

## Memorandum

To: CHAIR AND COMMISSIONERS  
CALIFORNIA TRANSPORTATION COMMISSION

CTC Meeting: October 21-22, 2015

Reference No.: 4.9  
Action Item

From: NORMA ORTEGA  
Chief Financial Officer

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Subject: **TRANSPORTATION ASSET MANAGEMENT PLAN PERFORMANCE MEASURES AND TARGETS**

### **RECOMMENDATION**

The California Department of Transportation (Department) recommends that the California Transportation Commission (Commission) approve the continued use of the existing performance measures and targets for pavements and bridges, until such time that the Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21) performance measures adopted at the March 2015 Commission meeting, are finalized through the federal rule making process.

The Department further recommends that the Commission adopt the Department's recommendation to develop performance targets based on a fiscally constrained budget over a four year time horizon and updated every other even year in conjunction with the development of the State Highway Operation and Protection Program (SHOPP) document.

### **DISCUSSION OF RECOMMENDATION**

MAP-21 established federal regulation governing asset management requirements for all National Highway System (NHS) roads and bridges in the United States. The regulations define national performance measures for pavement and bridge conditions. The Commission adopted the MAP-21 good, fair and poor performance measures at its March 2015 meeting.

The specific technical criteria proposed by the federal government for determining good, fair and poor pavements and bridges was anticipated to be approved by now, however, the Federal Highway Administration (FHWA) received a significant number of comments from the States, including California, that has delayed the anticipated date for publication of the final rule. The exact date for the final rule is not known, but is expected in 2016. In the absence of a final technical definition of how to calculate the MAP-21 performance measures for pavement and bridges, the Department is unable to apply these measures to our inventory to make a determination of acceptable performance targets.

The Department therefore recommends that the Commission permit the Department to continue to manage the SHOPP utilizing the existing performance measures for pavement and bridges until such time that the MAP-21 measures are finalized.

The California Government Code, as modified by Senate Bill (SB) 486, is silent on the time duration and fiscal constraint that should be used to develop all asset management performance targets. The MAP-21 language requires four-year performance targets updated every other year. The recommendation, by the Department, will establish fiscal basis and time horizon that will allow the Department to establish and update performance targets in conjunction with future SHOPP documents and simultaneously satisfy the MAP-21 target setting requirements.

### **ASSET MANAGEMENT BACKGROUND**

Asset management is a strategic and systematic process of operating, maintaining, and improving physical assets. Its focus is on engineering and economic analysis to identify a structured sequence of maintenance, preservation, rehabilitation, and replacement actions that will achieve and sustain a desired state of good repair over the lifecycle of the assets at minimum practicable cost.

As prescribed by SB 486, the Department is required to develop an asset management plan for the State Highway System with local projects coordinated, but not included, into the plan. The Transportation Asset Management Plan (TAMP) is required to be fully implemented by July 1, 2020; with Phase 1 beginning in July 2016. The Commission has specific authority to approve the proposed performance measures and targets related to the SHOPP.

In March 2015, the Commission adopted the following four asset classes and performance measures:

<b>Asset Class</b>	<b>Measurement Units</b>	<b>Performance Measure</b>
<b>Pavements</b>	Pavement Area	Good, Fair, Poor (MAP-21)
<b>Bridges</b>	Deck Area	Good, Fair, Poor (MAP-21)
<b>Culverts</b>	Culvert Length	Good, Fair, Poor
<b>ITS Elements</b>	% Operational	Good (Operational) or Poor (Non Op)

The performance measures for pavement and bridges are defined in MAP-21 with details of the measure subject to the federal rule making process. A significant number of comments and clarifying questions were received by the FHWA causing the final rule to be delayed beyond what the Department had anticipated in March of 2015.

In light of the delay in publishing the final rule defining the technical specifics of the performance measures, the Department is proposing the following change to our previous schedule:

<b>TAMP Milestone</b>	<b>Initial Date</b>	<b>Current Date</b>
<b>Identification of the assets to be included in the TAMP</b>	March 2015	Complete
<b>Recommended performance measures</b>	March 2015	Complete
<b>Establishment of baseline conditions</b>	October 2015	Pending Final Rule
<b>Performance target setting</b>	October 2015	Pending Final Rule

Until such time that the MAP-21 final rule is published, the Department is recommending the Commission allow the Department to use the existing performance measures for these four asset classes as defined below:

<b>Asset Class</b>	<b>Measure</b>	<b>Baseline</b>	<b>Unconstrained Goal</b>
<b>Pavement</b>	Distressed Pavement	84% Good	90% Good
<b>Bridges</b>	Distressed Bridges	93% Good	96% Good
<b>Culverts</b>	Good, Fair, Poor	14% Poor	≤10% Poor
<b>ITS Elements</b>	Good (Operational) or Poor (non-Op)	68% Good	90% Good

# Asset Management Update

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October 2015

# California Government Code Requirements (SB486) (GC - 14526)

- **Caltrans**
  - Prepare a “robust asset management plan”
  - The plan shall assess the health and condition of the State Highway System
  - The plan shall guide future SHOPP investments
  - Plan must be completed by 2020
- **Commission**
  - Commission adopts the asset management performance measures and targets
  - Commission approves the asset management plan

# Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21) Requirements

- **MAP-21 Defines the following:**
  - National goals and performance measures (not finalized)
  - Minimum management system requirements
  - Performance reporting requirements
  - Requires a “risk based” asset management plan
  - Defines the minimum contents of the plan
  - Defines penalties for not having a plan
  - Establishes minimum condition for bridges
  - Penalties for not meeting certain condition levels

# Prior Commission Action

- In March of 2015, the Commission adopted the following asset classes and performance measures:

Asset Class	Units	Performance Measures
Pavement	Pavement Area	Good, Fair, Poor (MAP-21 Definition)
Bridges	Deck Area	Good, Fair, Poor (MAP-21 Definition)
Culverts	Length	Good, Fair, Poor
ITS Elements	Each	Good (Operational) or Poor (Non-operational)

# Recommendation #1

- The Federal Rule Making process has not completed defining the technical requirements for the national pavement and bridge performance measures.
- The Department recommends that the Commission permit the use of the existing performance measures until the MAP-21 measures are finalized.

Asset Class	Measure	Baseline Condition	Unconstrained Goals
Pavement	Distressed Pavement	84%(Good)	10% Good
Bridges	Distressed Bridges	93% (Good)	96% Good
Culverts	Good, Fair, Poor	14% (Poor)	10% Poor
ITS Elements	Good (Operational) or Poor(Non-Op)	68% (Good)	90% Good

# Recommendation #2

- The CA. Government Code is silent on the fiscal constraint and time horizon to be used for the development of asset management performance targets.
- The Department recommends that the Commission adopt fiscal constraint and a 4 year time horizon for targets with updates every even year to be consistent with MAP-21 and to correspond with the delivery of the SHOPP.