

**DEPARTMENT OF TRANSPORTATION****Federal Highway Administration****23 CFR Part 490**

[Docket No. FHWA–2013–0020]

RIN 2125–AF49

**National Performance Management Measures; Highway Safety Improvement Program****AGENCY:** Federal Highway Administration (FHWA), DOT.**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** Section 1203 of the Moving Ahead for Progress in the 21st Century Act (MAP–21) declared that performance management will transform the Federal-aid highway program and refocus it on national transportation goals, increase accountability and transparency of the Federal-aid highway program, and improve project decision making through performance-based planning and programming. Section 1203 of MAP–21 identifies national transportation goals and requires the Secretary to promulgate a rulemaking to establish performance measures and standards in specified Federal-aid highway program areas. This NPRM proposes to establish measures for State departments of transportation (State DOT) to use to carry out the Highway Safety Improvement Program (HSIP) and to assess serious injuries and fatalities per vehicle mile traveled, and the number of serious injuries and fatalities. The HSIP is a core Federal-aid highway program with the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads, including non-State-owned public roads and roads on tribal lands.

**DATES:** Comments must be received on or before June 9, 2014. Late comments will be considered to the extent practicable.

**ADDRESSES:** You may submit comments identified by the docket number FHWA–2013–0020 by any one of the following methods:

Fax: 1–202–493–2251;

Mail: U.S. Department of

Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590; Hand Delivery: U.S. Department of Transportation, Docket Operations, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal

holidays; or Electronically through the Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the online instructions for submitting comments.

**Instructions:** All submissions must include the agency name, docket name and docket number or Regulatory Identification Number (RIN) for this rulemaking (2125–AF49). Note that all comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided.

**Docket:** For access to the docket to read background documents or comments received, go to <http://www.regulations.gov> at any time or to U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20950, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

**FOR FURTHER INFORMATION CONTACT:**

Francine Shaw Whitson, Office of Infrastructure, (202) 366–8028, or Anne Christenson, Office of Chief Counsel, (202) 366–1356, Federal Highway Administration, 1200 New Jersey Avenue SE., Washington, DC 20590. Office hours are from 8:00 a.m. to 4:30 p.m. e.t., Monday through Friday, except Federal holidays.

**SUPPLEMENTARY INFORMATION:** The FHWA will be publishing two additional NPRMs to establish the remaining measures required under 23 U.S.C. 150(c). The second NPRM focuses on the measures to assess the condition of pavements and bridges. The third performance-measure NPRM focuses on measures for the performance of the National Highway System (NHS), the Congestion Mitigation and Air Quality (CMAQ) program, and freight movement on the Interstate. This last NPRM will also include a discussion that summarizes all three of the proposed rules to establish the measures required under 23 U.S.C. 150(c).

This NPRM also proposes the following: the definitions that will be applicable to the new 23 CFR 490; the process to be used by State DOTs and Metropolitan Planning Organizations (MPOs) to establish safety-related performance targets that reflect the measures proposed in this rulemaking; a methodology to be used to assess State DOTs compliance with the target achievement provision specified under 23 U.S.C. 148(i); and the process State DOTs must follow to report on progress towards the achievement of safety-related performance targets. Finally, this NPRM includes a discussion on the

collective rulemaking actions FHWA intends to take to implement MAP–21 performance-related provisions.

**Table of Contents for Supplementary Information**

- I. Executive Summary
- II. Discussion of Stakeholder Engagement and Outreach
  - A. Consultation With State Departments of Transportation, Metropolitan Planning Organizations, and Other Stakeholders
  - B. Broader Public Consultation
  - C. Summary of Viewpoints Received
- III. Rulemaking Authority and Background
- IV. Performance Measure Analysis
  - A. Selection of Measures for the Highway Safety Improvement Program
  - B. Assessment of Selected Measures for the Highway Safety Improvement Program
- V. Section-by-Section Discussion of the General Information and Proposed Highway Safety Improvement Program Performance Measures
- VI. Rulemaking Analyses and Notices

**I. Executive Summary***a. Purpose of the Regulatory Action*

The MAP–21 (Pub. L. 112–141) transforms the Federal-aid highway program by establishing new requirements for performance management to ensure the most efficient investment of Federal transportation funds. Performance management refocuses attention on national transportation goals, increases the accountability and transparency of the Federal-aid highway program, and improves project decision making through performance-based planning and programming. The FHWA is required to establish measures through a rulemaking to assess performance in 12 areas<sup>1</sup> generalized as follows: (1) serious injuries per Vehicle Miles Traveled (VMT); (2) fatalities per VMT; (3) number of serious injuries; (4) number of fatalities; (5) pavement condition on the Interstate system; (6) pavement condition on the non-Interstate NHS; (7) bridge condition on the NHS; (8) traffic congestion; (9) on-road mobile source emissions; (10) freight movement on the Interstate system; (11) performance of the Interstate system; and (12) performance of the non-Interstate NHS. This rulemaking is the first of 3 NPRMs that propose the establishment of performance measures for State DOTs and MPOs to use to carry out Federal-aid highway programs and to assess performance in each of these 12 areas. This rulemaking seeks to establish

<sup>1</sup> These areas are listed within 23 U.S.C. 150(c), which requires the Secretary to establish measures to assess performance or condition.

measures for the first four areas in the above list.

This NPRM proposes to establish performance measures to carry out the HSIP and to assess serious injuries and fatalities, both in number and expressed as a rate, on all public roads. In addition, this NPRM proposes to establish the process for State DOTs and MPOs to use to establish and report safety targets, and the process that FHWA will use to assess progress State DOTs have made in achieving safety targets.

*b. Summary of the Major Provisions of the Regulatory Action in Question*

The FHWA proposes the establishment of measures to be used by State DOTs to assess performance and carry out the HSIP; the process for State DOTs and MPOs to use to establish safety targets; the methodology to determine whether State DOTs have achieved their safety targets; and the process for State DOTs to report on progress for their safety targets. Section references below refer to sections of proposed regulatory text for title 23 of the Code of Federal Regulations.

Section 490.205 proposes to define serious injuries in a manner that would provide for a uniform definition for national reporting in this performance area. The FHWA proposes to allow States 18 months from the effective date of this rule to adopt the latest edition Model Minimum Uniform Crash Criteria (MMUCC) definition and attribute for "Suspected Serious Injury (A)." The DOT also recommends that, by 2020, States prepare to determine serious injuries using a hospital records injury outcome reporting system that links injury outcomes from medical records to crash reports.

Section 490.207 proposes four measures to be used by State DOTs to assess serious injuries and fatalities per VMT, and the number of serious injuries and fatalities. Each of the four measures would be representative of a 5-year rolling average (rather than a single year period), where fatality-related measures would be derived from the Fatality Analysis Reporting System (FARS) and serious injury-related measures would be derived from the State motor vehicle crash database. State DOTs would calculate serious injury and fatality rates per one hundred million VMT as documented in the Highway Performance Monitoring System (HPMS).

Section 490.209 proposes the process to be used by State DOTs and MPOs to establish targets for each of the four safety measures. DOT believes that, to the extent practicable, the performance

measures common to the State's Highway Safety Plan (HSP) and the State Highway Safety Improvement Program (HSIP) (fatalities, fatality rate, and serious injuries) should be defined identically, as coordinated through the State Strategic Highway Safety Plan. While common performance measures are proposed in this NPRM, NHTSA is subject to a statutory requirement under MAP-21 that revisions to performance measures be coordinated with the Governors Highway Safety Association. The DOT also proposes that States would establish targets identical to those for common performance measures.

This NPRM proposes that State DOTs will establish the targets for these measures in the annual HSIP report while State Highway Safety Offices (SHSO) will establish the targets for measures in the HSP. For this reason, State DOTs and SHSOs should coordinate the targets so they are able to report identical targets for the common measures. The SHSOs established these targets beginning with HSPs for fiscal year 2014. The MAP-21 requires State DOTs to establish statewide targets not later than 1 year after the effective date of this rule. This rule proposes to require State DOTs to begin reporting this target information in the HSIP annual report due August 31 following the effective date of this rule. State DOTs would have the flexibility to also establish one aggregate target for urbanized areas and one aggregate target for non-urbanized areas for each performance measure. In accordance with MAP-21, MPOs would be required to establish targets for their entire Metropolitan Planning Area in coordination with the State DOT not later than 180 days after the date the respective State DOT establishes their safety targets. It is proposed in this rule that MPOs would establish targets for their Metropolitan Planning Area by either supporting the State DOT target or defining a target unique to its metropolitan area. The MPOs would be required to take this target establishing action each time the State DOT establishes a safety target.

Section 490.211 proposes the method FHWA will use to assess whether State DOTs have achieved or have made significant progress toward the achievement of their safety targets in accordance with 23 U.S.C. 148(i). State DOTs that have overall achieved their safety targets would not need to demonstrate significant progress. The FHWA would determine significant progress from FARS data for the number of fatalities, FARS and HPMS data for the fatality rate, State reported data for

the number of serious injuries, and State reported data and HPMS data for the serious injury rate. The FHWA would consider a State DOT to have made significant progress toward achieving each target if the actual outcome for each target is at or below the upper bound of a 70 percent prediction interval, which would be set based on the projection point from a 10-year historical trend line. The FHWA would only consider a State DOT to have made overall significant progress if that State DOT achieved or made significant progress for at least 50 percent of their safety targets. State DOTs that the FHWA determine not to have achieved overall significant progress for their safety targets would need to comply with 23 U.S.C. 148(i). Although this provision is directed at State DOTs, MPOs could also be indirectly impacted by consequences to the State DOT for non-compliance. The method by which the FHWA will review performance progress of MPOs is discussed in the updates to the Statewide and Metropolitan Planning regulations.

Section 490.213 proposes safety performance reporting for State DOTs and MPOs. State DOTs would establish and report their safety targets and progress toward their safety targets in the annual HSIP report in accordance with 23 CFR 924. Targets established by the MPO would be reported to their State DOTs on an annual basis in a manner that is agreed upon by both parties. The MPOs would report on progress toward the achievement of their targets in their System Performance Report as part of their transportation plan, in accordance with 23 CFR 450. In addition, State DOTs should include similar information in their transportation plans.

*c. Costs and Benefits*

The FHWA estimated the incremental costs associated with eight new requirements<sup>2</sup> proposed in this NPRM that represent a change to current practices for State DOTs and MPOs. The FHWA derived the costs of all eight components by assessing the expected increase in level of effort from labor to standardize and update data collection and reporting systems of State DOTs, as well as the increase in level of effort from labor to establish and report targets.

To estimate costs, the FHWA multiplied the level of effort, expressed in labor hours, with a corresponding

<sup>2</sup> See Table 1 in Section VI. Rulemaking Analysis and Notices.

loaded wage rate<sup>3</sup> that varied by the type of laborer needed to perform the activity. Following this approach the 10-year undiscounted incremental costs to comply with this rule is \$66.7 million. Approximately 39 percent of these costs represent one time costs to implement this rule.

The FHWA expects that, upon implementation, the proposed rule would result in some significant benefits, although they are not easily quantifiable. Specifically,

- the FHWA expects safety investment decision making to be more informed through the use of consistent and uniform measures,
- a greater level of accountability for the use of Federal funds to reduce

fatalities and serious injuries on all public roadways,

- and the achievement of progress toward the MAP-21 national goal for safety.

The FHWA could not directly quantify the expected benefits discussed above due to data limitations and the amorphous nature of the benefits from the proposed rule. Therefore, in order to evaluate benefits, the FHWA used a break-even analysis as the primary approach to quantify benefits. Following this approach, the FHWA used the break-even analysis to assess the level of reduction in fatalities or incapacitating injuries needed for the benefits to justify the costs of the proposed rule. The results of the break-even analysis

showed that the proposed rule would need to prevent approximately 7 fatalities or an equivalent 153 incapacitating injuries nationwide over 10 years to generate enough benefits to outweigh the cost of the proposed rule. This translates to approximately 1 avoided fatality or 15 equivalent incapacitating injuries respectively per year nationwide (compared to 33,561 fatalities and an estimated 2.36 million injuries as reported by NHTSA for 2012<sup>4</sup>). The FHWA believes that the proposed rule would surpass this threshold and, as a result, the benefits of the rule would outweigh the costs. The following table summarizes the costs and identifies the breakeven benefits of the proposed rule.

SUMMARY OF ESTIMATED COSTS AND BENEFITS

Category	Cost estimate	Units			Source/citation
		Year dollar	Discount rate (percent)	Period covered (years)	
<b>Costs:</b>					
Annualized Monetized (\$/year) .....	\$7,670,390	2012	7	10	Proposed Rule RIA.
	7,092,939	2012	3	10	
State, Local, and/or Tribal Government .....	\$7,670,390	2012	7	10	Proposed Rule RIA.
	7,092,939	2012	3	10	
Small Business .....	No substantial impact	.....	.....	.....	Proposed Rule RIA.
<b>Benefits:</b>					
Qualitative .....	The rule is cost-beneficial if over the 10-year analysis period if it reduces the number of fatalities by 7.3 or the number of incapacitating injuries by 153.2, which is equivalently .7 fatalities or 15.3 incapacitating injuries per year in a 10-year study period, from its current base case projection. Because of this low threshold, FHWA determines that the proposed rule benefits outweigh the costs.				

**II. Discussion of Stakeholder Engagement and Outreach**

In developing the NPRMs required by 23 U.S.C. 150(c), including this NPRM, the DOT conducted outreach efforts to obtain technical information as well as information on operational and economic impacts from stakeholders and the public. State DOTs, MPOs, transit agencies, and private/non-profit constituents across the country participated in the outreach efforts. A listing of each contact or series of contacts influencing the agency's position may be found in the docket.

*A. Consultation With State Departments of Transportation, Metropolitan Planning Organizations, and Other Stakeholders*

In accordance with 23 U.S.C. 150(c)(1), DOT consulted regularly with affected stakeholders (State DOTs, MPOs, industry, advocacy

organizations, etc.) to better understand the operational and economic impact of this proposed rule. In general, these consultations included:

- Conducted Listening sessions and workshops to clarify stakeholder sentiment and capture diverse opinions on the interpretation of technical information on the potential economic and operational impacts of implementing 23 U.S.C. 150;
- Conducted Listening sessions and workshops to better understand the state-of-the-practice on the economic and operational impacts of implementing various noteworthy practices, emerging technologies, and data reporting, collection, and analysis frameworks;
- Hosted Webinars with targeted stakeholder audiences through a chat pod or conference call; and
- Attended meetings with non-DOT subject matter experts, including task

forces, advocacy groups, private industry, non-DOT Federal employees, academia, etc. to discuss timelines, priorities, and the most effective methods for implementing 23 U.S.C. 150; discuss and collect information on the impact of conceptual frameworks of guidance and the issues that need to be addressed in the NPRMs or the questions that need to be answered to facilitate efficient implementation; and collect factual information about the issues that need to be addressed or the questions that need to be answered in the NRPMs.

*B. Broader Public Consultation*

It is the DOT's policy to provide for and encourage public participation in the rulemaking process. In addition to the public participation that was coordinated in conjunction with the stakeholder consultation discussed above, the DOT provided opportunities

<sup>3</sup> Bureau of Labor Statistics (BLS) Employee Cost Index, 2012.

<sup>4</sup> Traffic Safety Facts Research Note. 2012 Motor Vehicle Crashes: Overview. DOT HS 811 856.

for broader public participation. Those opportunities included facilitating opportunities for the public to provide technical and economic information to improve the agency's understanding of a subject and the potential impacts of rulemaking. This was done by providing an email address

([performanceasuresrulemaking@dot.gov](mailto:performanceasuresrulemaking@dot.gov)) feature on FHWA's MAP-21 Web site to allow the public to provide comments and suggestions about the development of the performance measures and by holding national online dialogues and listening sessions to ask the public to post their ideas on national performance measures, standards, and policies. The FHWA also conducted educational outreach to inform the public about transportation-related performance measures and standards, and solicited comments on them.

In accordance with 23 U.S.C. 150(c)(2)(A), the FHWA will "provide States, metropolitan planning organizations, and other stakeholders not less than 90 days to comment on any regulation proposed by the Secretary. . . ." During the notice and comment period, the FHWA plans to hold public meetings to explain the provisions contained in these NPRMs, including this NPRM. All such meetings will be open to the public and announced in the **Federal Register**. However, all comments regarding the NPRM must be submitted in writing to the rulemaking docket.

### C. Summary of Viewpoints Received

A summary of the common themes expressed and trends that emerged based on all stakeholder engagements and feedback, related to this rulemaking, are as follows:

The FHWA should account for the safety of all road users by including separate measures for motorized and non-motorized (e.g., pedestrian, bicycle) transportation. Having separate measures will allow State DOTs to utilize some HSIP funds on non-motorized transportation without any detriment to safety efforts for other road users.

The FHWA should define performance measures that specifically evaluate the number of fatalities and serious injuries for pedestrian and bicycles crashes. The FHWA should require that bicycle and pedestrian crashes and fatalities be reported nationally and by State and MPO.

The FHWA should be careful in making changes in the definitions of urbanized and rural areas to avoid adversely impacting the reporting of fatality and serious injury rates.

The FHWA should define the safety measures described in 23 U.S.C. 150(c) to include the use of a 5-year to 7-year moving average and the use of actual numbers (i.e., number of fatalities, number of serious injuries) versus rates (i.e., number of fatalities per 100 million VMT, number of serious injures per 100 million VMT).

There is a need for a consistent definition for serious injury. Establishment of uniform data sets, sources, and standards is also necessary to ensure there is consistency in the determination of metrics, the reporting of results, and the analysis of data. The FHWA should move toward using the actual number of fatalities and serious injuries instead of the number of collisions that involve fatalities and serious injuries.

The FHWA should determine how State DOTs demonstrate they have made significant progress toward achieving performance targets and whether the assessment for having made significant progress should be base-lined and determined according to a State-by-State/MPO-by-MPO method. Significant or substantial progress could be linked to the reversing of negative trends or moving of trends in a positive direction.

The administrative burden of target establishment and reporting should not become an onerous, unfunded mandate. The FHWA should ensure that timelines are set in a reasonable fashion that can be achieved by the State DOTs.

Lastly, while performance targets need to be consistent with performance goals, they need to be flexible with possible use of a target range or multiple targets for the same measure. The FHWA should be careful not to infringe upon what is already working at the State DOT and MPO level.

### III. Rulemaking Authority and Background

The cornerstone of MAP-21's Federal-aid highway program transformation is the transition to a performance and outcome-based program. As part of this program, recipients of Federal-aid highway funds make transportation investments to achieve individual targets that collectively make progress toward national goals.

The MAP-21 provisions that focus on the achievement of performance outcomes are contained in a number of sections of the law that are administered by different DOT agencies. Consequently, these provisions may require an implementation approach that includes a number of separate but related rulemakings, some from other modes within the DOT. This NPRM is focused on FHWA's implementation of

performance provisions related to the HSIP. A rulemaking to update the HSIP regulations at 23 CFR 924 is also underway (RIN 2125-AF56). Interested persons should refer to both rulemakings. Additional rulemakings are underway to implement other MAP-21 requirements. A summary of these rulemakings, as they relate to this proposed rule, is provided in this section, and additional information regarding related implementation actions is available on the FHWA Web site.<sup>5</sup>

### Summary of Related Rulemakings

The DOT's proposal regarding MAP-21's performance requirements will be presented through several rulemakings, some of which were referenced in the above discussions. As a summary, these rulemaking actions are listed below and should be referenced for a complete picture of performance management implementation. The summary below describes the main provisions that DOT plans to propose for each rulemaking. The DOT plans to seek comment on each of these rulemakings.

1. First Federal-aid Highway Performance Measures Rulemaking (this NPRM)
  - a. Propose and define national measures for the HSIP
  - b. Coordinated State and MPO target establishment requirements for the Federal-aid highway program
  - c. Determination of significant progress toward the achievement of targets
  - d. Performance progress reporting requirements and timing
  - e. Discuss how FHWA intends to implement MAP-21 performance-related provisions
2. Second Federal-aid Highway Performance Measures Rulemaking (RIN: 2125-AF53)
  - a. Propose and define national measures for the condition of NHS pavements and bridges
  - b. Coordinated State and MPO target establishment requirements for the Federal-aid highway program
  - c. Determination of significant progress toward the achievement of targets for National Highway Performance Program (NHPP)
  - d. Performance progress reporting requirements and timing
  - e. Minimum standards for Interstate pavement conditions
3. Third Federal-aid Highway Performance Measures Rulemaking (RIN: 2125-AF54)
  - a. Propose and define national

<sup>5</sup> <http://www.fhwa.dot.gov/map21/qandas/qapm.cfm>.

- measures for the remaining areas under 23 U.S.C. 150(c).
- b. Coordinated State and MPO target establishment requirements for the Federal-aid highway program
  - c. Performance progress reporting requirements and timing
  - d. Provide a summary of all three performance measure proposed rules
4. Update to the Metropolitan and Statewide Planning Regulations (RIN: 2125-AF52)
    - a. Supporting national goals in the scope of the planning process
    - b. Coordination between States, MPOs, and public transportation providers in selecting performance targets
    - c. Integration of elements of other performance-based plans into the metropolitan and statewide planning process.
    - d. Discussion in Metropolitan and Statewide Transportation Improvement Programs documenting how the programs are designed to achieve targets
    - e. New performance reporting in the Metropolitan and the Statewide transportation plans
  5. Updates to the Highway Safety Improvement Program Regulations (RIN: 2125-AF56)
    - a. Integration of performance measures and targets into the HSIP
    - b. Strategic Highway Safety Plan updates
    - c. Establishment of Model Inventory of Roadway Element—Fundamental Data Elements
    - d. HSIP reporting requirements
  6. Federal-aid Highway Asset Management Plan Process Rule (RIN: 2125-AF57)
    - a. Contents of asset management plan
    - b. Certification of process to develop plan
    - c. Transition period to develop plan
    - d. Minimum standards for pavement and bridge management systems
  7. Transit State of Good Repair Rule (RIN: 2132-AB07)
    - a. Define state of good repair and establish measures
    - b. Transit asset management plan content and reporting requirements
    - c. Target establishment requirements for public transportation agencies and MPOs
  8. Transit Safety Plan Rule (RIN: 2132-AB20)
    - a. Define transit safety standards
    - b. Transit safety plan content and reporting requirements
  9. Highway Safety Grant Programs Rule (NHTSA Interim Final Rule (IFR) <sup>6</sup> (RIN: 2127-AL30, 2127-AL29)

- a. Highway safety plan contents, including establishment of performance measures, targets, and reporting requirements
- b. Review and approval of highway safety plans

#### *Organization of MAP-21 Performance-Related Provisions*

The FHWA organized the many performance-related provisions within MAP-21 into six elements as defined below:

- National Goals—Goals or program purpose established in MAP-21 to focus the Federal-aid highway program on specific areas of performance.
- Measures—Establishment of measures by FHWA to assess performance and condition in order to carry out performance-based Federal-aid highway programs.
- Targets—Establishment of targets by recipients of Federal-aid highway funding for each of the measures to document expectations of future performance.
- Plans—Development of strategic and/or tactical plans by recipients of Federal funding to identify strategies and investments that will address performance needs.
- Reports—Development of reports by recipients of Federal funding that would document progress toward the achievement of targets, including the effectiveness of Federal-aid highway investments.
- Accountability—Requirements developed by FHWA for recipients of Federal funding to use to achieve or make significant progress toward achieving targets established for performance.

The following provides a summary of MAP-21 provisions, as they relate to the six elements listed above, including a reference to other related rulemakings that should be considered for a more comprehensive view of MAP-21 performance management implementation.

#### a. National Goals

The MAP-21 section 1203 establishes national goals to focus the Federal-aid highway program. The following national goals are codified at 23 U.S.C. 150(b):

- Safety—To achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned public roads and roads on tribal lands.
- Infrastructure condition—To maintain the highway infrastructure asset system in a state of good repair.

- Congestion reduction—To achieve a significant reduction in congestion on the NHS.

- System reliability—To improve the efficiency of the surface transportation system.

- Freight movement and economic vitality—To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.

- Environmental sustainability—To enhance the performance of the transportation system while protecting and enhancing the natural environment.

- Reduced project delivery delays—To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

These national goals will largely be supported through the metropolitan and statewide planning process, which is discussed under a separate rulemaking (2125-AF52) to update the Metropolitan and Statewide Planning Regulations at 23 CFR 450.

#### b. Measures

The MAP-21 requires the establishment of performance measures <sup>7</sup>, in consultation with State DOTs, MPOs, and other stakeholders, that would do the following: carry out the NHPP and assess pavement conditions for the Interstate and NHS (excluding Interstate), NHS bridge condition, and performance of the Interstate and NHS (excluding Interstate); carry out the HSIP and assess serious injuries and fatalities per VMT and the number of serious injuries and fatalities; carry out the CMAQ program and assess traffic congestion and on-road mobile source emissions; and assess freight movement on the Interstate system.

The FHWA will issue three NPRMs in sequence to propose the measures for the areas listed above. This NPRM focuses on the performance measures, for the purpose of carrying out the HSIP, to assess the number of serious injuries and fatalities and serious injuries and fatalities per VMT. A second NPRM will be issued by FHWA that will propose the measures to assess the condition of pavements and bridges, and a third NPRM will be issued that will propose the remaining areas under 23 U.S.C. 150(c) that require the establishment of measures. We anticipate issuing these

<sup>6</sup> 23 U.S.C. 402(k); Uniform Procedures for State Highway Safety Grant Programs, Interim final rule,

78 FR 4986 (January 23, 2013) (to be codified at 23 CFR Part 1200).

<sup>7</sup> 23 U.S.C. 150(c)(1).

three rulemakings in staggered sequence. The FHWA proposes to establish one common effective date for all three final rules for these performance measures, but we seek comment from the public on what an appropriate effective date would be. Additional information on the approach to establish performance measures for the Federal-aid highway program can be found on the FHWA's Transportation Performance Management Web site.<sup>8</sup>

The MAP-21 also requires the FHWA to establish minimum standards for State DOTs to use in developing and operating bridge and pavement management systems,<sup>9</sup> which the FHWA will propose in a separate rulemaking to establish a Risk Based Asset Management Plan for the NHS. In addition, MAP-21 requires the FHWA to establish minimum levels for the condition of pavements for the Interstate<sup>10</sup> necessary to carry out the NHPP. The FHWA will propose these levels in the second rulemaking to establish measures that focus on pavement and bridge condition for the NHS.

Separate sections of MAP-21 require the establishment of additional measures to assess public transportation performance.<sup>11</sup> These measures, which will be used to monitor the state of good repair of transit facilities and to establish transit safety criteria, will be addressed in two separate rulemakings, led by the Federal Transit Administration (FTA).

#### c. Targets

The MAP-21 requires State DOTs to establish performance targets reflecting measures established for the Federal-aid highway program<sup>12</sup> and requires MPOs to establish performance targets for these measures where applicable.<sup>13</sup> This NPRM proposes the process for State DOTs and MPOs to follow in the establishment of safety performance targets. The second and third Federal-aid highway performance measure NPRMs will discuss similar target establishment requirements for State DOTs and MPOs as they relate to the measures discussed in the respective proposed rules. Additionally, State DOTs and MPOs are required to coordinate when selecting targets for the areas specified under 23 U.S.C. 150(c) in order to ensure consistency in the establishment of targets, to the

maximum extent practical.<sup>14</sup> A separate rulemaking to update the Metropolitan and Statewide Planning Regulations at 23 CFR 450 discusses this coordination requirement. The FHWA will discuss those target establishment requirements in the subsequent rulemakings to implement these respective provisions.

Further, MAP-21 requires SHSOs to establish targets for 10 core highway safety program measures in the State Highway Safety Plan, which NHTSA has implemented through an Interim Final Rule (NHTSA IFR),<sup>15</sup> and for recipients of public transportation Federal funding and MPOs to establish state of good repair and safety targets.<sup>16</sup> Discussions on these target establishment requirements are not included in this NPRM.

#### d. Plans

A number of provisions within MAP-21 require States and MPOs to develop plans that provide strategic direction for addressing performance needs. For the Federal-aid highway program these provisions require: State DOTs to develop an NHS Asset Management Plan;<sup>17</sup> State DOTs to update their Strategic Highway Safety Plan;<sup>18</sup> MPOs serving a large transportation management area in areas of non-attainment or maintenance to develop a CMAQ Performance Plan;<sup>19</sup> MPOs to include a System Performance Report in the Metropolitan Transportation Plan;<sup>20</sup> and State DOTs and MPOs to include a discussion, to the maximum extent practical, in their Transportation Improvement Program as to how the program will achieve the performance targets they have established for the area.<sup>21</sup> In addition, State DOTs are encouraged to develop a State Freight Plan<sup>22</sup> to document planned activities and investments with respect to freight. This rulemaking does not discuss any requirements to develop or use plans. Rather, a discussion on the development and use of these plans will be included in the respective rulemakings to implement these provisions. More information on the required plans and the actions to implement the statutory

provisions related to plans can be found on FHWA's MAP-21 Web site.<sup>23</sup>

#### e. Reports

The MAP-21 section 1203 requires State DOTs to submit biennial reports to the FHWA on the condition and performance of the NHS, the effectiveness of the investment strategy documented in the State DOT's asset management plan for the NHS, progress in achieving targets, and ways in which the State DOT is addressing congestion at freight bottlenecks.<sup>24</sup> The FHWA is proposing in this NPRM that State DOTs report safety progress through the HSIP annual report, rather than the biennial report required under 23 U.S.C. 150(e). Accordingly, this NPRM does not discuss this biennial report. Rather, the FHWA will discuss the biennial report in the second and third performance measures NPRMs, which will propose the establishment of non-safety measures for the Federal-aid highway program.

Additional progress reporting is required under the CMAQ program, metropolitan transportation planning, elements of the Public Transportation Act of 2012, and the Motor Vehicle and Highway Safety Improvement Act of 2012. Also, State DOTs should include a system performance report in their Statewide transportation plan. These reporting provisions are discussed in separate rulemakings and guidance and are not discussed in this rulemaking.

#### f. Accountability

Two provisions within MAP-21, specifically 23 U.S.C. 119(e)(7) under the NHPP and 23 U.S.C. 148(i) under the HSIP, require the State DOT to undertake actions if significant progress is not made toward the achievement of State DOT targets established for these respective programs. For the NHPP, if a State DOT does not achieve or make significant progress toward the achievement of its NHS performance targets for two consecutive reporting periods, then the State DOT must document in its next report the actions it will take to achieve the targets.<sup>25</sup> The FHWA will discuss this provision in the second NPRM, which will propose pavement and bridge performance measures for the NHS. For the HSIP, if the State DOT does not achieve or has not made significant progress toward the achievement of its HSIP safety targets, then the State DOT must dedicate a specified amount of its

<sup>8</sup> <http://www.fhwa.dot.gov/tpm/about/schedule.cfm>.

<sup>9</sup> 23 U.S.C. 150(c)(3)(A)(i).

<sup>10</sup> 23 U.S.C. 150(c)(3)(A)(iii).

<sup>11</sup> 49 U.S.C. 5326 and 49 U.S.C. 5329.

<sup>12</sup> 23 U.S.C. 150(d).

<sup>13</sup> 23 U.S.C. 134(h)(2)(B).

<sup>14</sup> 23 U.S.C. 134(h)(2), 23 U.S.C. 135(d)(2), 49 U.S.C. 5303(h)(2), and 49 U.S.C. 5304(d)(2).

<sup>15</sup> 23 U.S.C. 402(k); Uniform Procedures for State Highway Safety Grant Programs, Interim final rule, 78 FR 4986 (January 23, 2013) (to be codified at 23 CFR Part 1200).

<sup>16</sup> 49 U.S.C. 5326(c).

<sup>17</sup> 23 U.S.C. 119(e)(2).

<sup>18</sup> 23 U.S.C. 148(d).

<sup>19</sup> 23 U.S.C. 149(l).

<sup>20</sup> 23 U.S.C. 134(i)(2)(C).

<sup>21</sup> 23 U.S.C. 134(j)(2)(D) and 23 U.S.C. 135(g)(4).

<sup>22</sup> MAP-21 Section 1118.

<sup>23</sup> <http://www.fhwa.dot.gov/map21/qandas/qapm.cfm>.

<sup>24</sup> 23 U.S.C. 150(e).

<sup>25</sup> 23 U.S.C. 119(e)(7).

obligation limitation to safety projects and prepare an annual implementation plan.<sup>26</sup> The regulatory definition and discussion below of “made significant progress” applies only for the purpose of carrying out the HSIP.

In addition, MAP–21 requires that each State DOT maintain minimum standards for Interstate pavement and NHS bridge conditions. If a State DOT falls below either standard, then the State DOT must spend a specified portion of its funds for that purpose until the minimum standard is exceeded.<sup>27</sup> The FHWA will discuss this provision in the second NPRM, which will propose pavement and bridge performance measures for the NHS.

Further, MAP–21 includes special safety rules<sup>28</sup> to require each State DOT to maintain or improve safety performance on high risk rural roads and for older drivers and pedestrians. If the State DOT does not meet these special rules, which contain minimum performance standards, then it must dedicate a portion of HSIP funding (in the case of the high risk rural road special rule) or document in their Strategic Highway Safety Plan (SHSP) actions it intends to take to improve performance (in the case of the older driver and pedestrian special rule). Guidance on how FHWA will administer these two special rules is provided on the FHWA MAP–21 Web site.<sup>29</sup>

#### *Implementation of MAP–21 Performance Requirements*

The FHWA will implement the performance requirements within section 1203 of MAP–21 in a manner that results in a transformation of the Federal-aid highway program so that the program focuses on national goals, provides for a greater level of accountability and transparency, and provides a means for the most efficient investment of Federal transportation funds. The FHWA plans to implement these new requirements in a manner that will provide Federal-aid highway fund recipients the greatest opportunity to fully embrace a performance-based approach to transportation investment decision making that does not hinder performance improvement. In this regard, FHWA carefully considered the following principles in the development of proposed regulations for national

performance management measures under 23 U.S.C. 150(c):

- Provide for a National Focus—focus the performance requirements on outcomes that can be reported at a national level.

- Minimize the Number of Measures—identify only the most necessary measures that will be required for target establishment and progress reporting. Limit the number of measures to no more than two per area specified under 23 U.S.C. 150(c).

- Ensure for Consistency—provide a sufficient level of consistency, nationally, in the establishment of measures, the process to set targets and report expectations, and the approach to assess progress so that transportation performance can be presented in a credible manner at a national level.

- Phase in Requirements—allow for sufficient time to comply with new requirements and consider approaches to phase in new approaches to measuring, target establishment, and reporting performance.

- Increase Accountability and Transparency—consider an approach that will provide the public and decision makers a better understanding of Federal transportation investment needs and return on investments.

- Consider Risk—recognize that risks in the target establishment process are inherent, and that performance can be impacted by many factors outside the control of the entity required to establish the targets.

- Understand that Priorities Differ—recognize that State DOTs and MPOs must establish targets across a wide range of performance areas, and that they will need to make performance trade-offs to establish priorities, which can be influenced by local and regional needs.

- Recognize Fiscal Constraints—provide for an approach that encourages the optimal investment of Federal funds to maximize performance but recognize that, when operating with scarce resources, performance cannot always be improved.

- Provide for Flexibility—recognize that the MAP–21 requirements are the first steps that will transform the Federal-aid highway program to a performance-based program and that State DOTs, MPOs, and other stakeholders will be learning a great deal as implementation occurs.

The FHWA considered these principles in this NPRM and encourages comments on the extent to which the approach to performance measures set forth in this NPRM supports the principles discussed above.

#### **IV. Performance Measure Analysis**

The FHWA, in consultation with State DOTs, MPOs, and other stakeholders, selected for this proposed rule measures to carry out the HSIP and for State DOTs and MPOs to use to assess safety performance. The FHWA assessed the selected measures, using a common methodology, to identify gaps that could impact successful implementation and to better inform the FHWA on the issues that the FHWA will address in this proposed rule. This section discusses why the FHWA selected the proposed measures and the results of FHWA’s assessment to identify implementation gaps.

##### *A. Selection of Measures for the Highway Safety Improvement Program*

The FHWA considered input from the following sources in selecting proposed measures to carry out the HSIP and for State DOTs and MPOs to use to assess safety performance:

- Knowledge of technical experts within the DOT on the current state of practice to monitor highway safety performance;
- Information provided by external stakeholders received directly or captured as part of organized stakeholder listening sessions;
- Information provided by external stakeholders received indirectly through informal contact such as telephone calls, email, or letters; and
- Measures that have been recommended and documented in nationally recognized reports such as the assessment of measurement readiness documented in the 2011 final report for National Cooperation Highway Research Program (NCHRP) 20–24(37)G, “Technical Guidance for Deploying National Level Performance Measurements,” and the 2008 NHTSA publication, “Traffic Safety Performance Measures for States and Federal Agencies,” which contains an initial minimum set of 14 performance measures agreed upon by NHTSA and the Governors Highway Safety Association (GHSA).

A listing of each contact or series of contacts influencing the agency’s proposals may be found in the docket.

The DOT believes that a unified State approach to highway safety promotes comprehensive transportation and safety planning and program efficiency in the States. For this reason, the DOT proposes that performance measures common to the State’s HSP and the HSIP (fatalities, fatality rate, and serious injuries) would be defined identically, as coordinated through the SHSP and subject to the GHSA coordination

<sup>26</sup> 23 U.S.C. 148(i).

<sup>27</sup> 23 U.S.C. 119(f).

<sup>28</sup> 23 U.S.C. 148(g).

<sup>29</sup> <http://www.fhwa.dot.gov/map21/guidance/guidehrrr.cfm>, and <http://www.fhwa.dot.gov/map21/guidance/guideolder.cfm>.

process NHTSA must follow under MAP-21.

The FHWA considered the need to align measures used to carry out highway safety grant programs administered by NHTSA with measures that are proposed to be established through this regulatory action. The MAP-21 restructured and made various substantive changes to the HSIP that is administered by the FHWA under 23 U.S.C. 148. These changes provide for additional consistency between the HSIP and the highway safety grant programs administered by NHTSA, including key outcome performance measures that are consistent between these two programs and for which State DOTs and SHSOs will establish targets. Specifically, MAP-21 modified the existing HSIP at 23 U.S.C. 148 by requiring State DOTs to develop and implement the HSIP by establishing targets that reflect the defined safety performance measures being promulgated in this NRPM.

As stated in NHTSA's IFR, SHSOs have been moving in the direction of using performance measures, such as the number of fatalities and serious injuries and fatality rate, in the State HSP for a number of years. Since 2010, all SHSOs have voluntarily established targets for these performance measures, as described in the report, Traffic Safety Performance Measures for States and Federal Agencies (DOT HS 811 025), developed as a cooperative effort between NHTSA and the GHSA. The MAP-21 requires SHSOs to use the Traffic Safety Performance Measures report for establishing performance measures and targets in the HSP beginning in fiscal year 2014.<sup>30</sup> The MAP-21 further requires NHTSA to coordinate with GHSA in making revisions to the performance measures identified in the report.

This NRPM includes performance measures that are common to both FHWA and NHTSA. The FHWA has been working with NHTSA and other DOT agencies to align those performance measures that are common across those agencies (i.e. fatality rate, fatality number, serious injury number) to ensure that the highway safety community is provided uniform measures of progress. The safety performance measures in this NRPM that are common to all agencies would be defined identically, as coordinated through the SHSP.

The FHWA is proposing HSIP measures for State DOTs to use in assessing safety performance in the four areas mandated in 23 U.S.C. 150(c)(4):

(1) number of fatalities; (2) rate of fatalities; (3) number of serious injuries; and (4) rate of serious injuries. The FHWA is proposing the establishment of one consistent measure for each of the four areas mandated under 23 U.S.C. 150(c)(4) to focus on aggregate outcome performance for the reasons noted below:

The FHWA proposes that safety for all users of public roads will be improved by focusing the safety measures on all fatalities and serious injuries. Focusing the measures on all fatalities and all serious injuries, regardless of vehicle type, influencing behavior, or roadway characteristics, provides for a view of overall safety performance that includes all users on all public roads and limits the extent of data collection and analysis.

The aggregation of all fatalities and serious injuries into single measures to carry out the HSIP will provide for more stable trends, allowing for more reliable predictions of future performance on which to base the selection of targets. At the State or MPO level, separating specific types of fatalities and serious injuries for a range of disaggregated measures by vehicle type (including passenger vehicles, trucks, motorcycles, and bicycles); by influencing behavior (e.g., distracted driving, impaired driving, speeding); or by roadway characteristics (e.g., intersections, roadway departure) leads to numbers too statistically small to provide sufficient validity for developing targets to carry out the HSIP.

The performance requirements within MAP-21 are the first foundational steps that will focus the Federal-aid highway program on performance outcomes. It is expected, in this foundational stage, that State DOTs and MPOs will be learning how to manage performance by balancing investment trade-offs across multiple performance measures; many State DOTs and MPOs will be establishing targets to carry out the HSIP for the first time as a result of this new requirement. Therefore, FHWA desires to establish a minimal number of measures to implement 23 U.S.C. 150(c) considering the requirement for State DOTs<sup>31</sup> and MPOs<sup>32</sup> to establish targets for each of these measures (a minimum of 12 measures will be established).

The more detailed analysis of separating specific types of fatalities and serious injuries for a range of disaggregated measures takes place in the creation of the SHSP. The MAP-21 requires that States take into consideration all vehicle and user needs

when establishing goals, objectives, and emphasis areas, and describe a program of strategies to reduce or eliminate safety hazards through the SHSP. Each State DOT identifies emphasis areas based on the analysis of all the available safety data after consultation with and input from the safety stakeholders representing the four E's from safety.<sup>33</sup> This analysis and collaboration helps identify the causes of safety hazards, and helps to develop successful improvement strategies to address those hazards and is used in decision making for FHWA's HSIP and NHTSA's highway safety programs. It is the development of the SHSP through a data-driven, coordinated process that includes the State DOTs, MPOs, and other safety stakeholders that ensures specific vehicle and user needs are addressed.

The HSIP safety performance measures should be viewed in the context of other DOT performance measures. As amended by MAP-21, 23 U.S.C. 402(k)(4) specifies that for the NHTSA HSP, traffic safety performance measures, developed in a cooperative effort between NHTSA and GHSA, are to be used by SHSOs in the development and implementation of behavioral highway safety plans and programs. Although limited in fiscal year (FY) 2014 to an initial set of 10 core outcome measures, 1 core behavior measure, and 3 activity measures, MAP-21 allows the NHTSA in subsequent fiscal years to make revisions to the set of performance measures required in the HSP through a coordinated process with GHSA.<sup>34</sup> The FHWA will continue to work with NHTSA toward a consistent application of traffic safety performance measures through a consensus process, subject to the GHSA coordination process NHTSA must follow under MAP-21.

The DOT received input through stakeholder listening sessions and in letters sent to the DOT suggesting that two measures be established for each of the four safety areas: (1) All "motorized" fatalities and serious injuries; and (2) all "non-motorized" fatalities and serious injuries.

The DOT requests comments on how the Department could address separate non-motorized performance measures. The DOT requests input on the extent to which States and MPOs currently collect and report non-motorized data (fatality, serious injury, miles traveled)

<sup>33</sup> The four E's include: Engineering, Education, Enforcement, and Emergency Medical Services.

<sup>34</sup> Currently targets are required to be established through the HSP for only the 10 core outcome measures.

<sup>30</sup> 23 U.S.C. 402(f)(4).

<sup>31</sup> 23 U.S.C. 134(h)(2)(B).

<sup>32</sup> 23 U.S.C. 150(d).



and the reliability and accuracy of such data, and how States and MPOs consider such data in their safety programs and in selecting investments. The DOT also invites the public to suggest ways to most efficiently track, report, and use performance measures to improve safety.

*B. Assessment of Selected Measures for the Highway Safety Improvement Program*

The FHWA used a common methodology to assess whether the candidate measure was appropriate for national use and whether the FHWA was ready to implement the measure in an accurate, reliable, and credible

manner. This methodology included 12 criteria that the FHWA used to assess both the appropriateness and readiness of each measure. The FHWA conducted an assessment to rate the extent to which the measure, as used in current practice, met each of the 12 criteria. As a result of the assessment, FHWA assigned one of the following three ratings to each criterion.

- Green Rating—Criterion is fully met for the candidate measure.
- Yellow Rating—Criterion is partially met for the candidate measure and work is underway to fully meet the criterion.
- Red Rating—Criterion is not fully met or no work is underway or planned that would allow the criterion to be met.

The FHWA used the results of this assessment to identify gaps that the FHWA could address through this rulemaking to improve the effectiveness of the measure to be used to carry out the HSIP and to assess safety performance. A description of the methodology used for this assessment is provided in the rulemaking docket.

The FHWA evaluated the four safety measures that it is proposing in this NPRM based on existing state-of-practice, using the assessment process described earlier in this section. The following table includes a summary of this assessment:

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G=Green Y= Yellow R=Red

Assessment Factor	Fatalities per VMT	Serious Injuries per VMT	No. of Fatalities	No. of Serious Injuries
A1) Is the measure focused on comprehensive performance outcomes?	G	G	G	G
A2) Has the measure been developed in partnership with key stakeholders?	G	Y	G	Y
A3) Is the measure maintainable to accommodate changes?	G	R	G	R
A4) Can the measure be used to support investment decisions, policy making and target establishment?	G	G	G	G
A5) Can the measures be used to analyze performance trends?	G	G	G	G
A6) Has the feasibility and practicality to collect, store, and report data in support of the measures been considered?	G	Y	G	Y
B1) Timeliness	R	R	R	R
B2) Consistency	G	R	G	R
B3) Completeness	G	G	G	G
B4) Accuracy	G	G	G	G
B5) Accessibility	G	Y	G	Y
B6) Data Integration	G	Y	G	Y

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The proposal outlined in this NPRM attempts to address some of the gaps that exist today for lower rated factors so that, as a result of the implementation of these new requirements, the measures would result in an improved assessment rating and thereby better support national

programs. In particular, FHWA considered the following factors:

- Criterion A2—recognize that a common approach to define serious injuries is still being discussed by stakeholders and allow for time to transition to a measure that is based on a more consistent definition.
- Criterion A3—consider an approach that will allow for more consistent

definitions of serious injury to be phased in over a period of time.

- Criterion B1—recognize the time lag of data available in national data sources compared to the availability of data in State-maintained sources in establishing requirements associated with proposed safety measures.
- Criterion B2—consider an approach to defining serious injuries that would

improve consistency in application across the country and recognize that consistency improvements can take time to implement.

- Criteria A6, B5, and B6—recognize that a comprehensive national data source does not exist today for serious injuries and that there could be a cost to Federal, State and local governments to create such a data source.

The FHWA is proposing an approach to define the safety measures in a manner that is more consistent with input received from stakeholders and addresses the various methods used today to define serious injuries. The specifics of these proposals are described in the Section-by-Section portion of this proposed rule.

## V. Section-by-Section Discussion of the General Information and Proposed Highway Safety Improvement Program Performance Measures

### Section 490.101 General Definitions

This subpart provides definitions of the following terms: Highway Performance Monitoring System, measure, metric, non-urbanized areas, and target.

The FHWA proposes to include a definition for “Highway Performance Monitoring System (HPMS)” because it will be one of the data sources used in establishing a measure and establishing a target. The HPMS is an FHWA-maintained, national level highway information system that includes State DOT-submitted data on the extent, condition, performance, use and operating characteristics of the Nation’s highways. The HPMS database was jointly developed and implemented by FHWA and State DOTs beginning in 1974 and it is a continuous data collection system serving as the primary source of information for the Federal government about the Nation’s highway system. Additionally, the data in the HPMS is used for the analysis of highway system condition, performance, and investment needs that make up the biennial Condition and Performance Reports to Congress. These Reports are used by the Congress in establishing both authorization and appropriation legislation, activities that ultimately determine the scope and size of the Federal-aid highway program, and determine the level of Federal highway taxation. Increasingly, State DOTs, as well as the MPOs, have utilized the HPMS as they have addressed a wide variety of concerns about their highway systems.<sup>35</sup>

Numerous State DOTs and the MPOs use HPMS data and its analytical capabilities for supporting their condition/performance assessment, investment requirement analysis, strategic and state planning efforts, etc.

The FHWA proposes to include a definition for “measure” because establishing measures is a critical element of an overall performance management approach and it is important to have a common definition that the FHWA can use throughout the Part. To have a consistent definition for “measure,” the FHWA proposes to make a distinction between “measure” and “metric.” Hence, the FHWA proposes to define “metric” as a quantifiable indicator of performance or condition and to define “measure” as an expression based on a metric that is used to establish targets and to assess progress toward achieving the established targets. For illustrative purposes, a metric for fatalities is the annual number of fatalities and the corresponding measure to establish targets is the 5-year rolling average of the metric.

In addition, the FHWA proposes to include a definition for “non-urbanized areas” to provide clarity in the implementation of the provision in 23 U.S.C. 150(d)(2) that allows the State DOTs the option of selecting different targets for “urbanized and rural areas.” As written, the statute is silent regarding the small urban areas that fall between “rural” and “urbanized” areas. Instead of only giving the State DOTs the option of establishing targets for “rural” and “urbanized” areas, FHWA proposes to define “non-urbanized” areas to include both “rural” areas and the small urban areas that are larger than “rural” areas but do not meet the criteria of an “urbanized area.” This would then allow State DOTs to establish different targets throughout the entire State for urbanized and non-urbanized areas. For target-setting purposes, the FHWA believes that these small urban areas are best treated with the “rural” areas, as non-urbanized areas, because both of these areas do not have the same complexities that come with having the population and density of urbanized areas and are generally more rural in characteristic. In addition, neither of these areas are treated as MPOs in the transportation planning process or given the authority under MAP-21 to establish their own targets.

Finally, the FHWA proposes to include a definition for “target” to indicate how measures will be used for

target establishment by State DOTs and MPOs to assess performance or condition.

### Subpart B: National Performance Measures for the Highway Safety Improvement Program

#### Section 490.201 Purpose

The FHWA proposes to include a statement describing the general purpose of the proposed subpart: to implement certain sections of Title 23, U.S.C. that require FHWA to establish measures for State DOTs to use to assess the number of serious injuries and fatalities and the rate of serious injuries and fatalities.

#### Section 490.203 Applicability

The FHWA proposes to specify that the safety performance measures are applicable to all public roads covered under 23 U.S.C. 130 and the HSIP under 23 U.S.C. 148. While 23 U.S.C. 148 specifically addresses the HSIP, projects that improve railway-highway crossings, consistent with 23 U.S.C. 130, are eligible as highway safety improvement projects under 23 U.S.C. 148. In addition, 23 U.S.C. 148 requires State DOTs to report on the occurrence of fatalities and serious injuries on railway-highway crossings. Because of the connection between 23 U.S.C. 130 and 148, it is important that any developed measures consider public roads covered under both of these provisions. Therefore, the FHWA includes this language to reiterate that the data used for the performance measures needs to include all public roads in the State regardless of ownership or functional classification.

#### Section 490.205 Definitions

The FHWA proposes to include a definition for “5-year rolling average,” because the FHWA proposes that State DOTs and MPOs use this information in calculating the performance measures for carrying out the HSIP. The 5-year rolling average is the average of five individual, consecutive annual points of data for each proposed performance measure (e.g., 5-year rolling average of the annual fatality rate). Using a multiyear average approach does not eliminate years with significant increases or decreases. Instead, it provides a better understanding of the overall fatality and serious injury data over time. The 5-year rolling average also provides a mechanism for accounting for regression to the mean. If a particularly high or low number of fatalities and/or serious injuries occur in 1 year, a return to a level consistent with the average in the previous year may occur.

<sup>35</sup> Highway Performance Monitoring System, FHWA Office of Policy Information. <http://www.fhwa.dot.gov/policyinformation/hpms/nahpms.cfm>.

The FHWA considered annual data, and 3-, 4-, and 5-year rolling averages, evaluating each of these options against the data currently available for all States. States with a small number of fatalities may see wide fluctuations in the number of fatalities from year to year. For those States, a rolling average would reduce short term fluctuations and highlight long term trends. A 5-year rolling average provides a balance between the stability of the data (by averaging multiple years) and providing an accurate trend of the data (by minimizing how far back in time to consider data).

The SHSOs have voluntarily been using a 3- to 5-year rolling average for fatalities, fatality rate, and serious injuries since 2010. Currently in NHTSA's HSP, SHSOs are required to establish performance measures for fatalities, fatality rate, and serious injuries using a 3- to 5-year rolling average. The SHSOs select the rolling average that is appropriate for their State depending on factors unique to each State. This NPRM proposes that all State DOTs use the same 5-year rolling average time period in the HSIP. In proposing that performance measures common to the State's HSP and the HSIP be aligned, SHSOs and State DOTs would be required to use the same rolling average period for common performance measures. Such a requirement in the HSP would be subject to the GHSA coordination process NHTSA must follow under MAP-21.

Stakeholders are encouraged to comment on whether a 3-, 4- or 5-year rolling average should be required for the HSIP performance measures. Stakeholders are also encouraged to comment on whether the use of moving averages is appropriate to predict future metrics.

The FHWA's objective is for State DOTs to establish achievable performance targets that focus on improving safety results. State DOTs that do not achieve or have not made significant progress toward achieving their targets would be subject to restricted obligation authority for use only on HSIP projects and the establishment of an implementation plan pursuant to 23 U.S.C. 148(i) and implemented under section 490.211(c).

The FHWA proposes to add a definition of "Fatality Analysis Reporting System (FARS)" because it would be used to determine if a State has achieved its target and, if necessary, as part of the evaluation of whether a State DOT has made significant progress toward achieving its target. The

proposed definition clarifies that final FARS data will be used.

The FHWA is proposing a definition of "historical trend line" because it would be an element of FHWA's evaluation of whether a State DOT has made significant progress toward achieving its target. The FHWA proposes the use of 10 years of data in order to provide sufficient historical context for the analysis and projection. Including more years of data would inappropriately impact the analysis by incorporating factors that are no longer relevant. Including fewer years of data would provide an insufficient foundation upon which to conduct the analysis.

The FHWA proposes a definition for "KABCO" because FHWA would be requiring States to begin reporting serious injuries by using the '(A)' coding convention on the KABCO injury classification scale. For serious injuries reported prior to adoption of MMUCC, latest edition, States would use a set of conversion tables to convert data to a consistent serious injury '(A)' coding classification on the KABCO scale. For data reported in compliance with MMUCC, latest edition, States would report data according to the "Suspected Serious Injury (A)" definition and attribute. The conversion tables, developed by NHTSA, are included in the docket and would be used to convert State serious injury crash data to a consistent KABCO coding convention.

Developed by the National Safety Council in 1976, the KABCO is a system used to standardize the coding for the level of the injury severity for any person involved in a crash as determined by law enforcement at the scene. The KABCO is a coding and classification scale that used, or in some cases still uses, the following classifications for the injury codes: K-fatality, A-incapacitating injury, B-non-incapacitating injury, C-possible injury, O-no injury. However, different agencies may use different classifications for injury codes (e.g., "A" for incapacitating injury or "A" for suspected serious injury) and different definitions for each injury code (e.g. in one agency a serious injury is defined as "an injury other than a fatal injury which results in broken bones, dislocated or distorted limbs, severe lacerations, or unconsciousness" and in another agency a serious injury is defined as "an injury, other than a fatal, which prevents the injured person from walking, driving or normally continuing the activities which he was capable of performing prior to the motor vehicle traffic accident." Still, KABCO is an effective tool used to standardize injury

severity across jurisdictions by law enforcement officers investigating and reporting on crashes at the scene.

The FHWA recognizes that States currently use a wide variety of coding conventions and associated definitions to report on injury severity. In order to collect and use the most consistent data to support the National Goals, the FHWA proposes that the highest severity injury category in the State's motor vehicle crash database would conform to the KABCO injury code '(A)'. To conform, the State would convert the injury crash data using the conversion tables developed by the NHTSA. The NHTSA developed an initial set of KABCO conversion tables to enable sampling in areas of the State where NHTSA collects injury crash data for the National Automotive Sampling System (NASS). For the purposes of this rulemaking, NHTSA has created similar tables, using the NASS methodology, for all States, and FHWA will make the tables available for States to use to report serious injury data. The FHWA recognizes that the conversion tables cannot account for all past and current differences between State definitions of injury levels. However, they will provide the most consistent available data for serious injuries for the States' past and current crash data until all States comply with the MMUCC requirement proposed in this rule.

The FHWA proposes a definition for "made significant progress" to distinguish that the FHWA would not use the statistical definition of the term "significant" to determine whether a State has made significant progress toward achieving their safety performance targets under 23 U.S.C. 148(i). Recognizing that there is a limit to the direct impact the State can have on safety outcomes, the risk in setting targets, and the resultant difficulty in determining a projected appropriate level of progress for the State DOT, the FHWA is proposing to use a specific set of calculations to determine whether a State DOT has made significant progress. Those calculations are described in Section 490.211, Determining Whether a State DOT has Made Significant Progress Towards Achieving Performance Targets.

The FHWA proposes a definition for the "number of fatalities" because it would be used to establish one of the measures for State DOTs and MPOs to use to assess safety performance related to fatalities and for the purpose of carrying out the HSIP. The FHWA also proposes a definition for the "number of serious injuries" because it would be used to establish one of the measures for State DOTs and MPOs to use to assess

safety performance related to serious injuries for the purpose of carrying out the HSIP.

The FHWA is proposing a definition of “prediction interval” because it would be an element of the evaluation of whether a State DOT has made significant progress toward achieving its target. The FHWA proposes to use the term prediction interval as it is applied for statistical evaluation.

The FHWA proposes a definition for “projection point” because it would be an element of FHWA’s evaluation of whether a State DOT has made significant progress toward achieving its target.

The FHWA proposes a definition for the “rate of fatalities” because it would be used to establish one of the measures for State DOTs and MPOs to use to assess safety performance related to fatalities for the purpose of carrying out the HSIP. The FHWA also proposes a definition for the “rate of serious injuries” because it would be used to establish one of the measures for State DOTs and MPOs to assess as a measure for safety performance related to serious injuries for the purpose of carrying out the HSIP.

The FHWA also proposes a definition of “serious injuries.” In defining the term “serious injuries,” the FHWA recognizes there are many disparities between States’ definitions of serious injuries and the coding convention used to report them. These discrepancies have long been recognized as a problem in collecting and analyzing data at the national level, and may be a problem in measuring progress toward the national goal of “significantly reducing fatalities and serious injuries on all public roads.”<sup>36</sup> The proposed definition would result in a consistent definition of “serious injuries,” which would standardize and improve the quality of data, and improve the ability to evaluate State DOT and national progress in achieving safety on the Nation’s roads.

The FHWA proposes that the definition and attribute for “serious injuries” is a “suspected serious injury” (A) as identified in the latest edition of the MMUCC.<sup>37</sup> The MMUCC definition of a suspected serious injury (A) is any injury, other than fatal, which results in one or more of the following:

- Severe laceration resulting in exposure of underlying tissues, muscle, organs, or resulting in significant loss of blood;
- Broken or distorted extremity (arm or leg);

- Crush injuries;
- Suspected skull, chest, or abdominal injury other than bruises or minor lacerations;
- Significant burns (second and third degree burns over 10 percent or more of the body);
- Unconsciousness when taken from the crash scene; or
- Paralysis.

The FHWA proposes that States would convert to KABCO, through use of the NHTSA conversion tables, only the serious injury crash data necessary to comply with the reporting requirements under 23 CFR 924 that are not compliant with the proposed serious injury definition within 18 months of the effective date of this rule. The FHWA also proposes that States must use the MMUCC, latest edition, definition and attribute for “suspected serious injury” within 18 months of the effective date of this rule. Depending on the effective date of this rule, the date requirements may be modified in order to align with the HSIP reporting cycle. As the MMUCC definition uses the KABCO scale, a State DOT would be in compliance with this definition if a State converts to the MMUCC definition for “suspected serious injury” prior to the 18-month requirement.

However, for data in the State crash database that was not MMUCC compliant, the State would convert its serious injury data to KABCO through use of the NHTSA serious injury conversion tables.

The FHWA considered the Abbreviated Injury Scale (AIS), the Maximum Abbreviated Injury Scale (MAIS), the International Statistical Classification of Diseases and Related Health Problems (ICD), and the Injury Severity Score (ISS) as potential coding conventions and definitions for reporting Serious Injuries data to replace MMUCC and KABCO. These injury classification systems are not being proposed because they would not offer the ease and opportunity to convert historical and future data into a consistent framework such as is available in using KABCO, NHTSA conversion tables, and MMUCC.

Those agencies that would need to comply with this requirement (e.g., State DOTs, SHSOs, law enforcement agencies) would not be expected to have the ability to use systems such as AIS, ICD, or ISS at the crash scene. Use of each of these systems would require either individual medical follow-up for each person injured in a crash, or some sort of manual or electronic linkage of crash records to hospital inpatient and emergency department records with injury diagnoses. The FHWA expects

the burden and time to set up such systems would be considerably greater than it would be for States to comply with the latest edition MMUCC’s Suspected Serious Injury definition as proposed in this rulemaking. Therefore, under this rulemaking, the FHWA would not require States to gather level of injury assessments from hospitals or other emergency medical service providers. As the MMUCC is a recommended standard for law enforcement crash reports and uses the KABCO scale, its definition was determined to be most appropriate for the immediate purposes of this proposed rule. The FHWA solicits comment on whether some other injury classification and coding system would be more appropriate.

#### *Section 490.207 National Performance Measures for the Highway Safety Improvement Program*

In section 490.207(a), FHWA proposes to describe the four performance measures for the purpose of carrying out the HSIP under 23 U.S.C. 150. The four performance measures would include: 1) number of fatalities, 2) rate of fatalities, 3) number of serious injuries, and 4) rate of serious injuries. The FHWA also proposes to specify that each performance measure would be based on the calendar year, rather than a State’s fiscal year or the Federal fiscal year, because safety statistics are already reported by calendar year.

In section 490.207(b), FHWA proposes the use of a rolling average for each of the performance measures and specifies that only the total number be rounded to the hundredth decimal place. The FHWA proposes the use of the hundredth decimal place because the industry standard in FARS for reporting fatality crash rates is to the hundredth decimal place. As FARS reports fatality rates by 100 million VMT, the FHWA proposes that the term “VMT” used in the calculation of fatality and serious injury rates also refer to 100 million VMT, rather than “per vehicle mile traveled” as expressed in 23 U.S.C. 150(c)(4).

The following items describe the calculation for each of the four performance measures. In subparagraph (1), the FHWA proposes that the performance measure for the number of fatalities would be the 5-year rolling average of the total number of fatalities for each State and would be calculated by adding the number of fatalities for the most recent 5 consecutive calendar years in which data are available and dividing by 5. As stated in the definitions section, the total number of fatalities for each State would be based

<sup>36</sup> 23 U.S.C. 150(b).

<sup>37</sup> The Model Minimum Uniform Crash Criteria, available at: <http://www.mmucc.us/>.

on the data reported by the FARS database for each calendar year. The FARS database is recognized as the standard for reporting fatalities and is already used by the State DOTs and the DOT.

In subparagraph (2), the FHWA proposes that the performance measure for fatalities per VMT would be the 5-year rolling average of the State's fatality rate per VMT and would be calculated by first calculating the number of fatalities per 100 million VMT for each of the most recent 5 consecutive years in which data are available, adding the results, and dividing by 5. As stated in the definitions, the VMT is as reported by a State DOT to the HPMS (expressed in 100 million vehicle miles) in a calendar year.

In subparagraph (3), the FHWA proposes that the performance measure for the number of serious injuries would be the 5-year rolling average of the total number of serious injuries for each State, and would be calculated by adding the number of serious injuries for the most recent 5 consecutive years in which data are available and dividing by 5.

In subparagraph (4), the FHWA proposes the performance measure for the number of serious injuries per VMT would be the 5-year rolling average of the total number of serious injuries per VMT, and would be calculated by first calculating the number of serious injuries per 100 million VMT for each of the most recent 5 consecutive years in which data are available, adding the results, and dividing by 5. The number of serious injuries would be equivalent to that in subparagraph (3) and the rate would be determined by VMT as reported by HPMS (expressed in 100 million vehicle miles) in a calendar year.

In section 490.207(c), the FHWA proposes that by the effective date of this rule, serious injuries shall be coded (A) in the KABCO injury classification scale through use of the NHTSA serious injuries conversion tables; and that within 18 months of the effective date of this rule, serious injuries must be determined using the latest edition of MMUCC.

Finally, in section 490.207(d), the FHWA recommends, but would not require, that States prepare themselves so that no later than calendar year 2020, serious injuries data is collected through and reported by a hospital records injury outcome reporting system that links injury outcomes from hospital inpatient and emergency discharge databases to crash reports. An example of a crash outcome data linkage system

is the NHTSA Crash Outcome Data Evaluation System (CODES).

The DOT is an active liaison to the NCHRP Project 17–57 *Development of a Comprehensive Approach for Serious Traffic Crash Injury Measurement and Reporting Systems*. The project's goals are to identify an injury scoring system for further consideration, develop a roadmap to assist States in developing and implementing an interim system, and ultimately develop a State-based framework to perform comprehensive linkage of records related to motor vehicle crashes resulting in serious injuries, and incremental steps and priorities for achieving the linkage (<http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3179>). The DOT anticipates that this project will be completed by 2014, and the recommendations could then be effectively implemented in all States. To the extent possible, DOT would work with States that implement a data linkage system prior to the recommended date. This rulemaking would not prohibit a State from using a data linkage system like CODES, but this rulemaking would require States to use the MMUCC definition of "suspected serious injury" and the KABCO system, through use of the NHTSA conversion tables, for reporting serious injuries data.

In summary, defining serious injuries in a manner that would provide for greater consistency requires:

- (1) a common coding convention;
- (2) a consistent definition of a serious injury; and
- (3) a method to accurately determine the severity level of an injury.

This rulemaking proposes, with reference to the above list, the establishment of items 1 and 2, and a recommended approach for item 3. More specifically, this rulemaking proposes: (1) KABCO as the required convention to code a serious injury as "A" using conversion tables developed by NHTSA; and (2) a requirement to use the MMUCC definition of a "suspected serious injury" to define what injuries qualify as a serious injury. This rulemaking would not propose a required use of a single method to accurately determine the level of injury but recommends that States prepare to use a crash to medical outcome data linkage methodology. This rulemaking would not prohibit a State from using such an approach before or after the effective date of this rule to determine the severity of injuries.

The DOT also recognizes that as serious injury data is migrated to the MMUCC definition, variances may occur in the data collected and reported

by States and that States should make necessary adjustments in establishing targets to accommodate these changes.

#### *Section 490.209 Establishment of Performance Targets*

The FHWA proposes in section 490.209(a) for State DOTs to establish quantifiable targets for each performance measure identified in section 490.207(a). The declared policy under 23 U.S.C. 150(a) is to transform the Federal-aid highway program by refocusing on national transportation goals and increasing accountability. Furthermore, the first national goal under 23 U.S.C. 150(b)(1) is to "achieve a significant reduction in traffic fatalities and serious injuries on all public roads." To this end, the FHWA strongly encourages State DOTs to establish targets that represent improved safety performance in order to support the national goals.

Consistent with the objectives in the NHTSA IFR, the FHWA is proposing in subparagraph (1) that the targets under this section be identical to the targets established for common measures reported in the States HSP, subject to the GHSA coordination process NHTSA must follow under MAP–21. The FHWA proposes in subparagraph (2) that the performance targets established by the State represent the safety outcomes anticipated for the calendar year following each HSIP annual report.

The FHWA recognizes that State DOTs would use the most current data available to them in order to establish targets required in this rule. However, as specified in section 490.211(a), the FHWA proposes to use the data in the final FARS database and HPMS to assess the State DOTs' performance targets for the fatality measures. State DOTs should recognize there are differences in the final FARS and HPMS databases and their most current data, in particular the potential time lag in the data needed for establishing targets.

For the serious injuries number measure, this lag is not an issue as this measure and reported outcomes are based on data contained in the State's motor vehicle crash database. However, there is a time lag for the remaining proposed safety measures.

The current time lag (time period between the end of the calendar year in which the data were collected to the date the data is available in the national system for the final FARS and HPMS data) is approximately 24 months. The FHWA recognizes the challenges to State DOTs in dealing with the uncertainty of data available in national data sources and how this uncertainty

would need to be considered in the target establishment process.

The following scenario is provided as an example to illustrate the potential time lag between State and national data sources for the fatality number measure and the fatality and serious injury rate measures. Targets that represent anticipated fatality outcomes for Calendar Year (CY) 2017 would need to be established by the State DOT and reported in its 2016 HSIP annual report by August 31, 2016. The State DOT may have current fatality data available through its motor vehicle crash database to develop targets. However, the fatality data reported by FARS, which would be used to assess fatality outcomes, would not be current due to the time lag needed to process, review, and validate data in FARS. Likewise, the VMT data available to calculate rate-based measures in the HPMS would face similar time lag issues. For this example, the most current information available in FARS and HPMS in August 2016 would be based on CY 2013 data. Therefore, the most current reported performance outcome for fatalities for the State would represent the data reported from 2009–2013 (data needed to calculate the 2013 5-year rolling average for fatalities). The FHWA recognizes the challenge this time lag would present to State DOTs as the State DOT would need to establish a target that represents a 5-year rolling average for the period from 2013–2017. The DOT seeks comments on whether this time lag is an issue, any impacts it may have on a State DOT's ability to establish targets, and any suggestions that can help address this issue.

The FHWA proposes in subparagraph (3) that State DOTs establish targets that represent the safety performance of all public roadways within the State boundary regardless of ownership and functional classification. The FHWA recognizes that there is a limit to the direct impact the State DOT can have on the safety outcomes resulting on all public roadways and that the State DOT would need to consider this uncertainty in their establishment of targets.

The FHWA proposes in subparagraph (4) that State DOTs begin reporting targets in the HSIP annual report that is due on or after 1 year from the effective date of this final rule and then each year thereafter in subsequent HSIP annual reports.

The FHWA recognizes that in its determination of targets, the State DOT would need to consider a wide range of factors that may either constrain its ability to impact outcomes or may adversely impact outcomes (such as the population growth of an area). State

DOTs should consider these factors in establishing targets and should provide an explanation as to how the factors were addressed in reporting their targets in the HSIP annual report.

In subparagraph (5), the FHWA proposes that for the purpose of evaluating serious injury measures targets, the State DOT would report each year, in their HSIP Report, 10 years of serious injury data for the equivalent years that final FARS data were available at the time the target was established.

As proposed in subparagraph (6), the FHWA believes that an annual target establishment frequency would not present a need for State DOTs to adjust or modify their targets during the year. It is anticipated that adjustments would be made through the establishment of new targets each year as State DOTs would be required to establish new targets incorporating the next year of performance.

In section 490.209(b), the FHWA proposes that State DOTs may, as appropriate, establish one additional performance target for all urbanized areas and one additional performance target for all non-urbanized areas within the State for each performance measure. Thus, the established urbanized target and non-urbanized targets would cover the entire State boundary. The FHWA proposes that State DOTs may use different performance targets for urbanized and non-urbanized areas to implement 23 U.S.C. 150(d)(2). For example, in accordance with section 490.209(a), a State DOT would be required to establish four performance targets for: (1) number of fatalities; (2) rate of fatalities; (3) number of serious injuries; and (4) rate of serious injuries. In addition to these four performance targets, the State DOT may elect to also establish different performance targets for urbanized and non-urbanized areas. Should the State elect to do so, the State would be required to establish both urbanized and non-urbanized performance targets. As a result, while a State DOT will establish a minimum of four safety performance targets, it could choose to establish 6, 8, 10, or 12 safety performance targets, depending on which, if any, performance measures it chooses to establish urbanized and non-urbanized targets.

Historically, the Census has defined urbanized areas every 10 years. The FHWA recognizes that each Census defined urbanized area can be adjusted to facilitate the planning process, and this could be done on varying schedules. Designation of new urbanized areas or changes to the boundary of existing urbanized areas

may lead to changes in the functional classification of the roads, which in turn may affect measures and the target achievement or making significant progress toward achieving targets. The FHWA intends to issue guidance regarding the voluntary establishment of performance targets for urbanized and non-urbanized areas. If a State DOT chooses to establish separate urbanized and non-urbanized performance targets, it would increase the number of performance targets that it reports. At a minimum, State DOTs would be required to establish four performance targets each year (one for each performance measure). State DOTs can increase the number of targets that are established if they elect to break out urbanized and non-urbanized areas. Some State DOTs may find it beneficial to establish separate performance targets for urbanized and non-urbanized areas to highlight the different nature of, causes of, and countermeasures for crash types in those areas.

In section 490.209(c), the FHWA proposes that MPOs establish targets to address the performance measures established in section 490.207(a), where applicable, each time the State DOT reports targets in their HSIP annual report. The FHWA proposes in subparagraph (1) that not later than 180 days after issuance of the State's HSIP annual report, which establishes the State DOT targets (section 490.213(a)), the MPO establish targets. The FHWA anticipates that State DOTs and MPOs would coordinate on the establishment of targets as required under 23 U.S.C. 134(h)(2)(B)(i)(II) and 23 U.S.C. 135(d)(2)(B)(i)(II). The MPO and State DOT should agree on how they would coordinate on the reporting of targets. The FHWA recognizes the need for State DOTs and MPOs to have a shared vision on expectations for future safety performance in order for there to be a jointly owned target establishment process. It is anticipated that State DOTs and MPOs would collectively identify strategies to reduce or eliminate safety hazards and would jointly decide how these strategies would impact performance outcomes across the State DOTs and within different areas of the State. The FHWA proposes in subparagraph (2) that after the MPO reports these targets to the State, the FHWA expects that, upon request, the State DOT can provide the MPO's most recently submitted targets to the FHWA in accordance with the Metropolitan Planning Agreement, developed under 23 CFR 450.

The FHWA recognizes the burden on MPOs to establish their own performance targets, especially where

the targets are annual targets. As such, the FHWA proposes in subparagraph (3) that MPOs establish targets by either agreeing to plan and program safety projects so that they contribute toward the accomplishment of 1 year safety targets established by the State DOT, or committing to a quantifiable 1 year safety target specific to the roadways within the metropolitan planning area.

Recognizing that the resource level and capability of some MPOs to reliably predict safety performance outcomes varies across the country, the FHWA is proposing an approach that would give flexibility for MPOs to establish targets by supporting the State DOT targets for performance through their investment decision making. Further, the FHWA recognizes that MPOs may need to work jointly with relevant State DOTs to access and analyze crash records for their planning area. Consequently, the MPOs may establish their targets using either of the proposed options in proposed subparagraph (3). The FHWA proposes in subparagraph (4) that, the established MPO targets under subparagraph (3) represent all public roadways within the metropolitan planning area boundary regardless of ownership or functional classification.

Annual target establishment for safety performance is being proposed to align the target establishment requirements of 23 U.S.C. 150 with those of 23 U.S.C. 402(k), subject to the GHSA coordination process NHTSA must follow under MAP-21. The FHWA recognizes that an annual frequency for target establishment is not consistent with typical planning cycles for MPOs and, as such, expects the State DOT to closely coordinate with their partner MPOs to make the target establishment decision. The FHWA will propose to provide for a longer target establishment time horizon, which is more aligned with the typical metropolitan planning cycle, for the other measures in which targets are required to be established under 23 CFR 450.

Pursuant to 23 U.S.C. 134(h)(2)(B)(i)(II) and 23 U.S.C. 135(d)(2)(B)(i)(II), the FHWA proposes in section 490.209(d) that State DOTs coordinate with relevant MPOs in the selection of targets to ensure consistency, to the maximum extent practical. The requirements to consider this coordination in the planning process should be addressed as State DOTs and MPOs work together to jointly identify performance expectations for the State and, if appropriate, specific areas of the State. The DOT recognizes the challenges associated with the coordination of quantifiable targets between the State

and relevant MPOs due to the differences in the geographical boundaries of areas in which targets would be established. The State DOT, as discussed previously in this section, would be required to establish a quantifiable target for the entire State boundary and would have the option of establishing 2 additional quantifiable targets: 1 for all urbanized areas, and 1 for all non-urbanized areas within the State. Additionally, an MPO would have the option to establish a quantifiable target for their metropolitan planning area. One of the coordination challenges facing States and MPOs would be how they consider the different geographical boundaries of urbanized areas and metropolitan planning areas, especially in cases where urbanized and metropolitan planning areas cross multiple State boundaries. To illustrate these differences the following is provided regarding the target establishment boundary differences that could exist in the State of Maryland today.

- **Urbanized Areas:** Based on the 2010 Census, 11 urbanized areas intersect or are contained within the geographic boundary of the State of Maryland. Of these areas, 5 extend into neighboring States.

- **Metropolitan Planning Areas:** Currently, 6 metropolitan planning areas intersect or are contained within the geographic boundary of the State. Of these areas, 4 extend into neighboring States.

- **Statewide Urbanized Area Target Extent:** A State DOT target for urbanized areas would represent the anticipated safety outcome of all public roads in those 11 urbanized areas within the geographic boundary of the State of Maryland.

- **MPO Target Extent:** Each of the 6 MPOs would establish targets for representing the anticipated safety outcome of relevant metropolitan planning area regardless of State boundary. In the case of Maryland, the metropolitan planning area boundaries used by MPOs to establish targets will represent an area that is larger than the area used by the State DOT to establish an urbanized target and will represent areas in several adjoining States.

As illustrated above, many differences in target setting boundaries could exist that would require State DOTs and MPOs to coordinate on quantifiable targets between them using the proposed target setting requirements in this section. As part of the coordination process, State DOTs and MPOs are encouraged to consider how the data will be reported. The FHWA is seeking comment on alternative approaches that

could be considered to effectively implement 23 U.S.C. 134(h)(2)(B)(i)(I) and 23 U.S.C. 150(d)(2) considering the need for coordination required under 23 U.S.C. 134(h)(2)(B)(i)(II) and 23 U.S.C. 135(d)(2)(B)(i)(II).

#### *Section 490.211 Determining Whether a State DOT Has Made Significant Progress Toward Achieving Performance Targets*

In section 490.211, the FHWA proposes the method in which the FHWA would determine whether a State DOT has met or made significant progress toward the achievement of its HSIP performance targets. Although this determination could directly impact State DOTs, as discussed in this section, MPOs could also be indirectly impacted as a result of the link between metropolitan and statewide planning and programming decision making. This rulemaking discusses the approach that would be taken by the FHWA to assess State DOT safety performance progress, but it does not include a discussion on the method that may be used by the FHWA to assess the safety performance progress of MPOs. Interested persons should refer to the updates to the Statewide and Metropolitan Planning regulations for any discussions on the review of MPO performance progress.

In section 490.211(a), the FHWA proposes that the determination for having achieved or made significant progress toward achieving the performance targets would be based on FARS data for the fatality number, FARS and HPMS data for the fatality rate, State reported data for the serious injuries number, and State reported data and HPMS data for the serious injury rate. The HSIP report, as proposed in 23 CFR 924, would require State DOTs to report general highway safety trends for the number and rate of fatalities and serious injuries. The State reported serious injury data would be taken from the HSIP report. The FHWA also proposes that reporting of safety performance targets be done as part of the HSIP report.

In section 490.211(b), the FHWA proposes that it would evaluate achievement of each performance target. The FHWA considered a number of different approaches to implement the State DOT performance targets provision specified in 23 U.S.C. 148(i). This provision requires State DOTs that have not achieved or made significant progress toward achieving the State DOT performance targets obligate a portion of their HSIP funding in accordance with 23 U.S.C. 148(i)(1) only for highway safety improvement projects, and to develop and submit an



annual implementation plan to document how State DOTs intend to improve performance using HSIP funds. The FHWA recognizes the risks associated with target establishment and the factors that could impact the ability to achieve a target that could be outside of a State DOT's control. The FHWA considered these risks and factors in its evaluation of different approaches to implement this provision. For example, a number of factors were raised as part of the performance management stakeholder outreach sessions regarding target establishment and progress assessment, such as the impact of funding availability on performance outcomes, the reliability of the current state-of-practice to predict outcomes resulting from investments at a system level, the impact of uncertain events or events outside the control of a State DOT on performance outcomes, the need to consider multiple performance priorities in making investment trade-off decisions, and the challenges associated with balancing local and national objectives.

The FHWA wants to implement an approach that considers the risks to a State DOT in achieving a target while meeting the need to provide for a fair and consistent process to determine compliance with this statutory provision. The FHWA realizes that there are some factors outside of a State's control (e.g. natural disaster, weather, technological safety improvements) that could impact the ability to achieve a target. The use of a rolling average as the basis for all of the measures will smooth the impacts of those factors that could result in any single year period.

Basing the assessment on quantifiable results would ensure a fair and consistent approach to making the determination. The FHWA believes that this principle is particularly important as the consequence for non-compliance will further restrict how a State DOT can use its HSIP funding. In developing the criteria for evaluating significant progress toward achieving performance targets, the FHWA considered how output measures (e.g., miles of rumble strips, number of impaired driving arrests) could be used in the determination. Although output measures are important in delivering the Federal-aid highway program, they do not sufficiently reflect the purpose of the HSIP as provided in 23 U.S.C. 148(c), or the "National Goals" in 23 U.S.C. 150(b)(1), which is to achieve a significant reduction in traffic fatalities and serious injuries. Output measures were therefore excluded from the proposed metric.

Following the principles above, the FHWA is proposing the following approach to assess if a State DOT has achieved or has made significant progress toward the achievement of their targets. The FHWA would evaluate each State DOT's progress toward achieving their performance targets based on the final FARS data for fatality performance targets, the State DOT's reported results in the HSIP annual report for serious injury performance targets, and the HPMS for performance targets for rate-based measures.

The FHWA proposes to use national datasets that are considered standards for statistics to base the determination of a State DOT's progress toward the achievement of targets so the process is conducted uniformly using a consistent and credible data set.

The FHWA recognizes that there is a time lag in receiving the final data from FARS and HPMS. Consequently, the FHWA would make appropriate timing adjustments to comply with the requirements of 23 U.S.C. 148(i). As an example, when a State DOT establishes their target in August 2016 for CY 2017, the latest available FARS and HPMS data would be for CY 2013, since that data becomes available in December 2015. The final FARS and HPMS data for CY 2017 would be available in December 2019. The FHWA would review and evaluate this data and notify State DOTs if they achieved or made significant progress toward achieving their performance targets by March 1, 2020. This time frame is necessary to ensure that the assessment of whether a State achieved or made significant progress toward achieving targets is conducted based on a final data set (final FARS) for the fatality number, fatality rate, and serious injury rate measures. The FHWA proposes the use of this data to ensure that the requirements in 23 U.S.C. 148(i) are applied consistently and to ensure that the requirements are not imposed on States in error.

As proposed in section 490.211(b), the FHWA would review each performance measure to determine if each target was achieved. Targets that have been achieved would not undergo any additional review or evaluation. As proposed in subparagraph (1), the FHWA would only evaluate performance targets not achieved to determine if the State DOT made significant progress toward achieving the target.

The FHWA proposes in subparagraph (2) to evaluate significant progress<sup>38</sup> for each performance target not achieved. First, the FHWA would determine a historical trend line based on FARS, State reported serious injury, and HPMS data for the State. In determining the historical trend line, the FHWA would plot 5-year rolling averages for 10 consecutive years using the most recent data available at the time the State sets the target. For example, the historical trend line for the first assessment of significant progress under this regulation would consist of six data points from the following 5-year rolling averages: 2004–2008, 2005–2009, 2006–2010, 2007–2011, 2008–2012, 2009–2013.

Trend lines are used to chart the prevailing direction of an event or events (e.g., fatalities or serious injuries by number or rates) and can be projected forward to predict future events. The historical trend line proposed to evaluate significant progress is a linear regression trend line. The FHWA considered different options for the historical trend line as well as time series analysis. We identified challenges with each option, particularly related to the use of rolling average data and the number of data points required to obtain meaningful results. Since FHWA must establish a uniform procedure to use for all States to assess, if necessary, whether the State made significant progress, the FHWA proposes to use a linear regression trend line. Stakeholders are encouraged to comment on the appropriateness of the trend line methodology proposed for the significant progress analysis.

The FHWA proposes that 10 years of serious injury data, for equivalent years that final FARS data were available at the time the target was established, be made available for purposes of determining a historical trend line. Ten years of historical data would provide a sufficient set of data points for the purposes of projecting out for future years while balancing the need to use recent data.

After the FHWA determines the historical trend line, the FHWA would then plot a projection point based on the historical trend line data and calculate the prediction interval for the projection point.

When predicting a future point (projection) or estimate, there is an element of uncertainty. A prediction interval acknowledges these uncertainties and provides a range in

<sup>38</sup> The methodology is based on Chapter 3 in Neter, Wasserman, and Kutner (*Applied Linear Statistical Models*, 3rd Edition, 1990).

which the actual point should fall. The prediction percentage describes the probability that the actual point will fall within the given range. The determination of the interval size is a statistical process that includes consideration of several factors including previous years of actual data.

There are any number of variables that impact safety performance, many of which are outside the control of the State DOT. For the “rate” measures, the FHWA further recognizes that it is a projection (e.g., number of fatalities) divided by a projection (i.e., VMT), and as such, there is even less certainty in the projection. Recognizing the uncertainty in setting the projection point, the FHWA proposes that a 70 percent prediction interval be used and that the actual outcome fall at or below the upper bound of that interval for significant progress to be achieved. If the actual outcome is above the upper bound of the prediction interval for the projection point, significant progress was not achieved. The FHWA proposes a 70 percent prediction interval to assess significant progress because a prediction interval below 70 percent would be too small to allow for the uncertainty in the prediction. Similarly, prediction intervals above 70 percent belie the fact that a projection point is merely a projection. The FHWA seeks comment on whether the underlying methodology of the prediction interval is appropriate. An Example Application describing how the historical trend line, projection point, and prediction interval are developed to assess achievement of significant progress is presented at the end of this section.

In subparagraph (3), the FHWA proposes to specify that a State DOT is determined to overall have achieved or made significant progress toward achieving its performance targets when at least 50 percent of the total number of performance targets the State DOT established for the respective reporting year are achieved or the FHWA has determined the State DOT has made significant progress toward achieving its targets under proposed section 490.211(b). This means that if a State DOT has four performance targets, then the State DOT would need to achieve or make significant progress toward achieving at least two of those targets in order for the State DOT to be evaluated as overall having achieved its targets or made significant progress toward achieving its targets in carrying out the HSIP. As an example, if a State DOT chooses to establish urbanized and non-urbanized performance targets for the number of fatalities and for the rate of serious injuries, it would have

established eight performance targets. The State DOT would need to have achieved or made significant progress toward achieving at least four of those targets for the FHWA to determine a State has overall achieved its targets or made significant progress toward achieving its targets. The FHWA proposes at least 50 percent for the achievement of overall significant progress because it would provide a meaningful way to evaluate progress while providing State DOTs the flexibility to establish aggressive targets to achieve the national goals defined in 23 U.S.C. 150. The FHWA seeks comment on whether 50 percent is the appropriate threshold for determining if a State has overall achieved or made significant progress toward achieving its performance targets.

In section 490.211(c), the FHWA proposes that if it determines that a State has not overall achieved or made significant progress toward achieving safety performance targets, the State DOT would need to comply with 23 U.S.C. 148(i). The provisions in 23 U.S.C. 148(i) require that State DOTs that have not achieved or made significant progress toward achieving safety performance targets must: (1) Use obligation authority only for HSIP projects equal to the HSIP apportionment for the fiscal year prior to the year for which the overall performance targets were not achieved or significant progress was not made, and (2) submit an annual implementation plan that describes actions the State DOT will take to achieve targets based on a detailed analysis, including analysis of crash types. The implementation plan must: (a) Identify roadway features that constitute a hazard to road users; (b) identify highway safety improvement projects on the basis of crash experience, crash potential, or other data-supported means; (c) describe how HSIP funds will be allocated, including projects, activities, and strategies to be implemented; (d) describe how the proposed projects, activities, and strategies funded under the State HSIP will allow the State DOT to make progress toward achieving the safety performance targets; and (e) describe the actions the State DOT will undertake to achieve the performance targets.

The following example illustrates how these provisions could be carried out. A State DOT establishes targets for performance measures for CY 2017. The FHWA would make a determination and inform the State DOT if it achieved or made significant progress toward achieving CY 2017 performance targets by March 1, 2020. This schedule takes

into account the time delay in obtaining final FARS and HPMS data, which in this example would not be available until December 2019. State DOTs would have the result of FHWA’s evaluation for preparing their HSIP reports for the 2021 reporting cycles, which would be due to the FHWA by August 31, 2020. If a State had not achieved or made significant progress toward its overall 2017 performance targets, then that State DOT would need to use obligation authority in FY 2021 equal to its FY 2016 HSIP apportionment (1 year prior to 2017) for use only on HSIP projects. The State DOT would also need to submit an implementation plan describing the actions that the State DOT will take to achieve its targets.

For any year the FHWA determines that a State DOT has overall achieved or made significant progress toward achieving the performance targets of the State DOT, that State DOT would not be required to use obligation authority or submit an implementation plan for the subsequent year. If, in some future year, the FHWA determines that a State DOT does not overall achieve or make significant progress toward achieving its performance targets, the State DOT would at that time need to submit an implementation plan as well as use obligation authority as required in section 23 U.S.C. 148(i).

In section 490.211(d), as required by 23 U.S.C. 148(i), the FHWA proposes that it will evaluate progress within 3 months of the date that final FARS data is available for the first year State DOTs set performance targets. Because of the delay in availability of final FARS data, the FHWA can conduct the evaluation 3 years after the State DOT establishes the target. The FHWA would continue to evaluate achievement of each performance target every year thereafter.

#### *Section 490.213 Reporting of Targets for the Highway Safety Improvement Program*

In section 490.213(a), the FHWA proposes that State DOT reporting of the safety performance measures and targets be done in accordance with 23 CFR part 924. State DOT targets would be reported in accordance with 23 CFR 924.15(a)(1)(iii) in the proposed HSIP regulation (RIN 2125–AF56).

In section 490.213(b), the FHWA proposes that the manner in which MPOs report their established targets be documented within the Metropolitan Planning Agreement, which is regulated under 23 CFR part 450. The MPOs would report their established safety targets to the relevant State DOTs in a manner that is agreed upon by both

parties and documented in the Metropolitan Planning Agreement.

In paragraph (c), the FHWA also proposes that MPOs report baseline safety performance and progress toward the achievement of their safety targets in the system performance report in the metropolitan transportation plan, as provided in 23 U.S.C. 134(i)(2)(C).

*Example Application of Proposed Target Assessment and Significant Progress Determination*

This fictional example demonstrates the State DOT process for establishing targets and the FHWA process to evaluate whether a State DOT has achieved or made significant progress toward achieving the performance targets of the State DOT in accordance with 23 U.S.C. 148(i). The example explains how the historical trend line, projection point, and prediction interval are developed by the FHWA to assess achievement of significant progress in cases where State performance targets are not achieved. The example assumes an effective date for the rule in the spring of 2015.

Step 1: The State establishes targets and reports them to FHWA.

The State DOT submits its targets for each of the performance measures for CY 2017 in the HSIP report due by August 31, 2016. The targets would be

identical for equivalent measures in the HSP, in keeping with section 490.209 and the NHTSA IFR, subject to the MAP-21 requirement that the performance measures in the HSP are coordinated with the GHSA.

The FHWA recognizes that there are numerous methods for developing and establishing performance targets to comply with this subpart. In this example, consistent with 23 U.S.C. 148 and 23 U.S.C. 402, the State DOT uses an evidence-based, data-driven approach to establish its targets for all measures. In doing so, the State DOT recognizes that a new primary seat belt law takes effect in CY 2016 and calibrates its fatality targets by reducing the anticipated number of fatalities for CY 2017. The State DOT makes this calibration to its trend line by using evidentiary data contained in the NHTSA Research Note “States With Primary Enforcement Laws Have Lower Fatality Rates.”<sup>39</sup> Based on the passage of the law and information in the Research Note, the State estimates a 10 percent increase in seat belt use rate, which equates to an anticipated reduction of 59 fatalities. The State DOT does not believe other external factors beyond a State’s control (e.g. economic conditions, weather patterns, technological safety improvements) will have a significant effect on the crash

numbers during the year and did not use these factors to calibrate the trend line further. The State DOT does not elect to set urbanized and non-urbanized targets for any of the performance measures.

Table 1 shows the data available to the State DOT and the targets established for the 2013–2017 period. Note that the target for the fatality number performance measure is less than the projection point to account for the estimated reduction in fatalities in CY 2017 attributable to the passage of a primary seat belt law. The small change in the fatality number, however, did not affect the fatality rate target. For this example, the State DOT had CY 2013 final FARS data available to calculate the 2009–2013 5-year rolling average for the subject measures.

The FHWA recognizes that a State DOT may have partial data to calculate the 2010–2014, 2011–2015 and 2012–2016 5-year rolling averages and thereby estimate a stronger target. For this example, the 2010–2014 and 2011–2015 data is estimated and the 2012–2016 data were not available. Figure 1 shows graphs of the trend lines developed by the State DOT when establishing its targets. In this example, the State DOT does not elect to separate urbanized and non-urbanized measures.

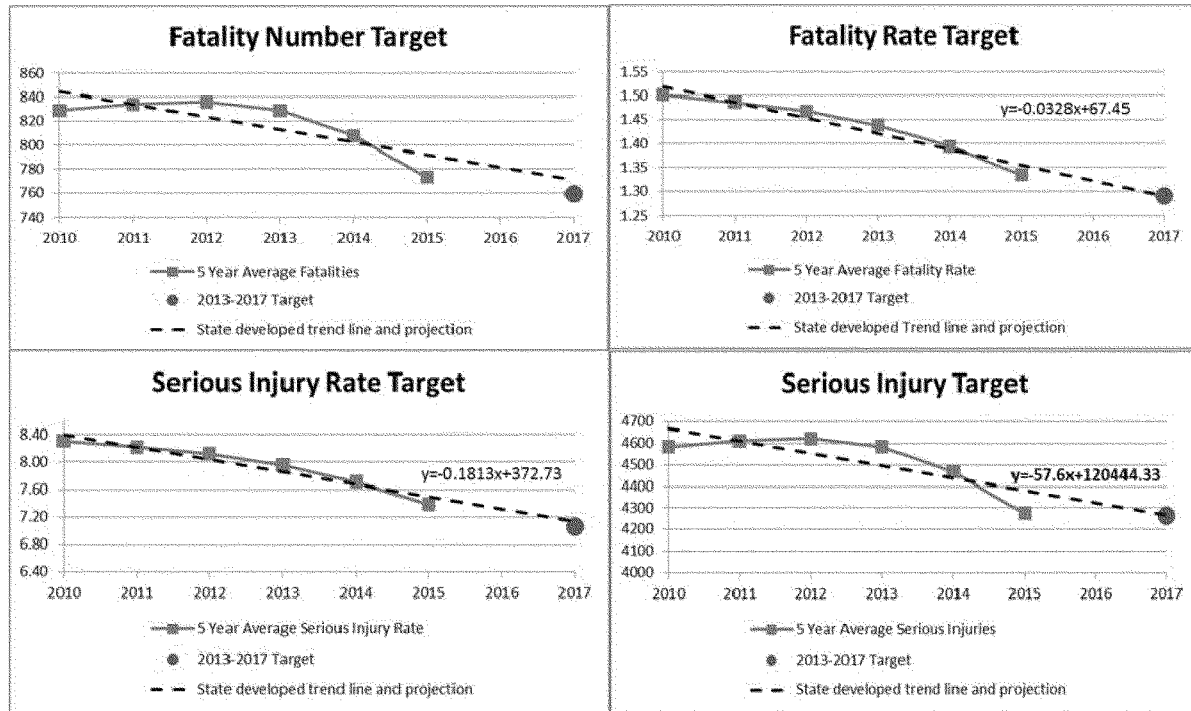
TABLE 1—AN EXAMPLE OF THE DATA AVAILABLE TO A STATE DOT AND THE TARGETS ESTABLISHED FOR CY 2017 [For Illustration Purposes]

State data for setting CY2017 targets									
Dates for 5-year rolling average	2006–2010	2007–2011	2008–2012	2009–2013	2010–2014	2011–2015	2012–2016	2013–2017 Projection	2013–2017 Target
Calendar year	2010	2011	2012	2013	2014	2015	2016	2017	2017
Number of Fatalities.	629	834	836	829	808	773	Unavailable .....	770	759
Rate of Fatalities	1.50	1.49	1.47	1.44	1.39	1.33	Unavailable .....	1.29	1.29
Number of Serious Injuries.	4584	4612	4623	4584	4468	4275	Unavailable .....	4265	4625
Rate of Serious injuries.	8.31	8.22	8.12	7.95	7.71	7.38	Unavailable .....	7.05	7.05
VMT (in millions)	55183	56112	56960	57640	57974	57941	Unavailable .....	N/A	N/A

<sup>39</sup> States With Primary Enforcement Laws Have Lower Fatality Rates, DOT HS 810 923, February

2008, <http://www-nrd.nhtsa.dot.gov/Pubs/810921.pdf>.

**Figure 1 An Example of the Trend Lines developed by a State DOT in Establishing Targets (for illustration purposes)**



Step 2: FHWA assessment of targets and, if necessary, significant progress.

The FHWA will assess target achievement by the State for CY 2017 beginning in CY 2020 by:

1. Assessing the target for each performance measure.
2. Assessing both the urbanized and the non-urbanized target for each performance measure, if the State elected to establish such targets.
3. If any target is not achieved, assessing whether the State made significant progress for the target.
4. Making an overall assessment for achieving targets and/or made significant progress.
5. Completing the assessment report on progress and submitting it to the State DOT by March 31, 2020.

The FHWA must wait 3 years, until CY 2020, to assess whether CY 2017 targets were achieved because the FARS and HPMS data are not available until that time as explained in the discussion of section 490.211. Note that although the time lag for assessment will remain constant, target achievement will be assessed annually.

Each target will be evaluated through the use of: Final FARS data for the fatality number measure; State DOT data for the serious injuries number measure; final FARS data and HPMS data for the fatality rate measure; and State DOT and HPMS data for the serious injury rate measure. The State data for the serious injury measures will be taken from the serious injury crash data submitted in the State HSIP report, in accordance

with section 490.213, in this example, due August 31, 2018. For purposes of evaluating whether the State DOT made significant progress for the serious injury measures, FHWA will use 10 years of serious injuries data for equivalent years that final FARS data were available at the time the target was established.

Table 2 provides the actual final FARS, HPMS, and State data used in this example to assess having achieved or made significant progress toward achieving targets. The FHWA will only use final FARS and HPMS data that was available to the State at the time of target establishment. Similarly, FHWA will use serious injury data for this analysis from the same period of time.

**TABLE 2—FINAL DATA FOR ASSESSING TARGET ACHIEVEMENT**  
[For Illustration Purposes]

CY2017 Final 5-year Rolling Average FARS, HPMS and Serious Injuries Data for Assessing Target Achievement		
	Target	Actual
Number of Fatalities .....	759	769
Rate of Fatalities .....	1.29	1.29
Number of Serious Injuries .....	4625	4599
Rate of Serious Injuries .....	7.05	7.05

The results are as follows:

1. Fatality Number Measure Target—The State DOT target for this measure was 759 and the actual number was 769, so the State DOT did not achieve this

target. The FHWA will evaluate significant progress.

2. Fatality Rate Measure Target—The State DOT target for this measure was 1.29 and the actual rate was 1.29, so the State DOT achieved this target.

3. Serious Injuries Number Measure Target—The State DOT target for this measure was 4625 and the actual number was 4599, so the State DOT achieved this target.

4. Serious Injury Rate Measure Target—The State DOT target for this measure was 7.05 and the actual rate was 7.05, so the State DOT achieved this target.

5. If the State DOT had elected to establish urbanized and non-urbanized

targets for any of the performance measures, the FHWA would next evaluate whether each of these targets were achieved.

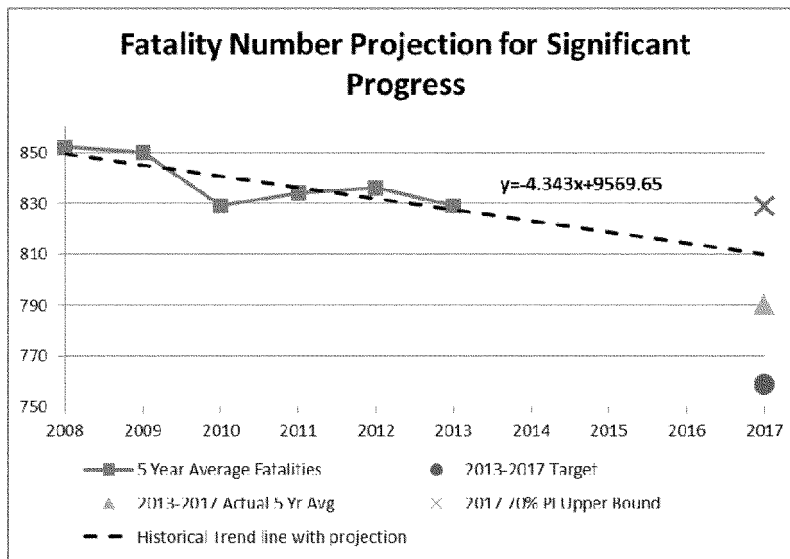
In this case, the State DOT did not achieve its fatality number measure target, so an evaluation of significant progress for that measure is presented below. Although the State DOT has already achieved 50 percent of its targets, the significant progress evaluation is included for illustrative purposes. Note that if the State DOT had elected to establish urbanized and non-urbanized targets for any of the performance measures, the determination of whether the State DOT had already achieved 50 percent of its

targets would be based on the total number of safety performance targets set.

The FHWA will develop a historical trend line, projection point, and prediction interval for this analysis. The historical trend line, as provided in section 490.211(b), requires 10 consecutive years of data. This results in six data points derived from consecutive 5-year rolling averages of the final FARS data that were available at the time the target was established. Table 3 provides the data for the assessment of the fatality number target in this example. Figure 2 provides this information as a graph.

TABLE 3—AN EXAMPLE OF THE DATA FOR THE FATALITY NUMBER MEASURE TARGET  
[For Illustrative Purposes]

Final FARS 5-year rolling average fatalities, projection, target and upper bound prediction interval data													
2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Proje- ction	2017 Target	2017 Actual	2017 70% PI Upper Bound	
852	850	829	834	836	829	NA	NA	NA	810.10	759	769	825.66	



The FHWA calculated the 70 percent prediction interval for this analysis to be ± 15.56.<sup>40</sup> Therefore, the upper bound for the prediction interval for the fatality number measure in this analysis is 825.66. The actual number of fatalities for 2013–2017 5-year rolling average was 769. In this case, the actual number is at or below the upper bound for the prediction interval, so the State DOT made significant progress for this measure.

Finally, the FHWA will evaluate overall achievement or having made

significant progress toward achieving performance targets. As required in section 490.211(b)(3), at least 50 percent of the targets must achieve or make significant progress toward achieving the targets, in order for the State DOT to overall achieve or make significant progress toward achieving targets. In this case, all four performance measures achieved or made significant progress toward achieving targets. The FHWA will report this finding to the State DOT by March 31, 2020. If, however, 50 percent of the targets were not achieved or made significant progress, the requirements in section 490.211(c) would need to be applied. The FHWA

would also notify the State DOT of such action on or before March 31, 2020.

**VI. 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 in the docket at the above address. Comments received after the comment closing date will be filed in the docket and will be considered to the extent practicable. In addition to late comments, the FHWA will also continue to file relevant information in the docket as it becomes available after the comment period closing date, and interested persons should continue to

<sup>40</sup> A document summarizing the steps used to calculate the prediction interval using *Applied Linear Statistical Models*, 3rd Edition, 1990 may be found in the docket.

examine the docket for new material. A final rule may be published at any time after close of the comment period and after DOT has had the opportunity to review the comments submitted.

*Executive Order 12866 (Regulatory Planning and Review), Executive Order 13563 (Improving Regulation and Regulatory Review), and DOT Regulatory Policies and Procedures*

The DOT has determined that this proposed rule constitutes a significant regulatory action within the meaning of Executive Order (EO) 12866 and is significant within the meaning of the DOT regulatory policies and procedures. This action complies with EO 12866 and 13563 to improve regulation. This action is considered significant because of widespread public interest in the transformation of the Federal-aid highway program to be performance-based, although it is not economically significant within the meaning of EO 12866. The FHWA is presenting a Regulatory Impact Analysis (regulatory analysis or RIA) in support of the NPRM on Safety Performance Measures for the Highway Safety Improvement Program. The regulatory analysis analyzes the economic impact, in terms of costs and benefits, on Federal, State, and local governments, as well as private entities regulated under this action, as required by EO 12866 and EO 13563. The estimated costs are measured on an incremental basis, relative to current safety performance reporting practices.

This section of the NPRM identifies the estimated costs resulting from the proposed rule—and how many serious injuries and fatalities would need to be avoided to justify this rule—in order to inform policy makers and the public of

the relative value of the current proposal. The complete RIA may be accessed from the rulemaking's docket (FHWA–2013–0020). Each of the three performance measure rulemakings will include a discussion on the costs and benefits resulting from the proposed rules contained in each respective rulemaking; however, the third performance measure rule will provide a comprehensive discussion on the costs and benefits associated with all three performance measure rules for informational purposes.

The cornerstone of MAP–21's highway program transformation is the transition to a performance-based program. In accordance with the law, State DOTs will invest resources in projects to achieve performance targets that will make progress toward national goals. Safety is one goal area where MAP–21 establishes national performance goals for Federal-aid highway programs. The law requires State DOTs to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. The MAP–21 requires the FHWA to promulgate a rule to establish safety performance measures.

#### *Estimated Cost of the Proposed Rule*

To estimate costs of the proposed rule, the FHWA assessed the level of effort, expressed in labor hours and the labor categories, needed to comply with each component of the proposed rule. Level of effort by labor category is monetized with loaded wage rates to estimate total costs. Table 1 displays the total cost of the proposed rule for the 10-year study period (2015–2024). Total costs are estimated to be \$66.7 million undiscounted, \$53.9 million discounted

at 7 percent, and \$60.5 million discounted at 3 percent. Costs associated with the establishment of performance targets make up 53 percent of the total costs of the proposed rule. The costs in the tables assume a portion of MPOs, approximately half, would establish their own targets and a portion would adopt State DOT targets. It is assumed that State DOTs and MPOs serving populations greater than 200,000 would use staff to analyze safety trends and establish performance targets on an annual basis and MPOs serving a population less than 200,000 would adopt State DOT targets rather than establish their own safety performance targets and would therefore not incur any incremental costs. The FHWA made this assumption because larger MPOs may have more resources available to develop performance targets. The FHWA believes that this is a conservative estimate as larger MPOs may elect not to set their own targets for any variety of reasons, including resource availability.

In addition, costs associated with the training of law enforcement personnel make up 36 percent of the total costs of the proposed rule. This is estimated to be a one-time incremental cost occurring in 2016 impacting law enforcement agencies (\$58,490 per State law enforcement agency, \$1,207 per local law enforcement agency, and \$1,697 per sheriff's department incurred in 2016 only). These amounts represents less than 3 percent of the unloaded mean wage of a local government law enforcement officer (\$57,670 in May 2012); further, law enforcement officers represent about 10 percent of all local government employees.<sup>41</sup>

TABLE 1—TOTAL ESTIMATED COST OF THE PROPOSED RULE

Cost components	10-yr total cost		
	Undiscounted	7%	3%
Cost of Section 490.205**	\$26,336,977	\$24,657,655	\$25,589,318
KABCO Compliance	348,983	348,983	348,983
Minor Revisions to Database	287,758	287,758	287,758
Convert non-KABCO data	61,225	61,225	61,225
MMUCC Compliance	25,669,624	23,990,303	24,921,965
Modifications to Database Platform	624,495	583,640	606,306
Modifications to PAR Report	1,070,213	1,000,199	1,039,042
Law Enforcement Training	23,974,916	22,406,464	23,276,617
Establish 5-Year Rolling Average	318,370	318,370	318,370
Cost of Section 490.209	35,278,769	25,538,819	30,520,482
Establish and Update Performance Targets	35,278,769	25,538,819	30,520,482
Cost of Section 490.211	5,079,514	3,677,135	4,394,406
Develop an Implementation Plan	5,079,514	3,677,135	4,394,406
Total Cost of Proposed Rule	66,695,260	53,873,609	60,504,205

\* Totals may not sum due to rounding.

\*\* Costs of Section 490.205 Represent one-time start up costs.

<sup>41</sup> BLS data for local governments (May 2012), [http://www.bls.gov/oes/current/naics4\\_999300.htm#33-0000](http://www.bls.gov/oes/current/naics4_999300.htm#33-0000).

*Break-Even Analysis*

Currently, there are many disparities in the way State DOTs code and define safety performance measures (e.g., serious injuries). The definitions and terminology (i.e. “incapacitating injury” vs. “severe injury”) that States use can differ greatly. Below are the terminology and definitions that two different States use to code their most serious injury:

- “Incapacitating Injury”: This means that the victim must be carried or otherwise helped from the scene. If the victim needs no help, then either a code 3 or 4 applies even though medical assistance may have been administered at the scene.
- “Severe Injury”: An injury other than a fatal injury which results in broken bones, dislocated or distorted limbs, severe lacerations, or unconsciousness at or when taken from the collision scene. It does not include minor laceration.

These discrepancies have long been recognized as a problem in collecting and analyzing data at the national level. The proposed rulemaking would establish a single terminology and definition for the performance measures for the purpose of carrying out the HSIP to assess serious injuries and fatalities on all public roads. In addition, the rule would establish the processes that (1) State DOTs and MPOs would use to

establish and report safety targets and (2) FHWA would use to assess progress that State DOTs have made toward achieving safety targets. Upon implementation, the FHWA expects that the proposed rule would result in some significant benefits. Specifically, the FHWA expects safety investment decision making to be more informed through the use of consistent and uniform measures, State DOTs to be more accountable to the public for the use of Federal funds to achieve their targets for performance and to reduce fatalities and serious injuries on all public roadways, in the HSIP, and for progress to be made toward the overall achievement of the MAP-21 national goal for safety. Each of these benefits is discussed in further detail in the Regulatory Impact Analysis, which we have placed in the docket. Although these improvements may lead to more effective policies, it is not appropriate to assume that any reductions in fatalities and serious injuries (post-rule implementation) are solely a result of this rule. Decisions regarding use of highway funding are the result of a multitude of factors (e.g. politics, project priorities, or other studies). In addition, these benefits are amorphous and difficult to quantify. Therefore, for this proposed rulemaking, the FHWA performed a break-even analysis as

described in Office of Management and Budget (OMB) Circular A-4 that estimates the number of fatalities and incapacitating injuries the rule would need to prevent for the benefits of the rule to justify the costs. Table 2 displays the results from a break-even analysis using fatalities and incapacitating injuries as the reduction metric. The results show that the proposed rule must prevent approximately 7 fatalities or an equivalent 153 incapacitating injuries, nationwide, over 10 years to generate enough benefits to outweigh the cost of the proposed rule. This translates to approximately 1 avoided fatality or an equivalent 15.3 incapacitating injuries per year nationwide.<sup>42</sup> The FHWA believes that the requirements proposed in this rule would result in the achievement of this break-even threshold based on the actual performance improvements realized after the implementation of strategic highway safety plans which were first required to be developed as part of the previous surface transportation authorization. The FHWA further believes that the proposed requirements in this rule build on the plan requirements and, as a result, the benefits of the rule would be realized such that they outweigh the costs.

TABLE 2—BREAK-EVEN ANALYSIS USING FATALITIES AND INCAPACITATING INJURIES REDUCTION METRIC

Undiscounted 10-year costs	Reduction in fatalities required for rule to be cost-beneficial	Average annual reduction in fatalities required for rule to be cost-beneficial	Reduction in incapacitating injuries required for rule to be cost-beneficial	Average annual reduction in incapacitating injuries required for rule to be cost-beneficial
a	b = a ÷ \$9,100,000	c = b ÷ 10 years	d = a ÷ \$435,208	e = d ÷ 10 years
\$66,695,260	7.3	0.7	153.2	15.3

*Regulatory Flexibility Act*

In compliance with the Regulatory Flexibility Act (Pub. L. 96–354, 5 U.S.C. 601–612), FHWA has evaluated the effects of this NPRM on small entities and anticipates that this action would not have a significant economic impact on a substantial number of small entities. The proposed rule affects three types of entities: State governments, MPOs, and local law enforcement agencies. State governments do not meet the definition of a small entity.

The MPOs are considered governmental jurisdictions, so the small entity standard for these entities is whether the affected MPOs serve less than 50,000 people. As discussed in the

RIA, the proposed rule is expected to impose costs on MPOs that serve populations exceeding 200,000. Further, MPOs serve urbanized areas with populations of more than 50,000. Therefore, the MPOs that incur economic impacts under this proposed rule do not meet the definition of a small entity.

Local law enforcement agencies, however, may be subsets of small governmental jurisdictions. Nonetheless, the RIA estimates minimal one-time costs to local law enforcement agencies, as discussed above, and these costs represent a fraction of a percent of revenues of a small government. Therefore, I hereby certify that this regulatory action would not have a

significant impact on a substantial number of small entities.

*Unfunded Mandates Reform Act of 1995*

The FHWA has determined that this NPRM would not impose unfunded mandates as defined by the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4, March 22, 1995, 109 Stat. 48). This rule does not contain a Federal mandate that may result in expenditures of \$143.1 million or more in any one year (when adjusted for inflation) in 2012 dollars for either State, local, and tribal governments in the aggregate, or by the private sector. The FHWA will publish a final analysis, including its

<sup>42</sup> For reference, according to “NHTSA Traffic Safety Facts 2009,” there were 250,808 severe crashes in 2009.

response to public comments, when it publishes a final rule. Additionally, the definition of “Federal mandate” in the Unfunded Mandates Reform Act excludes financial assistance of the type in which State, local, or tribal governments have authority to adjust their participation in the program in accordance with changes made in the program by the Federal Government. The Federal-aid highway program permits this type of flexibility.

*Executive Order 13132 (Federalism Assessment)*

The FHWA has analyzed this NPRM in accordance with the principles and criteria contained in EO 13132. The FHWA has determined that this action would not have sufficient federalism implications to warrant the preparation of a federalism assessment. The FHWA has also determined that this action would not preempt any State law or State regulation or affect the States’ ability to discharge traditional State governmental functions.

*Executive Order 12372 (Intergovernmental Review)*

The regulations implementing EO 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program. This EO applies because State and local governments would be directly affected by the proposed regulation, which is a condition on Federal highway funding. Local entities should refer to the Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction, for further information.

*Paperwork Reduction Act*

Under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501, *et seq.*), Federal agencies must obtain approval from the OMB prior to conducting or sponsoring a collection of information. Details and burdens in this proposed rule would be realized in Planning and HSIP reporting. The PRA activities are already covered by existing OMB Clearances. The reference numbers for those clearances are OMB: 2132–0529 and 2125–0025 with expiration dates of May 20, 2016. Any increase in PRA burdens caused by MAP–21 in these areas were addressed in PRA approval requests associated with those rulemakings.

*National Environmental Policy Act*

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

environment and meets the criteria for the categorical exclusion at 23 CFR 771.117(c)(20).

*Executive Order 12630 (Taking of Private Property)*

The FHWA has analyzed this proposed rule under EO 12630, Governmental Actions and Interference 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 EO 12630.

*Executive Order 12988 (Civil Justice Reform)*

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

*Executive Order 13045 (Protection of Children)*

We have analyzed this rule under EO 13045, Protection of Children from Environmental Health Risks and Safety Risks. The FHWA certifies that this action would not cause an environmental risk to health or safety that might disproportionately affect children.

*Executive Order 13175 (Tribal Consultation)*

The FHWA has analyzed this action under EO 13175, dated November 6, 2000, and believes that the proposed action would not have substantial direct effects on one or more Indian tribes; would not impose substantial direct compliance costs on Indian tribal governments; and would not preempt tribal laws. The proposed rulemaking addresses obligations of Federal funds to States for Federal-aid highway projects and would not impose any direct compliance requirements on Indian tribal governments. Therefore, a tribal summary impact statement is not required.

*Executive Order 13211 (Energy Effects)*

The FHWA has analyzed this action under EO 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use. The FHWA has determined that this is not a significant energy action under that order and is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Therefore, a Statement of Energy Effects is not required.

*Executive Order 12898 (Environmental Justice)*

The EO 12898 requires that each Federal agency make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minorities and low-income populations. The FHWA has determined that this rule does not raise any environmental justice issues.

*Regulation Identification Number*

A 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 number 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 490**

Bridges, Highway safety, Highways and roads, Reporting and record keeping requirements.

Issued on: February 28, 2014.

**Gregory G. Nadeau,**

*Deputy Administrator, Federal Highway Administration.*

In consideration of the foregoing, the FHWA proposes to amend title 23, Code of Federal Regulations, by adding part 490 to read as follows:

**PART 490—NATIONAL PERFORMANCE MANAGEMENT MEASURES**

**Subpart A—General Information**

Sec.

490.101 Definitions.

**Subpart B—National Performance Measures for the Highway Safety Improvement Program**

490.201 Purpose.

490.203 Applicability.

490.205 Definitions.

490.207 National performance measures for the Highway Safety Improvement Program.

490.209 Establishment of performance targets.

490.211 Determining whether a State DOT has made significant progress toward achieving performance targets.

490.213 Reporting of targets for the Highway Safety Improvement Program.

**Authority:** 23 U.S.C. 134, 135, 148(i) and 150; 49 CFR 1.85.



**Subpart A—General Information****§ 490.101 Definitions.**

Unless otherwise specified, the following definitions apply to this part: *Highway Performance Monitoring System* (HPMS) is a national level highway information system that includes data on the extent, condition, performance, use, and operating characteristics of the Nation's highways.

*Measure* means an expression based on a metric that is used to establish targets and to assess progress toward achieving the established targets (e.g., a measure for flight on-time performance is percent of flights that arrive on time, and a corresponding metric is an arithmetic difference between scheduled and actual arrival time for each flight).

*Metric* means a quantifiable indicator of performance or condition.

*Non-Urbanized Area* means any geographic area that is not an "urbanized area" under either 23 U.S.C. 101(a)(34) or 23 CFR 450.104.

*Target* means a quantifiable level of performance or condition, expressed as a value for the measure, to be achieved within a time period required by FHWA.

**Subpart B—National Performance Measures for the Highway Safety Improvement Program****§ 490.201 Purpose.**

The purpose of this subpart is to implement the requirements of 23 U.S.C. 150(c)(4), which requires the Secretary of Transportation to establish performance measures for the purpose of carrying out the Highway Safety Improvement Program (HSIP) and for State Departments of Transportation to use in assessing:

- (a) Serious injuries and fatalities per vehicle miles traveled; and
- (b) The number of serious injuries and fatalities.

**§ 490.203 Applicability.**

The performance measures are applicable to all public roads covered by the HSIP carried out under 23 U.S.C. 130 and 148.

**§ 490.205 Definitions.**

Unless otherwise specified, the following definitions apply in this subpart:

*5-year rolling average* means the average of 5 individual, consecutive annual points of data (e.g. the 5-year rolling average of the annual fatality rate).

*Fatality Analysis Reporting System* (FARS) means the final FARS data and is a nationwide census providing public

yearly data regarding all road user fatalities.

*Historical trend line* means a trend line, developed by FHWA from 10 years of data, used to plot a projection point for future numbers and rates of serious injuries and fatalities.

*KABCO* means the coding convention system for injury classification established by the National Safety Council.

*Made significant progress* means, in accordance with 23 U.S.C. 148(i), an outcome at or below the upper bound of a prediction interval.

*Number of Fatalities* means the total number of persons suffering fatal injuries in a motor vehicle traffic crash during a calendar year, based on the data reported by the Fatality Analysis Reporting System (FARS) database.

*Number of Serious Injuries* means the total number of persons suffering at least one serious injury for each separate motor vehicle traffic crash during a calendar year, as reported by the State, where the injury status is MMUCC, latest edition, compliant. For serious injuries that are not MMUCC compliant, the number of serious injuries means serious injuries that are converted to KABCO by use of conversion tables developed by NHTSA.

*Prediction Interval* means an estimate of the upper and lower bounds within which a future observation will fall, given a specific probability.

*Projection point* means a future point based on historical trend line data.

*Rate of Fatalities* means the ratio of the total number of fatalities (as defined above) to the number of vehicle miles of travel (VMT) as reported by the Highway Performance Monitoring System (HPMS) (expressed in 100 million VMT) in a calendar year.

*Rate of Serious Injuries* means the ratio of the total number of serious injuries (as defined above) to the number of VMT as reported by the HPMS (expressed in 100 million vehicle miles of travel) in a calendar year.

*Serious Injuries* means in the first 18 months of the effective date of this rule, injuries classified as "A" on the KABCO scale through use of the conversion tables developed by NHTSA; after 18 months of the effective date of this rule, "suspected serious injury" (A) as defined in the Model Minimum Uniform Crash Criteria (MMUCC), latest edition.

**§ 490.207 National performance measures for The Highway Safety Improvement Program.**

(a) There are four performance measures for the purpose of carrying out the Highway Safety Improvement Program (HSIP). They are:

- (1) Number of fatalities;
- (2) Rate of fatalities;
- (3) Number of serious injuries; and
- (4) Rate of serious injuries.

(b) Each performance measure is based on a 5-year rolling average. The performance measures are calculated as follows, rounding the total to the hundredth decimal place:

(1) The performance measure for the number of fatalities is the 5-year rolling average of the total number of fatalities for each State and shall be calculated by adding the number of fatalities for the most recent 5 consecutive years for which data are available and dividing by five.

(2) The performance measure for the rate of fatalities is the 5-year rolling average of the State's fatality rate per VMT and shall be calculated by first calculating the number of fatalities per 100 million VMT as reported in HPMS for the most recent 5 consecutive years for which data are available, adding the results, and dividing by five.

(3) The performance measure for the number of serious injuries is the 5-year rolling average of the total number of serious injuries for each State and shall be calculated by adding the number of serious injuries for the most recent 5 consecutive years for which data are available and dividing by five.

(4) The performance measure for the rate of serious injuries is the 5-year rolling average of the total number of serious injuries per VMT and shall be calculated by first calculating the number of serious injuries per 100 million VMT as reported in HPMS for each of the most recent 5 consecutive years for which data are available, adding the results, and divided by five.

(c) For purposes of calculating serious injuries performance measures in § 490.207(b)(3) and (4):

(1) By the effective date of this rule, serious injuries shall be coded (A) in the KABCO injury classification scale through use of the NHTSA serious injuries conversion tables.

(2) Within 18 months of the effective date of this rule, serious injuries must be determined using MMUCC, latest edition.

(d) FHWA recommends that States prepare themselves so that no later than January 1, 2020, all States use a medical record injury outcome reporting system that links injury outcomes from medical records to crash reports.

**§ 490.209 Establishment of performance targets.**

(a) State DOTs shall establish targets annually for each performance measure identified in § 490.207(a) in a manner that is consistent with the following:

(1) The State DOT targets shall be identical to the targets established by the State Highway Safety Office for common performance measures reported in the State's Highway Safety Plan, subject to the requirements of 23 U.S.C. 402(k)(4), and as coordinated through the State Strategic highway safety plan.

(2) State DOT targets shall represent performance outcomes anticipated for the calendar year following the HSIP annual report date, as provided in 23 CFR 924.15.

(3) State DOT performance targets shall represent the anticipated performance outcome for all public roadways within the State regardless of ownership or functional class.

(4) State DOT targets shall be reported in the HSIP annual report that is due after one year from the effective date of this rule and in each subsequent HSIP annual report thereafter.

(5) The State DOT shall include in the HSIP Report 10 years of serious injury data.

(i) The 10 years of data shall be the same years that final FARS data were available at the time the target was established.

(ii) The serious injury data shall be either MMUCC compliant or converted to the KABCO system (A) for injury classification through use of the NHTSA conversion tables.

(6) Unless approved by FHWA, State DOTs shall not change their target once it is submitted in the HSIP annual report.

(b) State DOTs may, as appropriate, establish one additional performance target for all urbanized areas and one additional performance target for all non-urbanized areas within the State for each performance measure.

(c) The Metropolitan Planning Organizations (MPOs) shall establish performance targets for each of the measures identified in § 490.207(a), where applicable, in a manner that is consistent with the following:

(1) The MPOs shall establish targets not later than 180 days after the respective State DOT establishes and reports targets in the State HSIP annual report.

(2) After the MPOs establish the targets, the State DOT must be able to

provide those targets to FHWA, upon request.

(3) The MPO targets shall be established by either:

(i) Planning and programming safety projects so that they contribute toward the accomplishment of the State DOT targets, or

(ii) Committing to quantifiable targets.

(4) The MPO targets established under paragraph (c)(3) of this section specific to the metropolitan planning area shall represent the anticipated performance outcome for all public roadways within the metropolitan planning boundary regardless of ownership or functional class.

(d) The State DOT and relevant MPOs shall coordinate on the selection of targets in accordance with 23 CFR 450 to ensure consistency, to the maximum extent practicable.

**§ 490.211 Determining whether a State DOT has made significant progress toward achieving performance targets.**

(a) The determination for having made significant progress toward achieving the performance targets under 23 U.S.C. 148(i) will be determined based on final FARS data for the fatality number, final FARS and HPMS data for the fatality rate, State reported data for the serious injuries number, and State reported data and HPMS data for the serious injuries rate. The State-reported serious injury data will be taken from the HSIP report in accordance with 23 CFR 924.15.

(b) FHWA will evaluate whether a State DOT has achieved or made significant progress toward achievement of each performance target.

(1) Only those performance targets not achieved will be evaluated for having made significant progress.

(2) FHWA will evaluate whether a State DOT has made significant progress toward achieving a target by:

(i) Determining a historical trend line, based on 5-year rolling averages, using 10 consecutive years of the most recent FARS, HPMS, and the equivalent serious injury data available at the time the target is established.

(ii) Using that historical trend line, determining a projection point (which is also based on the rolling average) for the target year.

(iii) Determining from that projection point, a prediction interval bounded by a 70 percent upper and lower bound.

(iv) Determining if the outcome is at or below the 70 percent upper bound of the prediction interval.

(3) A State DOT is determined to have overall achieved its targets or made significant progress toward achieving its targets when at least 50 percent of the total number of performance targets is achieved or the State DOT has made significant progress as provided in paragraph (b)(2) of this section (e.g. if a State DOT has four performance targets, then the State DOT is determined to overall achieve its targets or made significant progress toward achieving its targets if it met one target and made significant progress on one target).

(c) If a State DOT has not overall achieved or made significant progress toward achieving safety performance targets in accordance with paragraph (b) of this section, the State DOT must comply with 23 U.S.C. 148(i).

(d) FHWA will evaluate whether a State DOT has overall achieved or made significant progress toward achievement of performance targets annually. The first evaluation will occur within 3 months of the date that final FARS data are available for the first year State DOTs set performance targets.

**§ 490.213 Reporting of targets for the Highway Safety Improvement Program**

(a) The targets established by the State DOT shall be reported to the FHWA in the State's HSIP annual report in accordance with 23 CFR part 924.

(b) The MPOs shall report their established safety targets to their respective State DOT in a manner that is agreed upon by both parties and documented in the Metropolitan Planning Agreement in accordance with 23 CFR part 450.

(c) The MPOs shall report baseline safety performance and progress toward the achievement of their targets in the system performance report in the metropolitan transportation plan in accordance with 23 CFR part 450.

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