implement policies and procedures consistent with the requirements of this regulation that will assure the safety and mobility needs of all road users, construction workers, and other affected parties on Federal-aid highway projects. States are encouraged to implement these policies and procedures for non-Federal-aid highway projects.

#### § 630.1010 Implementation.

The FHWA shall review the conformance of the State's policies and procedures with this regulation, and reassess the State's implementation of its procedures at appropriate intervals. The FHWA shall take other appropriate actions to assure that the State's policies and procedures are being followed and achieve the results intended. Revisions in established policies and procedures shall be submitted to the FHWA for information.

#### § 630.1012 State Transportation Department Policy and Procedures.

The State transportation department policy and procedures shall include, but not necessarily be limited to, the following:

(a) *State Transportation Department Policy.*—(1) *Work Zone Safety and Mobility Policy.* Each State shall develop and implement policies and procedures that support the systematic consideration of work zone impacts across all project development stages; and address the safety and mobility needs of all road users, construction workers, and other affected parties on all Federal-aid highway projects.

(i) The content of such policies and their implications for different projects will vary based on the expected severity of work zone impacts due to projects.

(ii) States are encouraged to use a team of personnel from appropriate departments and representing the different project development stages to develop and implement these policies and procedures.

<sup>3</sup> MUTCD, Part 6, Temporary Traffic Control Zones, sec. 6C. 02.

(2) *Training.* All persons responsible for the development, design, implementation, operation, and inspection of work zone related transportation management and traffic control shall be adequately trained. States are encouraged to keep records of the training successfully completed by these personnel, and provide periodic training updates that reflect changing industry practices.

(3) *Process review and evaluation.* In order to assess the effectiveness of work zone safety and mobility procedures, States are encouraged to perform a periodic process review and evaluation, or review randomly selected projects throughout their jurisdictions. Appropriate State personnel who are representative of the project development stages and the different departments within the State are encouraged to participate in this review. States are encouraged to include an FHWA representative as a member of the review team, and to address the reviews in the stewardship agreements between each State and the FHWA.

(4) *Work zone performance data.* (i) Work zone crashes and crash data shall be analyzed and used to correct deficiencies which are found to exist on individual projects, and to continually improve work zone practices and policies. Other safety performance factors may be included in the analysis.

(ii) States are encouraged to collect and analyze work zone mobility performance data to correct deficiencies, which are found to exist on individual projects, and to continually improve work zone practices and policies.

(b) *Project impact analysis and management procedures.*—(1) *Work Zone Impacts Analysis.* The State shall analyze the work zone impacts of alternative project options and work zone design strategies, and develop appropriate measures to alleviate these impacts. The scope and level of detail of this impacts analysis will vary based on the State's policies, and their understanding of the anticipated severity of work zone impacts due to the project. If the State determines that a project is expected to have minimal sustained work zone impacts, they may exempt the project from the impacts analysis. The State is encouraged to start the impacts analysis early in the project development process and, depending upon the anticipated severity of work zone impacts due to the project, continue the analysis through project design, and traffic control and operations planning. The resultant project options and work zone design strategies and the mitigation measures recommended by the work zone impacts

analysis shall be appropriately documented.

(i) The State is encouraged to establish a team that includes representatives of the project development stages to discuss, evaluate and document work zone issues, and take responsibility for the development of the project design and work zone mitigation strategies. Non-State personnel, including transit providers, freight movers, public safety and other affected parties, may be included in this team as appropriate.

(ii) The work zone impacts analysis is a systematic process that may require the use of appropriate analytical tools. It consists of the following activities:

(A) Understanding of the project and traffic and travel characteristics, and identification of the work zone impacts of the project (including impacts of multiple projects at the corridor and network levels, as appropriate).

(B) Development and evaluation of alternative project options including design, procurement, and construction strategies that minimize the work zone impacts of the project.

(C) Development of transportation management recommendations that mitigate the work zone impacts of the project, including traffic control, transportation operations and safety, and public information and outreach strategies.

(2) *Transportation Management Plan (TMP).* A Transportation Management Plan (TMP) documents the mitigation strategies identified during the work zone impacts analysis. A TMP has three coordinated components: Traffic Control Plan (TCP), Transportation Operations Plan (TOP), and Public Information and Outreach Plan (PIOP). The content and degree of detail of the TMP components will depend on the severity of work zone impacts due to the project. Based upon the State's policy requirements and the recommendations from the work zone impacts analysis, the State shall develop a TMP for the project. The requirements for the TMP components are as follows:

(i) *Traffic Control Plan (TCP).* (A) The TMP shall include a TCP or provisions for the development of a State-approved TCP prior to start of work. A TCP is a plan for safely and efficiently handling traffic through a specific highway or street work zone or project. These plans may range in scope from a very detailed TCP designed solely for a specific project, a reference to a specific section of the MUTCD, or reference to approved standard plans or State transportation department manual.

(B) For projects that have minimal work zone impacts, the TCP may be the only component of the TMP.

(C) The scope of the TCP is determined by the anticipated work staging and scheduling, and the traffic safety and control requirements identified in the work zone impacts analysis.

(D) The plans, specifications, and estimates (P.S.&E.s) shall include either a State-prepared TCP; or provisions for contractors to develop a TCP, approved by the State, prior to start of the work.

(E) The TCP shall be consistent with the MUTCD provisions for Temporary Traffic Control Zones and Temporary Traffic Control Plans.

(ii) *Transportation Operations Plan (TOP).* (A) If recommended by the results of the work zone impacts analysis, the TMP shall include a TOP. A TOP includes considerations that address the safety and mobility of the transportation system by adopting strategies for the sustained operations and management of the work zone impact area.

(B) The TOP consists of strategies that address transportation systems management; corridor management; and traffic management operations and safety (*i.e.*, Intelligent Transportation Systems (ITS) based traffic control and traveler information, speed management and enforcement, incident and emergency management, safety reviews and audits). Development and sustained coordination of the TOP in partnership with stakeholders (*i.e.*, other transportation agencies, transit providers, freight movers, utility suppliers, police, fire, emergency medical services, and regional transportation management centers) is encouraged.

(C) The scope of the TOP is determined by the transportation operations and safety requirements identified in the work zone impacts analysis.

(D) The TOP may be included in the P.S.&E.s. Alternatively, provisions may be made in the P.S.&E.s for contractors to develop a TOP, approved by the State, prior to the start of work.

(iii) *Public Information and Outreach Plan (PIOP).* (A) If recommended by the results of the work zone impacts analysis, the TMP shall include a PIOP. A PIOP consists of project level communications that ensure that affected road users, the general public, residences and businesses, and the appropriate public entities are informed about the project, the expected work zone impacts, and the changing work conditions on the project.

(B) Through the PIOP, States are encouraged to provide adequate (*i.e.*, frequent, current, and near-real-time where appropriate) information for the affected parties to make informed travel decisions that help alleviate the work zone impacts of the project.

(C) The scope of the PIOP is determined by the public information and outreach requirements identified in the work zone impacts analysis.

(D) The PIOP may be included in the P.S.&E.s. Alternatively, provisions may be made in the P.S.&E.s for contractors to develop a PIOP, approved by the State, prior to the start of work.

(3) *Pay Items.* (i) The P.S. & E.s shall include pay item provisions for implementing the TCP. For method-based specifications for implementing the TCP, the P.S.&E.s shall include unit pay items to cover the cost of providing, installing, moving, replacing, maintaining, and cleaning traffic control devices. In the case of performance specifications, the P.S.&E.s will include pay item provisions for the targeted performance criteria. Suitable force account procedures may be used. Lump-sum method of payment may be used only to cover very small projects, projects of short duration, contingency, and general items.

(ii) The State may choose to include appropriate pay item provisions for the other TMP components in the P.S.&E.s.

(4) *Responsible Persons.* The State and the contractor shall each designate a qualified person at the project level who will have the primary responsibility and sufficient authority for assuring that the TMP and other safety and mobility aspects of the contract are effectively administered.

#### **§ 630.1014 Compliance Date.**

State Transportation Departments must comply with all elements of this policy no later than June 6, 2006.

[FR Doc. 03-11020 Filed 5-6-03; 8:45 am]

BILLING CODE 4910-22-P

## **DEPARTMENT OF THE TREASURY**

### **Internal Revenue Service**

#### **26 CFR Part 1**

[REG-152524-02]

RIN 1545-BB38

#### **Guidance Under Section 1502; Amendment of Waiver of Loss Carryovers From Separate Return Limitation Years**

**AGENCY:** Internal Revenue Service (IRS), Treasury.

**ACTION:** Notice of proposed rulemaking by cross-reference to temporary regulations and notice of public hearing.

**SUMMARY:** In the Rules and Regulations section of this issue of the **Federal Register**, the IRS is issuing temporary regulations under section 1502 that permit the amendment of certain elections to waive the loss carryovers of an acquired subsidiary. The text of the temporary regulations published in this issue of the **Federal Register** also serves as the text of these proposed regulations. This document also provides notice of a public hearing on these proposed regulations.

**DATES:** Written or electronic comments must be received by August 5, 2003. Outlines of topics to be discussed at the public hearing scheduled for August 6, 2003, at 10 a.m., must be received by July 16, 2003.

**ADDRESSES:** Send submissions to: CC:ITA:RU (REG-152524-02), room 5226, Internal Revenue Service, POB 7604, Ben Franklin Station, Washington, DC 20044. Submissions may be hand-delivered Monday through Friday between the hours of 8 a.m. and 5 p.m. to CC:ITA:RU (REG-152524-02), Courier's Desk, Internal Revenue Service, 1111 Constitution Avenue, NW., Washington, DC 20044. Alternatively, taxpayers may submit comments electronically directly to the IRS Internet site at [www.irs.gov/reg](http://www.irs.gov/reg). The public hearing will be held in room 6718, Internal Revenue Service Building, 1111 Constitution Avenue, NW., Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Concerning the proposed regulations, Alison G. Burns or Jeffrey B. Fienberg, (202) 622-7930; concerning submission of comments, the hearing, and/or to be placed on the building access list to attend the hearing, Sonya Cruse, (202) 622-7180 (not toll-free numbers).

#### **SUPPLEMENTARY INFORMATION:**

##### **Paperwork Reduction Act**

The collection of information contained in this notice of proposed rulemaking has been submitted to the Office of Management and Budget for review in accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)). Comments on the collection of information should be sent to the Office of Management and Budget, Attn: Desk Officer for the Department of Treasury, Office of Information and Regulatory Affairs, Washington, DC 20503, with copies to the Internal Revenue Service, Attn: IRS Reports Clearance Officer, W:CAR:MP:T:T:SP, Washington, DC

20224. Comments on the collection of information should be received by July 7, 2003. Comments are specifically requested concerning:

Whether the proposed collection of information is necessary for the proper performance of the functions of the IRS, including whether the information will have practical utility;

The accuracy of the estimated burden associated with the proposed collection of information (see below);

How the quality, utility, and clarity of the information to be collected may be enhanced;

How the burden of complying with the proposed collection of information may be minimized, including through the application of automated collection techniques or other forms of information technology; and

Estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information.

The collection of information in this proposed regulation was previously approved and reviewed by the Office of Management and Budget under control number 1545-1774. The collection of information is required to allow the taxpayer to make certain elections to determine the amount of allowable loss under § 1.337(d)-2T, § 1.1502-20 as currently in effect, or under § 1.1502-20 modified so that the amount of allowable loss determined pursuant to § 1.1502-20(c)(1) is computed by taking into account only the amounts computed under § 1.1502-20(c)(1)(i) and (ii); to allow the taxpayer to reapportion a section 382 limitation in certain cases; to allow the taxpayer to waive certain loss carryovers; and to ensure that loss is not disallowed under § 1.337-2T and basis is not reduced under § 1.337(d)-2T to the extent that the taxpayer establishes that the loss or basis is not attributable to the recognition of built-in gain on the disposition of an asset.

This collection of information is modified with respect to §§ 1.1502-20T and 1.1502-32T. Regarding § 1.1502-20T, the collection of information also is necessary to allow the common parent of the selling group to reapportion a separate, subgroup or consolidated section 382 limitation when the acquiring group amends its § 1.1502-32(b)(4) election. With respect to § 1.1502-32T, the collection of information also is necessary to allow the acquiring group to amend its previous § 1.1502-32(b)(4) election, so that it may use previously waived losses of its subsidiary.

The collection of information is required to obtain a benefit. The likely