whether a direct connection should be identified for such terminals, or whether being in the proximity (2 to 3 miles) of an NHS route is sufficient.

Subparts B–C [Reserved]

PART 490—NATIONAL PERFORMANCE MANAGEMENT MEASURES

Subpart A—General Information

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

Subpart C—National Performance Management Measures for the Assessing Pavement Condition

Subpart D—National Performance Management Measures for Assessing Bridge Condition

Subpart E—National Performance Management Measures To Assess Performance of the National Highway System

Subpart F—National Performance Management Measures To Assess Freight Movement on the Interstate System

Subpart G—National Performance Management Measure for Assessing the Congestion Mitigation and Air Quality Improvement Program—Traffic Congestion

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

SOURCE: 81 FR 13913, Mar. 15, 2016, unless otherwise noted.

Subpart A—General Information

SOURCE: 82 FR 6031, Jan. 18, 2017, unless otherwise noted.

§ 490.101 Definitions.

Unless otherwise specified, the following definitions apply to this part:

American Community Survey (ACS) is a national level ongoing survey from the U.S. Census Bureau that includes data on jobs, occupations, educational attainment, transportations patterns, and other topics of the Nation's population.

Attainment area as used in this part is defined in §450.104 of this chapter, Transportation Planning and Programming Definitions.

Bridge as used in this part is defined in §650.305 of this chapter, the National Bridge Inspection Standards.

Criteria pollutant is any pollutant for which there is established a NAAQS at 40 CFR part 50. The transportation related criteria pollutants per 40 CFR 93.102(b)(1) are carbon monoxide, nitrogen dioxide, ozone, and particulate matter (PM_{10} and $PM_{2.5}$).

Fuels and Financial Analysis System—Highways (Fuels & FASH) as used in this part means FHWA's system of record for motor fuel, highway program funding, licensed drivers, and registered vehicles data.

Full extent means continuous collection and evaluation of pavement condition data over the entire length of the roadway.

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.

Mainline highways means the through travel lanes of any highway. Mainline highways specifically exclude ramps, shoulders, turn lanes, crossovers, rest areas, and other pavement surfaces that are not part of the roadway normally traveled by through traffic.

Maintenance area as used in this part is defined in §450.104 of this chapter, Transportation Planning and Programming Definitions. For the purposes of this part, areas that have reached the end of their 20-year maintenance period[1] are not considered as maintenance areas.

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.

Metropolitan Planning Organization (MPO) as used in this part is defined in §450.104 of this chapter, Transportation Planning and Programming Definitions.

Metropolitan Planning Area as used in this part is defined in §450.104 of this chapter, Transportation Planning and Programming Definitions.

[1] The maintenance period in CAA Section 175A (42 U.S.C. 7505a) requires the submittal of two maintenance plans totaling 20 years, unless the applicable implementation plan specifics a longer maintenance period. The end of the maintenance period is 20-years from the effective date of the re-designation to attainment and approval of the first 10-year maintenance plan.

National Ambient Air Quality Standards (NAAQS) as used in this part is defined in §450.104 of this chapter, Transportation Planning and Programming Definitions.

National Bridge Inventory (NBI) is an FHWA database containing bridge information and inspection data for all highway bridges on public roads, on and off Federal-aid highways, including tribally owned and federally owned bridges, that are subject to the National Bridge Inspection Standards (NBIS).

National Performance Management Research Data Set (NPMRDS) means a data set derived from vehicle/passenger probe data (sourced from Global Positioning Station (GPS), navigation units, cell phones) that includes average travel times representative of all traffic on each mainline highway segment of the National Highway System (NHS), and additional travel times representative of freight trucks for those segments that are on the Interstate System. The data set includes records that contain average travel times for every 15 minutes of every day (24 hours) of the year recorded and calculated for every travel time segment where probe data are available. The NPMRDS does not include any imputed travel time data.

Nonattainment area as used in this part is defined in §450.104 of this chapter, Transportation Planning and Programming Definitions.

Non-SOV travel is defined as any travel mode other than driving alone in a motorized vehicle (*i.e.*, single occupancy vehicle or SOV travel), including travel avoided by telecommuting.

Non-urbanized area means a single geographic area that comprises all of the areas in the State that are not ''urbanized areas'' under 23 U.S.C. 101(a)(34).

Performance period means a determined time period during which condition/performance is measured and evaluated to: Assess condition/performance with respect to baseline condition/performance; and track progress toward the achievement of the targets that represent the intended condition/performance level at the midpoint and at the end of that time period. The term ''performance period'' applies to all measures in this part, except the measures for the Highway Safety Improvement Program (HSIP) in subpart B of this part. Each performance period covers a 4-year duration beginning on a specified date (provided in §490.105).

Reporting segment means the length of roadway that the State Department of Transportation (DOT) and MPOs define for metric calculation and reporting and is comprised of one or more travel time segments.

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 the Federal Highway Administration (FHWA).

Transportation Management Area (TMA) as used in this part is defined in §450.104 of this chapter, Transportation Planning and Programming Definitions.

Travel time data set means either the NPMRDS or an equivalent data set that is used by State DOTs and MPOs as approved by FHWA, to carry out the requirements in subparts E, F, and G of this part.

Travel time reliability means the consistency or dependability of travel times from day to day or across different times of the day.

Travel time segment means a contiguous stretch of the NHS for which average travel time data are summarized in the travel time data set.

Truck freight bottleneck, as used in this part, is defined as a segment of roadway identified by the State DOT as having constraints that cause a significant impact on freight mobility and reliability. Bottlenecks may include highway sections that do not meet thresholds for freight reliability identified in §490.613 or other locations identified by the State DOT. Causes may include recurring congestion, causing delays in freight movement, or roadway features that impact truck movements, such as steep grades, substandard vertical or horizontal clearances, weight restrictions, delays at border crossings or terminals, or truck operating restrictions.

[81 FR 13913, Mar. 15, 2016, as amended at 88 FR 85390, Dec. 7, 2023]

§ 490.103 Data requirements.

(a) *In general.* Unless otherwise noted in paragraphs (b) through (g) of this section, the data requirements in this section apply to the measures identified in subparts C through H of this part. Additional data requirements for specific performance management measures are identified in 23 CFR sections—

(1) 490.309 for the condition of pavements on the Interstate System;

(2) 490.309 for the condition of pavements on the non-Interstate NHS;

(3) 490.409 for the condition of bridges on the NHS;

(4) 490.509 for the performance of the Interstate System;

(5) 490.509 for the performance of the non-Interstate NHS;

(6) 490.609 for the freight movement on the Interstate System;

(7) 490.709 for traffic congestion; and

(8) 490.809 for on-road mobile source emissions.

(b) *Urbanized area data.* The State DOTs shall submit urbanized area data, including boundaries of urbanized areas, in accordance with the HPMS Field Manual for the purpose of the additional targets for urbanized and non-urbanized areas in § 490.105(e) and establishing and reporting on targets for the CMAQ Traffic Congestion measures in § 490.707. The boundaries of urbanized areas shall be identified based on the most recent U.S. Decennial Census, unless FHWA approves adjustments to the urbanized area as provided by 23 U.S.C. 101(a)(34) and these adjustments are submitted to HPMS.

(c) *Nonattainment and maintenance areas data.* The State DOTs shall use the nonattainment and maintenance areas boundaries based on the effective date of U.S. Environmental Protection Agency (EPA) designations in 40 CFR part 81.

(d) *National Highway System data.* The State DOTs shall document and submit the extent of the NHS in accordance with the HPMS Field Manual.

(e) *Travel time data set.* Travel time data needed to calculate the measures in subparts E, F, and G of this part will come from the NPMRDS, unless the State DOT requests, and FHWA approves, the use of an equivalent data source(s) that meets the requirements of this section. The State DOT shall establish, in coordination with applicable MPOs, a single travel time data set (*i.e.,* NPMRDS or equivalent data set) that will be used to calculate the annual metrics in subparts E, F, and G of this part. The same data source shall be used for each calendar year. A State DOT and MPO(s) must use the same travel time data set for each reporting segment for the purposes of calculating the metrics and measures. The use of equivalent data source(s) shall comply with the following:

(1) State DOTs and MPOs shall use the same equivalent data source(s) for a calendar year;

(2) The State DOT shall request FHWA approval for the use of such equivalent data source(s) no later than October 1st before the beginning of the calendar year in which the data source would be used to calculate metrics and FHWA must approve the use of that data source prior to a State DOT and MPO(s)'s implementation and use of that data source;

(3) The State DOT shall make the equivalent data source(s) available to FHWA, on request;

(4) The State DOT shall maintain and use a documented data quality plan to routinely check the quality and accuracy of data contained within the equivalent data source(s); and

(5) If approved by FHWA, the equivalent data source(s) shall:

(i) Be used by both the State DOT and all MPOs within the State for all applicable travel time segments and be referenced by HPMS location referencing standards; and

(ii) In combination with or in place of NPMRDS data, include:

(A) Contiguous segments that cover the mainline highways full NHS, as defined in 23 U.S.C. 103, within the State and MPO boundary; and

(B) Average travel times for at least the same number of 15 minute intervals and the same locations that would be available in the NPMRDS;

(iii) Be populated with observed measured vehicle travel times and shall not be populated with travel times derived from imputed (historic travel times or other estimates) methods. Segment travel times may be derived from travel times reported over a

longer time period of measurement (path processing or equivalent);

(iv) Include, for each segment at 15 minute intervals throughout the time periods specified in paragraphs (e)(5)(iv)(A) and (B) of this section for each day of the year, the average travel time, recorded to the nearest second, representative of at least one of the following:

(A) All traffic on each segment of the NHS (24 hours on Interstate; 6 a.m. to 8 p.m. for non-Interstate NHS); or

(B) Freight vehicle traffic on each segment of the Interstate System (24 hours);

(v) Include, for each segment, a recording of the time and date of each 15 minute travel time record;

(vi) Include the location (route, functional class, direction, State), length and begin and end points of each segment; and

(vii) Be available within 60 days of measurement.

(f) *Reporting segments.* State DOTs, in coordination with MPOs, shall define a single set of reporting segments of the Interstate System and non-Interstate NHS for the purpose of calculating the travel time-based measures specified in §§ 490.507, 490.607, and 490.707 in accordance with the following:

(1) Reporting segments shall be comprised of one or more contiguous Travel Time Segments of same travel direction. State DOTs have the option to accept the Travel Time Segments in the NPMRDS as the reporting segments;

(2) Reporting segments shall not exceed 1 mile in length in urbanized areas unless an individual Travel Time Segment is longer and 10 miles in length in non-urbanized areas unless an individual Travel Time Segment is longer;

(3) All reporting segments collectively shall be contiguous and cover the full extent of the directional mainline highways of the Interstate System and non-Interstate NHS required for reporting the measure; and

(4) The State DOT and applicable MPOs shall document, in manner that mutually agreed upon by all relevant parties, the coordination and agreement on the travel time data set and the defined reporting segments.

(g) *Posted speed limit.* State DOTs are encouraged to report the posted speed limits for the full extent of the NHS in their State via HPMS (HPMS Data Item ''Speed_Limit'').

§ 490.105 Establishment of performance targets.

(a) *In general.* State DOTs shall establish performance targets for all measures specified in paragraph (c) of this section for the respective target scope identified in paragraph (d) of this section with the requirements specified in paragraph (e) of this section. The MPOs shall establish performance targets for all measures specified in paragraph (c) of this section for respective target scope identified in paragraph (d) of this section with the requirements specified in paragraph (f) of this section.

(b) *Highway Safety Improvement Program measures.* State DOTs and MPOs shall establish performance targets for the Highway Safety Improvement Program (HSIP) measures in accordance with § 490.209.

(c) *Applicable measures.* State DOTs and MPOs that include, within their respective geographic boundaries, any portion of the applicable transportation network or area shall establish performance targets for the performance measures identified in 23 CFR sections—

(1) 490.307(a)(1) and (2) for the condition of pavements on the Interstate System;

(2) 490.307(a)(3) and (4) for the condition of pavements on the NHS (excluding the Interstate);

(3) 490.407(c)(1) and (2) for the condition of bridges on the NHS;

(4) 490.507(a)(1) and (2) for the NHS Travel Time Reliability;

(5) 490.507(b) for greenhouse gas (GHG) emissions on the NHS;

(6) 490.607 for the freight movement on the Interstate System;

(7) 490.707(a) and (b) for traffic congestion; and

(8) 490.807 for on-road mobile source emissions.

(d) *Target scope.* Targets established by State DOTs and MPOs shall, regardless of ownership, represent the transportation network or geographic area,

including bridges that cross State borders, that are applicable to the measures as specified in paragraphs (d)(1), (2), and (4) of this section.

(1) State DOTs and MPOs shall establish statewide and metropolitan planning area wide targets, respectively, that represent the condition/performance of the transportation network or geographic area that are applicable to the measures, as specified in 23 CFR sections—

(i) 490.303 for the condition of pavements on the Interstate System measures specified in § 490.307(a)(1) and (2);

(ii) 490.303 for the condition of pavements on the NHS (excluding the Interstate) measures specified in § 490.307(a)(3) and (4);

(iii) 490.403 for the condition of bridges on the NHS measures specified in § 490.407(c)(1) and (2);

(iv) 490.503(a)(1) for the Travel Time Reliability measures specified in § 490.507(a)(1) and (2);

(v) 490.503(a)(2) for the GHG measure specified in § 490.507(b);

(vi) 490.603 for the Freight Reliability measure specified in § 490.607; and

(vii) 490.803 for the Total Emissions Reduction measure identified in § 490.807.

(2) State DOTs and MPOs shall establish a single urbanized area target that represents the performance of the transportation network in each applicable area for the CMAQ Traffic Congestion measures, as specified in § 490.703.

(3) For the purpose of target establishment in this section and reporting targets and progress evaluation in § 490.107, State DOTs shall describe the urbanized area boundaries within the State boundary in the Baseline Performance Period Report required by § 490.107(b)(1).

(4) MPOs shall establish a joint target for the GHG measure specified in § 490.507(b), for each urbanized area that meets the criteria specified in paragraph (f)(10) of this section. The joint target shall represent the performance of the transportation network specified in § 490.503(a)(2).

(e) *Establishment.* State DOTs shall establish targets for each of the performance measures identified in paragraph (c) of this section for respective target scope identified in paragraph (d) of this section as follows:

(1) *Schedule.* State DOTs shall establish targets not later than the dates provided in paragraphs (e)(1)(i) and (e)(1)(ii) of this section, and for each performance period thereafter, in a manner that allows for the time needed to meet the requirements specified in this section and so that the final targets are submitted to FHWA by the due date provided in § 490.107(b).

(i) State DOTs shall establish initial targets not later than May 20, 2018, except as provided in paragraph (e)(1)(ii) of this section.

(ii) State DOTs shall establish initial targets for the GHG measure identified in § 490.507(b) not later than February 1, 2024.

(2) *Coordination.* State DOTs shall coordinate with relevant MPOs on the selection of targets in accordance with 23 U.S.C. 135(d)(2)(B)(i)(II) to ensure consistency, to the maximum extent practicable.

(3) *Additional targets for urbanized and non-urbanized areas.* In addition to statewide targets, described in paragraph (d)(1) of this section, State DOTs may, as appropriate, for each statewide target establish additional targets for portions of the State.

(i) State DOTs shall describe in the Baseline Performance Period Report required by § 490.107(b)(1) the boundaries used to establish each additional target.

(ii) State DOTs may select any number and combination of urbanized area boundaries and may also select a non-urbanized area boundary for the establishment of additional targets.

(iii) The boundaries used by the State DOT for additional targets shall be contained within the geographic boundary of the State.

(iv) State DOTs shall evaluate separately the progress of each additional target and report that progress as required under § 490.107(b)(2)(ii)(B) and (b)(3)(ii)(B).

(v) Additional targets for urbanized areas and the non-urbanized area are not applicable to the CMAQ Traffic Congestion measures and the Total Emissions Reduction measure in paragraphs (c)(7) and (8) of this section, respectively.

(4) *Time horizon for targets.* State DOTs shall establish targets for a performance period as follows:

(i) The performance period will begin on:

(A) January 1st of the year in which the Baseline Performance Period Report is due to FHWA and will extend for a duration of 4 years for the measures in paragraphs (c)(1) through (7) of this section; and

(B) October 1st of the year prior to which the Baseline Performance Report is due to FHWA and will extend for a duration of 4 years for the measure in paragraph (c)(8) of this section.

(C) For the GHG measure in § 490.105(c)(5), the performance period will begin on January 1, 2022 and will extend for a duration of 4-years. Subsequent performance periods will begin as described in paragraph (4)(i)(A) of this section.

(ii) The midpoint of a performance period will occur 2 years after the beginning of a performance period described in paragraph (e)(4)(i) of this section.

(iii) Except as provided in paragraphs (e)(7) and (e)(8)(v), and (e)(10)(i) of this section, State DOTs shall establish 2-year targets that reflect the anticipated condition/performance level at the midpoint of each performance period for the measures in paragraphs (c)(1) through (7) of this section, and the anticipated cumulative emissions reduction to be reported for the first 2 years of a performance period by applicable criteria pollutant and precursor for the measure in paragraph (c)(8) of this section.

(iv) State DOTs shall establish 4-year targets that reflect the anticipated condition/performance level at the end of each performance period for the measures in paragraphs (c)(1) through (7) of this section, and the anticipated cumulative emissions reduction to be reported for the entire performance period by applicable criteria pollutant and precursor for the measure in paragraph (c)(8) of this section.

(5) *Reporting.* State DOTs shall report 2-year targets, 4-year targets, the basis for each established target, progress made toward the achievement of targets, and other requirements to FHWA in accordance with § 490.107. State DOTs shall provide relevant MPO(s) targets to FHWA, upon request, each time the relevant MPOs establish or adjust MPO targets, as described in paragraph (f) of this section.

(6) *Target adjustment.* State DOTs may adjust an established 4-year target in the Mid Performance Period Progress Report, as described in § 490.107(b)(2). State DOTs shall coordinate with relevant MPOs when adjusting their 4-year target(s). Any adjustments made to 4-year targets established for the CMAQ Traffic Congestion measures in paragraph (c)(7) of this section shall be agreed upon and made collectively by all State DOTs and MPOs that include any portion of the NHS in the respective urbanized area applicable to the measures.

(7) *Phase-in of new requirements for Interstate System pavement condition measures and the non-Interstate NHS Travel Time Reliability measures.* The following requirements apply only to the first performance period and to the measures in §§ 490.307(a)(1) and (2) and 490.507(a)(2):

(i) State DOTs shall establish their 4-year targets, required under paragraph (e)(4)(iv) of this section, and report these targets in their Baseline Performance Period Report, required under § 490.107(b)(1);

(ii) State DOTs shall not report 2-year targets, described in paragraph (e)(4)(iii) of this section, and baseline condition/performance in their Baseline Performance Period Report; and

(iii) State DOTs shall use the 2-year condition/performance in their Mid Performance Period Progress Report, described in § 490.107(b)(2)(ii)(A) as the baseline condition/performance. State DOTs may also adjust their 4-year targets, as appropriate.

(8) *Urbanized area specific targets.* The following requirements apply to establishing targets for the CMAQ Traffic Congestion measures in paragraph (c)(7) of this section, as their target scope provided in paragraph (d)(2) of this section:

(i) For the performance period that begins on January 1, 2018, State DOTs, with mainline highways on the NHS that cross any part of an urbanized area with a population more than 1 million within its geographic State

boundary and that urbanized area contains any part of a nonattainment or maintenance area for any one of the criteria pollutants, as specified in § 490.703, shall establish targets for the CMAQ Traffic Congestion measures specified in § 490.707(a) and (b).

(ii) Beginning with the performance period that begins on January 1, 2022, and all subsequent performance periods thereafter, State DOTs, with mainline highways on the NHS that cross any part of an urbanized area with a population more than 200,000 within its geographic State boundary and that urbanized area contains any part of a nonattainment or maintenance area for any one of the criteria pollutants, as specified in § 490.703, shall establish targets for the CMAQ Traffic Congestion measures specified in § 490.707(a) and (b).

(iii) If required to establish targets for the CMAQ Traffic Congestion measures, as described in paragraphs (e)(8)(i) and/or (ii) of this section, State DOTs shall comply with the following:

(A) For each urbanized area, only one 2-year target and one 4-year target for the entire urbanized area shall be established regardless of roadway ownership.

(B) For each urbanized area, all State DOTs and MPOs that contain, within their respective boundaries, any portion of the NHS network in that urbanized area shall agree on one 2-year and one 4-year target for that urbanized area. In accordance with paragraphs (e)(5) and (f)(9) of this section, the targets reported by the State DOTs and MPOs for that urbanized area shall be identical.

(C) Except as provided in paragraphs (e)(8)(iii)(F) and (e)(8)(v) of this section, State DOTs shall meet all reporting requirements in § 490.107 for the entire performance period even if there is a change of population, NHS designation, or nonattainment/maintenance area designation during that performance period.

(D) The 1 million and 200,000 population thresholds, in paragraphs (e)(8)(i) and (ii) of this section, shall be determined based on the most recent annual population estimates published by the U.S. Census available 1 year before when the State DOT Baseline Performance Period Report is due to FHWA.

(E) NHS designations and urbanized areas, in paragraphs (e)(8)(i) and (ii) of this section, shall be determined from the data, contained in HPMS, 1 year before when the State DOT Baseline Performance Period Report is due to FHWA.

(F) The designation of nonattainment or maintenance areas, in paragraphs (e)(8)(i) and (ii) of this section, shall be determined based on the effective date of U.S. EPA's designation under the NAAQS in 40 CFR part 81, as of the date 1 year before the State DOT Baseline Performance Period Report is due to FHWA. The nonattainment and maintenance areas shall be revised if, on the date 1 year before the State DOT Mid Performance Period Progress Report in § 490.107(b)(2)(ii) is due to FHWA, the area is no longer in nonattainment or maintenance for a criteria pollutant included in § 490.703.

(iv) If a State DOT does not meet the criteria specified in paragraph (e)(8)(i) or (ii) of this section 1 year before when the State DOT Baseline Performance Period Report is due to FHWA, then that State DOT is not required to establish targets for the CMAQ Traffic Congestion measures for that performance period.

(v) If the urbanized area, in paragraph (e)(8)(i) or (ii) of this section, does not contain any part of a nonattainment or maintenance area for the applicable criteria pollutants, as specified in § 490.703, 1 year before the State DOT Mid Performance Period Progress Report is due to FHWA, as described in paragraph (e)(8)(iii)(F) of this section, then that State DOT is not required to meet the requirements in § 490.107 for the CMAQ Traffic Congestion measures for that urbanized area for the remainder of that performance period.

(vi) The following requirements apply only the Peak Hour Excessive Delay (PHED) measure in § 490.707(a) to assess CMAQ Traffic Congestion in to the first performance period:

(A) State DOTs shall establish their 4-year targets, required under paragraph (e)(4)(iv) of this section, and report these targets in their Baseline

Performance Period Report, required under § 490.107(b)(1).

(B) State DOTs shall not report 2-year targets, described in paragraph (e)(4)(ii) of this section, and baseline condition/performance in their Baseline Performance Period Report.

(C) State DOTs shall use the 2-year condition/performance in their Mid Performance Period Progress Report, described in § 490.107(b)(2)(ii)(A) as the baseline condition/performance. The established baseline condition/performance shall be collectively developed and agreed upon with relevant MPOs.

(D) State DOTs may, as appropriate, adjust their 4-year target(s) in their Mid Performance Period Progress Report, described in § 490.107(b)(2)(ii)(A). Adjusted 4-year target(s) shall be developed and collectively agreed upon with relevant MPO(s), as described in paragraph (e)(6) of this section.

(E) State DOTs shall annually report metrics for all mainline highways on the NHS for all applicable urbanized area(s) throughout the performance period, as required in § 490.711(f).

(9) *Targets for Total Emissions Reduction measure.* The following requirements apply to establishing targets for the measures specified in paragraph (c)(8) of this section:

(i) The State DOTs shall establish statewide targets for the Total Emissions Reduction measure for all nonattainment and maintenance areas for all applicable criteria pollutants and precursors specified in § 490.803.

(ii) For all nonattainment and maintenance areas within the State geographic boundary, the State DOT shall establish separate statewide targets for each of the applicable criteria pollutants and precursors specified in § 490.803.

(iii) The established targets, as specified in paragraph (e)(4) of this section, shall reflect the anticipated cumulative emissions reduction to be reported in the CMAQ Public Access System required in § 490.809(a).

(iv) In addition to the statewide targets in paragraph (e)(9)(i) of this section, State DOTs may, as appropriate, establish additional targets for any number and combination of nonattainment and maintenance areas by applicable criteria pollutant within the geographic boundary of the State. If a State DOT establishes additional targets for nonattainment and maintenance areas, it shall report the targets in the Baseline Performance Period Report required by § 490.107(b)(1). State DOTs shall evaluate separately the progress of each of these additional targets and report that progress as required under § 490.107(b)(2)(ii)(B) and (b)(3)(ii)(B).

(v) The designation of nonattainment or maintenance areas shall be determined based on the effective date of U.S. EPA's designation under the NAAQS in 40 CFR part 81, as of the date 1 year before the State DOT Baseline Performance Period Report is due to FHWA. The nonattainment and maintenance areas shall be revised if, on the date 1 year before the State DOT Mid Performance Period Progress Report in § 490.107(b)(2)(ii) is due to FHWA, the area is no longer in nonattainment or maintenance for a criteria pollutant included in § 490.803.

(vi) Except as provided in paragraphs (e)(9)(vii) and (viii) of this section, the State DOT shall meet all reporting requirements in § 490.107 for the entire performance period even if there is a change of nonattainment or maintenance area during that performance period.

(vii) If a State geographic boundary does not contain any part of nonattainment or maintenance areas for applicable criteria pollutants and precursors, as specified in § 490.803, 1 year before the State DOT Baseline Performance Period Report is due to FHWA, then that State DOT is not required to establish targets for Total Emissions Reduction measures for that performance period.

(viii) If the State geographic boundary, in paragraph (e)(9)(ii) of this section, does not contain any part of the nonattainment or maintenance area for an applicable criteria pollutant or precursor, as specified in § 490.803, 1 year before the State DOT Mid Performance Period Progress Report is due to FHWA as described in paragraph (e)(9)(v) of this section, then that State DOT is not required to meet the requirements in § 490.107 for the Total Emissions Reduction measure for that

applicable criteria pollutant or precursor for the remainder of that performance period.

(10) *Targets for the GHG measure.* Targets established for the GHG measure in paragraph (c)(5) of this section shall be declining targets for reducing tailpipe CO_2 emissions on the NHS.

(i) The following requirements apply only to the targets established for the State Initial GHG Report, described in § 490.107(d), and 2026 Full Performance Period Progress Report, described in § 490.107(b)(3), for the measure in § 490.507(b):

(A) State DOTs are exempt from the required 2-year target described in paragraph (e)(4)(iii) of this section.

(B) State DOTs shall establish a 4-year target, required under paragraph (e)(4)(iv) of this section, and report this target in their 2024 State Initial GHG Report, required under § 490.107(d).

(C) The performance for the reference year shall be used as the baseline performance.

(f) *MPO establishment.* The MPOs shall establish targets for each of the performance measures identified in paragraph (c) of this section for the respective target scope identified in paragraph (d) of this section as follows:

(1) *Schedule.* The MPOs shall establish targets no later than 180 days after the respective State DOT(s) establishes their targets, as provided in paragraph (e)(1) of this section.

(i) The MPOs shall establish 4-year targets, described in paragraph (e)(4)(iv) of this section, for all applicable measures, described in paragraphs (c) and (d) of this section. For the GHG measure described in (c)(5) of this section, the targets established shall be declining targets for reducing tailpipe CO_2 emissions on the NHS.

(ii) Except as provided in paragraph (f)(5)(vi) of this section, the MPOs shall establish 2-year targets, described in paragraph (e)(4)(iii) of this section for the CMAQ Traffic Congestion and Total Emissions Reduction measures, described in paragraphs (c) and (d) of this section as their applicability criteria described in paragraphs (f)(5)(i) and (ii) and (f)(6)(iii) of this section, respectively.

(iii) If an MPO does not meet the criteria described in paragraph (f)(5)(i), (f)(5)(ii), or (f)(6)(iii) of this section, the MPO is not required to establish 2-year target(s) for the corresponding measure(s).

(2) *Coordination.* The MPOs shall coordinate with relevant State DOT(s) on the selection of targets in accordance with 23 U.S.C. 134(h)(2)(B)(i)(II) to ensure consistency, to the maximum extent practicable.

(3) *Target establishment options.* For each performance measure identified in paragraph (c) of this section, except the CMAQ Traffic Congestion measures in paragraph (f)(5) of this section, MPOs meeting the criteria under paragraph (f)(6)(iii) of this section for Total Emissions Reduction measure, the MPOs shall establish targets for the metropolitan planning area by either:

(i) Agreeing to plan and program projects so that they contribute toward the accomplishment of the relevant State DOT target for that performance measure; or

(ii) Committing to a quantifiable target for that performance measure for their metropolitan planning area.

(4) *MPOs serving a multistate planning area.* Except as provided in the CMAQ Traffic Congestion measures in paragraph (f)(5) of this section, and MPOs meeting the criteria under paragraph (f)(6)(iii) of this section, for Total Emissions Reduction measure, MPOs with planning areas extending across State boundaries shall follow these requirements for each performance measure identified in paragraph (c) of this section:

(i) For each measure, MPOs may choose different target establishment options, provided in paragraph (f)(3) of this section, for the portion of the planning area within each State.

(ii) If MPOs choose the option to agree to plan and program projects to contribute toward State DOT targets, in accordance with paragraph (f)(3)(i) of this section, for a measure, then they shall plan and program projects in support of State DOT targets for the portion of the planning area within each State.

(5) *Urbanized area specific targets.* The following requirements apply to establishing targets for the CMAQ Traffic Congestion measures in paragraph (c)(7) of this section, as their target

scope provided in paragraph (d)(2) of this section:

(i) For the performance period that begins on January 1, 2018, MPOs shall establish targets for the CMAQ Traffic Congestion measures specified in § 490.707(a) and (b) when mainline highways on the NHS within their metropolitan planning area boundary cross any part of an urbanized area with a population more than 1 million, and that portion of their metropolitan planning area boundary also contains any portion of a nonattainment or maintenance area for any one of the criteria pollutants, as specified in § 490.703. If an MPO with mainline highways on the NHS within their metropolitan planning area boundary cross any part of an urbanized area with a population more than 1 million and that urbanized area contains any part of a nonattainment or maintenance area, for any one of the criteria pollutant as specified in § 490.703, outside of its metropolitan planning area boundary, then that MPO should coordinate with relevant State DOT(s) and MPO(s) in the target establishment process for the CMAQ Traffic Congestion measures specified in § 490.707.

(ii) Beginning with the performance period that begins on January 1, 2022, and all subsequent performance periods thereafter, MPOs shall establish targets for the CMAQ Traffic Congestion measures specified in § 490.707(a) and (b) when mainline highways on the NHS within their metropolitan planning area boundary cross any part of an urbanized area with a population more than 200,000, and that portion of their metropolitan planning area boundary also contains any portion of a nonattainment or maintenance area for any one of the criteria pollutants, as specified in § 490.703. If an MPO with mainline highways on the NHS within their metropolitan planning area boundary cross any part of an urbanized area with a population more than 200,000 and that urbanized area contains any part of a nonattainment or maintenance area, for any one of the criteria pollutant as specified in § 490.703, outside of its metropolitan planning area boundary, then that MPO should coordinate with relevant State DOT(s) and MPO(s) in the target establishment process for the CMAQ Traffic Congestion measures specified in § 490.707.

(iii) If required to establish a target for the CMAQ Traffic Congestion measures, as described in paragraphs (f)(5)(i) and/or (ii) of this section, MPOs shall comply with the following:

(A) For each urbanized area, only one 2-year target and one 4-year target for the entire urbanized area shall be established regardless of roadway ownership.

(B) For each urbanized area, all State DOTs and MPOs that contain, within their respective boundaries, any portion of the NHS network in that urbanized area shall agree on one 2-year and one 4-year target for that urbanized area. The targets reported, in accordance with paragraphs (e)(5) and (f)(9) of this section, by the State DOTs and MPOs for that urbanized area shall be identical.

(C) Except as provided in paragraphs (f)(5)(iii)(F) and (f)(5)(v) of this section, MPOs shall meet all reporting requirements in § 490.107(c) for the entire performance period even if there is a change of population, NHS designation, or nonattainment/maintenance area during that performance period.

(D) The 1 million and 200,000 population thresholds, in paragraph (f)(5)(i) and (ii) of this section, shall be determined based on the most recent annual population estimates published by the U.S. Census available 1 year before the State DOT Baseline Performance Period Report is due to FHWA.

(E) NHS designations and urbanized areas, in paragraphs (f)(5)(i) and (ii) of this section, shall be determined from the data, contained in HPMS, 1 year before State DOT Baseline Performance Period Report is due to FHWA.

(F) The designation of nonattainment or maintenance areas, in paragraph (f)(5)(i) and (ii) of this section, shall be determined based on the effective date of U.S. EPA's designation under the NAAQS in 40 CFR part 81, as of the date 1 year before the State DOT Baseline Performance Period Report is due to FHWA. The nonattainment and maintenance areas shall be revised if, on the date 1 year before the State DOT Mid Performance Period Progress Report in § 490.107(b)(2)(ii) is due to

FHWA, the area is no longer in nonattainment or maintenance for a criteria pollutant included in § 490.703.

(iv) If an MPO does not meet the criteria specified in paragraph (f)(5)(i) or (ii) of this section at the time that is 1 year before when the State DOT Baseline Performance Period Report is due to FHWA, then that MPO is not required to establish targets for the CMAQ Traffic Congestion measure for that performance period.

(v) If the portion of the metropolitan planning area boundary within the urbanized area, in paragraph (f)(5)(i) or (ii) of this section, does not contain any part of a nonattainment or maintenance area for the applicable criteria pollutants, as specified in § 490.703, at the time that is 1 year before when the State DOT Mid Performance Period Progress Report is due to FHWA, as described in paragraph (f)(5)(iii)(F) of this section, then that MPO is not required to meet the requirements in § 490.107 for the CMAQ Traffic Congestion measures for that urbanized area for the remainder of that performance period.

(vi) The following requirements apply only to the first performance period and the PHED measure to assess traffic congestion in § 490.707(a):

(A) The MPOs shall not report 2-year targets, described in paragraph (f)(5)(iii)(A) of this section;

(B) The MPOs shall use the 2-year condition/performance in the State DOT Mid Performance Period Progress Report, described in § 490.107(b)(2)(ii)(A) as baseline condition/performance. The established baseline condition/performance shall be agreed upon and made collectively with relevant State DOTs; and

(C) The MPOs may, as appropriate, adjust their 4-year target(s). Adjusted 4-year target(s) shall be collectively developed and agreed upon with all relevant State DOT(s), as described in paragraph (f)(8) of this section.

(6) *Targets for the Total Emissions Reduction measure.* The following requirements apply to establishing targets for the measure in paragraph (c)(8) of this section:

(i) The MPO shall establish targets for each of the applicable criteria pollutants and precursors, specified in § 490.803, for which it is in nonattainment or maintenance, within its metropolitan planning area boundary.

(ii) The established targets, as specified in paragraph (e)(4) of this section, shall reflect the anticipated cumulative emissions reduction to be reported in the CMAQ Public Access System required in § 490.809(a).

(iii) If any part of a designated nonattainment and maintenance area within the metropolitan planning area overlaps the boundary of an urbanized area with a population more than 1 million in population, as of 1 year before the State DOT Baseline Performance Period Report is due to FHWA, then that MPO shall establish both 2-year and 4-year targets for their metropolitan planning area. The population threshold shall be determined based on the most recent annual population estimates published by the U.S. Census available 1 year before the State DOT Baseline Performance Period Report is due to FHWA.

(iv) For the nonattainment and maintenance areas within the metropolitan planning area that do not meet the criteria in paragraph (f)(6)(iii) of this section, MPOs shall establish 4-year targets for their metropolitan planning area, as described in paragraph (f)(3) of this section.

(v) The designation of nonattainment or maintenance areas shall be determined based on the effective date of U.S. EPA's designation under the NAAQS in 40 CFR part 81, as of the date 1 year before the State DOT Baseline Performance Period Report is due to FHWA. The nonattainment and maintenance areas shall be revised if, on the date 1 year before the State DOT Mid Performance Period Progress Report in § 490.107(b)(2)(ii) is due to FHWA, the area is no longer in nonattainment or maintenance for a criteria pollutant included in § 490.803.

(vi) Except as provided in paragraphs (f)(6)(v) and (viii) of this section, MPOs shall meet all reporting requirements in § 490.107(c) for the entire performance period even if there is a change of nonattainment or maintenance area or population during that performance period.

(vii) If a metropolitan planning area boundary does not contain any part of nonattainment or maintenance areas

for applicable criteria pollutants 1 year before when the State DOT Baseline Performance Period Report is due to FHWA, then that MPO is not required to establish targets for the Total Emissions Reduction measure for that performance period.

(viii) If the metropolitan planning area boundary, in paragraph (f)(6)(i) of this section, does not contain any part of a nonattainment or maintenance area for the applicable criteria pollutants, as specified in § 490.803, 1 year before the State DOT Mid Performance Period Progress Report is due to FHWA, as described in paragraph (f)(6)(v) of this section, then that MPO is not required to meet the requirements in § 490.107 for the Total Emissions Reduction measure for that applicable criteria pollutant or precursor for the remainder of that performance period.

(7) *MPO response to State DOT target adjustment.* For the established targets in paragraph (f)(3) of this section, if the State DOT adjusts a 4-year target in the State DOT's Mid Performance Period Progress Report and if, for that respective target, the MPO established a target by supporting the State DOT target as allowed under paragraph (f)(3)(i) of this section, then the MPO shall, within 180 days, report to the State DOT whether it will either:

(i) Agree to plan a program of projects so that they contribute to the adjusted State DOT target for that performance measure; or

(ii) Commit to a new quantifiable target for that performance measure for its metropolitan planning area.

(8) *Target adjustment.* If the MPO establishes its target by committing to a quantifiable target, described in paragraph (f)(3)(ii) of this section or establishes target(s) for the Total Emissions Reduction measure required in paragraph (f)(6)(iii) of this section, then the MPOs may adjust its target(s) in a manner that is collectively developed, documented, and mutually agreed upon by the State DOT and MPO. Any adjustments made to 4-year targets, established for CMAQ Traffic Congestion measures in paragraph (f)(5)(i) or (ii) of this section, shall be collectively developed and agreed upon by all State DOTs and MPOs that include any portion of the NHS in the respective urbanized area applicable to the measure.

(9) *Reporting.* The MPOs shall report targets and progress toward the achievement of their targets as specified in § 490.107(c). After the MPOs establish or adjust their targets, the relevant State DOT(s) must be able to provide these targets to FHWA upon request.

(10) *Joint Targets for the GHG Measure.* Where an urbanized area contains mainline highways on the NHS, and any portion of that urbanized area is overlapped by the metropolitan planning area boundaries of two or more MPOs, those MPOs shall collectively establish a single joint 4-year target for that urbanized area, described in paragraph (e)(4)(iv) of this section. The target established shall be a declining target for reducing tailpipe CO_2 emissions on the NHS. This joint target is in addition to the targets for the metropolitan planning area required in paragraph (f)(1)(i) of this section.

(i) The NHS designations and urbanized area data shall be from the data contained in HPMS 1 year before the State DOT Baseline Performance Period Report is due to FHWA.

(ii) Only one target shall be established for the entirety of each applicable urbanized area regardless of roadway ownership. In accordance with paragraph (f)(9) of this section, each MPO shall report the same joint target for the urbanized area.

(iii) The target established for each urbanized area shall represent a quantifiable target for that urbanized area.

[82 FR 6031, Jan. 18, 2017, as amended at 83 FR 24936, May 31, 2018; 88 FR 85390, Dec. 7, 2023]

§ 490.107 Reporting on performance targets.

(a) *In general.* All State DOTs and MPOs shall report the information specified in this section for the targets required in § 490.105.

(1) All State DOTs and MPOs shall report in accordance with the schedule and content requirements under paragraphs (b), (c), and (d) of this section, respectively.

(2) For the measures identified in § 490.207(a), all State DOTs and MPO

shall report on performance in accordance with § 490.213.

(3) State DOTs shall report using an electronic template provided by FHWA.

(b) *State Biennial Performance Report.* State DOTs shall report to FHWA baseline condition/performance at the beginning of a performance period and progress achievement at both the midpoint and end of a performance period. State DOTs shall report at an ongoing 2-year frequency as specified in paragraphs (b)(1) through (3) of this section.

(1) *Baseline Performance Period Report*—(i) *Schedule.* State DOTs shall submit a Baseline Performance Period Report to FHWA by October 1st of the first year in a performance period. State DOTs shall submit their first Baseline Performance Period Report to FHWA by October 1, 2018, and subsequent Baseline Performance Period Reports to FHWA by October 1st every 4 years thereafter, except for the GHG measure specified in § 490.105(c)(5). For the Baseline Performance Period Report, State DOTs shall submit information related to the GHG measure in the report due to FHWA by October 1, 2026, and every 4 years thereafter.

(ii) *Content.* The State DOT shall report the following information in each Baseline Performance Period Report:

(A) *Targets.* 2-year and 4-year targets for the performance period, as required in § 490.105(e), and a discussion, to the maximum extent practicable, of the basis for each established target;

(B) *Baseline condition/performance.* Baseline condition/performance derived from the latest data collected through the beginning date of the performance period specified in § 490.105(e)(4)(i) for each target, required under paragraph (b)(1)(ii)(A) of this section;

(C) *Relationship with other performance expectations.* A discussion, to the maximum extent practicable, on how the established targets in paragraph (b)(1)(ii)(A) of this section support expectations documented in longer range plans, such as the State asset management plan required by 23 U.S.C. 119(e) and the long-range statewide transportation plan provided in part 450 of this chapter;

(D) *Urbanized area boundaries and population data for targets.* For the purpose of establishing additional targets for urbanized and non-urbanized areas in § 490.105(e)(3) and the urbanized area specific targets in § 490.105(e)(8), State DOTs shall document the boundary extent for all applicable urbanized areas based on information in HPMS;

(E) *Congestion at truck freight bottlenecks.* The State DOT shall document the location of truck freight bottlenecks within the State, including those identified in the National Freight Strategic Plan. If a State has prepared a State Freight Plan under 49 U.S.C. 70202, within the last 2 years, then the State Freight Plan may serve as the basis for identifying truck freight bottlenecks;

(F) *Nonattainment and maintenance area for targets.* Where applicable, for the purpose of determining target scope in § 490.105(d) and any additional targets under § 490.105(e)(9)(iv), State DOTs shall describe the boundaries of U.S. EPA's designated nonattainment and maintenance areas, as described in §§ 490.103(c) and 490.105(e)(9)(v);

(G) *MPO CMAQ Performance Plan.* Where applicable, State DOTs shall include as an attachment the MPO CMAQ Performance Plan, described in paragraph (c)(3) of this section;

(H) GHG metric and metric information for the GHG measure. The metric and the individual values used to calculate the GHG metric, as described in § 490.511(c), for the calendar year preceding the reporting year, and a description of the data source(s) used for the VMT information.

(I) *Data collection method for the Percent of Non-SOV Travel measure.* Where applicable, State DOTs shall report the data collection method that is used to determine the Percent of Non-SOV Travel measure, in § 490.707(b), for each applicable urbanized area in the State, as provided in § 490.709(f)(2).

(2) *Mid Performance Period Progress Report*—

(i) *Schedule.* State DOTs shall submit a Mid Performance Period Progress Report to FHWA by October 1st of the third year in a performance period. State DOTs shall submit their first Mid Performance Period Progress Report to FHWA by October 1, 2020, and subsequent Mid Performance Period Progress Reports to FHWA by October

1st every 4 years thereafter, except for the GHG measure specified in §490.105(c)(5). For the Mid Performance Period Progress Report, the State DOTs shall submit information related to the GHG measure in the report due to FHWA by October 1, 2028, and every 4 years thereafter.

(ii) *Content.* The State DOT shall report the following information in each Mid Performance Period Progress Report:

(A) *2-year condition/performance.* The actual condition/performance derived from the latest data collected through the midpoint of the performance period, specified in §490.105(e)(4), for each State DOT reported target required in paragraph (b)(1)(ii)(A) of this section;

(B) *2-year progress in achieving performance targets.* A discussion of the State DOT's progress toward achieving each established 2-year target in paragraph (b)(1)(ii)(A) of this section. The State DOT shall compare the actual 2-year condition/performance in paragraph (b)(2)(ii)(A) of this section, within the boundaries and limits documented in paragraphs (b)(1)(ii)(D) and (E) of this section, with the respective 2-year target and document in the discussion any reasons for differences in the actual and target values;

(C) *Investment strategy discussion.* A discussion on the effectiveness of the investment strategies developed and documented in the State asset management plan for the NHS required under 23 U.S.C. 119(e);

(D) *Congestion at truck freight bottlenecks.* Discussion on progress of the State DOT's efforts in addressing congestion at truck freight bottlenecks within the State, as described in paragraph (b)(1)(ii)(F) of this section, through comprehensive freight improvement efforts of State Freight Plan or MPO freight plans; the Statewide Transportation Improvement Program and Transportation Improvement Program; regional or corridor level efforts; other related planning efforts; and operational and capital activities targeted to improve freight movement on the Interstate System. If a State has prepared a State Freight Plan under 49 U.S.C. 70202 within the previous 2 years, then the State Freight Plan may serve as the basis for addressing congestion at truck freight bottlenecks. If the State Freight Plan has not been updated since the previous State Biennial Performance Report, then an updated analysis of congestion at truck freight bottlenecks must be completed;

(E) *Target adjustment discussion.* When applicable, a State DOT may submit an adjusted 4-year target to replace an established 4-year target in paragraph (b)(1)(ii)(A) of this section. If the State DOT adjusts its target, it shall include a discussion on the basis for the adjustment and how the adjusted target supports expectations documented in longer range plans, such as the State asset management plan and the long-range statewide transportation plan. The State DOT may only adjust a 4-year target at the midpoint and by reporting the change in the Mid Performance Period Progress Report;

(F) *2-year significant progress discussion for the National Highway Performance Program (NHPP) targets and the National Highway Freight Program (NHFP) target.* State DOTs shall discuss the progress they have made toward the achievement of all 2-year targets established for the NHPP measures in §490.105(c)(1) through (5) and the Freight Reliability measure in §490.105(c)(6). This discussion should document a summary of prior accomplishments and planned activities that will be conducted during the remainder of the performance period to make significant progress toward that achievement of 4-year targets for applicable measures;

(G) *Extenuating circumstances discussion on 2-year Targets.* When applicable, for 2-year targets for the NHPP or NHFP, a State DOT may include a discussion on the extenuating circumstance(s), described in §490.109(e)(5), beyond the State DOT's control that prevented the State DOT from making 2-year significant progress toward achieving NHPP or NHFP target(s) in paragraph (b)(2)(ii)(F) of this section;

(H) *Applicable target achievement discussion.* If FHWA determined that a State DOT has not made significant progress toward the achievement of any 4-year NHPP or NHFP targets in the FHWA determination made after

the State DOT submits the Full Performance Period Progress Report for the immediate prior performance period, then the State DOT shall include a description of the actions they will undertake to better achieve those targets as required under § 490.109(f). If FHWA determined under § 490.109(e) that the State DOT has made significant progress for immediate prior performance period's 4-year NHPP or NHFP targets, then the State DOT does not need to include this description for those targets;

(I) *MPO CMAQ Performance Plan.* Where applicable, State DOTs shall include as an attachment the MPO CMAQ Performance Plan, described in paragraph (c)(3) of this section; and

(J) GHG metric and metric information for the GHG measure. The metric and the individual values used to calculate the GHG metric, as described in § 490.511(c), for the calendar year preceding the reporting year, and a description of the data source(s) used for the VMT information.

(3) *Full Performance Period Progress Report*—(i) *Schedule.* State DOTs shall submit a progress report on the full performance period to FHWA by October 1st of the first year following the reference performance period. State DOTs shall submit their first Full Performance Period Progress Report to FHWA by October 1, 2022, and subsequent Full Performance Period Progress Reports to FHWA by October 1st every 4 years thereafter, except for the GHG measure specified in § 490.105(c)(5). For the Full Performance Period Progress Report, State DOTs shall submit information related to the GHG measure in the report due to FHWA by October 1, 2026, and every 4 years thereafter.

(ii) *Content.* The State DOT shall report the following information for each Full Performance Period Progress Report:

(A) *4-year condition/performance.* The actual condition/performance derived from the latest data collected through the end of the performance period, specified in § 490.105(e)(4), for each State DOT reported target required in paragraph (b)(1)(ii)(A) of this section;

(B) *4-year progress in achieving performance targets.* A discussion of the State DOT's progress made toward achieving each established 4-year target in paragraph (b)(1)(ii)(A) or (b)(2)(ii)(E) of this section, when applicable. The State DOT shall compare the actual 4-year condition/performance in paragraph (b)(3)(ii)(A) of this section, within the boundaries and limits documented in paragraphs (b)(1)(ii)(D) and (E) of this section, with the respective 4-year target and document in the discussion any reasons for differences in the actual and target values;

(C) *Investment strategy discussion.* A discussion on the effectiveness of the investment strategies developed and documented in the State asset management plan for the NHS required under 23 U.S.C. 119(e);

(D) *Congestion at truck freight bottlenecks.* Discussion on progress of the State DOT's efforts in addressing congestion at truck freight bottlenecks within the State, as described in paragraphs (b)(1)(ii)(F) and (b)(2)(ii)(D) of this section;

(E) *4-year significant progress evaluation for applicable targets.* State DOTs shall discuss the progress they have made toward the achievement of all 4-year targets established for the NHPP measures in § 490.105(c)(1) through (5) and the Freight Reliability measure in § 490.105(c)(6). This discussion shall include a summary of accomplishments achieved during the performance period to demonstrate whether the State DOT has made significant progress toward achievement of 4-year targets for those measures;

(F) *Extenuating circumstances discussion on applicable targets.* When applicable, a State DOT may include discussion on the extenuating circumstance(s), described in § 490.109(e)(5), beyond the State DOT's control that prevented the State DOT from making a 4-year significant progress toward achieving NHPP or NHFP targets, described in paragraph (b)(3)(ii)(E) of this section;

(G) *Applicable target achievement discussion.* If FHWA determined that a State DOT has not made significant progress toward the achievement of any 2-year NHPP or NHFP targets in the biennial FHWA determination made after the State DOT submits the

Mid Performance Period Progress Report for the performance period, then the State DOT shall include a description of the actions they will undertake to better achieve those targets as required under § 490.109(f). If FHWA determined in § 490.109(e) that the State DOT has made significant progress for the 2-year NHPP or NHFP targets for the performance period, then the State DOT does not need to include this description for those targets;

(H) *MPO CMAQ Performance Plan.* Where applicable, State DOTs shall include as an attachment the MPO CMAQ Performance Plan, described in paragraph (c)(3) of this section; and

(I) *GHG metric and metric information for the GHG measure.* The metric and the individual values used to calculate the GHG metric, as described in § 490.511(c), for the calendar year preceding the reporting year, and a description of the data source(s) used for the VMT information.

(c) *MPO Report.* The MPOs shall establish targets in accordance with § 490.105 and report targets and progress toward the achievement of their targets in a manner that is consistent with the following:

(1) The MPOs shall report their established targets to their respective State DOT in a manner that is documented and mutually agreed upon by both parties.

(2) The MPOs shall report baseline condition/performance and progress toward the achievement of their targets in the system performance report in the metropolitan transportation plan in accordance with part 450 of this chapter. For the GHG measure in § 490.105(c)(5), the MPOs shall also report:

(i) The calculation of annual tailpipe CO_2 emissions for the NHS, and may include all public roads, described in § 490.511(f), for the period between the current and previous system performance report, and the reference year.

(ii) A description of the metric calculation method(s) used, as described in § 490.511(d). When the method(s) used are not specified in § 490.511(d), the MPO must include information demonstrating the method(s) has valid and useful results for measuring transportation related CO_2.

(3) The MPOs serving a TMA and meeting criteria, specified in § 490.105(f)(6)(iii), shall develop a CMAQ performance plan as required by 23 U.S.C. 149(l). The CMAQ performance plan is not required when the MPO meets the criteria specified in § 490.105(f)(6)(vii) or (viii).

(i) The CMAQ performance plan shall be submitted to FHWA by the State DOT, and be updated biennially on the same schedule as the State Biennial Performance Reports.

(ii) For the CMAQ Traffic Congestion and Total Emissions Reduction measures in subparts G and H of this part, the CMAQ performance plan submitted with the State DOT's Baseline Performance Period Report to FHWA shall include:

(A) The 2-year and 4-year targets for the CMAQ Traffic Congestion measures, identical to the relevant State DOT(s) reported target under paragraph (b)(1)(ii)(A) of this section, for each applicable urbanized area;

(B) The 2-year and 4-year targets for the Total Emissions Reduction measure for the performance period;

(C) Baseline condition/performance for each MPO reported CMAQ Traffic Congestion targets, identical to the relevant State DOT(s) reported baseline condition/performance under paragraph (b)(1)(ii)(B) of this section;

(D) Baseline condition/performance derived from the latest estimated cumulative emissions reductions from CMAQ projects for each MPO reported Total Emissions Reduction target; and

(E) A description of projects identified for CMAQ funding and how such projects will contribute to achieving the performance targets for these measures.

(iii) For the CMAQ Traffic Congestion and Total Emissions Reduction measures in subparts G and H of this part, the CMAQ performance plan submitted with the State DOT's Mid Performance Period Progress Report to FHWA shall include:

(A) 2-year condition/performance for the CMAQ Traffic Congestion measures, identical to the relevant State DOT(s) reported condition/performance under paragraph (b)(2)(ii)(A) of this section, for each applicable urbanized area;

(B) 2-year condition/performance derived from the latest estimated cumulative emissions reductions from CMAQ projects for each MPO reported Total Emissions Reduction target;

(C) An assessment of the progress of the projects identified in the CMAQ performance plan submitted with the Baseline Performance Period Report toward achieving the 2-year targets for these measures;

(D) When applicable, an adjusted 4-year target to replace an established 4-year target; and

(E) An update to the description of projects identified for CMAQ funding and how those updates will contribute to achieving the 4-year performance targets for these measures.

(iv) For the CMAQ Traffic Congestion and Total Emissions Reduction measures in subparts G and H of this part, the CMAQ performance plan submitted with the State DOT's Full Performance Period Progress Report to FHWA shall include:

(A) 4-year condition/performance for the CMAQ Traffic Congestion measures, identical to the relevant State DOT(s) reported condition/performance reported under paragraph (b)(3)(ii)(A) of this section, for each applicable urbanized area;

(B) 4-year condition/performance derived from the latest estimated cumulative emissions reductions from CMAQ projects for each MPO reported Total Emissions Reduction target; and

(C) An assessment of the progress of the projects identified in both paragraphs (c)(3)(ii)(C) and (c)(3)(iii)(D) of this section toward achieving the 4-year targets for these measures.

(4) [Reserved]

(d) *State Initial GHG Report.* For the GHG measure in § 490.105(c)(5), State DOTs shall submit an Initial GHG Report by February 1, 2024.

(1) The State Initial GHG Report shall include:

(i) *Targets.* The 4-year target for the performance period, as required in § 490.105(e), and a discussion, to the maximum extent practicable, of the basis for the established target;

(ii) *Baseline performance.* Performance derived from the data collected for the reference year, for the 4-year target required under paragraph (d)(1) of this section;

(iii) *Relationship with other performance expectations.* A discussion, to the maximum extent practicable, on how the established target in paragraph (d)(1) of this section support expectations documented in longer range plans, such as the State asset management plan required by 23 U.S.C. 119(e) and the long-range statewide transportation plan provided in part 450 of this chapter; and

(iv) *GHG metric and metric information for the GHG measure.* The metric and the individual values used to calculate the GHG metric, as described in § 490.511(c), for the reference year.

(2) For the State Initial GHG Report, the State DOT shall use the following data to calculate the GHG metric, described in § 490.511(c), for the reference year.

(i) Data published by FHWA for the CO_2 factors for each on-road fuel type associated with the reference year.

(ii) The fuel consumed data shall meet the requirements in § 490.509(g) for the reference year.

(iii) The VMT data shall meet the requirements of § 490.509(h) for the reference year.

[82 FR 6031, Jan. 18, 2017, as amended at 83 FR 24936, May 31, 2018; 88 FR 85391, Dec. 7, 2023]

§ 490.109 Assessing significant progress toward achieving the performance targets for the National Highway Performance Program and the National Highway Freight Program.

(a) *In general.* The FHWA will assess each of the State DOT targets separately for the NHPP measures specified in § 490.105(c)(1) through (5) and the Freight Reliability measure specified in § 490.105(c)(6) to determine the significant progress made toward the achievement of those targets.

(b) *Frequency.* The FHWA will determine whether a State DOT has or has not made significant progress toward the achievement of applicable targets as described in paragraph (e) of this section at the midpoint and the end of each performance period.

(c) *Schedule.* The FHWA will determine significant progress toward the

achievement of a State DOT's NHPP and NHFP targets after the State DOT submits the Mid Performance Period Progress Report for progress toward the achievement of 2-year targets, and again after the State DOT submits the Full Performance Period Progress Report for progress toward the achievement of 4-year targets. The FHWA will notify State DOTs of the outcome of the determination of the State DOT's ability to make significant progress toward the achievement of its NHPP and NHFP targets.

(d) *Source of data/information.* (1) The FHWA will use the following sources of information to assess NHPP target achievement and condition/performance progress:

(i) Data contained within the HPMS on June 15th of the year in which the significant progress determination is made that represents conditions from the prior year for targets established for Interstate System pavement condition measures, as specified in § 490.105(c)(1);

(ii) Data contained within the HPMS on August 15th of the year in which the significant progress determination is made that represents conditions from the prior year for targets established for non-Interstate NHS pavement condition measures, as specified in § 490.105(c)(2);

(iii) The most recently available data contained within the NBI as of June 15th of the year in which the significant progress determination is made for targets established for NHS bridge condition measures, as specified in § 490.105(c)(3);

(iv) Data contained within the HPMS on August 15th of the year in which the significant progress determination is made that represents performance from the prior year for targets established for the Travel Time Reliability measures, as specified in § 490.105(c)(4);

(v) Data contained within Fuels & FASH on August 15th of the year in which the significant progress determination is made that represents performance from the prior year for targets established for the GHG measure in § 490.105(c)(5), and data from Fuels & FASH that represents performance for the reference year.

(vi) Baseline condition/performance data contained in Fuels & FASH, HPMS, and NBI of the year in which the Baseline Period Performance Report is due to FHWA that represents baseline conditions/performances for the performance period for the measures in §§ 490.105(c)(1) through (5). For the GHG measure, specified in § 490.105(c)(5), the baseline performance data from HPMS shall be the data contained within HPMS on November 30th of the year the Baseline Period Performance Report is due to FHWA.

(vii) Data contained within the HPMS on November 30th of the year in which the significant progress determination is made that represents performance from the prior year for targets established for the GHG measure specified in § 490.105(c)(5), and HPMS data as of November 30, 2023 that represents performance for the reference year.

(viii) The CO_2 factor specified in § 490.509(f) for the baseline performance, prior year, and reference year for targets established for the GHG measure specified in § 490.105(c)(5).

(2) The FHWA will use the following sources of information to assess NHFP target achievement and condition/performance progress:

(i) Data contained within the HPMS on August 15th of the year in which the significant progress determination is made that represents performance from the prior year for targets established for the Freight Reliability measure, as specified in § 490.105(c)(6); and

(ii) Baseline condition/performance data contained in HPMS of the year in which the Baseline Period Performance Report is due to FHWA that represents baseline condition/performance for the performance period.

(e) *Significant progress determination for individual NHPP and NHFP targets*—(1) *In general.* The FHWA will biennially assess whether the State DOT has achieved or made significant progress toward each target established by the State DOT for the NHPP measures described in § 490.105(c)(1) through (5) and the Freight Reliability measure described in § 490.105(c)(6). The FHWA will assess the significant progress of each statewide target separately using the

condition/performance data/information sources described in paragraph (d) of this section. The FHWA will not assess the progress achieved for any additional targets a State DOT may establish under § 490.105(e)(3).

(2) *Significant progress toward individual NHPP and NHFP targets.* The FHWA will determine that a State DOT has made significant progress toward the achievement of each 2-year or 4-year applicable target if either:

(i) The actual condition/performance level is better than the baseline condition/performance; or

(ii) The actual condition/performance level is equal to or better than the established target.

(3) *Phase-in of new requirements.* The following requirements shall only apply to the first performance period and only to the Interstate System pavement condition targets and non-Interstate NHS Travel Time Reliability targets, described in § 490.105(e)(7):

(i) At the midpoint of the first performance period, FHWA will not make a determination of significant progress toward the achievement of 2-year targets for Interstate System pavement condition measures:

(ii) The FHWA will classify the assessment of progress toward the achievement of targets in paragraph (e)(3)(i) of this section as ''progress not determined'' so that they will be excluded from the requirement under paragraph (e)(2) of this section; and

(iii) The FHWA will not make a determination of significant progress toward the achievement of 2-year targets for the Non-Interstate NHS Travel Time Reliability measure.

(4) *Insufficient data and/or information.* The FHWA will determine that a State DOT has not made significant progress toward the achievement of an individual NHPP or NHFP target if:

(i) A State DOT does not submit a required report, individual target, or other information as specified in § 490.107 for the each of the measures in § 490.105(c)(1) through (6);

(ii) The data contained in HPMS do not meet the requirements under § 490.313(b)(4)(i) by the data extraction date specified in paragraph (d)(1) of this section for the each of the Interstate System pavement condition measures in § 490.105(c)(1);

(iii) The data contained in HPMS do not meet the requirements under § 490.313(b)(4)(i) by the data extraction date specified in paragraph (d)(2) of this section for the each of the non-Interstate NHS pavement condition measures in § 490.105(c)(2);

(iv) A State DOT reported data are not cleared in the NBI by the data extraction date specified in paragraph (d)(3) of this section for the each of the NHS bridge condition measures in § 490.105(c)(3); or

(v) The data were determined insufficient, as described in paragraphs (e)(4)(ii) through (iv) of this section, in the year in which the Baseline Period Performance Report is due to FHWA for the measures in § 490.105(c)(1) through (3).

(vi) A State DOT's reported data are not accepted in the Fuels & FASH, by the data extraction date specified in paragraph (d)(1) of this section for the GHG measure in § 490.105(c)(5).

(vii) A State DOT's reported data are not accepted in the HPMS by the data extraction date specified in paragraph (d)(1) of this section for the GHG measure in § 490.105(c)(5).

(5) *Extenuating circumstances.* The FHWA will consider extenuating circumstances documented by the State DOT in the assessment of progress toward the achievement of NHPP and NHFP targets in the relevant State Biennial Performance Report, provided in § 490.107.

(i) The FHWA will classify the assessment of progress toward the achievement of an individual 2-year or 4-year target as ''progress not determined'' if the State DOT has provided an explanation of the extenuating circumstances beyond the control of the State DOT that prevented it from making significant progress toward the achievement of a 2-year or 4-year target and the State DOT has quantified the impacts on the condition/performance that resulted from the circumstances, which are:

(A) Natural or man-made disasters that caused delay in NHPP or NHFP project delivery, extenuating delay in data collection, and/or damage/loss of data system;

(B) Sudden discontinuation of Federal government furnished data due to natural and man-made disasters or sudden discontinuation of Federal government furnished data due to lack of funding; and/or

(C) New law and/or regulation directing State DOTs to change metric and/or measure calculation.

(ii) If the State DOT's explanation, described in paragraph (e)(5)(i) of this section, is accepted by FHWA, FHWA will classify the progress toward achieving the relevant target(s) as ''progress not determined,'' and those targets will be excluded from the requirement in paragraph (e)(2) of this section.

(6) *Phase-in of new requirements for the GHG Measure.* The following requirements shall only apply to the GHG targets, described in §490.513(d), and the significant progress determination conducted immediately after the submittal of the 2024 Mid Performance Period Progress Report, described in §490.107(b)(2):

(i) Consistent with §490.105(e)(10)(i), State DOTs are not required to establish a 2-year target, and, consistent with 490.107(b)(2), State DOTs will not submit information related to the GHG measure in the 2024 Mid Performance Period Progress Report.

(ii) At the midpoint of the performance period, FHWA shall not make a determination of significant progress toward the achievement of 2-year targets for the GHG measure; and

(iii) The FHWA will classify the assessment of progress toward the achievement of targets in paragraph (e)(6)(ii) of this section as ''progress not determined'' and they will be excluded from the requirement under paragraph (e)(2) of this section.

(f) *Performance achievement.* (1) If FHWA determines that a State DOT has not made significant progress toward the achieving of NHPP targets, then the State DOT shall include as part of the next performance target report under 23 U.S.C. 150(e) [the Biennial Performance Report] a description of the actions the State DOT will undertake to achieve the targets related to the measure in which significant progress was not achieved as follows:

(i) If significant progress is not made for either target established for the Interstate System pavement condition measures, §490.307(a)(1) and (2), then the State DOT shall document the actions it will take to achieve Interstate Pavement condition targets;

(ii) If significant progress is not made for either target established for the Non-Interstate System pavement condition measures, §490.307(a)(3) and (4), then the State DOT shall document the actions it will take to to achieve Non-Interstate Pavement condition target;

(iii) If significant progress is not made for either target established for the NHS bridge condition measures, §490.407(c)(1) and (2), then the State DOT shall document the actions it will take to to achieve NHS bridge condition target;

(iv) If significant progress is not made for either target established for the Travel Time Reliability measures, §490.507(a)(1) and(2), then the State DOT shall document the actions it will take to achieve the NHS travel time targets; and

(v) If significant progress is not made for the target established for the GHG measure in §490.105(c)(5), then the State DOT shall document the actions it will take to achieve the GHG performance target.

(2) If FHWA determines that a State DOT has not made significant progress toward achieving the target established for the Freight Reliability measure in §490.607, then the State DOT shall include as part of the next performance target report under 23 U.S.C. 150(e) [the Biennial Performance Report] the following:

(i) An identification of significant freight system trends, needs, and issues within the State.

(ii) A description of the freight policies and strategies that will guide the freight-related transportation investments of the State.

(iii) An inventory of truck freight bottlenecks within the State and a description of the ways in which the State DOT is allocating funding under title 23 U.S.C. to improve those bottlenecks.

(A) The inventory of truck freight bottlenecks shall include the route and milepost location for each identified

bottleneck, roadway section inventory data reported in HPMS, Average Annual Daily Traffic (AADT), Average Annual Daily Truck Traffic (AADTT), Travel-time data and measure of delay, such as travel time reliability, or Average Truck Speeds, capacity feature causing the bottleneck or any other constraints applicable to trucks, such as geometric constrains, weight limits or steep grades.

(B) For those facilities that are State-owned or operated, the description of the ways in which the State DOT is improving those bottlenecks shall include an identification of methods to address each bottleneck and improvement efforts planned or programed through the State Freight Plan or MPO freight plans; the Statewide Transportation Improvement Program and Transportation Improvement Program; regional or corridor level efforts; other related planning efforts; and operational and capital activities.

(iv) A description of the actions the State DOT will undertake to achieve the target established for the Freight Reliability measure in § 490.607.

(3) The State DOT should, within 6 months of the significant progress determination, amend its Biennial Performance Report to document the information specified in this paragraph to ensure actions are being taken to achieve targets.

[82 FR 6031, Jan. 18, 2017, as amended at 83 FR 24936, May 31, 2018; 88 FR 85392, Dec. 7, 2023]

§ 490.111 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, FHWA must publish a notice of change in the FEDERAL REGISTER and the material must be available to the public. All approved material is available for inspection at the Federal Highway Administration, Office of Highway Policy Information (202–366–4631) 1200 New Jersey Avenue SE., Washington, DC 20590, *www.fhwa.dot.gov* and is available from the sources listed below. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030 or go to *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*.

(b) The Federal Highway Administration, 1200 New Jersey Avenue SE., Washington, DC 20590, *www.fhwa.dot.gov*.

(1) Highway Performance Monitoring System (HPMS) Field Manual, IBR approved for §§ 490.103, 490.309, 490.311, and 490.319.

(2) Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges, includes: Errata Sheet for Coding Guide 06/2011, Report No. FHWA–PD–96–001, December 1995, IBR approved for §§ 490.409 and 490.411.

(c) The American Association of State Highway and Transportation Officials, 444 North Capitol Street NW., Suite 249, Washington, DC 20001, (202) 624–5800, *www.transportation.org*.

(1) AASHTO Standard M328–14, Standard Specification for Transportation Materials and Methods of Sampling and Testing, Inertial Profiler, 2014, 34th/2014 Edition, IBR approved for § 490.309.

(2) AASHTO Standard R57–14, Standard Specification for Transportation Materials and Methods of Sampling and Testing, Standard Practice for Operating Inertial Profiling Systems, 2014, 34th/2014 Edition, IBR approved for § 490.309.

(3) AASHTO Standard R48–10 (2013), Standard Specification for Transportation Materials and Methods of Sampling and Testing, Standard Practice for Determining Rut Depth in Pavements, 2014, 34th/2014 Edition, IBR approved for § 490.309.

(4) AASHTO Standard R36–13, Standard Specification for Transportation Materials and Methods of Sampling and Testing, Standard Practice for Evaluating Faulting of Concrete Pavements, 2014, 34th/2014 Edition, IBR approved for § 490.309.

(5) AASHTO Standard R43–13, Standard Specification for Transportation Materials and Methods of Sampling and Testing, Standard Practice for Quantifying Roughness of Pavement,

2014, 34th/2014 Edition, IBR approved for § 490.311.

Subpart B—National Performance Management 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 (State DOTs) to use in assessing:

(a) Serious injuries and fatalities per vehicle miles traveled (VMT); and

(b) 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).

Annual Report File (ARF) means FARS data that are published annually, but prior to Final FARS data.

Fatality Analysis Reporting System (FARS) means a nationwide census providing public yearly data regarding fatal injuries suffered in motor vehicle traffic crashes.

Final FARS means the FARS data that replace the ARF file and contain additional cases or updates to cases that became available after the ARF was released, and which are no longer subject to future changes.

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

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 FARS database.

Number of non-motorized fatalities means the total number of fatalities (as defined in this section) with the FARS person attribute codes: (5) Pedestrian, (6) Bicyclist, (7) Other Cyclist, and (8) Person on Personal Conveyance.

Number of non-motorized serious injuries means the total number of serious injuries (as defined in this section) where the injured person is, or is equivalent to, a pedestrian (2.2.36) or a pedalcylcist (2.2.39) as defined in the ANSI D16.1–2007 (incorporated by reference, see § 490.111).

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 crash involves a motor vehicle traveling on a public road, and the injury status is ''suspected serious injury (A)'' as described in MMUCC, (incorporated by reference, see § 490.111). For serious injury classifications 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 the NHTSA.

Public road is as defined in 23 CFR 924.3.

Rate of fatalities means the ratio of the total number of fatalities (as defined in this section) to the number of vehicle miles traveled (VMT) (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 in this section) to the number of VMT (expressed in 100 million vehicle miles of travel) in a calendar year.

Serious injuries means:

(1) From April 14, 2016 to April 15, 2019, injuries classified as ''A'' on the KABCO scale through use of the conversion tables developed by NHTSA; and

(2) After April 15, 2019, ''suspected serious injury (A)'' as defined in the MMUCC.

§ 490.207 National performance management measures for the Highway Safety Improvement Program.

(a) There are five performance measures for the purpose of carrying out the HSIP. They are:

(1) Number of fatalities;

(2) Rate of fatalities;

(3) Number of serious injuries;

(4) Rate of serious injuries; and,

(5) Number of non-motorized fatalities and non-motorized serious injuries.

(b) Each performance measure is based on a 5-year rolling average. The performance measures are calculated as follows:

(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 each of the most recent 5 consecutive years ending in the year for which the targets are established, dividing by 5, and rounding to the tenth decimal place. FARS ARF may be used if Final FARS is not available.

(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 for each of the most recent 5 consecutive years ending in the year for which the targets are established, adding the results, dividing by 5, and rounding to the thousandth decimal place. The FARS ARF may be used if Final FARS is not available. State VMT data are derived from the HPMS. The Metropolitan Planning Organizations (MPO) VMT is estimated by the MPO. The sum of the fatality rates is divided by five and then rounded to the thousandth decimal place.

(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 each of the most recent 5 consecutive years ending in the year for which the targets are established, dividing by five, and rounding to the tenth decimal place.

(4) The performance measure for the rate of serious injuries is the 5-year rolling average of the State's serious injuries rate per VMT and shall be calculated by first calculating the number of serious injuries per 100 million VMT for each of the most recent 5 consecutive years ending in the year for which the targets are established, adding the results, dividing by five, and rounding to the thousandth decimal place. State VMT data are derived from the HPMS. The MPO VMT is estimated by the MPO.

(5) The performance measure for the number of Non-motorized Fatalities and Non-motorized Serious Injuries is the 5-year rolling average of the total number of non-motorized fatalities and non-motorized serious injuries for each State and shall be calculated by adding the number of non-motorized fatalities to the number non-motorized serious injuries for each of the most recent 5 consecutive years ending in the year for which the targets are established, dividing by five, and rounding to the tenth decimal place. FARS ARF may be used if Final FARS is not available.

(c) For purposes of calculating serious injuries in paragraphs (b)(3), (4), and (5) of this section:

(1) Before April 15, 2019, serious injuries may be determined by either of the following:

(i) Serious injuries coded (A) in the KABCO injury classification scale through use of the NHTSA serious injuries conversion tables; or

(ii) Using MMUCC (incorporated by reference, see § 490.111).

(2) By April 15, 2019, serious injuries shall be determined using MMUCC.

§ 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) 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. For fiscal year 2024 only, the performance targets submitted under this paragraph are not required to be identical to the targets established by the

State Highway Safety Office for the common performance measures.

(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 April 14, 2017, and in each subsequent HSIP annual report thereafter.

(5) The State DOT shall include, in the HSIP Report (see 23 CFR part 924), at a minimum, the most recent 5 years of serious injury data and non-motorized serious injury data. 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 as required by § 490.207(c).

(6) Unless approved by FHWA and subject to § 490.209(a)(1), a State DOT shall not change one or more of its targets for a given year once it is submitted in the HSIP annual report.

(b) In addition to targets described in paragraph (a) of this section, State DOTs may, as appropriate, for each target in paragraph (a) establish additional targets for portions of the State.

(1) A State DOT shall declare and describe in the State HSIP annual report required by § 490.213 the boundaries used to establish each additional target.

(2) State DOTs may select any number and combination of urbanized area boundaries and may also select a single non-urbanized area boundary for the establishment of additional targets.

(3) The boundaries used by the State DOT for additional targets shall be contained within the geographic boundary of the State.

(4) State DOTs shall evaluate separately the progress of each additional target and report that progress in the State HSIP annual report (see 23 CFR part 924).

(c) The Metropolitan Planning Organizations (MPO) 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) The MPO target shall represent performance outcomes anticipated for the same calendar year as the State target.

(3) After the MPOs within each State establish the targets, the State DOT must be able to provide those targets to FHWA, upon request.

(4) For each performance measure, the MPOs shall establish a target by either:

(i) Agreeing to plan and program projects so that they contribute toward the accomplishment of the State DOT safety target for that performance measure; or

(ii) Committing to a quantifiable target for that performance measure for their metropolitan planning area.

(5) The MPOs that establish quantifiable fatality rate or serious injury rate targets shall report the VMT estimate used for such targets and the methodology used to develop the estimate. The methodology should be consistent with other Federal reporting requirements, if applicable.

(6) The MPO targets established under paragraph (c)(4) 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)(1) The State DOT and relevant MPOs shall coordinate on the establishment of targets in accordance with 23 CFR part 450 to ensure consistency, to the maximum extent practicable.

(2) The MPOs with multi-State boundaries that agree to plan and program projects to contribute toward State targets in accordance with paragraph (c)(4)(i) of this section shall plan and program safety projects in support of the State DOT targets for each area within each State (e.g., MPOs that extend into two States shall agree to

plan and program projects to contribute toward two separate sets of targets (one set for each State)).

[81 FR 13913, Mar. 15, 2016, as amended at 88 FR 36474, June 5, 2023]

§ 490.211 Determining whether a State department of transportation has met or made significant progress toward meeting performance targets.

(a) The determination for having met or made significant progress toward meeting the performance targets under 23 U.S.C. 148(i) will be determined based on:

(1) The most recent available Final FARS data for the fatality number. The FARS ARF may be used if Final FARS is not available;

(2) The most recent available Final FARS and HPMS data for the fatality rate. The FARS ARF may be used if Final FARS is not available;

(3) The most recent available Final FARS data for the non-motorized fatality number. The FARS ARF may be used if Final FARS is not available;

(4) State reported data for the serious injuries number;

(5) State reported data and HPMS data for the serious injuries rate; and

(6) State reported data for the non-motorized serious injuries number.

(b) The State-reported serious injury data and non-motorized serious injury data will be taken from the HSIP report in accordance with 23 CFR part 924.

(c) The FHWA will evaluate whether a State DOT has met or made significant progress toward meeting performance targets.

(1) The FHWA will not evaluate any additional targets a State DOT may establish under § 490.209(b).

(2) A State DOT is determined to have met or made significant progress toward meeting its targets when at least four of the performance targets established under § 490.207(a) are:

(i) Met; or

(ii) The outcome for a performance measure is less than the 5-year rolling average data for the performance measure for the year prior to the establishment of the State's target. For example, of the State DOT's five performance targets, the State DOT is determined to have met or made significant progress toward meeting its targets if it met two targets and the outcome is less than the measure for the year prior to the establishment of the target for two other targets.

(d) If a State DOT has not met or made significant progress toward meeting performance targets in accordance with paragraph (c) of this section, the State DOT must comply with 23 U.S.C. 148(i) for the subsequent fiscal year.

(e) The FHWA will first evaluate whether a State DOT has met or made significant progress toward meeting performance targets after the calendar year following the year for which the first targets are established, and then annually thereafter.

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

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

(b) The MPOs shall annually report their established safety targets to their respective State DOT, in a manner that is documented and mutually agreed upon by both parties.

(c) The MPOs shall report baseline safety performance, VMT estimate and methodology if a quantifiable rate target was established, 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. Safety performance and progress shall be reported based on the following data sources:

(1) The most recent available Final FARS data for the fatality number. The FARS ARF may be used if Final FARS is not available;

(2) The most recent available Final FARS and MPO VMT estimate for the fatality rate. The FARS ARF may be used if Final FARS is not available;

(3) The most recent available Final FARS data for the non-motorized fatality number. The FARS ARF may be used if Final FARS is not available;

(4) State reported data for the serious injuries number;

(5) State reported data and MPO VMT estimate for the serious injuries rate; and

(6) State reported data for the non-motorized serious injuries number.

Subpart C—National Performance Management Measures for the Assessing Pavement Condition

SOURCE: 82 FR 5962, Jan. 17, 2017, unless otherwise noted.

§ 490.301 Purpose.

The purpose of this subpart is to implement the following statutory requirements of 23 U.S.C. 150(c)(3) to:

(a) Establish measures for State DOTs and MPOs to assess the condition of pavements on the Interstate System;

(b) Establish measures for State DOTs and MPOs to assess the condition of pavements on the NHS (excluding the Interstate);

(c) Establish minimum levels for pavement condition on the Interstate System, only for purposes of carrying out 23 U.S.C. 119(f)(1);

(d) Establish data elements that are necessary to collect and maintain standardized data to carry out a performance-based approach; and

(e) Consider regional differences in establishing the minimum levels for pavement conditions on the Interstate System.

§ 490.303 Applicability.

The performance measures in this subpart are applicable to the mainline highways on the Interstate System and on the non-Interstate NHS.

§ 490.305 Definitions.

The following definitions are only applicable to this subpart, unless otherwise provided:

Asphalt pavements means pavements where the top-most surface is constructed with asphalt materials. These pavements are coded in the HPMS as having any one of the following Surface Types:

Code	Surface_type
2	Bituminous.
6	Asphalt-Concrete (AC) Overlay over Existing AC Pavement.
7	AC Overlay over Existing Jointed Concrete Pavement.
8	AC (Bituminous Overlay over Existing CRCP).

Continuously Reinforced Concrete Pavements (CRCP) means pavements where the top-most surface is constructed of reinforced Portland cement concrete with no joints. These pavements are coded in the HPMS as having the following Surface Type:

Code	Surface_type
5	CRCP—Continuously Reinforced Concrete Pavement.

Cracking means an unintentional break in the continuous surface of a pavement.

Cracking Percent means the percentage of pavement surface exhibiting cracking as follows:

(1) For asphalt pavements, Cracking Percent is the percentage of the area of the pavement section, exhibiting visible cracking.

(2) For jointed concrete pavements, Cracking Percent is the percentage of concrete slabs exhibiting cracking.

(3) For CRCP, the Cracking Percent is the percentage of pavement surface with longitudinal cracking and/or punchouts, spalling or other visible defects.

Faulting means a vertical misalignment of pavement joints in Portland Cement Concrete Pavements.

International Roughness Index (IRI) means a statistic used to estimate the amount of roughness in a measured longitudinal profile. The IRI is computed from a single longitudinal profile using a quarter-car simulation, as described in the report: ''On the Calculation of IRI from Longitudinal Road Profile'' (Sayers, M.W., Transportation

Research Board 1501, Transportation Research Board, Washington, DC 1995).

Jointed concrete pavements means pavements where the top-most surface is constructed of Portland cement concrete with joints. It may be constructed of either reinforced or unreinforced (plain) concrete. It is coded in the HPMS as having any one of the following Surface Types:

Code	Surface_type
3	Jointed Plain Concrete Pavement (includes whitetopping).
4	Jointed Reinforced Concrete Pavement (includes whitetopping).
9	Unbonded Jointed Concrete Overlay on PCC Pavement.
10	Bonded PCC Overlay on PCC Pavement.

Pavement means any hard surfaced travel lanes of any highway.

Pavement section means a nominally 0.1 mile-long reported segment that defines the limits of pavement condition metrics required by FHWA.

Present Serviceability Rating (PSR) means an observation based system used to rate pavements.

Punchout means a distress specific to CRCP described as the area between two closely spaced transverse cracks and between a short longitudinal crack and the edge of the pavement (or a longitudinal joint) that is breaking up, spalling, or faulting.

Rutting means longitudinal surface depressions in the pavement derived from measurements of a profile transverse to the path of travel on a highway lane. It may have associated transverse displacement.

Sampling as applied to pavements, means measuring pavement conditions on a short section of pavement as a statistical representation for the entire section. Sampling is not to be used to measure or rate NHS pavement conditions.

§ 490.307 National performance management measures for assessing pavement condition.

(a) To carry out the NHPP, the performance measures for State DOTs to assess pavement condition are:

(1) Percentage of pavements of the Interstate System in Good condition;

(2) Percentage of pavements of the Interstate System in Poor condition;

(3) Percentage of pavements of the non-Interstate NHS in Good condition; and

(4) Percentage of pavements of the non-Interstate NHS in Poor condition.

(b) State DOTs will collect data using the methods described in § 490.309 and will process this data to calculate individual pavement metrics for each section of pavement that will be reported to FHWA as described in § 490.311. State DOTs and FHWA will use the reported pavement metrics to compute an overall performance of Good, Fair, or Poor, for each section of pavement as described in § 490.313.

§ 490.309 Data requirements.

(a) The performance measures identified in § 490.307 are to be computed using methods in § 490.313 from the four condition metrics and three inventory data elements contained within the HPMS that shall be collected and reported following the HPMS Field Manual, which is incorporated by reference into this subpart (see § 490.111). State DOTs shall report four condition metrics for each pavement section: IRI, rutting, faulting, and Cracking_Percent. State DOTs shall also report three inventory data elements as directed in the HPMS Field Manual: Through Lanes, Surface Type, and Structure Type. All pavement data collected after January 1, 2018 for Interstate highways and January 1, 2020 for non-Interstate National Highway System routes shall meet the requirements of this section.

(b) State DOTs shall collect data in accordance with the following relevant HPMS requirements to report IRI, rutting (asphalt pavements), faulting (jointed concrete pavements), and Cracking percent. State DOTs will be permitted to report present serviceability rating (PSR) for specific locations in accordance with the HPMS requirements as an alternative where posted speed limits are less than 40 miles per hour.

(1) For the Interstate System the following shall apply for all the pavement condition metrics:

(i) State DOTs shall collect data—

(A) From the full extent of the mainline highway;

(B) In the rightmost travel lane or one consistent lane for all data if the rightmost travel lane carries traffic that is not representative of the remainder of the lanes or is not readily accessible due to closure, excessive congestion, or other events impacting access;

(C) Continuously collected in a manner that will allow for reporting in nominally uniform pavement section lengths of 0.10 mile (528 feet); shorter pavement sections are permitted only at the beginning of a route, end of a route, at bridges, at locations where surface type changes or other locations where a pavement section length of 0.10 mile is not achievable; the maximum length of pavement sections shall not exceed 0.11 mile (580.8 feet);

(D) In at least one direction of travel; and

(E) On an annual frequency.

(ii) Estimating conditions from data samples of the full extent of the mainline highway is not permitted.

(iii) State DOTs may collect and report pavement condition data separately for each direction of divided highways on the Interstate System. Averaging across directions is not permitted. When pavement condition data is collected in one direction only, the measured conditions shall apply to all lanes in both directions for that pavement section for purposes of this part.

(iv) For the portions of the Interstate mainline highway pavements where posted speed limits are less than 40 MPH (e.g., border crossings, toll plazas), State DOTs may collect and report the Present Serviceability Rating (PSR) as an alternative to the IRI, Cracking__Percent, rutting, and faulting in this pavement section and shall follow the following requirements:

(A) The PSR shall be determined as a value from 0 to 5 per the procedures prescribed in the HPMS Field Manual;

(B) Alternative pavement condition methods may be allowed to estimate a PSR with prior approval from FHWA of the method of correlation between their condition determination and PSR as required in the HPMS Field Manual;

(C) The PSR data shall be continuously collected in a manner that will allow for reporting in uniform pavement section lengths of 0.10 mile (528 feet); shorter pavement sections are permitted only at the beginning of a route, end of a route, at bridges, at locations where surface type changes or other locations where a pavement section length of 0.10 mile is not achievable; the maximum length of pavement sections shall not exceed 0.11 mile (580.8 feet);

(D) The PSR data shall be collected in at least one direction of travel; and

(E) The PSR data shall be collected on an annual frequency.

(2) For the non-Interstate NHS the following shall apply:

(i) For the IRI metric, State DOTs shall collect and report data:

(A) From the full extent of the mainline highway;

(B) In the rightmost travel lane or one consistent lane for all data if the rightmost travel lane is not accessible;

(C) Continuously collected in a manner that will allow for reporting in uniform pavement section lengths of 0.10 mile (528 feet); shorter pavement sections are permitted only at the beginning of a route, end of a route, at bridges, at locations where surface type changes or other locations where a pavement section length of 0.10 mile is not achievable; the maximum length of pavement sections shall not exceed 0.11 mile (580.8 feet)

(D) In one direction of travel; and

(E) On a biennial frequency.

(F) Estimating IRI metrics from data samples of the full extent of the mainline will not be permitted.

(ii) For the Cracking percent, rutting and faulting metrics, State DOTs shall collect data—

(A) On the full extent (no sampling) of the mainline highway;

(B) In the rightmost travel lane or one consistent lane for all data if the rightmost travel lane is not accessible;

(C) Continuously collected in a manner that will allow for reporting in uniform pavement section lengths of 0.10 mile (528 feet); shorter pavement sections are permitted only at the beginning of a route, end of a route, at bridges, at locations where surface type changes or other locations where a pavement section length of 0.10 mile is not achievable; the maximum length of pavement sections shall not exceed 0.11 mile (580.8 feet)

(D) In one direction of travel; and

(E) On at least a biennial frequency.

(F) Estimating conditions from data samples of the full extent of the mainline highway will not be permitted.

(iii) For the portions of mainline highways where posted speed limits of less than 40 MPH, State DOTs may collect the Present Serviceability Rating (PSR) as an alternative to the IRI, Cracking__Percent, rutting, and faulting pavement condition metrics, in paragraphs (b)(2)(i) and (ii) of this section, and shall follow the following requirements:

(A) The PSR shall be determined as a 0 to 5 value per the procedures prescribed in the HPMS Field Manual;

(B) Alternative pavement condition methods may be allowed to estimate a PSR with prior approval from FHWA of the method of correlation between their condition determination and PSR as required in the HPMS Field Manual;

(C) The PSR data shall be continuously collected in a manner that will allow for reporting in uniform pavement section lengths of 0.10 mile (528 feet); shorter pavement sections are permitted only at the beginning of a route, end of a route, at bridges, at locations where surface type changes or other locations where a pavement section length of 0.10 mile is not achievable; the maximum length of pavement sections shall not exceed 0.11 mile (580.8 feet);

(D) The PSR data shall be collected in one direction of travel; and

(E) The PSR data shall be collected on at least a biennial frequency.

(3) Data collection methods for each of the condition metrics shall conform to the following:

(i) The device to collect data needed to calculate the IRI metric shall be in accordance with American Association of State Highway Transportation Officials (AASHTO) Standard M328–14, Standard Specification for Transportation Materials and Methods of Sampling and Testing, Standard Equipment Specification for Inertial Profiler (incorporated by reference, see § 490.111).

(ii) The method to collect data needed to calculate the IRI metric shall be in accordance with AASHTO Standard R57–14, Standard Specification for Transportation Materials and Methods of Sampling and Testing, Standard Practice for Operating Inertial Profiling Systems (incorporated by reference, see § 490.111).

(iii) For highways with a posted speed limit less than 40 miles per hour, an alternate method for estimation of IRI is permitted as described in § 490.309(b)(1)(iv) or § 490.309(b)(2)(iii) may be used in lieu of measuring IRI, cracking, rutting and faulting.

(iv) The method to collect data needed to determine the Cracking__Percent metric for all pavement types except CRCP shall be manual, semi-automated, or fully automated in accordance with the HPMS Field Manual (incorporated by reference, see 490.111).

(v) For CRCP the method to collect the data needed to determine the Cracking__Percent metric is described in the HPMS Field Manual (incorporated by reference, see § 490.111) and includes longitudinal cracking and/or punchouts, spalling, or other visible defects.

(vi) For asphalt pavements, the method to collect data needed to determine the rutting metric shall either be:

(A) A 5-Point Collection of Rutting Data method in accordance with AASHTO Standard R48–10, Standard Specification for Transportation Materials and Methods of Sampling and Testing, Standard Practice for Determining Rut Depth in Pavements (incorporated by reference, see § 490.111); or

(B) An Automated Transverse Profile Data method in accordance with the HPMS Field Manual (incorporated by reference, see § 490.111).

(vii) For jointed concrete pavements, the method to collect data needed to determine the faulting metric shall be in accordance with AASHTO Standard R36–13, Standard Specification for Transportation Materials and Methods of Sampling and Testing, Standard Practice for Evaluating Faulting of Concrete Pavements (incorporated by reference, see § 490.111).

(c) State DOTs shall collect data in accordance with the following relevant HPMS requirements to report Through Lanes, Surface Type, and Structure Type.

(1) State DOTs shall collect data:

(i) For the full extent of the mainline highway of the NHS;

(ii) In at least one direction of travel for the Interstate System and in one direction of travel for the non-Interstate NHS; and

(iii) On an annual frequency on the Interstate routes and on at least a biennial frequency on non-Interstate NHS routes.

(2) Estimating data elements from samples of the full extent of the mainline highway is not permitted.

§ 490.311 Calculation of pavement metrics.

(a) The condition metrics and inventory data elements needed to calculate the pavement performance measures shall be calculated in accordance with the HPMS Field Manual (incorporated by reference, see § 490.111), except as noted below.

(b) State DOTs shall calculate metrics in accordance with the following relevant HPMS requirements.

(1) For all pavements, the IRI metric:

(i) Shall be computed from pavement profile data in accordance with AASHTO Standard R43–13, Standard Specification for Transportation Materials and Methods of Sampling and Testing, Standard Practice for Quantifying Roughness of Pavement, 2014, 34th/2014 Edition, AASHTO, 1–56051–606–4 (incorporated by reference, see § 490.111);

(ii) Shall be reported for all pavements as the average value in inches per mile for each section; and

(iii) Shall not be estimated from a PSR or other observation-based method except where permitted in § 490.309(b)(3)(iii).

(2) For asphalt pavements—

(i) The Cracking_Percent metric shall be computed as the percentage of the total area containing visible cracks to the nearest whole percent in each section; and

(ii) The rutting metric shall be computed as the average depth of rutting, in inches to the nearest 0.01 inches, for the section.

(3) For CRCP, the Cracking_Percent metric shall be computed as the percentage of the area of the section to the nearest whole percent exhibiting longitudinal cracking, punchouts, spalling, or other visible defects. Transverse cracking shall not be considered in the Cracking_Percent metric.

(4) For jointed concrete pavements—

(i) The Cracking_Percent metric shall be computed as the percentage of slabs to the nearest whole percent within the section that exhibit cracking;

(ii) Partial slabs shall contribute to the section that contains the majority of the slab length; and

(iii) The faulting metric shall be computed as the average height, in inches to the nearest 0.01 inch, of faulting between pavement slabs for the section.

(5) For the mainline highways on the non-Interstate NHS with posted speed limits of less than 40 MPH—

(i) The present serviceability rating (PSR) may be used as an alternative to the IRI, Cracking_Percent, rutting, and faulting pavement condition metrics.

(ii) The PSR shall be determined as a 0 to 5 value per the procedures prescribed in the HPMS Field Manual.

(iii) Alternative pavement condition methods may be allowed to estimate a PSR with prior approval from FHWA of the method of correlation between their condition determination and PSR as required in the HPMS Field Manual.

(c) State DOTs shall report the four pavement metrics listed in § 490.309(a) as calculated following the requirements in paragraphs (a) and (b) of this section in accordance with the following relevant HPMS requirements:

(1) Pavement condition metrics shall be reported to the HPMS in uniform section lengths of 0.1 mile (528 feet); shorter sections are permitted only at the beginning of a route, the end of a route, at bridges, or other locations where a section length of 0.1 mile is not achievable; and the maximum length of sections shall not exceed 0.11 mile (580.8 feet)

(2) Each measured section shall have a single value for each of the relevant condition metrics. Sections where condition is estimated from PSR will have one value for the overall condition.

(3) The time and location reference shall be reported for each section as follows:

(i) The State_Code, Route_ID, Begin_Point, and End_Point shall be

reported as specified in the HPMS field manual (incorporated by reference, see § 490.111) for each of the four condition metrics.

(ii) The Year_Record shall be reported as the four digit year for which the data represents for each of the four condition metrics; and

(iii) The Value_Date shall be reported as the month and year of data collection for each of the four condition metrics.

(4) Sections for the four condition metrics shall be reported to the HPMS for the Interstate System by April 15 of each year for the data collected during the previous calendar year.

(5) Sections for the four condition metrics shall be reported to the HPMS for the non-Interstate NHS by June 15 of each year for the data collected during the previous calendar year(s).

(d) The three inventory data elements, Through_Lanes, Surface_Type, and Structure Type shall be reported to the HPMS as directed in Chapter 4 of the HPMS Field Manual for the entire extent of the NHS.

(1) Section Lengths for the three inventory data items are not required to meet the 0.1 mile nominal length but may be any logical length as defined in the HPMS Field Manual.

(2) The three inventory data elements shall be reported to the HPMS for the Interstate System by April 15 of each year.

(3) The three inventory data elements shall be reported to the HPMS for the non-Interstate NHS by June 15 of the each year that data reporting is required.

§ 490.313 Calculation of performance management measures.

(a) The pavement measures in § 490.307 shall be calculated in accordance with this section and used by State DOTs and MPOs to carry out the pavement condition related requirements of this part, and by FHWA to make the significant progress and minimum condition determinations specified in §§ 490.109 and 490.317, respectively.

(b) The performance measure for pavements shall be calculated based on the data collected in § 490.309 and pavement condition metrics computed in § 490.311. The performance measure for pavements shall be based on three condition ratings of Good, Fair, and Poor calculated for each pavement section. The ratings are determined as follows:

(1) IRI rating shall be determined for all pavement types using the following criteria. If an IRI value of a pavement section is:—

(i) Less than 95, the IRI rating for the pavement section is Good;

(ii) Between 95 and 170, the IRI rating for the pavement section is Fair; and

(iii) Greater than 170, the IRI rating for the pavement section is Poor.

(2) Cracking condition shall be determined using the following criteria:

(i) For asphalt pavement sections—

(A) If the Cracking_Percent value of a section is less than 5 percent, the cracking rating for the pavement section is Good;

(B) If the Cracking_Percent value of a section is equal to or greater than 5 percent and less than or equal to 20 percent the cracking rating for the pavement section is Fair; and

(C) If the Cracking_Percent value of a section is greater than 20 percent the cracking rating for the pavement section is Poor.

(ii) For jointed concrete pavement sections—

(A) If the Cracking_Percent value of a section is less than 5 percent, the cracking rating for the pavement section is Good;

(B) If the Cracking_Percent value of a section is equal to or greater than 5 percent and less than or equal to 15 percent the cracking rating for the pavement section is Fair; and

(C) If the Cracking_Percent value of a section is greater than 15 percent the cracking rating for the pavement section is Poor.

(iii) For CRCP sections:

(A) If the Cracking_Percent value of a section is less than 5 percent, the cracking rating for the pavement section is Good;

(B) If the Cracking_Percent value of a section is equal to or greater than 5 percent and less than or equal to 10 percent, the cracking rating for the pavement section is Fair; and

(C) If the Cracking_Percent value of a section is greater than 10 percent, the

cracking rating for the pavement section is Poor.

(3) Rutting or faulting rating shall be determined using the following criteria.

(i) For asphalt pavement:

(A) If the rutting value of a section is less than 0.20 inches, the rutting rating for the pavement section is Good;

(B) If the rutting value of a section is equal to or greater than 0.20 inches and less than or equal to 0.40 inches, the rutting rating for the pavement section is Fair; and

(C) If the rutting value of a section in is greater than 0.40 inches, the rutting rating for the pavement section is Poor.

(ii) For jointed concrete pavement:

(A) If the faulting value of a section is less than 0.10 inches, the faulting rating for the pavement section is Good;

(B) If the faulting value of a section is equal to or greater than 0.10 inches and less than or equal to 0.15 inches, the faulting rating for the pavement section is Fair; and

(C) If the faulting value of a section is greater than 0.15 inches, the faulting rating for the pavement section is Poor.

(4) The FHWA will determine that a reported section in HPMS has a missing, invalid or unresolved data on the dates specified in §490.317(b) for Interstate System and §490.109(d)(2) and (d)(4) for non-Interstate NHS, if a reported section does not meet any one of the data requirements specified in §§490.309 and 490.311(c) or that reported section does not provide sufficient data to determine its Overall Condition specified in paragraphs (c) through (f) of this section:

(i) Total mainline lane-miles of missing, invalid, or unresolved sections for Interstate System and non-Interstate NHS shall be limited to no more than 5 percent of the total lane miles less the sections excluded in §490.313(f)(1). For each pavement section without collected its condition metrics and inventory data, State DOTs shall note in the HPMS submittal with a specific code identified in the HPMS Field Manual (incorporated by reference, see §490.111) noting the reason it was not collected.

(ii) Calculation of overall pavement conditions in any State meeting the requirements of §490.309(b) shall be based only on sections containing data reported in the HPMS Submittal as of the submission dates required in §490.311(c)(4) and (5). State DOTs not meeting the requirements of §490.309(b) will be considered as not in compliance with §420.105(b) requiring State DOTs to submit data to the HPMS and not in compliance with §490.107 requiring reporting on performance targets. Failure to report data meeting the requirements of §490.309(b) by the submission dates for the Interstate System will be considered as not meeting the minimum requirements for pavement conditions on the Interstate System and that State DOT is subject to the penalties in §490.315.

(c) The Overall condition for asphalt and jointed concrete pavement sections shall be determined based on the ratings for IRI, Cracking__Percent, rutting and faulting, as described in paragraphs (b)(1), (b)(2), (b)(3) and (b)(4) of this section, respectively, for each section as follows:

(1) A pavement section shall be rated an overall condition of Good only if the section is exhibiting Good ratings for all three conditions (IRI, Cracking__Percent, and rutting or faulting);

(2) A pavement section shall be rated an overall condition of Poor if two or more of the three conditions are exhibiting Poor ratings (at least two ratings of Poor for IRI, Cracking__Percent, and rutting or faulting).

(3) A pavement section shall be rated an overall condition of Fair if it does not meet the criteria in paragraphs (c)(1) or (c)(2) of this section.

(4) For sections on roadways where the posted speed limit is less than 40 MPH and where the State DOT has reported PSR in lieu of the IRI, Cracking__Percent, rutting, and faulting metrics the PSR condition level shall be determined using the following criteria:

(i) If the PSR of a section is equal to or greater than 4.0 the PSR rating for the pavement section is Good;

(ii) If the PSR of a section is less than 4.0 and greater than 2.0 the PSR rating for the pavement section is Fair; and

(iii) If the PSR of a section is less than or equal to 2.0 the PSR rating for the pavement section is Poor.

(d) The Overall condition for CRCP sections shall be determined based on two ratings of IRI and Cracking__Percent, as described in paragraphs (b)(1) and (b)(2) of this section or based on PSR where appropriate as described in paragraph (c)(4) of this section, respectively, for each section as follows:

(1) A pavement section shall be rated an overall condition of Good only if the section is exhibiting Good ratings for both conditions (IRI and Cracking__Percent);

(2) A pavement section shall be rated an overall condition of Poor if it exhibits Poor ratings for both conditions (IRI and Cracking__Percent);

(3) A pavement section shall be rated an overall condition of Fair if it does not meet the criteria in paragraphs (d)(1) or (d)(2) of this section.

(4) For pavement sections that are on roadways with a posted speed limit of less than 40 MPH where the State DOT reported the PSR metric in lieu of the IRI, Cracking__Percent, faulting, and rutting metrics the pavement section shall be rated an overall condition equal to the PSR condition rating as described in section (c)(4) above

(e) State DOTs shall not be subject to paragraphs (c) and (d) of this section for Pavements on the until after the data collection cycle ending December 31, 2018, for Interstate highways and December 31, 2021, for the non-Interstate NHS. During this transition period, the Overall condition for all pavement types will be based on IRI rating, as described in paragraph (b)(1) of this section, or on PSR as described in paragraphs (c)(4) or (d)(4) of this section.

(f) The pavement condition measures in § 490.307 shall be computed as described below. The measures shall be used for establishing targets in accordance with § 490.105 and reporting the conditions of the pavements in the biennial performance reporting required in § 490.107 as follows:

(1) Bridges shall be excluded prior to computing all pavement condition measures by removing the sections where the Structure__Type data item in the HPMS is coded as 1. Sections that have an unpaved surface or an ''other'' surface type (such as cobblestone, planks, brick) shall be excluded prior to computing all pavement condition measures by removing the sections where the Surface Type data item in the HPMS is coded as 1 or as 11.

(2) For § 490.307(a)(1) the measure for percentage of lane-miles of the Interstate System in Good condition shall be computed to the one tenth of a percent as follows:

$$100 \times \frac{\sum_{g=1}^{Good}\{\langle End\_Point - Begin\_Point\rangle \times Through\_lanes\}_{section\ g}}{\sum_{t=1}^{Total}\{\langle End\_Point - Begin\_Point\rangle \times Through\_lanes\}_{section\ t}}$$

Where:

Good = total number of mainline highway Interstate System sections where the overall condition is Good;

g = a section's overall condition is determined Good per paragraphs (b) or (c) of this section;

t = an Interstate System section;

Total = total number of mainline highway Interstate System sections excluding bridges, unpaved surface and ''other'' surface types, and missing data sections, described in paragraph (f)(1) and (b)(4)(i) of this section.

Begin__Point = Begin Milepost of each section *g* or *t;*

End Point = End Milepost of each section *g* or *t;* and

Through__lanes = the number of lanes designated for through-traffic represented by a section *g* or *t*.

(3) For § 490.307(a)(2) the measure for percentage of lane-miles of the Interstate System in Poor condition shall be computed to the one tenth of a percent as follows:

$$100 \times \frac{\sum_{p=1}^{Poor}\{\langle End\_Point - Begin\_Point\rangle \times Through\_lanes\}_{section\ p}}{\sum_{t=1}^{Total}\{\langle End\_Point - Begin\_Point\rangle \times Through\_lanes\}_{section\ t}}$$

Where:

Poor = total number of mainline highway Interstate System sections where the overall condition is Poor;

p = a section's overall condition is determined Poor per paragraphs (b) or (c) of this section;

t = an Interstate System section;

Total = total number of mainline highway Interstate System sections excluding bridges, unpaved surface and ''other'' surface types, and missing data sections, described in paragraph (f)(1) and (b)(4)(i) of this section;

Begin_Point = Begin Milepost of each section *p* or *t;*

End Point = End Milepost of each section *p* or *t;* and

Through_lanes = the number of lanes designated for through-traffic represented by a section *p* or *t.*

(4) For §490.307(a)(3) the measure for percentage of lane-miles of the non-Interstate NHS in Good condition in §490.307(a)(3) shall be computed to the one tenth of a percent as follows:

$$100 \times \frac{\sum_{g=1}^{Good}\{\langle End\_Point - Begin\_Point\rangle \times Through\_lanes\}_{section\ g}}{\sum_{t=1}^{Total}\{\langle End\_Point - Begin\_Point\rangle \times Through\_lanes\}_{section\ t}}$$

Where:

Good = total number of mainline highway non-Interstate NHS sections where the overall condition is Good;

g = a section's overall condition is determined Good per paragraphs (b), (c) or (d) of this section;

t = a non-Interstate NHS section;

Total = total number of mainline highway non-Interstate NHS sections excluding bridges, unpaved surface and ''other'' surface types, and missing data sections, described in paragraph (f)(1) and (b)(4)(i) of this section;

Begin_Point = Begin Milepost of each section *g* or *t;*

End Point = End Milepost of each section *g* or *t;* and

Through_lanes = the number of lanes designated for through-traffic represented by a section *g* or *t.*

(5) For §490.307(a)(4) the measure for percentage of lane-miles of the non-Interstate NHS in Poor condition in §490.307(a)(4) shall be computed to the one tenth of a percent as follows:

$$100 \times \frac{\sum_{p=1}^{Poor}\{\langle End\_Point - Begin\_Point\rangle \times Through\_lanes\}_{section\ p}}{\sum_{t=1}^{Total}\{\langle End\_Point - Begin\_Point\rangle \times Through\_lanes\}_{section\ t}}$$

Where:

Poor = total number of mainline highway non-Interstate NHS sections where the overall condition is Poor;

p = a section's overall condition is determined Poor per paragraphs (b), (c) or (d) of this section;

t = a non-Interstate NHS section;

Total = total number of mainline highway non-Interstate NHS sections excluding bridges, unpaved surface and ''other'' surface types, and missing data sections, described in paragraph (f)(1) and (b)(4)(i) of this section;

Begin_Point = Begin Milepost of each section *p* or *t;*

End Point = End Milepost of each section *p* or *t;* and

Through_lanes = the number of lanes designated for through-traffic represented by a section *p* or *t.*

§ 490.315 Establishment of minimum level for condition of pavements.

(a) For the purposes of carrying out the requirements of 23 U.S.C. 119(f)(1), the percentage of lane-miles of Interstate System in Poor condition, as computed per § 490.313(e)(3), shall not exceed 5.0 percent except as noted in paragraph (b) of this section.

(b) For the purposes of carrying out the requirements of 23 U.S.C. 119(f)(1), the percentage of lane-miles of Interstate System in Poor condition within the State of Alaska, as computed per § 490.313(e)(3), shall not exceed 10.0 percent.

§ 490.317 Penalties for not maintaining minimum Interstate System pavement condition.

(a) The FHWA shall compute the Percentage of lane-miles of the Interstate System, excluding sections on bridges, in Poor Condition, in accordance with § 490.313(e)(3), for each State annually.

(b) Each year, FHWA shall extract data contained within the HPMS on June 15 that represents conditions from the prior calendar year for Interstate System pavement conditions to carry out paragraph (a) of this section, beginning with data collected during the 2018 calendar year.

(c) The FHWA shall determine if a State DOT is in compliance with § 490.315(a) or § 490.315(b) and 23 U.S.C. 119(f)(1) after the first full year of data collection for the Interstate System and each year thereafter.

(d) The FHWA will notify State DOTs of their compliance with 23 U.S.C. 119(f)(1) prior to October 1 of the year in which the determination was made.

(e) If FHWA determines through conduct of paragraph (d) of this section a State DOT to be out of compliance with 23 U.S.C. 119(f)(1) then the State DOT shall, during the following fiscal year:

(1) Obligate, from the amounts apportioned to the State DOT under 23 U.S.C. 104(b)(1) (for the NHPP), an amount that is not less than the amount of funds apportioned to the State for Federal fiscal year 2009 under the Interstate Maintenance program for the purposes described in 23 U.S.C. 119 (as in effect on the day before the date of enactment of the MAP–21), except that for each year after Federal fiscal year 2013, the amount required to be obligated under this clause shall be increased by 2 percent over the amount required to be obligated in the previous fiscal year; and

(2) Transfer, from the amounts apportioned to the State DOT under 23 U.S.C. 104(b)(2) (for the Surface Transportation Program) (other than amounts sub-allocated to metropolitan areas and other areas of the State under 23 U.S.C. 133(d)) to the apportionment of the State under 23 U.S.C. 104(b)(1), an amount equal to 10 percent of the amount of funds apportioned to the State for fiscal year 2009 under the Interstate Maintenance program for the purposes described in 23 U.S.C. 119 (as in effect on the day before the date of enactment of the MAP–21).

§ 490.319 Other requirements.

(a) In accordance with the HPMS Field Manual (incorporated by reference, see § 490.111), each State DOT shall report the following to the HPMS no later than April 15 each year:

(1) The pavement condition metrics specified in § 490.311 that are necessary to calculate the Interstate System condition measures identified in §§ 490.307(a)(1) and (a)(2) and;

(2) The data elements specified in § 490.309(c) for the Interstate System

(b) In accordance with the HPMS Field Manual (incorporated by reference, see § 490.111), each State DOT shall report to the HPMS no later than June 15 each year the pavement condition metrics specified in § 490.311 that are necessary to calculate the non-Interstate NHS condition measures in §§ 490.307(a)(3) and (a)(4).

(c) Each State DOT shall develop and utilize a Data Quality Management Program, approved by FHWA that addresses the quality of all data collected, regardless of the method of acquisition, to report the pavement condition metrics, discussed in § 490.311, and data elements discussed in § 490.309(c).

(1) In a Data Quality Management Programs, State DOTs shall include, at a minimum, methods and processes for:

(i) Data collection equipment calibration and certification;

(ii) Certification process for persons performing manual data collection;

(iii) Data quality control measures to be conducted before data collection begins and periodically during the data collection program;

(iv) Data sampling, review and checking processes; and

(v) Error resolution procedures and data acceptance criteria.

(2) Not later than 1 year after the effective date of this regulation, State DOTs shall submit their Data Quality Management Program to FHWA for approval. Once FHWA approves a State DOT's Data Quality Management Program, the State DOT shall use that Program to collect and report data required by §§ 490.309 to 490.311. State DOTs also shall submit any proposed significant change to the Data Quality Management Program to FHWA for approval prior to implementing the change.

Subpart D—National Performance Management Measures for Assessing Bridge Condition

SOURCE: 82 FR 5968, Jan. 18, 2017, unless otherwise noted.

§ 490.401 Purpose.

The purpose of this subpart is to implement the requirements of 23 U.S.C. 150(c)(3)(A)(ii)(III), which requires the Secretary of Transportation to establish performance measures for the purpose of carrying out the NHPP and for State DOTs and MPOs to use in assessing the condition of bridges carrying the NHS which includes on- and off-ramps connected to the NHS.

§ 490.403 Applicability.

The section is only applicable to bridges carrying the NHS, which includes on- and off-ramps connected to the NHS.

§ 490.405 Definitions.

The following definitions are only applicable to this subpart, unless otherwise provided:

Structurally deficient as used in §§ 490.411 and 490.413 is a classification given to a bridge which has any component in Poor or worse condition or the adequacy of the waterway opening provided by the bridge is determined to be insufficient to the point of causing overtopping with intolerable traffic interruptions. Beginning with calendar year 2018 and thereafter, *structurally deficient* as used in §§ 490.411 and 490.413 is a classification given to a bridge which has any component in Poor or worse condition.

§ 490.407 National performance management measures for assessing bridge condition.

(a) There are three classifications for the purpose of assessing bridge condition. They are:

(1) Percentage of NHS bridges classified as in Good condition;

(2) Percentage of NHS bridges classified as in Fair condition; and

(3) Percentage of NHS bridges classified as in Poor condition.

(b) [Reserved]

(c) To carry out the NHPP, two of the three classifications are performance measures for State DOTs to use to assess bridge condition on the NHS. They are:

(1) Percentage of NHS bridges classified as in Good condition; and

(2) Percentage of NHS bridges classified as in Poor condition.

(d) Determination of Good and Poor conditions are described in § 490.409.

§ 490.409 Calculation of National performance management measures for assessing bridge condition.

(a) The bridge measures in § 490.407 shall be calculated in accordance with this section and used by State DOTs and MPOs to carry out the bridge condition related requirements of this part and by FHWA to make the significant progress determination specified in § 490.109.

(b) The condition of bridges carrying the NHS, which includes on- and off-ramps connected to the NHS, shall be classified as Good, Fair, or Poor following the criteria specified in this paragraph. The assignment of a classification of Good, Fair, or Poor shall be based on the bridge's condition ratings for NBI Items 58—Deck, 59—Superstructure, 60—Substructure, and 62—Culverts. For the purposes of national performance measures under the

NHPP, the method of assessment to determine the classification of a bridge will be the minimum of condition rating method (*i.e.*, the condition ratings for lowest rating of a bridge's 3 NBI Items, 58—Deck, 59—Superstructure, and 60—Substructure). For culverts, the rating of its NBI Item, 62—Culverts, will determine its classification. The bridges carrying the NHS which includes on- and off-ramps connected to the NHS will be classified as Good, Fair, or Poor based on the following criteria:

(1) *Good:* When the lowest rating of the 3 NBI items for a bridge (Items 58—Deck, 59—Superstructure, 60—Substructure) is 7, 8, or 9, the bridge will be classified as Good. When the rating of NBI item for a culvert (Item 62—Culverts) is 7, 8, or 9, the culvert will be classified as Good.

(2) *Fair:* When the lowest rating of the 3 NBI items for a bridge is 5 or 6, the bridge will be classified as Fair. When the rating of NBI item for a culvert is 5 or 6, the culvert will be classified as Fair.

(3) *Poor:* When the lowest rating of the 3 NBI items for a bridge is 4, 3, 2, 1, or 0, the bridge will be classified as Poor. When the rating of NBI item for a culvert is 4, 3, 2, 1, or 0, the culvert will be classified as Poor.

(c) The bridge measures specified in §490.407(c) shall be calculated for the applicable bridges per paragraph (a) that pertain to each target established by the State DOT or MPO in §§490.105(e) and 490.105(f), respectively, as follows:

(1) For §490.407(c)(1), the measure for the percentage of bridges classified as in Good condition shall be computed and reported to the one tenth of a percent as follows:

$$100 \times \frac{\sum_{g=1}^{GOOD} [\text{Length} \times \text{Width}]_{\text{Bridge g}}}{\sum_{s=1}^{TOTAL} [\text{Length} \times \text{Width}]_{\text{Bridge s}}}$$

Where:

GOOD = total number of the applicable bridges, where their condition is Good per paragraph (b)(1) of this section;

g = a bridge determined to be in Good condition per paragraph (b)(1) of this section;

Length = corresponding value of NBI Item 49—Structure Length for every applicable bridge;

Width = corresponding value of NBI Item 52—Deck Width or value of Item 32 Approach Roadway Width for culverts where the roadway is on a fill [*i.e.*, traffic does not directly run on the top slab (or wearing surface) of the culvert] and the headwalls do not affect the flow of traffic for every applicable bridge.

s = an applicable bridge per paragraph (b) of this section; and

TOTAL = total number of the applicable bridges specified in paragraph (b) of this section.

(2) For §490.407(c)(2), the measure for the percentage of bridges classified as in Poor condition shall be computed and reported to the one tenth of a percent as follows:

$$100 \times \frac{\sum_{p=1}^{POOR} [\text{Length} \times \text{Width}]_{\text{Bridge p}}}{\sum_{s=1}^{TOTAL} [\text{Length} \times \text{Width}]_{\text{Bridge s}}}$$

Where:

POOR = total number of the applicable bridges, where their condition is Poor per paragraph (b)(3) of this section;

p = a bridge determined to be in Poor condition per paragraph (b)(3) of this section;

Length = corresponding value of NBI Item 49—Structure Length for every applicable bridge;

Width = corresponding value of NBI Item 52—Deck Width or value of Item 32 Approach Roadway Width for culverts

where the roadway is on a fill [*i.e.*, traffic does not directly run on the top slab (or wearing surface) of the culvert] and the headwalls do not affect the flow of traffic for every applicable bridge.

s = an applicable bridge per paragraph (b) of this section; and

TOTAL = total number of the applicable bridges specified in paragraph (b) of this section.

(d) The measures identified in §490.407(c) shall be used to establish targets in accordance with §490.105 and report targets and conditions described in §490.107.

(e) The NBI Items included in this section are found in the Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges, which is incorporated by reference (see §490.111).

§490.411 Establishment of minimum level for condition for bridges.

(a) State DOTs will maintain bridges so that the percentage of the deck area of bridges classified as Structurally Deficient does not exceed 10.0 percent. This minimum condition level is applicable to bridges carrying the NHS, which includes on- and off-ramps connected to the NHS within a State, and bridges carrying the NHS that cross a State border.

(b) For the purposes of carrying out this section and §490.413, a bridge will be classified as Structurally Deficient when one of its NBI Items, 58—Deck, 59—Superstructure, 60—Substructure, or 62—Culverts, is 4 or less, or when one of its NBI Items, 67—Structural Evaluation or 71—Waterway Adequacy, is 2 or less. Beginning with calendar year 2018 and thereafter, a bridge will be classified as Structurally Deficient when one of its NBI Items, 58—Deck, 59—Superstructure, 60—Substructure, or 62—Culverts, is 4 or less.

(c) For all bridges carrying the NHS, which includes on- and off-ramps connected to the NHS and bridges carrying the NHS that cross a State border, FHWA shall calculate a ratio of the total deck area of all bridges classified as Structurally Deficient to the total deck area of all applicable bridges for each State. The percentage of deck area of bridges classified as Structurally Deficient shall be computed by FHWA to the one tenth of a percent as follows:

$$100\times\frac{\sum_{SD=1}^{\text{Structurally Deficient}}[\text{Length}\times\text{Width}]_{\text{Bridge SD}}}{\sum_{s=1}^{\text{TOTAL}}[\text{Length}\times\text{Width}]_{\text{Bridge s}}}$$

Where:

Structurally Deficient = total number of the applicable bridges, where their classification is Structurally Deficient per this section and §490.413;

SD = a bridge classified as Structurally Deficient per this section and §490.413;

Length = corresponding value of NBI Item 49—Structure Length for every applicable bridge;

Width = corresponding value of NBI Item 52—Deck Width

Beginning with calendar year 2018 and thereafter, Width = corresponding value of NBI Item 52—Deck Width or value of Item 32 Approach Roadway Width for culverts where the roadway is on a fill [*i.e.*, traffic does not directly run on the top slab (or wearing surface) of the culvert] and the headwalls do not affect the flow of traffic for every applicable bridge.

s = an applicable bridge per this section and §490.413; and

TOTAL = total number of the applicable bridges specified in this section and §490.413.

(d) The FHWA will annually determine the percentage of the deck area of NHS bridges classified as Structurally Deficient for each State DOT and identify State DOTs that do not meet the minimum level of condition for NHS bridges based on data cleared in the NBI as of June 15 of each year. The FHWA will notify State DOTs of their compliance with 23 U.S.C. 119(f)(2) prior to October 1 of the year in which the determination was made.

(e) For the purposes of carrying out this section, State DOTs will annually submit their most current NBI data on

highway bridges to FHWA no later than March 15 of each year.

(f) The NBI Items included in this section are found in the Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges, which is incorporated by reference (see § 490.111).

§ 490.413 Penalties for not maintaining bridge condition.

(a) If FHWA determines for the 3-year period preceding the date of the determination, that more than 10.0 percent of the total deck area of bridges in the State on the NHS is located on bridges that have been classified as Structurally Deficient, the following requirements will apply.

(1) During the fiscal year following the determination, the State DOT shall obligate and set aside in an amount equal to 50 percent of funds apportioned to such State for fiscal year 2009 to carry out 23 U.S.C. 144 (as in effect the day before enactment of MAP–21) from amounts apportioned to a State for a fiscal year under 23 U.S.C. 104(b)(1) only for eligible projects on bridges on the NHS.

(2) The set-aside and obligation requirement for bridges on the NHS in a State in paragraph (a) of this section for a fiscal year shall remain in effect for each subsequent fiscal year until such time as less than 10 percent of the total deck area of bridges in the State on the NHS is located on bridges that have been classified as Structurally Deficient as determined by FHWA.

(b) The FHWA will make the first determination by October 1, 2016, and each fiscal year thereafter.

Subpart E—National Performance Management Measures To Assess Performance of the National Highway System

SOURCE: 82 FR 6042, Jan. 18, 2017, unless otherwise noted.

§ 490.501 Purpose.

The purpose of this subpart is to implement the requirements of 23 U.S.C. 150(c)(3)(A)(ii)(IV) and (V) to establish performance measures for State Departments of Transportation (State DOTs) and Metropolitan Planning Organizations (MPOs) to use to assess:

(a) Performance of the Interstate System; and

(b) Performance of the non-Interstate National Highway System (NHS).

§ 490.503 Applicability.

(a) The performance measures are applicable to those portions of the mainline highways on the NHS as provided in paragraphs (a)(1) and (2) of this section (and in more detail in § 490.507):

(1) The Travel Time Reliability measures in § 490.507(a) are applicable to all directional mainline highways on the Interstate System and non-Interstate NHS.

(2) The Greenhouse Gas (GHG) measure in § 490.507(b) is applicable to all mainline highways on the Interstate and non-Interstate NHS.

(b) [Reserved]

[82 FR 6031, Jan. 18, 2017, as amended at 83 FR 24936, May 31, 2018; 88 FR 85392, Dec. 7, 2023]

§ 490.505 Definitions.

All definitions in § 490.101 apply to this subpart. Unless otherwise specified in this subpart, the following definitions apply to this subpart:

Greenhouse gas (GHG) is any gas that absorbs infrared radiation (traps heat) in the atmosphere. Approximately 97 percent of on-road GHG emissions are carbon dioxide (CO_2) from burning fossil fuel. Other transportation GHGs are methane (CH_4), nitrous oxide (N_2O), and hydrofluorocarbons (HFCs).

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Level of Travel Time Reliability is a comparison, expressed as a ratio, of the 80th percentile travel time of a reporting segment to the ''normal'' (50th percentile) travel time of a reporting segment occurring throughout a full calendar year.

Normal Travel Time (or 50th percentile travel time) is the time of travel to traverse the full extent of a reporting segment which is greater than the time

for 50 percent of the travel in a calendar year to traverse the same reporting segment.

Reference year is calendar year 2022 for the purpose of the GHG measure.

Travel time cumulative probability distribution means a representation of all the travel times for a road segment during a defined reporting period (such as annually) presented in a percentile ranked order as provided in the travel time data set. The normal (50th percentile) and 80th percentile travel times used to compute the Travel Time Reliability measures may be identified by the travel time cumulative probability distribution.

[82 FR 6031, Jan. 18, 2017, as amended at 83 FR 24936, May 31, 2018; 88 FR 85392, Dec. 7, 2023]

§ 490.507 National performance management measures for system performance.

There are three performance measures to assess the performance of the Interstate System and the performance of the non-Interstate NHS for the purpose of carrying out the National Highway Performance Program (referred to collectively as the NHS Performance measures).

(a) Two measures are used to assess reliability (referred to collectively as the Travel Time Reliability measures). They are:

(1) Percent of the person-miles traveled on the Interstate that are reliable (referred to as the Interstate Travel Time Reliability measure); and

(2) Percent of person-miles traveled on the non-Interstate NHS that are reliable (referred to as the Non-Interstate Travel Time Reliability measure).

(b) One measure is used to assess GHG emissions, which is the percent change in tailpipe CO_2 emissions on the NHS compared to the reference year (referred to as the GHG measure).

[82 FR 6031, Jan. 18, 2017, as amended at 83 FR 24936, May 31, 2018; 88 FR 85392, Dec. 7, 2023]

§ 490.509 Data requirements.

(a) Travel time data needed to calculate the Travel Time Reliability measures in § 490.507(a) shall come from the travel time data set, as specified in § 490.103(e).

(1) State DOTs, in coordination with MPOs, shall define reporting segments in accordance with § 490.103(f). Reporting segments must be contiguous so that they cover the full extent of the mainline highways of the NHS in the State.

(2) [Reserved]

(b) State DOTs shall not replace missing travel times when data are not available in the travel time data set (data not reported, or reported as ''0'' or null) as specified in § 490.511(b)(1)(v).

(c) AADT needed to calculate the Travel Time Reliability measures will be used, as reported to HPMS in June of the reporting year, to assign an annual volume to each reporting segment. Annual volume will be calculated as:

$$\text{Annual Volume} = \text{AADT} \times 365 \text{ days}$$

(d) The average occupancy factors for the State and/or metropolitan area (as applicable) needed to calculate Travel Time Reliability measures shall come from the most recently available data tables published by FHWA unless using other allowed data source(s).

(e) If an NHS roadway is closed, the State DOT is not required to include those time periods for those segments of road in the calculations required for the Level of Travel Time Reliability (LOTTR) metric (see § 490.511(a)(1)).

(f) The FHWA will post on the FHWA website, no later than August 15th of each reporting year, the CO_2 factors for each on-road fuel type that will be used to calculate the GHG metric for the GHG measure in § 490.105(c)(5).

(g) Fuel sales information needed to calculate the fuel consumed for the GHG measure in § 490.507(b) shall:

(1) Represent the total number of gallons of fuel consumed by fuel type; and

(2) Be based on fuels sales data for the prior calendar year, and reported to Fuels & FASH.

(h) Annual vehicle miles traveled (VMT) needed to calculate the GHG measure in § 490.507(b) shall come from the best available data that represents the prior calendar year and is consistent, to the maximum extent practicable, with data submitted to HPMS. The VMT data needed to calculate the

GHG metric in §490.511(c) for the reference year, shall be the HPMS data as of November 30, 2023.

[82 FR 6031, Jan. 18, 2017, as amended at 83 FR 24936, May 31, 2018; 88 FR 85392, Dec. 7, 2023]

§ 490.511 Calculation of National Highway System performance metrics.

(a) Two performance metrics are required for the NHS Performance measures specified in §490.507. These are:

(1) Level of Travel Time Reliability (LOTTR) for the Travel Time Reliability measures in §490.507(a) (referred to as the LOTTR metric).

(2) Annual Total Tailpipe CO_2 Emissions on the NHS for the GHG measure in §490.507(b) (referred to as the GHG metric).

(b) The State DOT shall calculate the LOTTR metrics for each NHS reporting segment in accordance with the following:

(1) Data sets shall be created from the travel time data set to be used to calculate the LOTTR metrics. This data set shall include, for each reporting segment, a ranked list of average travel times for all traffic (''all vehicles'' in NPMRDS nomenclature), to the nearest second, for 15 minute periods of a population that:

(i) Includes travel times occurring between the hours of 6 a.m. and 10 a.m. for every weekday (Monday–Friday) from January 1st through December 31st of the same year;

(ii) Includes travel times occurring between the hours of 10 a.m. and 4 p.m. for every weekday (Monday–Friday) from January 1st through December 31st of the same year;

(iii) Includes travel times occurring between the hours of 4 p.m. and 8 p.m. for every weekday (Monday–Friday) from January 1st through December 31st of the same year; and

(iv) Includes travel times occurring between the hours of 6: a.m. and 8: p.m. for every weekend day (Saturday–Sunday) from January 1st through December 31st of the same year.

(2) The Normal Travel Time (50th percentile) shall be determined from each data set defined under paragraph (b)(1) of this section as the time in which 50 percent of the times in the data set are shorter in duration and 50 percent are longer in duration. The 80th percentile travel time shall be determined for each data set defined under paragraph (b)(1) of this section as the time in which 80 percent of the times in the data set are shorter in duration and 20 percent are longer in duration. Both the Normal and 80th percentile travel times can be determined by plotting the data on a travel time cumulative probability distribution graph or using the percentile functions available in spreadsheet and other analytical tools.

(3) Four LOTTR metrics shall be calculated for each reporting segment; one for each data set defined under paragraph (b)(1) of this section as the 80th percentile travel time divided by the 50th percentile travel time and rounded to the nearest hundredth.

(c) Tailpipe CO_2 emissions on the NHS for a given year shall be computed in million metric tons (mmt) and rounded to the nearest hundredth as follows:

Equation 1 to paragraph (c)

$$(\text{Tailpipe } CO_2 \text{Emissions on NHS})_{CY} = \left(\sum_{t=1}^{T} (\text{Fuel Consumed})_t \times (CO_2 \text{Factor})_t\right) \times \left(\frac{\text{NHS VMT}}{\text{Total VMT}}\right)$$

Where:

$(\text{Tailpipe } CO_2 \text{ Emissions on NHS})_{CY}$ = Total tailpipe CO_2 emissions on the NHS in a

calendar year (expressed in mmt, and rounded to the nearest hundredth);
T = the total number of on-road fuel types;
t = an on-road fuel type;
(Fuel Consumed)$_t$ = the quantity of total annual fuel consumed for on-road fuel type ''t'' (to the nearest thousand gallons);
(CO_2 Factor)$_t$ = is the amount of CO_2 released per unit of fuel consumed for on-road fuel type ''t'';
NHS VMT = annual total vehicle-miles traveled on NHS (to the nearest one million vehicle-miles); and
Total VMT = annual total vehicle-miles traveled on all public roads (to the nearest one million vehicle-miles).

(d) For the GHG measure specified in §490.507(b), MPOs are granted additional flexibility in how they calculate the GHG metric, described in §490.511(a)(2). MPOs may use the MPO share of the State's VMT as a proxy for the MPO share of CO_2 emissions in the State, VMT estimates along with MOVES[1] emissions factors, FHWA's Energy and Emissions Reduction Policy Analysis Tool (EERPAT) model, or other method the MPO can demonstrate has valid and useful results for CO_2 measurement.

(e) Starting in 2018 and annually thereafter, State DOTs shall report the LOTTR metrics, defined in paragraph (b) of this section, in accordance with HPMS Field Manual by June 15th of each year for the previous year's measures.

(1) Metrics are reported to HPMS by reporting segment. All reporting segments where the NPMRDS is used shall be referenced by NPMRDS TMC(s) or HPMS section(s). If a State DOT elects to use, in part or in whole, the equivalent data set, all reporting segment shall be referenced by HPMS section(s); and

(2) The LOTTR metric (to the nearest hundredths) for each of the four time periods identified in paragraphs (b)(1)(i) through (iv) of this section: the corresponding 80th percentile travel times (to the nearest second), the corresponding Normal (50th percentile) Travel Times (to the nearest second), and directional AADTs. If a State DOT does not elect to use FHWA supplied occupancy factor, as provided in §490.507(d), that State DOT shall report vehicle occupancy factor (to the nearest tenth) to HPMS.

(f) Tailpipe CO_2 emissions generated by on-road sources travelling on the NHS (the GHG metric), and generated by on-road sources travelling on all roadways (the step in the calculation prior to computing the GHG metric) shall be calculated as specified in paragraph (c) of this section. The calculations shall be reported in the State Biennial Performance Reports, as required in §490.107, and shall address the following time periods.

(1) The reference year, as required in §490.107(b)(1)(ii)(H); and

(2) The calendar year preceding the reporting year, as required in §490.107(b)(1)(ii)(H), (b)(2)(ii)(J) and (b)(3)(ii)(I).

[1] MOVES (Motor Vehicle Emission Simulator) is EPA's emission modeling system that estimates emissions for mobile sources at the national, county, and project level for criteria air pollutants, GHGs, and air toxics. See *https://www.epa.gov/moves*. The EMFAC model is used in California for emissions analysis.

[82 FR 6031, Jan. 18, 2017, as amended at 83 FR 24936, May 31, 2018; 88 FR 85393, Dec. 7, 2023]

§490.513 Calculation of National Highway System performance measures.

(a) The NHS Performance measures in §490.507 shall be calculated in accordance with this section by State DOTs and MPOs to carry out the Interstate System and non-Interstate NHS performance-related requirements of this part, and by FHWA to make the significant progress determinations specified in §490.109 and to report on system performance.

(b) The Interstate Travel Time Reliability measure specified in §490.507(a)(1) shall be computed to the nearest tenth of a percent as follows:

$$100 \times \frac{\sum_{i=1}^{R} SL_i \times AV_i \times OF_j}{\sum_{i=1}^{T} SL_i \times AV_i \times OF_j}$$

Where:

R = total number of Interstate System reporting segments that are exhibiting an LOTTR below 1.50 during all of the time periods identified in §490.511(b)(1)(i) through (iv);

I = Interstate System reporting segment ''i'';

SL_i = length, to the nearest thousandth of a mile, of Interstate System reporting segment ''i'';

AV_i = total annual traffic volume to the nearest single vehicle, of the Interstate System reporting segment ''i'';

J = geographic area in which the reporting segment ''i'' is located where a unique occupancy factor has been determined;

OF_i = occupancy factor for vehicles on the NHS within a specified geographic area within the State/Metropolitan planning area; and

T = total number of Interstate System reporting segments.

(c) The Non-Interstate Travel Time Reliability measure specified in §490.507(a)(2) shall be computed to the nearest tenth of a percent as follows:

$$100 \times \frac{\sum_{i=1}^{R} SL_i \times AV_i \times OF_j}{\sum_{i=1}^{T} SL_i \times AV_i \times OF_j}$$

Where:

R = total number of non-Interstate NHS reporting segments that are exhibiting an LOTTR below 1.50 during all of the time periods identified in §490.511(b)(1)(i) through (iv);

i = non-Interstate NHS reporting segment ''i'';

SL_i = length, to the nearest thousandth of a mile, of non-Interstate NHS reporting segment ''i'';

AV_i = total annual traffic volume to the nearest 1 vehicle, of the Interstate System reporting segment ''i'';

j = geographic area in which the reporting segment ''i'' is located where a unique occupancy factor has been determined;

OF_j = occupancy factor for vehicles on the NHS within a specified geographic area within the State/Metropolitan planning area; and

T = total number of non-Interstate NHS reporting segments.

(d) The GHG measure specified in §490.507(b) shall be computed to the nearest tenth of a percent as follows:

Equation 3 to paragraph (d)

$$\frac{(\text{Tailpipe } CO_2 \text{Emissions on NHS})_{CY} - (\text{Tailpipe } CO_2 \text{Emissions on NHS})_{\text{reference year}}}{(\text{Tailpipe } CO_2 \text{Emissions on NHS})_{\text{reference year}}} \times 100$$

Where:

(Tailpipe CO_2 Emissions on NHS)$_{CY}$ = total tailpipe CO_2 emissions on the NHS in a calendar year (expressed in million metric tons (mmt), and rounded to the nearest hundredth); and

(Tailpipe CO_2 Emissions on NHS)$_{reference\ year}$ = total tailpipe CO_2 emissions on the NHS in calendar year 2022 (expressed in million metric tons (mmt), and rounded to the nearest hundredth).

(d) The GHG measure specified in §490.507(b) shall be computed to the nearest tenth of a percent as follows:

Equation 3 to paragraph (d)

$$\frac{(\text{Tailpipe } CO_2 \text{Emissions on NHS})_{CY} - (\text{Tailpipe } CO_2 \text{Emissions on NHS})_{\text{reference year}}}{(\text{Tailpipe } CO_2 \text{Emissions on NHS})_{\text{reference year}}} \times 100$$

Where:

(Tailpipe CO_2 Emissions on NHS)$_{CY}$ = total tailpipe CO_2 emissions on the NHS in a calendar year (expressed in million metric tons (mmt), and rounded to the nearest hundredth); and

(Tailpipe CO_2 Emissions on NHS)$_{reference\ year}$ = total tailpipe CO_2 emissions on the NHS in calendar year 2022 (expressed in million metric tons (mmt), and rounded to the nearest hundredth).

[82 FR 6031, Jan. 18, 2017, as amended at 83 FR 24936, May 31, 2018; 88 FR 85393, Dec. 7, 2023]

§ 490.515 Severability.

The provisions of §§ 490.105(c)(5), 105(d), 105(d)(1)(v), 105(d)(4), 105(e)(1)(i), 105(e)(1)(ii), 105(e)(4)(i)(C), 105(e)(4)(iii), 105(e)(10), 105(f)(1)(i), 105(f)(3), 105(f)(10), 107(a)(1), 107(b)(1)(i), 107(b)(1)(ii)(H), 107(b)(2)(i), 107(b)(2)(ii)(J), 107(b)(3)(i), 107(b)(3)(ii)(I), 107(c)(2), 107(d), 109(d)(1)(v), 109(d)(1)(vi), 109(d)(1)(vii), 109(d)(1)(viii), 109(e)(4)(vi), 109(e)(4)(vii), 109(e)(6), 109(f)(1)(v), 503(a)(2), 505, 507(b), 509(f), 509(g), 509(h), 511(a)(2), 511(c), 511(d) 511(f), and 513(d) are separate and severable from one another and from the other provisions of this part. If any provision is stayed or determined to be invalid, the remaining provisions shall continue in effect.

[88 FR 85393, Dec. 7, 2023]

Subpart F—National Performance Management Measures To Assess Freight Movement on the Interstate System

SOURCE: 82 FR 6044, Jan. 18, 2017, unless otherwise noted.

§ 490.601 Purpose.

The purpose of this subpart is to implement the requirements of 23 U.S.C. 150(c)(6) to establish performance measures for State Departments of Transportation (State DOTs) and the Metropolitan Planning Organizations (MPOs) to use to assess the national freight movement on the Interstate System.

§ 490.603 Applicability.

The performance measures to assess the national freight movement are applicable to the Interstate System.

§ 490.605 Definitions.

The definitions in § 490.101 apply to this subpart.

§ 490.607 National performance management measures to assess freight movement on the Interstate System.

The performance measure to assess freight movement on the Interstate System is the: Truck Travel Time Reliability (TTTR) Index (referred to as the Freight Reliability measure).

§ 490.609 Data requirements.

(a) Travel time data needed to calculate the Freight Reliability measure in § 490.607 shall come from the travel time data set, as specified in § 490.103(e).

(b) State DOTs, in coordination with MPOs, shall define reporting segments in accordance with § 490.103(f). Reporting segments must be contiguous so that they cover the full extent of the directional mainline highways of the Interstate in the State.

(c) When truck travel times are not available in the travel time data set (data not reported, or reported as ''0'' or null) as specified in § 490.611(a)(1)(ii) for a given 15 minute interval, State DOTs shall replace the missing travel time with an observed travel time that represents all traffic on the roadway during the same 15 minute interval (''all vehicles'' in NPMRDS nomenclature).

(d) If an NHS roadway is closed, the State DOT is not required to include those time periods for those segments of road in the calculations required for the Freight Reliability metric/measure.

§ 490.611 Calculation of Truck Travel Time Reliability metrics.

(a) The State DOT shall calculate the TTTR Index metric (referred to as the TTTR metric) for each Interstate System reporting segment in accordance with the following:

(1) A truck travel time data set shall be created from the travel time data set to be used to calculate the TTTR metric. This data set shall include, for each reporting segment, a ranked list of average truck travel times, to the nearest second, for 15 minute periods of

a 24-hour period for an entire calendar year that:

(i) Includes ''AM Peak'' travel times occurring between the hours of 6 a.m. and 10 a.m. for every weekday (Monday–Friday) from January 1st through December 31st of the same year;

(ii) Includes ''Mid Day'' travel times occurring between the hours of 10 a.m. and 4 p.m. for every weekday (Monday-Friday) from January 1st through December 31st of the same year;

(iii) Includes ''PM Peak'' travel times occurring between the hours of 4 p.m. and 8 p.m. for every weekday (Monday-Friday) from January 1st through December 31st of the same year;

(iv) Includes ''Overnight'' travel times occurring between the hours of 8 p.m. and 6 a.m. for every day (Sunday-Saturday) from January 1st through December 31st of the same year; and

(v) Includes ''Weekend'' travel times occurring between the hours of 6 a.m. and 8 p.m. for every weekend day (Saturday-Sunday) from January 1st through December 31st of the same year.

(2) The Normal Truck Travel Time (50th percentile) shall be determined from each of the truck travel time data sets defined under paragraph (a)(1) of this section as the time in which 50 percent of the times in the data set are shorter in duration and 50 percent are longer in duration. The 95th percentile truck travel time shall be determined from each of the truck travel time data sets defined under paragraph (a)(1) of this section as the time in which 95 percent of the times in the data set are shorter in duration. Both the Normal and 95th percentile truck travel times can be determined by plotting the data on a travel time cumulative probability distribution graph or using the percentile functions available in spreadsheet and other analytical tools.

(3) Five TTTR metrics shall be calculated for each reporting segment; one for each data set defined under paragraph (a)(1) of this section as the 95th percentile travel time divided by the Normal Truck Travel Time and rounded to the nearest hundredth.

(b) Starting in 2018 and annually thereafter, State DOTs shall report the TTTR metrics, as defined in this section, in accordance with the HPMS Field Manual by June 15th of each year for the previous year's Freight Reliability measures.

(1) All metrics shall be reported to HPMS by reporting segments. When the NPMRDS is used metrics shall be referenced by NPMRDS TMC(s) or HPMS section(s). If a State DOT elects to use, in part or in whole, the equivalent data set, all reporting segment shall be referenced by HPMS section(s).

(2) The TTTR metric shall be reported to HPMS for each reporting segment (to the nearest hundredths) for each of the five time periods identified in paragraphs (a)(1)(i) through (v) of this section; the corresponding 95th percentile travel times (to the nearest second) and the corresponding normal (50th percentile) travel times (to the nearest second).

§ 490.613 Calculation of Freight Reliability measure.

(a) The performance for freight movement on the Interstate in § 490.607 (the Freight Reliability measure) shall be calculated in accordance with this section by State DOTs and MPOs to carry out the freight movement on the Interstate System related requirements of this part, and by FHWA to make the significant progress determinations specified in § 490.109 and to report on freight performance of the Interstate System.

(b) The Freight Reliability measure shall be computed to the nearest hundredth as follows:

$$\frac{\sum_{i=1}^{T}(SL_i \times \max TTTR_i)}{\sum_{i=1}^{T}(SL_i)}$$

Where:

i = An Interstate System reporting segment;

$maxTTTR_i$ = The maximum TTTR of the five time periods in paragraphs (a)(1)(i) through (v) of § 490.611, to the nearest hundredth, of Interstate System reporting segment ''i'';

SL_i = Segment length, to the nearest thousandth of a mile, of Interstate System reporting segment ''i''; and

T= A total number of Interstate System reporting segments.

Subpart G—National Performance Management Measure for Assessing the Congestion Mitigation and Air Quality Improvement Program—Traffic Congestion

SOURCE: 82 FR 6045, Jan. 18, 2017, unless otherwise noted.

§ 490.701 Purpose.

The purpose of this subpart is to implement the requirements of 23 U.S.C. 150(c)(5)(A) to establish performance measures for State DOTs and the MPOs to use in assessing CMAQ Traffic Congestion for the purpose of carrying out the CMAQ program.

§ 490.703 Applicability.

The CMAQ Traffic Congestion performance measures are applicable to all urbanized areas that include NHS mileage and with a population over 1 million for the first performance period and in urbanized areas with a population over 200,000 for the second and all other performance periods, that are, in all or part, designated as nonattainment or maintenance areas for ozone (O_3), carbon monoxide (CO), or particulate matter (PM_{10} and $PM_{2.5}$) National Ambient Air Quality Standards (NAAQS).

§ 490.705 Definitions.

All definitions in § 490.101 apply to this subpart. Unless otherwise specified, the following definitions apply in this subpart:

Excessive delay means the extra amount of time spent in congested conditions defined by speed thresholds that are lower than a normal delay threshold. For the purposes of this rule, the speed threshold is 20 miles per hour (mph) or 60 percent of the posted speed limit, whichever is greater.

Peak Period is defined as weekdays from 6 a.m. to 10 a.m. and either 3 p.m. to 7 p.m. or 4 p.m. to 8 p.m. State DOTs and MPOs may choose whether to use 3 p.m. to 7 p.m. or 4 p.m. to 8 p.m.

§ 490.707 National performance management measures for traffic congestion.

There are two performance measures to assess traffic congestion for the purpose of carrying out the CMAQ program (referred to collectively as the CMAQ Traffic Congestion measures. They are:

(a) Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita (referred to as the PHED measure); and

(b) Percent of Non-SOV Travel.

§ 490.709 Data requirements.

(a) Travel time data needed to calculate the PHED measure in § 490.707(a) shall come from the travel time data set, as specified in § 490.103(e).

(b) State DOTs, in coordination with MPOs, shall define reporting segments in accordance with § 490.103(f). Reporting segments must be contiguous so that they cover the full extent of the directional mainline highways of the NHS in the urbanized area(s).

(c) State DOTs shall develop hourly traffic volume data for each reporting segment as follows:

(1) State DOTs shall measure or estimate hourly traffic volumes for Peak Periods on each weekday of the reporting year by using either paragraph (c)(1)(i) or (ii) of this section.

(i) State DOTs may use hourly traffic volume counts collected by continuous count stations and apply them to multiple reporting segments; or

(ii) State DOTs may use Annual Average Daily Traffic (AADT) reported to the HPMS to estimate hourly traffic volumes when no hourly volume counts exist. In these cases the AADT data used should be the most recently available, but not more than 2 years older than the reporting period (e.g., if reporting for calendar year 2018, AADT should be from 2016 or 2017) and should be split to represent the appropriate direction of travel of the reporting segment.

(2) State DOTs shall assign hourly traffic volumes to each reporting segment by hour (e.g., between 8 a.m. and 8:59 a.m.).

(3) State DOTs shall report the methodology they use to develop hourly traffic volume estimates to FHWA no later than 60 days before the submittal of the first Baseline Performance Period Report.

(4) If a State DOT elects to change the methodology it reported under paragraph (c)(3) of this section, then the State DOT shall submit the changed methodology no later than 60 days before the submittal of next State Biennial Performance Report required in § 490.107(b).

(5) If an NHS roadway is closed, the State DOT is not required to include those time periods for the segment of road in the calculation required for this metric and measure.

(d) State DOTs shall develop annual vehicle classification data for each reporting segment using data as follows:

(1) State DOTs shall measure or estimate the percentage of cars, buses, and trucks, relative to total AADT for each segment using either paragraph (d)(1)(i) or (ii) of this section.

(i) State DOTs may use annual traffic volume counts collected by continuous count stations to estimate the annual percent share of traffic volumes for cars, buses, and trucks for each segment; or

(ii) State DOTs may use AADT reported to the HPMS to estimate the annual percent share of traffic volumes for cars, buses, and trucks, where:

(A) Buses = value in HPMS Data Item ''AADT__Single__Unit'';

(B) Trucks = value in HPMS Data Item ''AADT__Combination''; and

(C) Cars = subtract values for Buses and Trucks from the value in HPMS Data Item ''AADT''.

(iii) If a State DOT uses the data reported to the HPMS in paragraph (d)(1)(ii) of this section, then the data values should be split to represent the appropriate direction of travel of the reporting segment.

(2) State DOTs shall report the methodology they use to develop annual percent share of traffic volume by vehicle class to FHWA no later than 60 days before the submittal of the first Baseline Performance Period Report.

(3) If a State DOT elects to change the methodology it reported under paragraph (d)(2) of this section, then the State DOT shall submit the changed methodology no later than 60 days before the submittal of next State Biennial Performance Report required in § 490.107(b).

(e) State DOTs shall develop annual average vehicle occupancy (AVO) factors for cars, buses, and trucks in applicable urbanized areas using either method under paragraph (e)(1)(i) or (ii) of this section.

(1) State DOTs shall measure or estimate annual vehicle occupancy factors for cars, buses, and trucks in applicable urbanized areas.

(i) State DOTs shall use estimated annual vehicle occupancy factors for cars, buses, and trucks in urbanized areas provided by FHWA; and/or

(ii) State DOTs may use an alternative estimate of annual vehicle occupancy factors for a specific reporting segment(s) for cars, buses, and trucks in urbanized areas, provided that it is more specific than the data provided by FHWA.

(f) All State DOTs and MPOs contributing to the unified target for the applicable area as specified in § 490.105(d)(2) shall agree to using one of the methods specified in paragraph (f)(1)(i), (ii), or (iii) of this section to identify the data that will be used to determine the Percent of Non-SOV Travel for the applicable urbanized area.

(1) The data to determine the Percent of Non-SOV Travel measure shall be developed using any one of the following methods.

(i) *Method A—American Community Survey*. Populations by predominant travel to commute to work may be identified from Table DP03 of the American Community Survey using the totals by transportation mode listed within the ''Commuting to Work'' subject heading under the ''Estimate'' column of the table. The ''5 Year Estimate'' DP03 table using a geographic filter that represents the applicable ''Urban Area'' shall be used to identify these populations. The Percent of Non-SOV Travel measure shall be developed

from the most recent data as of August 15th of the year in which the State Biennial Performance Report is due to FHWA.

(ii) *Method B—local survey.* The Percent of Non-SOV Travel may be estimated from a local survey focused on either work travel or household travel for the area and conducted as recently as 2 years before the beginning of the performance period. The survey method shall estimate travel mode choice for the full urbanized area using industry accepted methodologies and approaches resulting in a margin of error that is acceptable to industry standards, allow for updates on at least a biennial frequency, and distinguish non-SOV travel occurring in the area as a percent of all work or household travel.

(iii) *Method C—system use measurement.* The volume of travel using surface modes of transportation may be estimated from measurements of actual use of each transportation mode. Sample or continuous measurements may be used to count the number of travelers using different surface modes of transportation. The method used to count travelers shall estimate the total volume of annual travel for the full urbanized area within a margin of error that is acceptable to industry standards and allows for updates on at least a biennial frequency. The method shall include sufficient information to calculate the amount of non-SOV travel occurring in the area as a percentage of all surface transportation travel. State DOTs are encouraged to report use counts to FHWA that are not included in currently available national data sources.

(2) State DOTs shall report the data collection method that is used to determine the Percent of Non-SOV Travel measure for each applicable urbanized area in the State to FHWA in their first Baseline Performance Period Report required in §490.107(b)(1). The State DOT shall include sufficient detail to understand how the data are collected if either Method B or Method C are used for the urbanized area. This method shall be used for the full performance period for each applicable urbanized area.

(3) If State DOTs and MPOs that contribute to an applicable urbanized area elect to change the data collection method reported under paragraph (f)(2) of this section, then each respective State DOT shall report this change in their next Baseline Performance Report required in §490.107(b)(1). The new method reported as a requirement of this paragraph shall not be used until the beginning of the next performance period for the Baseline Performance Report in which the method was reported to be changed.

(g) Populations of urbanized areas shall be as identified based on the most recent annual estimates published by the U.S. Census available 1 year before the State DOT Baseline Performance Period Report is due to FHWA to identify applicability of the CMAQ Traffic Congestion measures in §490.707(a) and (b) for each performance period, as described in §490.105(e)(8)(iii)(D) and (f)(5)(iii)(D). For computing the PHED measure in §490.713(b), the most recent annual population estimate published by the U.S. Census, at the time when the State DOT Biennial Performance Period Report is due to FHWA shall be used.

(h) Nonattainment and maintenance area determinations for the CMAQ Traffic Congestion measures:

(1) The CMAQ Traffic Congestion measures apply to nonattainment and maintenance areas. Such areas shall be identified based on the effective date of U.S. EPA's designations under the NAAQS in 40 CFR part 81, as of the date 1 year before the State DOT Baseline Performance Period Report is due to FHWA.

(2) The nonattainment and maintenance areas to which the CMAQ Traffic Congestion measures applies shall be revised if, on the date 1 year before the State DOT Mid Performance Period Progress Report is due to FHWA, the area is no longer in nonattainment or maintenance for a criteria pollutant included in §490.703.

§490.711 Calculation of Peak Hour Excessive Delay metric.

(a) The performance metric required to calculate the measure specified in §490.707(a) is Total Peak Hour Excessive Delay (person-hours)(referred to as

the PHED metric). The following paragraphs explain how to calculate this PHED metric.

(b) State DOTs shall use the following data to calculate the PHED metric:

(1) Travel times of all traffic (''all vehicles'' in NPMRDS nomenclature) during each 15 minute interval for all applicable reporting segments in the travel time data set occurring for peak periods from January 1st through December 31st of the same year;

(2) The length of each applicable reporting segment, reported as required under § 490.709(b);

(3) Hourly volume estimation for all days and for all reporting segments where excessive delay is measured, as specified in § 490.709(c);

(4) Annual vehicle classification data for all days and for all reporting segments where excessive delay is measured, as specified in § 490.709(d); and

(5) Annual vehicle occupancy factors for cars, buses, and trucks for all days and for all reporting segments where excessive delay is measured, as specified in § 490.709(e).

(c) The State DOT shall calculate the ''excessive delay threshold travel time'' for all applicable travel time segments as follows:

$$Excessive\ Delay\ Threshold\ Travel\ Time_s = \left(\frac{Travel\ Time\ Segment\ Length_s}{Threshold\ Speed_s}\right) \times 3{,}600$$

Where:

Excessive Delay Threshold Travel Time$_s$ = the time of travel, to the nearest whole second, to traverse the Travel Time Segment at which any longer measured travel times would result in excessive delay for the travel time segment ''';

Travel Time Segment Length$_s$ = total length of travel time segment to the nearest thousandth of a mile for travel time reporting segment '''; and

Threshold Speed$_s$ = the speed of travel at which any slower measured speeds would result in excessive delay for travel time reporting segment ''.'' As defined in § 490.705, the speed threshold is 20 miles per hour (mph) or 60 percent of the posted speed limit travel time reporting segment ''s,'' whichever is greater.

(d) State DOTs shall determine the ''excessive delay'' for each 15 minute bin of each reporting segment for every hour and every day in a calendar year as follows:

(1) The travel time segment delay (RSD) shall be calculated to the nearest whole second as follow:

$RSD_{s,b} = Excessive\ Delay\ Threshold\ Travel\ Time_s$ and $RSD_{s,b} \leq 900$ *seconds*

Where:

$RSD_{s,b}$ = travel time segment delay, calculated to the nearest whole second, for a 15-minute bin ''b'' of travel time reporting segment ''s'' for in a day in a calendar year. $RSD(s)_b$ not to exceed 900 seconds;

Travel time$_{s,b}$ = a measured travel time, to the nearest second, for 15-minute time bin ''b'' recorded for travel time reporting segment ''s'';

Excessive Delay Threshold Travel Time$_s$ = The maximum amount of time, to the nearest second, for a vehicle to traverse through travel time segment ''s'' before excessive delay would occur, as specified in paragraph (c) of this section;

b = a 15-minute bin of a travel time reporting segment ''s''; and

s = a travel time reporting segment.

(2) Excessive delay, the additional amount of time to traverse a travel time segment in a 15-minute bin as compared to the time needed to traverse the travel time segment when traveling at the excessive delay travel speed threshold, shall be calculated to the nearest thousandths of an hour as follows:

$$Excessive\ Delay_{s,b} = \begin{cases} \frac{RSD_{s,b}}{3{,}600}\ when\ RSD_{s,b} \geq 0 \\ or \\ 0\ when\ RSD_{s,b} < 0 \end{cases}$$

Where:

Excessive $Delay_{s,b}$ = excessive delay, calculated to the nearest thousandths of an hour, for 15-minute bin ''b'' of travel time reporting segment ''s'';

$RSD_{s,b}$ = the calculated travel time reporting segment delay for fifteen minute bin ''b'' of a travel time reporting segment ''s,'' as described in paragraph (d)(1) of this section;

b = a fifteen minute bin of a travel time reporting segment ''s''; and

s = a travel time reporting segment.

(e) State DOTs shall use the hourly traffic volumes as described in §490.709(c) to calculate the PHED metric for each reporting segment as follows:

$$Total\ Excessive\ Delay_s = AVO \times \sum_{d=1}^{TD} \left\{ \sum_{h=1}^{TH} \left[\sum_{b=1}^{TB} \left(Excessive\ Delay_{s,b,h,d} \times \left(\frac{hourly\ volume}{4} \right)_{s,h,d} \right)_b \right]_h \right\}_d$$

Where:

Total Excessive $Delay_s$ (in person-hours) = the sum of the excessive delay, to the nearest thousandths, for all traffic traveling through single travel time reporting segment ''s'' on NHS within an urbanized area, specified in §490.703, accumulated over the full reporting year;

AVO = Average Vehicle Occupancy;

s = a travel time reporting segment;

d = a day of the reporting year;

TD = total number of days in the reporting year;

h = single hour interval of the day where the first hour interval is 12 a.m. to 12:59 a.m.;

TH = total number of hour intervals in day ''h'';

b = 15-minute bin for hour interval ''h'';

TB = total number of 15-minute bins where travel times are recorded in the travel time data set for hour interval ''h'';

Excessive $Delay_{s,b,h,d}$ = calculated excessive travel time, in hundredths of an hour, for 15 minute bin (), hour interval (h), day (d), and travel time segment (s), as described in paragraph (d)(2) of this section; and

$$\left(\frac{\text{hourly volume}}{4}\right)_{\text{s,hd}}$$

Where the equation equals hourly traffic volume, to the nearest tenth, for hour interval ''h'' and day ''d'' that corresponds to 15-minute bin ''b'' and travel time reporting segment ''s'' divided by 4. For example, the 9 a.m. to 9:15 a.m. minute bin would be assigned one fourth of the hourly traffic volume for the 9 a.m. to 9:59 a.m. hour on the roadway in which travel time segment is included;

$AVO = (P_C \times AVO_C) + (P_B \times AVO_B) + (P_T \times AVO_T)$

Where:

P_C = the percent of cars as a share of total AADT on the segment as specified in § 490.709(d);

P_B = the percent of buses as a share of total AADT on the segment as specified in § 490.709(d);

P_T = the percent of trucks as a share of total AADT on the segment as specified in § 490.709(d);

AVO_C = the average vehicle occupancy of cars as specified in § 490.709(e);

AVO_B = the average vehicle occupancy of buses as specified in § 490.709(e); and

AVO_T = the average vehicle occupancy of trucks as specified in § 490.709(e).

(f) Starting in 2018 and annually thereafter, State DOTs shall report the PHED metric (to the nearest one hundredth hour) in accordance with HPMS Field Manual by June 15th of each year for the previous year's PHED measures. The PHED metric shall be reported for each reporting segment. All reporting segments of the NPMRDS shall be referenced by NPMRDS TMC or HPMS section(s). If a State DOT elects to use, in part or in whole, the equivalent data set, all reporting segments shall be referenced by HPMS sections.

§ 490.713 Calculation of Traffic Congestion measures.

(a) The performance measures in § 490.707 shall be computed in accordance with this section by State DOTs and MPOs to carry out CMAQ traffic congestion performance-related requirements of this part and by FHWA to report on traffic congestion performance.

(b) The performance measure for CMAQ traffic congestion specified in § 490.707, Annual Hours of Peak Hour Excessive Delay Per Capita (the PHED measure), shall be computed to the nearest tenth, and by summing the PHED metrics of all reporting segments in each of the urbanized area, specified in § 490.703, and dividing it by the population of the urbanized area to produce the PHED measure. The equation for calculating the PHED measure is as follows:

$$\textit{Annual Hours of Peak Hour Excessive Delay per Capita} = \frac{\sum_{s=1}^{T} \textit{Total Excessive Delay}_s}{\textit{Total Population}}$$

Where:

Annual Hours of Peak Hour Excessive Delay per Capita = the cumulative hours of excessive delay, to the nearest tenth, experienced by all people traveling through all reporting segments during peak hours in the applicable urbanized area for the full reporting calendar year;

s = travel time reporting segment within an urbanized area, specified in § 490.703;

T = total number of travel time reporting segments in the applicable urbanized area;

Total Population = total hours of excessive delay in § 490.711(e) for all people traveling through travel time reporting segment ''s'' during a calendar year (as defined in § 490.711(f)); and

Total Population = the total population in the applicable urbanized area from the most recent annual population published by the U.S. Census at the time that the State Biennial Performance Period Report is due to FHWA.

(c) Calculation for the PHED measure, described in paragraph (b) of this section, and target establishment for the measure shall be phased-in under

the requirements in § 490.105(e)(8)(vi) and (f)(5)(vi).

(d) The performance measure for CMAQ traffic congestion specified in § 490.707(b), Percent of Non-SOV Travel, shall be computed as specified in paragraphs (d)(1) through (3) of this section corresponding to the method reported by the State DOT to collect travel data for the applicable area under § 490.709(f)(2).

(1) *Method A—American Community Survey*. The Percent of Non-SOV Travel shall be calculated to the nearest tenth of a percent using the following formula:

Percent of Non-SOV Travel = 100% − % SOV

Where:

Percent of Non-SOV Travel = percent of commuting working population, to the nearest tenth of a percent, that predominantly do not commute by driving alone in a car, van, or truck, including travel avoided by telecommuting; and

% SOV = percent estimate for ''Car, truck, or van—drive alone''.

(2) *Method B—local survey*. The Percent of Non-SOV Travel shall be calculated using the data derived from local survey results as specified in § 490.709(f)(1)(ii). The Percent of Non-SOV Travel measure shall be calculated to represent travel that is not occurring by driving alone in a motorized vehicle, including travel avoided by telecommuting, as a percentage of all surface transportation occurring in the applicable area. The Percent of Non-SOV Travel measure shall be calculated to the nearest tenth of a percent.

(3) *Method C—system use measurement*. The Percent of Non-SOV Travel shall be calculated to the nearest tenth of a percent from the data collected from system use measurements as specified in § 490.709(f)(1)(iii) using the general form of the following formula:

$$Percent\ of\ Non-SOV\ Travel = 100 \times \left(\frac{Volume_{non-SOV}}{(Volume_{non-SOV}) + (Volume_{SOV})}\right)$$

Where:

Percent of Non-SOV Travel = percentage of travel, to the nearest tenth of a percent, that is not occurring by driving alone in a motorized vehicle, including travel avoided by telecommuting

$Volume_{non\text{-}SOV}$ *Volume* = Annual volume of person travel occurring while driving alone in a motorized vehicle; and

$Volume_{SOV}$ = Annual volume of person travel occurring on modes other than driving alone in a motorized vehicle, calculated as:

$$\sum_{m=1}^{t} Volume_m$$

Where:

m = travel mode (modes other than driving alone in a motorized vehicle, including travel avoided by telecommuting);

Volume $_m$ = annual volume of person travel for each mode, ''m''; and

t = total number of modes that are not driving alone in a motorized vehicle.

Subpart H—National Performance Management Measures to Assess the Congestion Mitigation and Air Quality Improvement Program—On-Road Mobile Source Emissions

SOURCE: 82 FR 6049, Jan. 18, 2017, unless otherwise noted.

§ 490.801 Purpose.

The purpose of this subpart is to implement the requirements of 23 U.S.C. 150(c)(5)(B) to establish performance measures for State DOTs and the MPOs to use in assessing on-road mobile source emissions.

§ 490.803 Applicability.

(a) The on-road mobile source emissions performance measure (called the Total Emissions Reduction- see § 490.807) is applicable to all States and MPOs with projects financed with

funds from the 23 U.S.C. 149 CMAQ program apportioned to State DOTs for areas designated as nonattainment or maintenance for ozone (O_3), carbon monoxide (CO), or particulate matter (PM_{10} and $PM_{2.5}$) National Ambient Air Quality Standards (NAAQS).

(b) This performance measure does not apply to States and MPOs that do not contain any portions of nonattainment or maintenance areas for the criteria pollutants identified in paragraph (a) of this section.

§ 490.805 Definitions.

All definitions in § 490.101 apply to this subpart. Unless otherwise specified in this subpart, the following definitions apply in this subpart:

On-road mobile source means, within this part, emissions created by all projects and sources financed with funds from the 23 U.S.C. 149 CMAQ program.

§ 490.807 National performance management measure for assessing on-road mobile source emissions for the purposes of the Congestion Mitigation and Air Quality Improvement Program.

The performance measure for the purpose of carrying out the CMAQ Program and for State DOTs to use to assess on-road mobile source emissions is ''Total Emissions Reduction,'' which is the 2-year and 4-year cumulative reported emission reductions, for all projects funded by CMAQ funds, of each criteria pollutant and applicable precursors ($PM_{2.5}$, PM_{10}, CO, VOC, and NOx) under the CMAQ program for which the area is designated nonattainment or maintenance.

§ 490.809 Data requirements.

(a) The data needed to calculate the Total Emission Reduction measure shall come from the CMAQ Public Access System and includes:

(1) The applicable nonattainment or maintenance area;

(2) The applicable MPO; and

(3) The emissions reduction estimated for each CMAQ funded project for each of the applicable criteria pollutants and their precursors for which the area is nonattainment or maintenance.

(b) The State DOT shall:

(1) Enter project information into the CMAQ project tracking system for each CMAQ project funded in the previous fiscal year by March 1st of the following fiscal year; and

(2) Extract the data necessary to calculate the Total Emissions Reduction measures as it appears in the CMAQ Public Access System on July 1st for projects obligated in the prior fiscal year.

(c) Nonattainment and maintenance area determinations for the CMAQ Total Emissions Reduction measure:

(1) The CMAQ Total Emissions Reduction measure applies to nonattainment and maintenance areas. Such areas shall be identified based on the effective date of U.S. EPA's designations under the NAAQS in 40 CFR part 81, as of the date 1 year before the State DOT Baseline Performance Period Report is due to FHWA.

(2) The nonattainment and maintenance areas to which the Total Emissions Reduction measure applies shall be revised if, on the date 1 year before the State DOT Mid Performance Period Progress Report is due to FHWA, the area is no longer in nonattainment or maintenance for a pollutant included in § 490.803.

§ 490.811 Calculation of Total Emissions Reduction measure.

(a) The Total Emission Reductions performance measure specified in § 490.807 shall be calculated in accordance with this section by State DOTs and MPOs to carry out CMAQ on-road mobile source emissions performance-related requirements of this part.

(b) The Total Emission Reductions measure for each of the criteria pollutant or applicable precursor for all projects reported to the CMAQ Public Access System shall be calculated to the nearest one thousandths, as follows:

$$Total\ Emission\ Reduction_p = \sum_{i=1}^{T} Daily\ Kilograms\ of\ Emission\ Reductions_{p,i}$$

Where:

i = applicable projects reported in the CMAQ Public Access System for the first 2 Federal fiscal years of a performance period and for the entire performance period, as described in in §490.105(e)(4)(i)(B);

p = criteria pollutant or applicable precursor: $PM_{2.5}$, PM_{10}, CO, VOC, or NOx;

Daily Kilograms of Emission Reductions$_{p,i}$ = total daily kilograms, to the nearest one thousandths, of reduced emissions for a criteria pollutant or an applicable precursor ''p'' in the in the first year the project is obligated;

T = total number of applicable projects reported to the CMAQ Public Access System for the first 2 Federal fiscal years of a performance period and for the entire performance period, as described in §490.105(e)(4)(i)(B); and

Total Emission Reduction$_p$ = cumulative reductions in emissions over 2 and 4 Federal fiscal years, total daily kilograms, to the nearest one thousandths, of reduced emissions for criteria pollutant or precursor ''p.''