

April 23, 2015

Gregory G. Nadeau
Deputy Administrator, Federal Highway Administration
U.S. Department of Transportation
1200 New Jersey Avenue S.E.
Washington, DC 20590

Re: Docket No. FHWA-2013-0053

Dear Deputy Administrator Nadeau:

The American Association of State Highway and Transportation Officials (AASHTO) is pleased to provide comments on Federal Highway Administration's (FHWA) "National Performance Management Measures; Assessing Pavement Condition for the National Highway Performance Program and Bridge Condition for the National Highway Performance Program"; Proposed Rule (Docket Number FHWA-2013-0053) published in the Federal Register on January 5, 2015. Representing all 50 states, the District of Columbia, and Puerto Rico, AASHTO serves as a liaison between state departments of transportation and the federal government.

AASHTO and the State DOTs are supportive of the MAP-21 performance management provisions and believe that the performance management principles can be implemented along with the performance-based transportation planning provisions in a manner that advances a safer and more efficient transportation system without imposing undue regulatory burdens on States. There are some recognized challenges ahead in the effort to achieve those goals and AASHTO and the State DOTs will continue to engage with U.S. DOT to address these challenges and work together.

Performance management, including the establishment of performance measures and performance targets, are not new to the State Departments of Transportation (DOTs). For the last decade, many State DOTs have developed and implemented various performance management systems to help them make effective investment decisions within resource limitations while at the same time meeting stakeholder expectations during a time of financial uncertainty. AASHTO has reviewed the proposed rule in part from the perspective of ensuring that it respects and builds on the excellent work that States DOTs have already undertaken, and continue to perform, in this area.

AASHTO is supportive of the statutory goals underlying the proposed rule in this docket: National Performance Management Measures; Assessing Pavement Condition for the National Highway Performance Program and Bridge Condition for the National Highway Performance Program. AASHTO also appreciates that FHWA has worked hard in developing this proposed rule, including consultation

with AASHTO and State departments of transportation among others. The measures that are adopted in this docket will serve to improve communication between transportation agencies and decision makers and users. However, these measures will not be the only measures a State DOT will use to manage their bridge and pavement programs. U.S. DOT, decision makers, and users alike must know that State DOTs use numerous different performance measures to manage the assets in their system and that these other measures must be given due consideration when assessing how the state is performing. So, while we support many aspects of the proposed regulations, there are several areas in which State DOTs have important concerns, and we recommend that FHWA take action to address those concerns and improve the proposal in finalizing this regulation.

AASHTO comments are organized as follows in the attachment to this letter:

- **Principal Comments**—There are nine principal comments for which AASHTO provides an in-depth analysis and discussion.
- **Section-by-Section Comments**—AASHTO comments on each major section and sub-section of the NPRM.
- **AASHTO Response to FHWA Requests**—AASHTO responds to the nine questions specifically asked by FHWA in the NPRM.
- **Proposed Changes to Text**—Suggested changes to the NPRM text based upon AASHTO analysis.

These comments represent a substantial work effort among State DOTs to thoroughly review and comment on the pavement and bridge condition and performance management NPRM. AASHTO has in place a process to provide coordinated comments representing the different disciplines of the various standing committees on all of the performance management NPRMs being developed by U.S. DOT. This included a coordinated effort to gather input from the AASHTO Standing Committee on Performance Management, Subcommittee on Bridges and Structures, and the Joint Technical Committee on Pavements. These comments are but one set of more than ten that AASHTO expects to provide as U.S. DOT issues proposals implementing performance-related provisions of MAP-21. Since this NPRM includes placeholder references for other NPRMs yet to be issued, AASHTO recommends that U.S. DOT provide an opportunity for States and others to offer any additional comments after all of the performance management NPRMs have been issued.

We appreciate the opportunity to provide these comments and look forward to working with FHWA in the implementation of final rules. If you would like to discuss the issues raised in this letter, please contact Matthew Hardy, AASHTO's Program Director for Planning and Policy at (202) 624-3625.

Sincerely,



Bud Wright
Executive Director
AASHTO



John Cox
President, AASHTO
Director, Wyoming Department of Transportation

PRINCIPAL COMMENTS

1) REVISE THE PROPOSED PERFORMANCE MEASURES AND THRESHOLDS FOR BRIDGES AND PAVEMENTS TO USE MORE APPROPRIATE APPROACHES AND THRESHOLDS

AASHTO has a number of important concerns with the proposed measures and thresholds for whether pavements and bridges are in a condition that does not subject the state to sanctions. At the outset, AASHTO is concerned that the current structure of the NPRM requires use of numerous voluntary AASHTO standards and calculations from the HPMS field manual that have not gone through a regulatory review process. AASHTO believes that writing these standards and processes into a regulatory document will limit State DOTs ability to use the most up-to-date techniques, methodologies and processes. For example, an increasing number of states are no longer collecting NBI ratings for NHS bridges, but are now collecting the new AASHTO Element Level ratings and converting to the NBI ratings using an approximate computerized algorithm. In fact, FHWA required the use of element level rating for NHS bridges beginning October 1, 2014.

AASHTO can envision, after several cycles of reporting based on the NBI for purposes of national reporting, that State DOTs will be resistant to switching over to an element-level based rating system for the NHS bridges. However, once momentum is sufficient for the move to element-based ratings, our real concern would be that all involved would feel the need to equate a rating system based on element condition to the then existing one based on NBI, whether or not it skewed the usefulness of the results. Therefore, we encourage the FHWA to move ahead with developing an element-based approach as soon as possible, with a reasonable transition period, and to address this needed transition in the final rule or in a subsequent rule that would be proposed soon.

AASHTO also is vitally concerned with the pavement performance measures. It is AASHTO's strong opinion that only the IRI performance measure is ready for implementation today. IRI is unique in that it is suitable for both flexible and rigid pavements, transportation agencies are already required to collect them for HPMS, and the measure can be collected with a single piece of equipment.

AASHTO, whose members regularly consider issues concerning pavement condition, including roughness, cracking, rutting, and faulting, is convinced that the other three measures proposed as means of assessing the overall structural health of the pavement (cracking/rutting/faulting) are not yet ready for national-level deployment but could be ready within the next five years. They should be addressed in a future rulemaking, not hurried into a final rule at this time.

Below is a summary of AASHTO's concerns for each of the four pavement performance metrics included in the NPRM:

- *IRI*— Although IRI is not a comprehensive measure of overall pavement condition, AASHTO believe IRI collected on roadways where speed can be maintained is the only currently available measure generally ready for national-level deployment. There are concerns about the validity of IRI data collected in urban areas with low speed roads and AASHTO recommends excluding urban IRI collection and measurement from the final rule, perhaps to be revisited in a future

rulemaking. To some extent FHWA has acknowledged the concern with urban IRI by proposing a higher threshold IRI measurement (of 220) for roads in urbanized areas with a population of one million or more. However, the concern with measurement of low speed urban area roads is not limited to those in areas with a population of one million or more. Those difficulties extend to all slow speed areas, including all “urban areas,” defined in title 23 as urbanized areas of 5,000 or greater population (See 23 USC 101(a)). That definition (5,000 or greater population), should be used in defining urban areas for the purposes of IRI measurement. So, if notwithstanding AASHTO’s recommendation, the final rule is to require IRI collection in urban areas (as defined in 23 USC 101(a)), the higher (220) IRI threshold should be applied within all “urban areas” as defined in title 23, not only in urbanized areas of one million or more population. Otherwise, states could be subjected, unreasonably, to having a significant portion of NHS road mileage considered “poor” due to higher (though not reliable) IRI measurements in urban areas.

- *Cracking (Asphalt)*—The condition determination *Cracking Percent* is based on the definition of cracking percent, however, neither R55 nor PP67 are based on determining the cracking percent. R55 uses feet of cracking over square feet of surface area of the section. PP67 is based purely on the length of cracking. Given this information, the metric for cracking does not make sense in relation to the required AASHTO standards the states are required to follow. AASHTO also has the following concerns with the definition used in the NPRM:
 - R55-10 is not intended for HPMS purposes.
 - PP67-14 is provisional and will likely change and be modified. The number will also change once it is finalized.
 - How are State DOTs to address sealed cracks and patches?
- *Cracking (Concrete)*—No standard currently exists to measure cracking of concrete pavement. The NPRM specifies that the HPMS field manual will be used but the methodology is not considered a standard. Also, the NPRM states that the cracking percent for joint plane concrete pavement (JPCP) considers any crack present in a slab within the section. That seems to be overbroad. Not all cracks are necessarily bad, such as expansion joints that are sawed into concrete slabs.
- *Rutting (Asphalt)*—The proposed processes for data collection allow for rutting measurements using either 5 point data collection or the automated transverse profile. There is a big difference between these two methods. The 5 point system can significantly underestimate rutting measurements and the differences between the two methods can lead to inconsistency in the data presented at the national level.

AASHTO also has the following concerns with the definition used in the NPRM related to rutting:

- The common practice for reporting rutting values is in increments of 0.25” but FHWA proposes to use 0.2” increments. AASHTO recommends that FHWA continue to use the common practice.
- AASHTO recommends the following rutting depth thresholds:
 - Good: Less than 0.25”
 - Fair—0.25” to 0.75”
 - Poor--Greater than 0.75” to account for areas where chains and studded tires are used.

- *Faulting (Jointed Concrete Pavement)*—AASHTO is concerned that the value used for assigning a poor condition of faulting of 0.15” is too strict. AASHTO recommends using a higher value. For example, the American Concrete Pavement Association recommends 3/16” as the threshold for faulting which is higher than the value recommended by FHWA. In addition, AASHTO is concerned that while the technology to measure faulting for jointed concrete pavement exists, it is not yet implemented on a wide scale by State DOTs.

AASHTO recommends the following as it relates to the implementation of the performance measures for bridges and pavement:

- **FHWA should make consistent the NBI items used to categorize a bridge as Good, Fair, Poor and Structurally Deficient.** AASHTO strongly recommends that FHWA remove the NBI items 67 and 71 (waterway and structural adequacy) from the factors that are used to determine if a bridge is considered structurally deficient. Making the definitions between bridge condition (Good/Fair/Poor) and whether the bridge is “structurally deficient” consistent would go a long way in communicating with the public and decision makers the needs of maintaining bridges versus developing a separate categorization of bridges for the sole purpose of meeting the requirements of MAP-21. In addition, this consistency would ensure better communication with the public where all bridges classified as structurally deficient would be a sub-set of those bridges categorized as being in Poor condition. As currently defined in the proposed rule, a bridge could be classified in Good condition but also be considered structurally deficient. This will create significant confusion.
- **Structurally deficient should be defined as a rating of 3 or less for NBI Items 58, 59, 60, and 62.** It is AASHTO’s position that the classification used by FHWA to determine whether a bridge is considered structurally deficient should be based upon an NBI rating of 3 or less for any of the four NBI Items used to classify a bridge or culvert as structurally deficient.

AASHTO recommends that the following the changes to 490.411(b):

“...a bridge will be classified as Structurally Deficient when one of its NBI Items, 58—Deck, 59—Superstructure, 60—Substructure, and 62—Culverts is 3 or less.”

- **FHWA must clearly indicate in the rule a transition plan to the use of element level ratings for bridge condition.** The Rule should note that the use of NBI ratings for the definitions of the measures is temporary and will transition to the new definitions based on the new National Element Level ratings as defined by AASHTO. The Rule should state that new definitions based on element level ratings will be developed jointly by FHWA and AASHTO, or at least that AASHTO input will be considered in developing definitions of the measures based on element level ratings.
- **FHWA should defer implementation of cracking, rutting and faulting performance metrics¹.** A decision on whether, when, and how to use them should be deferred to a future rulemaking that would not take place until there is greater consensus on standards in these areas.

¹ It is important to note that if only IRI is used, more urban states (e.g., Connecticut) may be at a disadvantage because these states would have more urban roads where there are more challenges in collecting IRI data. In these situations, the state DOT may look worse in comparison to other states in order to meet the proposed 5 percent minimum threshold. However, these states will not typically manage their pavements based solely upon IRI but other performance measures as well.

AASHTO recommends that these measures and thresholds be developed jointly by FHWA and AASHTO, or at least that AASHTO input will be considered in developing the measures and thresholds. If FHWA should proceed to implement these requirements, the measurements and thresholds for “poor” condition should be modified as discussed immediately above.

- **IRI collection in urban areas, as defined in 23 USC 101(a) should be excluded from the rule at this time.** If it is included, the higher IRI threshold for “poor” condition (220) should be retained but also applied to all urban areas as defined in title 23 and not applied only to urban areas with a population of over one million.

2) CONFIRM STATE DISCRETION IN TARGET SETTING AND REPORTING

Target setting is a data-driven and multidisciplinary process that is practiced by all states. MAP-21 was clear in saying that each State shall set performance targets that use the measures developed by U.S. DOT. Furthermore, it is AASHTO’s position that every state and political subdivision faces different constraints and opportunities affecting their transportation system. Available funding is a particularly important variable for States in planning and target setting, but there are other factors, including economic conditions, environmental conditions, population growth trends, legislative and gubernatorial mandates and priorities, and issues identified in the public involvement process. Consequently it is essential that States and MPOs have the flexibility to set targets, including targets that have performance holding steady or, in some situations, declining. Regulations pertaining to performance reporting should focus on providing the public and interested parties clear, concise and easily available information on transportation system performance in the State as determined by the State. States should have flexibility in determining the need for consolidation of information regarding MAP-21 performance measures and the nature of the performance reporting. Options include but are not limited to stand-alone periodic performance reports, reporting within the context of the statewide plan, summary discussions with appropriate references in the STIP, etc. States are in the best position to know “what works” in the State regarding communications with the public, interested parties, and their partners.

The final rule should also be clear that State DOTs would have the discretion to voluntarily set long term targets (such as 10 years or more), not just 2 and 4 year targets, and to do so completely outside of the Federal regulatory framework. Given the long-term nature of the assets that are being measured (bridge and pavement), their condition will generally not change significantly over the shorter 2 and 4 year reporting periods. While AASHTO does not support adding mandatory long term target and management provisions to the requirements proposed in the NPRM, the proposed performance management structure for pavements and bridges should accommodate voluntary decisions by the individual States to also establish, for their own use, target and reporting timeframes that the individual State considers to be realistic and appropriate for the measures being used. The proposed rule should give State DOTs (and MPOs) the flexibility to establish long-term targets, outside of a Federal regulatory requirement, that states and MPOs can work together to achieve. State DOTs can still report on a biennial basis (as required by MAP-21) on performance results and progress while also fashioning, voluntarily, their own longer term targets.

AASHTO recommends the following as it relates to target setting and reporting requirements:

- **The proposed rule should include specific language stating that target levels may call for improving, constant, or declining condition.** FHWA’s recognition that targets can indicate a

decline in asset performance (whether due to inadequate funding or otherwise) is set forth only in the preamble of the NPRM (Page 338, third column, second paragraph) but not in the proposed rule itself. AASHTO recommends that specific language be included in the rule itself to confirm this essential point

- **State DOTs should be able to adjust targets annually if critical assumptions underlying performance targets have changed sufficiently to affect target values.** Currently, the NPRM would allow a State DOT to modify targets on a biennial basis. In some cases, the need to adjust targets may occur more often and State DOTs should be allowed to adjust targets annually after providing documentation to its FHWA Division for information, not for approval.
- **Evaluate only the three required statewide targets for bridge and pavement condition.** If States choose to adopt additional optional targets for urbanized and non-urbanized areas or if an MPO sets targets, these targets should not be considered in evaluating whether significant progress was made by a State. Otherwise, the burden associated with establishing additional targets may become a disincentive to some states or MPOs adopting additional performance measures and targets. All states should be measured only on the same three required statewide targets pertaining to the measures established in CFR 490.105(c)(1) through (3).

3) METHODOLOGY FOR DETERMINING SIGNIFICANT PROGRESS

AASHTO is generally supportive of the process established in the NPRM to determine whether a State DOT is making significant progress towards target achievement. This includes determining that significant progress has been made if the State DOT achieves or exceeds its targets when the targets are the same as or lower than the baseline condition, not only when the targets call for an improved condition. It also includes the case where the actual performance level is better than the baseline condition. AASHTO believes that this will give State DOTs flexibility to establish aggressive targets if desired but will not result in States being punished if they do not meet those targets. This approach must be retained in the final rule.

AASHTO also supports FHWA's approach of assessing significant progress only on the Interstate pavement condition and non-Interstate NHS pavement condition, and NHS bridge condition and to not assess progress on additional targets a State DOT may elect to establish for other geographical regions in the State.

AASHTO recommends the following regarding methodology for determining significant progress:

- **Significant progress has been made if the State DOT achieves or exceeds its targets when the targets are the same as or lower than the baseline condition or when the improvement is simply better than the baseline condition.** As discussed in the preamble of the NPRM, the 0.1% improvement above the baseline to have achieved significant progress seems arbitrary with no basis. AASHTO would recommend FHWA include additional language in the rule that simply states improvement better than the baseline would be deemed achieving significant progress.
- **Insert additional language to account for unforeseen events.** Add new subparagraphs (D) - (F) to proposed 23 CFR 490.109(e)(5)(i) that could read as follows:

*“(D) Lack of federal funding through a long-term surface transportation program;
(E) Cost inflation beyond assumed levels; and/or
(F) Another cause reported by the State not covered under the previous circumstances.”*

- **Ensure significant progress is based upon the three NHPP measures in CFR 490.105(c)(1) through (3).** Change CFR 490.109(e)(1) to the following:

“...State DOT for the NHPP measures described in CFR 490.105(c)(1) through (3).”

4) USE TERMS THAT ENABLE STATES AND U.S. DOT TO TELL A BETTER AND MORE ACCURATE STORY ABOUT INFRASTRUCTURE

An important aspect of implementing performance management is the ability to use the data and information generated as part of the process to communicate with decision makers and the public. It is critical that as we begin the new era of implementing performance management provisions at the national level, we begin using words and terms we can easily communicate with and have meaning to those receiving the information. First, use of the terms Good, Fair, and Poor do not tell the public what is really needed in order to maintain the asset. Since an important component of performance management is to tell a story using the data and information, AASHTO would encourage FHWA to include use of the following terms when providing a narrative concerning what it means for an asset to be in Good/Fair/Poor condition: routine or cyclic maintenance for assets in good condition; condition based preventive maintenance for assets in fair condition; and rehabilitation and replacement for assets in poor condition. These terms are already include in the FHWA Bridge Preservation Guide and could easily be applied to both bridge or pavement assets and other asset classes as well.

Second, use of the terms “structurally deficient” or “functionally obsolete” originally were defined for use by engineers to communicate with each other. The terms were never meant to be used for communicating with decision makers or the general public. It is unfortunate, we believe, that the term “structurally deficient” was included in MAP-21 as the defining factor for minimum bridge condition along with the arbitrary 10 percent threshold. AASHTO believes that there is an opportunity to improve the terminology in the public interest and would welcome a robust conversation about what terms should be used. Moreover, whatever language is included in the final rule should include flexibility to adjust terminology such that we are not married to obsolete, irrelevant, meaningless, or suboptimal words.

AASHTO recommends the following as it relates to the use of terms and telling a better story:

- **Do not use the term “structurally deficient”.** While MAP-21 does require U.S. DOT to set minimum condition levels for “structurally deficient” bridges, it is AASHTO’s strong recommendation that FHWA work to use a new and different term other than “structurally deficient.” There is some precedent for implementing the intent of a congressional program but not sticking to the specific terms identified in the language. For example, the “TIGER” program is not the term used in the appropriations statute, but U.S. DOT implements the provision as “TIGER.” AASHTO strongly recommends that the definition of structurally deficient be changed to the following:

“Structurally deficient as used in 23 CFR 490.411 and 490.413 is a classification given to a

bridge which is categorized as having an NBI rating of 3 or less for either the deck, superstructure, substructure, or culvert.”

5) DO NOT HOLD STATES ACCOUNTABLE FOR ASSETS THEY DO NOT CONTROL

Reporting and management of certain assets outside of State DOT responsibility such as Federal Land Management Agency bridges/pavements and tribal government bridges/pavements is currently a U.S. DOT responsibility and should remain so. State DOTs have no direct authority to collect data on them. In fact there is no expectation and no requirement or mechanism for State DOTs to obtain pavement or bridge data on these assets. Requiring or encouraging State DOTs to report on these would be a transfer of responsibility from the federal government to the State DOTs without any authority, or additional funding, and it would hold State DOTs accountable for performance measures and targets outside of their control. If reporting on these assets is desired, the government entities responsible for these bridges and pavements should be asked to develop their own targets best suited for their individual needs and report directly to the U.S. DOT. In addition, states should not be held accountable for locally-owned NHS assets that they do not own or control.

There are two overarching concerns with including non-State DOT controlled assets in the overall target setting and accountability process. First, State DOTs may not be legally able to collect data on assets they do not own. In some cases, the State DOT may be penalized for not reporting data they are not legally able to collect. For example, under the proposed rule, pavement segments for which no data is reported would be classified as poor.

Second, for non-State DOT controlled assets, the State DOT may have no authority to control how funding on those assets is spent or how the assets are maintained. Thus, while State DOTs may be the mechanism to report condition data to FHWA, State DOTs should not be held responsible for the condition of these assets.

Another complicating factor is the reporting of data. For example, the NBI file that FHWA will use for evaluating State DOTs on these measures contains data on federally owned bridges that is submitted by the respective federal agency independently of the states' NBI submittal. The states do not collect and/or report the NBI data for these bridges nor do they have any control over what happens to these bridges. As a result, regulations should not hold State DOTs accountable for noncompliance or the condition of these bridges.

AASHTO recommends the following as it relates to assets outside the control of a State DOT:

- **Missing pavement data should not automatically revert to poor condition.** There are a number of reasons why data may be missing. One significant one may be that the State DOT does not own and maintain the asset. Another may be that the applicable segment may be undergoing work. See further discussion below on the Section-by-Section Comments, 490.313(b)(4) for additional reasons why missing pavement data should not automatically revert to poor condition.
- **Exclude non-State DOT assets in the assessment of making significant progress towards target achievement.** It is AASHTO's strong recommendation that State DOTs be able to indicate as part of the reporting of asset condition for both bridges and pavements those assets that are controlled by the State DOT and those that are not. By reporting them separately, FHWA

will be able to, and should, exclude non-State DOT controlled assets from the making significant progress assessment. Non-State DOT controlled assets may include assets owned by the Federal government, tribal lands, local agencies (county, city, or municipal), etc.

- **Set up a separate process for federally-controlled assets.** AASHTO recommends that FHWA set up a separate requirement for federally-owned assets to report on their performance. Since the funding mechanisms are different and not controlled by States, the targets and assessment of progress for federally owned pavement and bridges should be completely separate from the state targets, and from assessment and investment plans to reach targets.

6) COST TO IMPLEMENT THE BRIDGE AND PAVEMENT REQUIREMENTS

AASHTO is concerned that this NPRM will require State DOTs to collect more data, at a greater level of detail, collected more often, on a larger network, potentially at a higher quality level (based on the proposed FHWA approved Data Quality Management Program), which will cost more, and submit it all two months sooner (than the current HPMS data submittal). And, if any data on a section is missing or incorrect, it will be assessed as poor. These proposed changes are very significant and will be extremely costly.

The costs associated with implementation of the pavement and bridge performance measures are not trivial and represent both a significant up-front cost and annual costs. Currently, State DOTs do not have the additional resources to spend on original data collection and the ongoing maintenance of these data. AASHTO believes that the extensive data collection and storage of information required to collect the additional pavement data constitutes a significant unfunded mandate.

AASHTO is also concerned that State DOTs are going to need to maintain “two sets of books” because of these national performance measure requirements—one for national performance reporting and one to manage their network using pavement management and asset management principles that they consider appropriate.. This will lead to a significant disconnect between State DOT reporting and national reporting causing confusion for the public and loss of credibility for both the State DOTs and the FHWA. As part of the reporting requirements, AASHTO suggests that the NPRM allow, but not require State DOTs to also report their own pavement and bridge performance based on the network they maintain and the metrics critical to their own pavement management principles.

AASHTO recommends the following as it relates to the cost to implement the bridge and pavement requirements:

- **FHWA should specifically state in the NPRM that sampling of pavement data should be allowed.** Given the fiscal realities that many State DOTs currently face, allowing State DOTs to conduct sampling of pavement data is a more cost effective approach than requiring the full extent to be measured. In fact, FHWA is already endorsing a sampling approach by requiring data for a single through lane of travel. AASHTO does recognize that if additional resources and time are made available that a data set that represents the full extent is generally better than one consisting solely of sampled data. However, sampling is a professional way to cost effectively collect data that should be allowed. That approach could be reconsidered in a future rulemaking at such time that there is an increase in available funding that could be used for this purpose.
- **Pavement data for the Interstate System should be allowed to be collected and reported, at a minimum, on a biennial basis.**

- **State DOTs need to be involved in the design of the reporting template.** The reporting template is another item that may undergo changes that greatly increase the workload without opportunity for comment. Also, AASHTO has good suggestions that could make the performance report template more relatable to the public, such as trend lines or numbers of bridges moving from fair to good.
- **Allow State DOTs to report pavement condition in logical pavement segments and not be restricted to reporting in 0.1 mile segments.** AASHTO is concerned about the requirement that the pavement performance measures must be collected and reported in 0.1 mile segments. Reporting the data in 0.1 mile segments is an undue burden on many State DOTs as they do not necessarily manage their pavements in such small increments. Rather, State DOTs use pavement management segments that are typically homogenous in nature based upon surface type or logical project lengths. AASHTO recommends that FHWA reconsider the 0.1 mile segment requirements and develop a process whereby the State DOTs can work with their Division Offices to define logical pavement segments for reporting.

7) DO NOT FORCE STATE DOTs TO IMPLEMENT A WORST-FIRST APPROACH TO MAINTAINING ASSETS

MAP-21 specifies for the first time in Federal law a requirement for the states to utilize and document an asset management plan for the NHS. One of the principles of asset management is to focus on reducing life-cycle costs, not on addressing the “worst first.” FHWA’s NPRM on the risk-based asset management plans states that a successful asset management program will have moved away from a worst-first approach to a life-cycle cost approach whereby the asset management framework is being used to achieve and sustain established targets over the life cycle of the assets at minimum practicable cost (Page 9236, first column, first paragraph of docket number FHWA-2013-0052).

A core principle of transportation asset management is to provide the appropriate treatment at the right time in the life cycle of the asset. This may mean the option not to treat the worst item or segment first may be the most cost effective for the overall system, including assets not on the NHS. State DOTs are concerned that the performance targets and “minimum condition” requirements for NHS bridges and Interstate System pavement may force State DOTs into adopting a worst-first approach to asset management since the State DOTs will be required to include in their overall asset management systems not only the federally-required assets (bridges carrying the NHS, Interstate Pavement and non-Interstate NHS pavements) but many other assets as well. As such, AASHTO is concerned that the pavement condition metrics being used by the NPRM are not solely sufficient for states, MPOs or any other entities to use in order to perform investment analysis, network condition predictions, or project selection, which are all key components of Pavement Management and therefore Asset Management. To use such limited data mined from the HPMS database to establish correlations between system performance and investment decisions is not recommended.

AASHTO is fully supportive of State DOTs implementing asset management approaches as good business practice. It is important to note that implementing asset management approaches does not mean that the overall performance of the transportation system will necessarily improve. In the NPRM, however, FHWA suggests that for pavement condition they will “establish a minimum condition threshold that would become more stringent over time, to replace in the future the proposed initial 5 percent level, in order to reflect the improvements made to the system over time; and the lowest minimum condition level that could be maintained for Interstate System pavements in the future.”

(NPRM at 371) This proposal assumes system improvement over time, which may or may not be possible depending on funding levels and possibly other variable.

AASHTO recommends the following as it relates to State DOTs implementing an asset management approach:

- **Evaluate the effects (intended and unintended consequences) of the national-level performance measures, targets and minimum condition levels.** AASHTO strongly recommends that U.S. DOT evaluate the impact that the federally-required targets and minimum condition thresholds are having on overall asset management approaches at a future date, to ensure that these policies have had a positive impact on asset management approaches, before committing to a future course of action.

8) DEVELOP A REALISTIC IMPLEMENTATION TIMEFRAME

While performance measurement and management of NHS pavements and bridges is important, it is only part of the planning effort States must undertake in order to deliver a successful program to the public. AASHTO wants to make clear that other tasks and the level of effort and coordination with local agencies, the public and other stakeholders is very, very substantial. The NPRM appears to assume that states can readily and promptly integrate federal performance management into already complex and time consuming processes, including Federal and State planning and public involvement processes and state performance measurement and management efforts.

FHWA must recognize that the entire process to collect/analyze data, understand the trends, and establish targets needs to be established across a wide range of performance areas that can be influenced by local and regional needs. Coordination takes time and this NPRM seems to rush the process. It appears that the timelines put forth in this NPRM are not adequate for the process to establish targets and report expectations and AASHTO would encourage FHWA not to rush the process of implementing the national-level performance measures.

AASHTO recommends the following as it relates to developing a realistic implementation timeframe:

- **Implement all of the performance management requirements using one effective date.** AASHTO strongly recommends that FHWA implement these new requirements with one common effective date. However, AASHTO would like for FHWA to finalize and publish the rules as they are ready such that State DOTs can begin to prepare to implement the requirements. Moreover, given the complexity of integrating these new requirements into an already complex process, the rule should include a provision to allow a state to ask for and receive an extension of time to comply with the requirements so long as the state is able to show that it has made progress towards compliance and is working to achieve compliance.
- **Provide enough time to implement if a single effective date of implementation is not feasible.** AASHTO prefers that a single effective date for all rules be used such that State DOTs are properly prepared to implement the national-level performance measure provisions, risk-based asset management plan requirements, and updated performance-based planning regulations. If a single date is not feasible, AASHTO would propose the following as a general schedule for implementation of the pavement and bridge performance measures:

- Publication Date: As soon as possible.
- Effective Date: 12 months after publication. This would allow State DOTs and MPOs to start coordinating and better understanding how the requirements will affect existing processes and to develop an implementation approach.
- Phase-In Period: This would include time to do/confirm data collection, establish targets, and prepare a baseline report
 - Bridge Performance Measures: 24 months
 - Interstate Pavement Measures: 24 months
 - Non-Interstate NHS Measures: 48 months
- Penalties Assessed if Minimum Condition requirements are not met: No earlier than 48 months after the completion of the phase-in period.
- Making Significant Progress Determination Conducted: No earlier than 48 months after the completion of the phase-in period.
- **Have a single reporting date for all data submitted to FHWA under this rule.** FHWA should have a single reporting date for all data and all subparts of this rule of June 15. Having multiple reporting dates for the same type of data (e.g., pavements or bridges) creates an undue burden on and confusion for State DOTs.
- **FHWA should be aware that outcome results for long-lived assets such as pavements and bridges are slow to change even when seemingly dramatic changes in program content and focus are instituted.** This is particularly so for surface transportation assets which are extensive in number and size. Even with the reforms in MAP-21 that streamlined aspects of highway project delivery, it takes time to adequately identify, design, program and construct the improvements to the extent that changes in asset conditions and performance can occur. Accordingly, without in any way adding to proposed requirements, FHWA can reduce the number of assessments so that assessment intervals for targets would be for mid- term periods, so that program changes have more time to work before they are assessed. In place of biennial intervals, we strongly suggest that four or five year intervals be considered for the final rule. Anything less than this might give the false impression that little change is taking place as a result of the pavement, bridge and other mandated performance measures. And, of course, assessment must keep in mind financial resources. Insufficient resources may result in less progress than the ideal regardless of any improvements in program management.
- **Increase the length of reporting periods for the mandatory condition thresholds for Interstate Pavements and NHS bridges.** By changing reporting periods to four or five years, the ability of FHWA to assess penalties against states that do not achieve required performance levels would be structured within a more appropriate time frame for the life of the assets. This would provide states and other key stakeholders with sufficient time to evaluate the success of the MAP- 21 performance management initiative and for any resulting statutory changes to be addressed by Congress. AASHTO strongly believes in the benefits of performance management but time on the part of both states and U.S. DOT is needed to successfully integrate these principles into State DOT decision processes, implement them, and measure results, especially in a climate where resources at all levels are extremely scarce and volatile and where other complex processes are already required. By structuring a better match between asset lives and time needed for implementation and assessments, State DOT's will be able to better integrate their decision processes with the requirements of the rule to be promulgated in this docket.

9) HPMS AND NBIS ARE IMPORTANT TO THE PROPOSED REGULATION BUT THEY WERE NOT DEVELOPED TO BE REGULATORY DOCUMENTS

It is clear in the NPRM that FHWA intends to make both the HPMS and NBIS the primary mechanisms with which to report performance data. In so doing, FHWA is using HPMS for much more than what they intended to achieve. AASHTO generally supports the concept of using both the HPMS and NBIS as a central repository for State DOTs to report the data; for FHWA to store and archive the data; and for FHWA to use the data to assess making significant progress or determining that the minimum condition thresholds are being met. In this case, however, adjustments are appropriate and needed to reflect the new use of these documents. AASHTO has a number of concerns that need to be addressed if these two systems and documents become part of larger regulatory requirement.

First, there needs to be a stronger partnership between FHWA and the State DOTs to ensure that appropriate changes to HPMS and NBIS are made and to protect against any undesirable changes to these data collection tools. Currently, a mechanism does not now exist whereby comments on the referenced documents such as HPMS are formally filed with FHWA or clearly considered by FHWA. AASHTO has provided numerous comments on changes to the HPMS in the past but has not seen many of these comments incorporated into revisions or updates (see Docket FHWA-2006-23638). What the State DOTs have seen is that recent changes to the HPMS have greatly increased the burdens on the states, but many of the increased workloads have been made in a directive manner rather than in full cooperation with the primary user, the states represented by AASHTO.

Given the importance of data collection to the proposed performance management regime, changes in how data is collected clearly are potentially important to a state's results for purposes of the rule and simply cannot continue to be handled informally. Accordingly, AASHTO strongly recommends that there be discussion in the final rule that will ensure that future changes to the current items incorporated by reference do not circumvent the rulemaking process and avoid a chance for State DOT input. Second, FHWA needs to preclude itself by rule from making any further changes to HPMS or NBIS without first providing notice and opportunity for comment.

In addition, concern has been expressed regarding current Chapter 7 of the HPMS Manual. It appears that the requirements proposed, if adopted, will result in changes in how data is submitted, including the separate submission of data for different classes of highway. This does not appear to be captured in the HPMS at this time. FHWA should promptly develop any needed changes to the HPMS manual and issue them for notice and comment.

AASHTO recommends the following as it relates to use of the HPMS and NBIS:

- **Establish a mechanism for comments, and preferably active consultation with State DOT, before making future changes to the HPMS requirements.** Any changes to the Highway Performance Monitoring System (HPMS) Field Manual or other documents incorporated by reference in the rule should be subject to notice and opportunity to comment and due legal process before becoming parts of the regulation.
- **FHWA should preclude itself by rule from making changes to the HPMS or NBIS without first providing notice and opportunity for comment.**

- **Revise the HPMS guide and the NBI to all English units of measure to eliminate the Metric/English units of measure rounding issues that result in changes to performance levels.**
- **AASHTO has recommended (above) that the final rule address pavement measurement solely through IRI and not include measures or management provisions regarding cracking, rutting, and faulting. If, unfortunately, the final rule should continue to address such other pavement variables, several clarifications and adjustments would be needed respecting them. Set forth below are areas related to HPMS that should be clarified:**
 - *Discrepancy in calculating the Cracking Percent between the NPRM HPMS Field Manual.* According to pages 4-94 and 4-95 of the HPMS Field Manual dated March 2014, the Cracking Percent for asphalt pavements is described as percent area with fatigue type cracking for all severity levels for AC pavements (in wheel path). The manual also states that this should be reported as the percent of actual pavement with fatigue cracking. The LTPP protocol says to include fatigue cracking and longitudinal cracking in the wheel path that has associated random cracking (any cracks in the wheel path that have a quantifiable area). This definition excludes all cracking outside the wheel paths and can be interpreted to exclude longitudinal cracking in the wheel paths without associated random cracking.
 - *Whether ramps are to be included as part of HPMS reporting or not.* It is AASHTO's understanding that the definition of the NHS includes ramps; however, HPMS reporting specifically excludes ramps. If ramps are to be included, this will require considerable effort and cost, including costs for additional visual distress collection, additional time for QC/QA of the data and processing and additional time for analysis.
 - *Cracking Percent Significant Figures.* Cracking Percent in the NPRM is defined to be calculated to the nearest percent whereas the HPMS Field manual stipulates nearest 5 percent.
 - *Rutting and Faulting Significant Figures.* There is a discrepancy for rutting and faulting (nearest 0.05 inch versus nearest 0.1 inch).
 - *Inclusion of bridges in the reporting of IRI.* The HPMS manual states that bridges are to be included in reporting IRI results which is in conflict with the NPRM that states bridges are to be excluded from the IRI calculation.

SECTION-BY-SECTION COMMENTS

SUBPART A—GENERAL INFORMATION

490.101 DEFINITIONS

NATIONAL BRIDGE INVENTORY (NBI)

AASHTO recommends that FHWA improve its bridge condition data translator to properly reflect the “Good” and “Fair” breakdown. AASHTO has heard from many State DOTs that the percent of good bridges is biased by shortcomings of the current FHWA translator for CoRe to NBI data. The best NBI rating is typically translated to either a 6 or 7 based upon element data, underestimating the number of good bridges. FHWA's converter for element-to-NBI and NBI-to-element ratings must span the full spectrum of NBI ratings to properly distribute bridges in the “Good” & “Fair” categories.

490.103 DATA REQUIREMENTS

(d) As discussed above in the Principal Comments section, AASHTO is concerned that the HPMS and the HPMS Field Manual are becoming regulatory documents with little input from the State DOTs on how they should be improved and implemented. AASHTO encourages FHWA to work with the State DOTs in a consultative and coordinated manner to improve the overall functionality of the HPMS and HPMS Field Manual. As also discussed above, references in the final rule to HPMS and NBIS should be to a specified version of them, so that FHWA could not modify them without changing the rule. That would ensure that substantive change to them would be subject to a notice and comment opportunity for State DOTs. Accordingly, the definitions of those terms in proposed 490.101 should be modified to include the date of the final rule (rather than the date that the proposed rule was published, so that FHWA can adopt the comments we have made in this docket regarding needed clarifications).

490.105 ESTABLISHMENT OF PERFORMANCE TARGETS

(d) As discussed above in AASHTO's Principal Comments under the subheading *Do Not Hold States Accountable for Assets They Do Not Control*, AASHTO believes that the target scope established by the State DOTs for the bridge and pavement asset measures should be limited to those assets they control.

(e)(2) Strike “to ensure consistency, to the maximum extent practicable” and substitute: “to facilitate consistency”. Coordination simply cannot “ensure” consistency, much less to the “maximum extent practicable”. This modification would reduce the chances of unreasonable impact on states in implementation. A similar change should be made in (f)(2).

(e)(6) This needs to be modified to allow a State to adjust targets more frequently than once every 2 years.

(f) AASHTO suggests FHWA explore the possibility of delaying MPO target setting for the bridge and pavement measures until the start of the second full performance period. This will allow for additional time for States and MPOs to further develop their collaborative efforts in response to this NPRM and Asset Management Plan (23 CFR Part 515). Further, if FHWA should not follow AASHTO's recommendation to exclude from the rule measures for cracking, rutting, and faulting, and insist on pursuing those non-consensus measures at this time, the attempts to collect that uncertain data will only be made in the second half of the first performance period (mid performance report). Until such data is collected and evaluated, the MPOs will likely have a difficult time appraising this complex and

uncertain data to set targets. Please see the *Develop a Realistic Implementation Timeframe* discussion under the Principal Comments section.

490.107 REPORTING ON PERFORMANCE TARGETS

(a)(3) AASHTO supports FHWA's desire to develop a standardized electronic reporting template. However, AASHTO strongly recommends that FHWA engage with the State DOTs in the development of this template to ensure it is not an undue burden for the State DOTs to report the data.

(b) AASHTO does not agree that the reporting timeframe should be shortened to one year. AASHTO believes that a stronger case can be made that the reporting time should be longer, such as 4 years. The State Biennial Performance Report would allow for adjustment of targets in case of major funding changes or events. Most projects take more than two years from designing to contract to measuring and reporting the new condition, so making the report annually would share minimal new data and not offer beneficial data (especially in comparison to cost.) Additionally, major assets normally deteriorate predictably and slowly. For example, a bridge built with a design life of 75 years does not normally show a great amount of change from one inspection cycle to the next (every two years). In fact, the four year performance period is likely too short an interval to implement programmatic changes that will be funded, designed, constructed, measured, and reported within the performance period.

(b)(1) In addition, the noted timeframe for submittal of the first baseline report (October 1, 2016) is truly unrealistic. For cold weather states, data is generally collected in the fall of the year (the most stable time for pavements in the "snow zone"). So, to meet an October 1 deadline the data would have to have been collected the prior year. Yet this rule will not be final for collection in the fall of 2015. Therefore, this first report would have to be due at least one year later, October 1, 2017.

(b)(1)(ii)(C) and (b)(2)(ii)(C) AASHTO strongly recommends that the final rule should not include duplicative and excessive reporting requirements. More specifically, this section requires "*A discussion to the maximum extent practicable, on how the targets...of this section support expectations documentation in longer range plans, such as the State asset management plan...and the long-range statewide transportation plan...*" First, the requirement of a discussion "to the maximum extent practicable" opens the door to an unconstrained demand on the State DOT for information and discussion. Second, documents such as the long-range statewide transportation plan already are required to document the measures, targets, and financial plans. The STIP has the requirement to spell out how the projects support program goals.

490.109 ASSESSING SIGNIFICANT PROGRESS TOWARD ACHIEVING THE PERFORMANCE TARGETS FOR THE NATIONAL HIGHWAY PERFORMANCE PROGRAM

(c) AASHTO recommends that FHWA include a provision that FHWA must inform the State DOTs of their achievement of making significant progress by December 31 of the calendar year in which the assessment was made. The rule should provide that if the State DOT does not receive that information by the deadline, that it is conclusively deemed to have made significant progress in that time period.

(d) AASHTO recommends that FHWA have a single reporting date for all data and all subparts of this rule of June 15. Having multiple reporting dates for the same type of data (e.g., pavements or bridges) creates an undue burden on and confusion for State DOTs. Please see the *Develop a Realistic Implementation Timeframe* discussion under the Principal Comments section, above.

(e) AASHTO supports FHWA's approach that the significant progress determination is based only upon the three measures described in 490.105(c)(1) through 490.105(c)(3). AASHTO recommends that FHWA change the word "and" to the word "through" in the first sentence of (e)(1).

(f) AASHTO supports FHWA's approach that performance achievement is based upon two FHWA determinations. This provides State DOTs some flexibility to try to improve their performance without being assessed the penalty.

490.111 INCORPORATION BY REFERENCE

(b) AASHTO recommends that the wording of this provision be modified so that any proposed changes to items (b)(1) or (b)(2) be subject to notice and comment by the State DOTs and other affected parties. Substantial material with potentially significant impact on the cost of State and MPO data collection and analysis is incorporated by reference in (b)(1) and (2). Mere notice without opportunity for comment is not sufficient for these items.

(c) AASHTO is concerned about the proposal to require use of the AASHTO standards. AASHTO standards are developed in a voluntary manner and are used by State DOTs in a voluntary manner. Requiring their use as part of a federal rulemaking was not their intended use and may have unintended consequences.

Further, if AASHTO standards are to be used, AASHTO would recommend that FHWA develop a mechanism, including close coordination with AASHTO, to ensure that the most recent version of AASHTO standards is used or not used as appropriate. Hypothetically, an AASHTO standard could be updated by AASHTO for its purposes but with the updated version potentially not having the same impact or effect as the prior version that FHWA incorporated by reference.

SUBPART C—NATIONAL PERFORMANCE MANAGEMENT MEASURES FOR THE ASSESSING PAVEMENT CONDITION

490.301 PURPOSE.

AASHTO has no comments on this section.

490.303 APPLICABILITY.

AASHTO agrees with defining mainline highways by excluding ramps, shoulders, turn lanes, crossovers, rest areas, and non-normally traveled pavement surfaces that are not part of the roadway normally traveled by through traffic. However, AASHTO would recommend that FHWA make consistent the bridges and pavement sections that are to be reported. Currently, Subpart D includes bridges carrying ramps connecting to the NHS, while Subpart C is only applicable to mainline highways on the Interstate System and the non-Interstate NHS.

490.305 DEFINITIONS.

CRACKING PERCENT

There is a discrepancy between this NPRM and the HPMS pertaining to the definition and measurement of Cracking Percent. Please see the discussion of HPMS and NBIS under the Principal Comments section, above.

490.307 NATIONAL PERFORMANCE MANAGEMENT MEASURES FOR ASSESSING PAVEMENT CONDITION.

(a) AASHTO recommends that FHWA make consistent the three category definitions (Good/Fair/Poor) used with Subpart C (pavements) and Subpart D (bridges). Please see the *Use Terms that Enable States and U.S. DOT to Tell a Better and More Accurate Story About Infrastructure* discussion under the Principal Comments section, above.

(b) AASHTO recommends including a description of “fair” in 490.307(a) to make it consistent with FHWA’s desire to “...compute an overall performance of Good, Fair, or Poor, for each section of pavement...”

490.309 DATA REQUIREMENTS.

(a) In the second sentence of §490.309(a), the word “include” should be changed to “are.” The use of “include” suggests that there could be additional pavement metrics or requirements not discussed in this section or elsewhere in the NPRM. Please see the *Make Clear the HPMS is Not a Regulatory Document* discussion under the Principal Comments section.

(b) Please see the *Cost to Implement the Bridge and Pavement Requirements* discussion under the Principal Comments section for AASHTO’s position on the 0.1 mile segment length.

(b)(1)(i)(B) AASHTO recommends that, by default, each State DOT will define which travel lane will be used to collect data rather than the default to the right-most travel lane. In rural and mountainous areas, the right-most travel lane is often one of three lanes with the other two designated for primary non-commercial through traffic lanes. These truck lanes are often rehabilitated with more routine single-lane surface treatments to address their rapid deterioration from heavily loaded tires with chains. The remaining lanes deteriorate at a much lower rate and are treated at more conventional pavement

rehabilitation and pavement management treatment cycles. In urban areas, the right-most lane is often congested with vehicles struggling to get onto and off of the highway and buses starting/stopping.

(b)(1)(i)(E) AASHTO believes that the annual collection and reporting of Interstate pavement data is not a cost effective approach. AASHTO recommends that FHWA make consistent the data collection of Interstate and non-Interstate pavement on a biennial frequency.

(b)(1)(ii) AASHTO strongly recommends that FHWA allow and encourage sampling of pavement condition metrics. The cost to collect, analyze, and manage the required data is significant and encouraging sampling would be a more cost effective approach with the same results. Please see the *Cost to Implement the Bridge and Pavement Requirements* discussion under the Principal Comments section.

(b)(2) AASHTO appreciates that FHWA recognizes that some State DOTs may not be able to collect the data required in this section prior to the first performance period. AASHTO believes this is a good example of why a more realistic implementation schedule needs to be developed. Please see AASHTO's comments on *Develop a Realistic Implementation Timeframe* under the Principal Comments section.

(b)(3)(iii)(A) AASHTO recommends that FHWA review the R55-10 specification as it states that the use of the standard is not intended for HPMS purposes but for network level pavement management. Please see AASHTO's comments on *Revise the Proposed Performance Measures and Thresholds for Bridges and Pavements to Use More Appropriate Approaches and Thresholds* under the Principal Comments section.

(b)(3)(iv) and (b)(3)(v) Please see AASHTO's comments on *Revise the Proposed Performance Measures and Thresholds for Bridges and Pavements to Use More Appropriate Approaches and Thresholds* under the Principal Comments section for a more detailed discussion on AASHTO's position concerning the cracking, rutting and faulting performance metrics.

(c)(2) AASHTO recommends removing this section. Sampling is an acceptable and often encouraged method for reducing the overall cost of data collection while ensuring that a statistically significant number of data points is collected. Please see the *Cost to Implement the Bridge and Pavement Requirements* discussion under the Principal Comments section.

490.311 CALCULATION OF PAVEMENT METRICS.

(b)(1) through (b)(4) Please see AASHTO's comments on *Revise the Proposed Performance Measures and Thresholds for Bridges and Pavements to Use More Appropriate Approaches and Thresholds* under the Principal Comments section.

(c)(1) Please see the *Cost to Implement the Bridge and Pavement Requirements* discussion under the Principal Comments section for AASHTO's position on the 0.1 mile segment length.

(c)(4) and (c)(5) Make consistent the reporting dates for both Interstate and non-Interstate pavement data. AASHTO recommends that all pavement data be reported to the HPMS by June 15 of each year for the data collected during the previous calendar year. Please see AASHTO's comments on *Developing a Realistic Implementation Timeframe* under the Principal Comments section.

490.313 CALCULATION OF PERFORMANCE MANAGEMENT MEASURES.

(b)(1)(i) and (b)(1)(ii) AASHTO does not agree with the approach used in measuring IRI in urban areas (which the proposed rule describes as those with over 1,000,000 population) versus rural areas (areas of 1,000,000 or lower population).

First, it is the opinion of AASHTO that using IRI in urban areas needs more research due to the difficulties in collecting the data and interpreting the data. Urban pavements tend to be rougher than rural pavements due to surface drainage, intersections, curb and gutter, utility accommodations, and so forth. Furthermore, in stop-and-go traffic in urban areas, operational limitations in current data collection equipment introduce large errors that are misinterpreted as higher roughness. Even when a high IRI is reported, ride quality may be entirely acceptable to the public since traffic speeds are lower and movement is often controlled by signing or signals.

In recognition of the difficulty of measuring urban pavement roughness, FHWA is conducting research to improve methods for measuring longitudinal profile in urban environments. Likewise, the State DOTs, through NCHRP Project 10-93, is exploring methods for calculating more meaningful urban roughness indices. Until this research is completed and applied, reporting IRI for urban areas will be unreliable and often misleading. AASHTO would recommend that FHWA exclude urban area IRI measures for non-Interstate NHS routes until such time as the issues associated with data collection and interpretation are addressed.

Second, the concern with measurement of low speed urban area roads is not limited to those in areas with a population of one million or more. Those difficulties extend to all slow speed areas, including all “urban areas,” defined in title 23 as urbanized areas of 5,000 or greater population (See 23 USC 101(a)). So, the exclusion of collection of urban area data should be much more extensive than in areas over one million in population, ideally, down to urban areas as defined in Sec 23 USC 101(a).

Finally, if contrary to AASHTO’s recommendation, the final rule is to require IRI collection in urban areas, the higher IRI threshold of 220 should be applied within all “urban areas” as defined in Sec 23 USC 101(a), not only in urbanized areas of one million or more population. Otherwise, states could be subjected, unreasonably, to having a significant portion of NHS road mileage considered “poor” due to higher (though not reliable) IRI measurements in urban areas.

(b)(2) and (b)(3)(i) Please see AASHTO’s comments on *Revise the Proposed Performance Measures and Thresholds for Bridges and Pavements to Use More Appropriate Approaches and Thresholds* under the Principal Comments section for a more detailed discussion on AASHTO’s position that the proposed cracking, rutting and faulting performance metrics should be deleted and not included in the final rule in this docket.

(b)(4) FHWA proposes to address incomplete mainline mileage or incomplete data by deeming the applicable section of pavement to be in poor condition. AASHTO disagrees with this approach and believes that this is an incorrect assumption to make and strongly recommends that FHWA reconsider how missing or incomplete data is addressed. Currently, the most common reason for missing data is that the pavement is under construction or maintenance at the time the data is collected. In fact, it would not be uncommon for upwards of 5% of the network to be undergoing some type of maintenance or rehabilitation activity during the testing season. As such, it is unreasonable to categorize these pavement

sections as “poor” simply because they could not be tested. The reality is that the pavement section will likely be in much better condition than poor once data can be collected. AASHTO recommends that FHWA develop an approach to report the percent of poor pavement based on the data available, but have a minimum requirement for the percent of network reported (e.g., 95%) This would provide a more accurate picture of the actual percent of poor pavement. An alternative would be to default to the previous year’s rating unless this incomplete data exists for 2 consecutive data collection cycles.

(e) AASHTO appreciates that States would be given until after the data collection cycle ending December 31, 2019 before being subject to certain measuring, reporting and targets setting for cracking, rutting and faulting on non-Interstate pavement. However, AASHTO believes that the cracking, rutting and faulting data collection and measuring methodologies are still too immature to warrant collection of cracking, rutting and faulting on Interstate pavements and the use of such measures for regulatory purposes. Thus, the provision should be deleted as a conforming change to a general deletion from the rule of provisions related to cracking, rutting and faulting. However, if that general deletion is not made, a similar timeframe should be provided for Interstate pavements. Please view the *Revise the Proposed Performance Measures and Thresholds for Bridges and Pavements to Use More Appropriate Approaches and Thresholds* discussion in the Principal Comments section.

If FHWA does finalize the rule as written using the cracking, rutting and faulting performance measures, then AASHTO recommends using the HPMS sample data to set the baseline condition, mid-term condition/performance and mid-term target for the State targets for 490.105(2) (non-Interstate NHS). Using only IRI to report baseline condition, set a 2 year target, and report the mid-term condition will be “throw-away” work, since the state will be required to switch methodologies to 490.313(c) and 490.313(d) and establish new targets that include cracking, rutting, and faulting for the 4-year report.

(f)(1) The NPRM states that bridges shall be excluded prior to computing all pavement condition measures. Since under the proposed rule pavement condition data are aggregated in the HPMS at 0.1 mile reporting intervals, it needs to be clarified as to how the data is altered when dealing with bridge sections that are a small piece (e.g. 20 feet) of the tenth mile interval or those that span portions of 2 adjacent tenth mile intervals. AASHTO has recommended flexibility for states to use segments other than 0.1 mile. If that change is made, a similar adjustment would still have to be made to exclude bridge length.

(f)(2) AASHTO recommends that the denominator be the total system miles tested. Using “lane-miles” in the performance measure will be an issue. What the State DOTs must collect is a sample of all “lane-mile.” At best, State DOTs would collect data on “surveyed” lanes. AASHTO believes that taking the condition on the outside travel lane as described in the method, then saying that the results are representative of all lanes is a big leap that could lead to managing repairs to meet criteria imposed by the Federal measurement rule instead of repairs that otherwise would receive priority.

490.315 ESTABLISHMENT OF MINIMUM LEVEL FOR CONDITION OF PAVEMENTS.

AASHTO believes that the 5.0 percent minimum condition level for Interstate Pavements in poor condition is not a realistic value to expect all States to meet. The 5.0 percent does not take into account differing geographical attributes (freeze/thaw), system age, or available funding of the State DOT. In addition, it does not account for future conditions which are generally trending in worse condition due to funding limitations. All State DOTs are facing different environmental conditions, political

environments, and economic conditions. An arbitrary value of 5.0 percent does not account for these realities.

AASHTO proposes two approaches to addressing the minimum condition threshold. The first option would be that FHWA set the minimum threshold for Interstate Pavements after consideration of the pavement targets that all State DOTs will be required have to prepare. The second option would have FHWA set the minimum condition level for Interstate Pavements in poor condition at a level higher than 5.0 percent and further provide that a State DOT could adjust that percentage to up to 10% based on its targets.

490.317 PENALTIES FOR NOT MAINTAINING MINIMUM INTERSTATE SYSTEM PAVEMENT CONDITION.

(a) AASHTO recommends that the rule be revised so that FHWA is required to compute the percentage of highways in poor condition using the current requirements of the HPMS field manual as it relates to the reporting of IRI data and bridge sections. Please see the comments on the *Making Clear the HPMS is Not a Regulatory Document* in the Principal Comments section.

(c) AASHTO believes that under this provision the first assessment of whether a State DOT meets the minimum Interstate pavement condition cannot occur until after a State DOT has submitted a full year of Interstate pavement condition data, not simply the first full year after the effective date of the rule. Thus, the provision reads in relevant part that the FHWA makes its compliance determination “after the first full year of data collection for the Interstate System following the effective date of this rule.” It does not say the first “full year” after the effective date, but the first “full year of data collection after the effective date.” The discussion of the provision in the preamble of the NPRM is to the same effect. See NPRM at 371, where FHWA wrote: “Considering that this rule is scheduled to be effective in 2015, the first determination would be made in 2017 (after a full year of data collection in 2016) and then annually thereafter.”

While, as discussed elsewhere in these comments, AASHTO does not agree with that particular schedule of effectiveness, and asks that it be extended, the discussion is clear that the first assessment of whether a State DOT meets the minimum Interstate Pavement condition cannot occur until after a State DOT has submitted a full year of Interstate pavement condition data, not simply the first full year after the effective date of the rule. That principle should continue to apply if the effective date of the rule is pushed back, as AASHTO recommends. AASHTO asks that this point be made clearly in the final rule and rulemaking notice.

Also, as a technical matter the reference in 490.317(c) to 490.315(a) should be changed to 490.315, as there is no 490.315(a).

490.319 OTHER REQUIREMENTS.

(a) and (b) AASHTO recommends that FHWA have a single reporting date for all data and all subparts of this rule of June 15. Having multiple reporting dates for the same type of data (e.g., pavements or bridges) creates an undue burden and confusion on State DOTs. Please see the *Develop a Realistic Implementation Timeframe* discussion under the Principal Comments section.

(c) This subsection requires each State DOT to have a data quality management program approved by FHWA. However, other than a listing of some areas that must be addressed within that program, the

nature of the data quality plan is not described, other than that it must be approved by FHWA. No other standards or criteria for achieving such approval are set forth.

Given the lack of specificity in the proposed rule on this matter, AASHTO recommends that the rule be revised to provide that the State certify that it has a data quality management program or taken care to ensure data quality and be required to submit its program or practices to FHWA for information, not for approval or disapproval.

Within such a framework FHWA could issue guidance on best practices, such as those that define procedures for ensuring quality control of data collection nationally. This guidance should be provided before the baseline data is collected to ensure consistency. Data quality can vary greatly based on the capability of collection equipment, manual collection methods, or applied conversion factors.

If FHWA insists on a data quality management program in which it will approve or disapprove state programs, AASHTO submits that the inadequacy of the vague approach set forth in the proposed rule requires the issuance of a separate, later rulemaking that includes some particulars, so states and other interested parties could have the opportunity to comment on a specific proposal.

In addition, AASHTO recommends that FHWA provide guidance to State DOTs on the acquisition and use of data collection equipment that would be used as part of a comprehensive Data Quality Management Program. State DOTs will improve their data collection technology on a regular basis as better and less expensive data collection technologies become available. However, this NPRM provides no discussion on protocols or procedures for comparing data from old technology to new technology (for example sensors, cameras, etc.).

(c)(2) The timing of the proposed requirement for State DOTs to submit a Data Quality Management Program to FHWA for approval is not realistic or logical. For example, if this rule is finalized as early as October 1, 2015, State DOTs will need to start collecting data according to the new requirements in 2016. In some states, data collection begins in April, but in cold weather states data collection tends to take place in the fall. The way the language is currently written, FHWA may not accept data collected without an approved Data Quality and Management Program, thus undercutting, if not disabling, initial data collection pursuant to the new rule. AASHTO recommends a better phase-in of data quality requirements and notes that the phase-in problem would be mooted if FHWA follows the above recommendation that data quality be addressed by requiring a state certification submitted to FHWA for information rather than approval.

SUBPART D—NATIONAL PERFORMANCE MANAGEMENT MEASURES FOR ASSESSING BRIDGE CONDITION

490.401 PURPOSE.

AASHTO has no comments on this section.

490.403 APPLICABILITY.

AASHTO generally supports the language that limits Subpart D to only the NHS bridges including bridges on ramps connecting to the NHS that are carrying the NHS. AASHTO does have three concerns. First, in general, the State DOT controls the maintenance and operation of the NHS bridges. However, it is important to note that State DOTs typically include many other bridges besides the bridges carrying the NHS in their overall bridge management program and funding decisions encompass all of these bridges and are not limited solely to bridges carrying the NHS. Second, AASHTO is concerned that the bridges required to be included in the overall performance management program may include bridges that are not under the control of the State DOT. In these cases, AASHTO recommends that these bridges not be included in the reporting, overall target setting or assessment process for the State DOTs. Third, AASHTO would recommend that FHWA make consistent the bridges and pavement sections that are to be reported. Currently, Subpart D includes bridges carrying ramps connecting to the NHS, while Subpart C is only applicable to mainline highways on the Interstate System and the non-Interstate NHS.

490.405 DEFINITIONS.

Structurally Deficient—AASHTO believes that the proposed definition of structurally deficient includes many judgmental and subjective terms and is not appropriate for the purpose of national-level reporting of bridge condition. The definition of structurally deficient is based upon a previous definition included in paragraph 9 of the 1992 FHWA Non-Regulatory Supplement pertaining to the Highway Bridge Program. The definition, by including a rating of 4, had the effect of increasing the number of bridges eligible for additional federal funding, to address needs for significant repair and rehabilitation. It had the effect of increasing State flexibility. However, in the new context of MAP-21, using that same definition would, unintentionally, have the effect of limiting a State DOT's flexibility in managing its overall bridge program.

Accordingly, AASHTO strongly recommends that the definition of structurally deficient be changed to the following:

“Structurally deficient as used in CFR 490.411 and 490.413 is a classification given to a bridge or culvert which is categorized as having an NBI rating of 3 or less for either the deck, superstructure, substructure, or culvert.”

490.407 NATIONAL PERFORMANCE MANAGEMENT MEASURES FOR ASSESSING BRIDGE CONDITION.

(a) AASHTO is generally supportive of developing three classifications for the purposes of assessing bridge condition. Please see the *Use Terms that Enable State DOTs and U.S. DOT to Tell a Better and More Accurate Story About Infrastructure* discussion under the Principal Comments section.

(c) AASHTO agrees that the national performance management measures for assessing bridge condition should be limited to the two measures identified by FHWA (percentage of NHS bridges classified as in Good and Poor condition) per the changes to the terms recommended by AASHTO indicated above.

490.409 CALCULATION OF NATIONAL PERFORMANCE MANAGEMENT MEASURES FOR ASSESSING BRIDGE CONDITION.

(b) AASHTO agrees that the assignment of a classification of Good, Fair, or Poor shall be based upon the bridge's condition ratings for NBI Items 58 (Deck), 59 (Superstructure), 60 (Substructure), and 62 (Culvert). AASHTO also agrees that the criteria used for classification should be the following:

- Good: NBI rating of 7, 8 or 9;
- Fair: NBI rating of 5 or 6; and
- Poor: NBI rating of 4, 3, 2, 1 or 0.

However, AASHTO wishes to emphasize that the use of the NBI rating of 4 as "poor" for this purpose must not be confused with whether a bridge is "structurally deficient." AASHTO does not agree with the proposed rule's treatment of a bridge rated as "4" as structurally deficient, even while accepting that a bridge rated as 4 could be considered as "poor" for target setting or other planning purposes.

(c) AASHTO generally agrees with the procedure FHWA proposes to calculate the percent of bridges in each of the categories identified in (b). However, the proposed rule calls for the bridge deck area to be calculated by multiplying the NBI bridge length by the NBI bridge width. This method of determining deck area assumes that every bridge is rectangular in shape. This assumption ignores ramp area, curved configurations, and other irregular deck shapes. AASHTO would recommend that the bridge area be used as is reported using the element level bridge data as is required by MAP-21.

490.411 ESTABLISHMENT OF MINIMUM LEVEL FOR CONDITION FOR BRIDGES.

(b) AASHTO believes that FHWA should make consistent the NBI Items used to categorize a bridge as being either Good, Fair, or Poor and those items used to classify a bridge as being structurally deficient. Making these definitions consistent would go a long way in communicating with the public and decision makers the needs of maintaining bridges versus developing a separate categorization of bridges for the sole purpose of meeting the requirements of MAP-21. In addition, this consistency would ensure better communication with the public where all bridges classified as structurally deficient would be a sub-set of those bridges categorized as being in Poor condition. As currently defined in the proposed rule, a bridge could be classified in Good condition but also be considered structurally deficient. This will create significant confusion.

AASHTO also believes that using the current definition of structurally deficient as one of the three NBI Items listed above (NBI Items 58, 59, or 60) as being 4 or less is not appropriate because the original intent of the structurally deficient definition was to make bridges eligible for additional federal funding if they were in need of significant repair and rehabilitation. The purpose of using the definition with regard to this NPRM is quite different in that it is being used to assess whether or not a State DOT meets the requirements of an arbitrary threshold (10%) established by Congress. In addition, there are significant penalties that would be inflicted upon the State DOTs if they did not meet this arbitrary threshold. And, this threshold is being assessed on certain sub-set of the total bridges that State DOTs are maintaining. Thus, it is AASHTO's position that the classification used by FHWA to determine whether a bridge or culvert is considered structurally deficient should be based upon an NBI rating of 3 or less for any of the four NBI Items used to classify a bridge or culvert as structurally deficient.

AASHTO recommends that the following:

“...a bridge will be classified as Structurally Deficient when one of its NBI Items, 58—Deck, 59—Superstructure, 60—Substructure, and 62—Culverts is 3 or less.”

490.413 PENALTIES FOR NOT MAINTAINING BRIDGE CONDITION.

(b) AASHTO believes that the October 1, 2016 date for determining the first assessment is too soon. If implemented, State DOTs will have no time to assess their current situation and then implement reasonable projects to attempt to affect their meeting the 10 percent threshold. Please see the *Develop a Realistic Implementation Timeframe* discussion under the Principal Comments section.

AASHTO recommends the following:

“The FHWA will make the first determination by October 1, 2021, and each fiscal year thereafter.”

AASHTO RESPONSE TO FHWA REQUESTS

IMPLEMENTATION OF MAP-21 PERFORMANCE REQUIREMENTS

1) What is an appropriate effective date?

AASHTO strongly recommends that FHWA implement these new rules with one common effective date. However, AASHTO would like for FHWA to finalize and publish the rules as they are ready such that State DOTs can begin to prepare to implement the requirements. Moreover, given the complexity of integrating these new requirements into an already complex process, the rules should include a provision to allow a state to ask for and receive an extension of time to comply with the requirements so long as the state is able to show that it has made progress towards compliance and is working to achieve compliance. AASHTO recommends an effective date for the rules of January 1, 2017. This does not mean that a rule could not have within it requirements that do not take effect until after the effective date of the rule. We are not saying that all requirements would be effective as of January 1, 2017. A more complete discussion is provided under the Principal Comments section, *Develop a Realistic Implementation Timeframe*.

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

AASHTO appreciates the nine principles that FHWA developed in considering this NPRM.

Regarding the pavement measures, AASHTO believes that only IRI is ready for implementation now while the cracking, rutting, and faulting measures still need time to be developed before it would be appropriate for them to be considered for inclusion in a rule. Please see discussion under the *Revise the Proposed Performance Measures and Thresholds for Bridges and Pavements to Use More Appropriate Approaches and Thresholds* in the Principal Comments section.

Regarding bridge measures, AASHTO believes that the use of NBI data is current best practice. However, use of element level bridge data will be best practice in the near future and acknowledgement needs to be made to this effect within the rule. Please see the discussion under *Revise the Proposed Performance Measures and Thresholds for Bridges and Pavements to Use More Appropriate Approaches and Thresholds* in the Principal Comments section.

FEDERAL TECHNICAL ASSISTANCE

3) The FHWA technical assistance will include activities such as conducting national research studies, developing analytical modeling tools, identifying and promoting best practices, preparing guidance materials, and developing data quality assurance tools. The FHWA encourages comments on how it can help maximize opportunities for successful implementation.

AASHTO encourages FHWA to provide as much technical assistance as possible in the implementation of performance management requirements. AASHTO strongly encourages FHWA to continue to work with AASHTO through the Standing Committee on Performance Management, Subcommittee on Bridges and Structures, and Joint Technical Committee on Pavements to provide this technical assistance as it applies to this rule.

ESTABLISHING ADDITIONAL, OPTIONAL TARGETS

4) Are there alternative approaches for State and MPO target coordination?

AASHTO does not have any alternative approaches for State DOT and MPO target coordination. The only comment that AASHTO would like to provide is that for the bridge and pavement measures, this will be a new endeavor and flexibility is needed as the State DOTs and MPOs work together to implement the rule.

5) The FHWA is seeking comments on this approach for establishing optional additional targets for urbanized areas and the non-urbanized area.

AASHTO supports the approach proposed by FHWA that State DOTs and MPOs may establish optional additional targets for urbanized areas. However, regarding urbanized areas, please review AASHTO comments recommending that urban IRI measurements be excluded from the rule and, failing that, recommending a change in the proposed threshold for “poor” IRI in many urban areas (with indirect impact on the setting of targets) under the *Revise the Proposed Performance Measures and Thresholds for Bridges and Pavements to Use More Appropriate Approaches and Thresholds* in the Principal Comments section and the Section-by-Section comments, Subpart C Section 490.313(b)(1)(i).

6) The FHWA would also like comments on any other flexibilities it could provide to or identify for State DOTs related to the voluntary establishment of additional targets. Some examples include:

- *Providing options for establishing different additional targets throughout the State, particularly for the States’ non-urbanized area; and*
- *Expanding the boundaries that can be used in establishing additional targets (e.g., metropolitan planning area boundaries, city limit boundaries, etc.).*

AASHTO believes that State DOTs will voluntarily establish additional targets for various geographical boundaries on an ad-hoc basis working with their MPOs and local agencies. No other flexibilities need to be provided except that, under the rule, the establishment of additional targets should be at the sole discretion of the State DOT and not encumbered by Federal reporting or other requirements.

PAVEMENT DATA REPORTING

7) FHWA requests comments on whether a 0.1 mile uniform section length is appropriate for both the Interstate System and non-Interstate NHS reporting of pavement condition.

AASHTO does not agree with the requirement to report pavement condition on strict 0.1 mile segments. Reporting the data in 0.1 mile segments is an undue burden on many State DOTs as they do not necessarily manage their pavements in such small increments. Rather, State DOTs use pavement management segments that are typically homogenous in nature based upon surface type segments or logical project lengths. AASHTO recommends that FHWA reconsider the 0.1 mile segment requirements and develop a process whereby the State DOTs can work with their Division Offices to define logical pavement segments for reporting.

PROPOSED PAVEMENT CONDITION RATING THRESHOLDS

8) Are the proposed criteria to determine Good, Fair, and Poor ratings appropriate? (TABLE 5)

Please see discussion under the *Revise the Proposed Performance Measures and Thresholds for Bridges and Pavements to Use More Appropriate Approaches and Thresholds* in the Principal Comments section.

9) *The FHWA encourages comments on the appropriateness of these proposed criteria and any alternative levels that would be appropriate for network level condition assessment. (TABLE 5)*

Please see discussion under the *Revise the Proposed Performance Measures and Thresholds for Bridges and Pavements to Use More Appropriate Approaches and Thresholds* in the Principal Comments section.

10) *Are the IRI threshold values appropriate?*

No. There are concerns about the validity of IRI data collected in urban areas with low speed roads and AASHTO recommends excluding urban IRI collection and measurement from the final rule, perhaps to be revisited in a future rulemaking. To some extent FHWA has acknowledged the concern with urban IRI by proposing a higher threshold IRI measurement (of 220) for roads in urbanized areas with a population of one million before such roads could be considered in “poor” condition. However, the concern with measurement of low speed urban area roads is not limited to those in areas with a population of one million or more. Those difficulties extend to all slow speed areas, including all “urban areas,” defined in title 23 as urbanized areas of 5,000 or greater population. See 23 USC 101(a). That definition (5,000 or greater population), should be used in defining urban areas for the purposes of IRI measurement. So, if notwithstanding AASHTO’s recommendation, the final rule is to require IRI collection in urban areas (as defined in 23 USC 101(a)), the higher (220) IRI threshold should be applied within all “urban areas” as defined in title 23, not only in urbanized areas of one million or more population. Otherwise, states could be subjected, unreasonably, to having a significant portion of NHS road mileage considered “poor” due to higher (though not reliable) IRI measurements in urban areas.

Please see discussion under the *Revise the Proposed Performance Measures and Thresholds for Bridges and Pavements to Use More Appropriate Approaches and Thresholds* in the Principal Comments section.

MISSING DATA FOR PAVEMENT CONDITION (PAGE 148)

11) *The FHWA encourages comments on alternative methods for addressing missing or invalid data that would provide for an accurate assessment of network level conditions.*

AASHTO disagrees with this approach, believes that this is an incorrect assumption to make, and strongly recommends that FHWA change how missing or incomplete data is addressed.

Currently, the most common reason for missing data is that the pavement is under construction or maintenance at the time the data is collected. In fact, it would not be uncommon for upwards of 5% of the network to be undergoing some type of maintenance or rehabilitation activity during the testing season. As such, it is unreasonable to categorize these pavement sections as “poor” simply because they could not be tested. The reality is that the pavement section will likely be in much better condition than poor once data can be collected. AASHTO recommends that FHWA develop an approach to report the percent of poor pavement based on the data

available, but have a minimum requirement for the percent of network reported (e.g., 95%) This would provide a more accurate picture of the actual percent of poor pavement. An alternative would be to default to the previous year's rating unless this incomplete data exists for 2 consecutive data collection cycles.

GEOGRAPHIC VARIATIONS IN PAVEMENT CONDITION (PAGE 157)

12) The FHWA evaluated lane-mile distribution of the Interstate System pavement conditions among different traffic volumes, climatic conditions, and terrain types. Consequently, the data suggested that there is no evidence to conclude that there are significant differences in percent lane-miles of the Interstate System in Poor pavement condition among the Interstate System pavement sections in these various areas. FHWA seeks comments on the need to establish different thresholds for geographic regions.

AASHTO believes that different thresholds do need to be established for urban versus rural areas but AASHTO would define urban areas as including far more areas than the proposed 1,000,000 population threshold proposed in the NPRM. As discussed under the Section-by-Section comments, Subpart c, 490.313(b)(1)(i), the concern with measurement of low speed urban area roads is not limited to those in areas with a population of one million or more. Those difficulties extend to all slow speed areas, including all "urban areas," defined in title 23 as urbanized areas of 5,000 or greater population. See 23 USC 101(a).

AASHTO also believes that climatic differences do affect pavement condition and the states with significant freeze/thaw cycles will have a more difficult time managing pavements and meeting the minimum threshold requirement (see discussion below, Question 13).

MINIMUM CONDITION REQUIREMENTS FOR PAVEMENT AND BRIDGES

13) Any suggestions for alternative approaches to implementing the minimum condition requirements?

PAVEMENTS

Under the Section-by-Section comments, Subpart C, 490.315, AASHTO believes that the 5.0 percent minimum condition level for Interstate Pavements in poor condition is not a realistic value to expect all States to meet. The 5.0 percent does not take into account differing geographical attributes (freeze/thaw), system age, or funding available to the State DOT. In addition, it does not account for future conditions which are generally trending in worse condition due to funding limitations. All State DOTs are facing different environmental conditions, financial environments, and economic conditions. An arbitrary value of 5.0 percent does not account for these realities.

AASHTO proposes two approaches to addressing the minimum condition threshold. The first option would be that FHWA set the minimum threshold for Interstate Pavements after consideration of the pavement targets that all State DOTs will be required have to prepare. The second option would have FHWA set the minimum condition level for Interstate Pavements in poor condition at a level higher than 5.0 percent and further provide that a State DOT could adjust that percentage to up to 10% based on its targets.

BRIDGES

AASHTO is strongly opposed to using the term structurally deficient and the 10 percent minimum threshold of structurally deficient bridges. While MAP-21 does require U.S. DOT to set minimum condition levels for “structurally deficient” bridges, it is AASHTO’s strong recommendation that FHWA work to use a new and different term other than “structurally deficient.” As currently proposed, State DOTs could have bridges that are deemed to be in good condition but are also structurally deficient. Please see Section-by-Section comments, Subpart D, Section 490.411.

14) Is the proposed schedule to implement the minimum condition requirements workable?

No. AASHTO believes that additional time is needed to implement the minimum condition levels. Please see Section-by-Section comments, Subpart C, Section 490.317(c)(2) for pavements and Subpart D, Section 490.413 for bridges.

PROPOSED CHANGES TO TEXT

Section	Changes Recommended by AASHTO
490.105(e)(2)	<i>Coordination.</i> 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 facilitate consistency to ensure consistency, to the maximum extent practicable.
490.105(f)(2)	<i>Coordination.</i> 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 facilitate consistency to ensure consistency, to the maximum extent practicable.
490.109(e)(1)	The FHWA will biennially assess whether the State DOT has achieved or made significant progress towards each target established by the State DOT for the NHPP measures described in § 490.105(c)(1) and through (3). 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).
490.109(e)(5)(i)	... (D) Lack of federal funding through a long-term surface transportation program; (E) Cost inflation beyond assumed levels; and/or (F) Another cause reported by the State not covered under the previous circumstances.
490.309(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). The four condition metrics include: IRI, rutting, faulting, and Cracking_Percent. The three data elements are include : Through Lanes, Surface Type, and Structure Type.
490.309(c)(2)	Estimating data elements from samples of the full extent of the mainline highway is not permitted, except as provided in paragraph (b)(2)(ii)(A) of this section.
490.319(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 June April 15 each year:
490.405	<i>Structurally deficient</i> as used in §§ 490.411 and 490.413 is a classification given to a bridge which is categorized as having an NBI rating of 3 or less for either the deck, superstructure, or substructure, or culvert has significant load carrying elements 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.
490.411(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 3 or less, or when one of its NBI Items, 67 – Structural Evaluation or 71 – Waterway Adequacy, is 2 or less.

Section	Changes Recommended by AASHTO
490.413(b)	The FHWA will make the first determination by October 1, 2021 ¹⁶ , and each fiscal year thereafter.