

Chapter 4

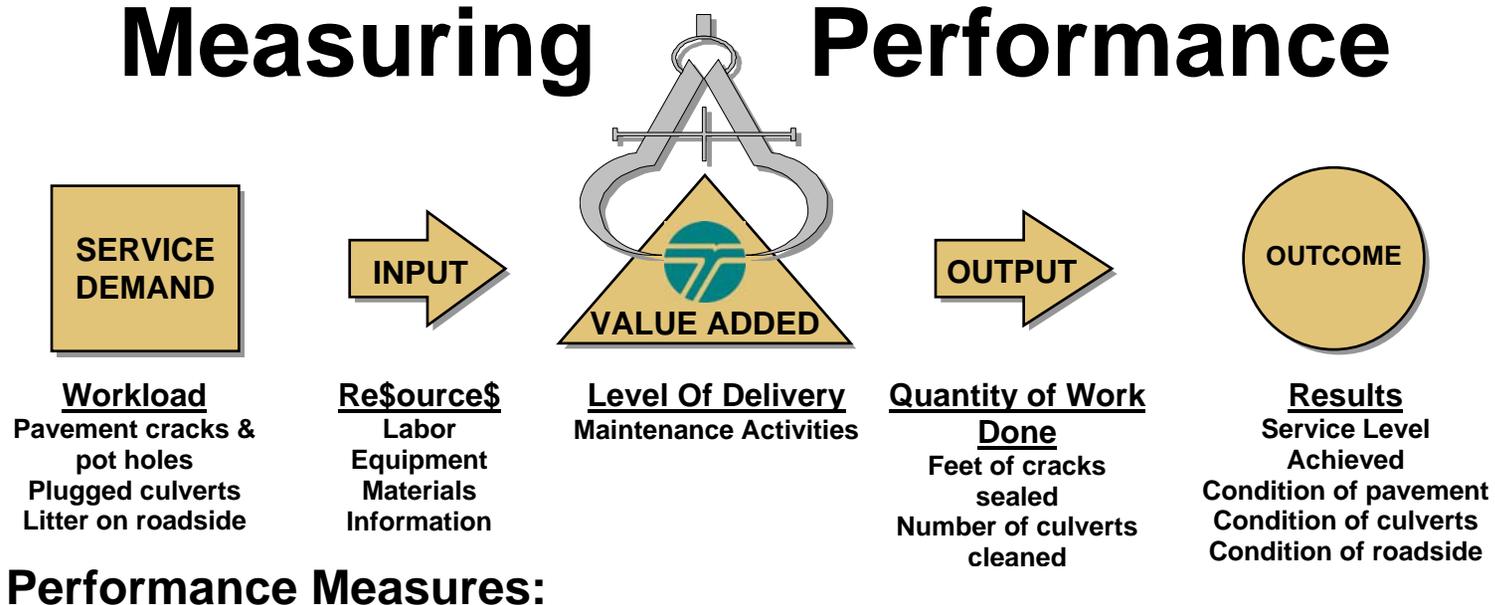
Performance Measures

The Maintenance Accountability Process utilizes outcome based performance measures with a rating scale of A (best) to F (worst) for reporting the level of service provided. Outcome based refers to the results of tasks accomplished by Maintenance personnel.

A performance measure is made up of a condition indicator, (deficiency or condition to be measured), outcome measure, (unit of measure), and thresholds for the five service levels for each MAP activity. A threshold is the range of allowable deficiencies or conditions for each service level.

The following pages define each of the performance measures. Included with each performance measure is information on timing (when the information is gathered and reported), what level the reporting is at (region, area, section), plus clarifying comments and the source of the data.

Measuring Performance



MAP Measures Outcomes

Outcomes - Measure the result (outcome)

- Examples:
- Service level rating
 - Sq. ft. of deficient pavement per lane
 - Per cent of culverts plugged
 - Amount of litter per system mile of highway

Outputs - Measure the quantity of work done.

- Examples:
- System miles maintained
 - Feet of crack sealed
 - Number of culverts cleaned
 - Cubic Yards of litter picked up

Group 1 - Roadway Maintenance and Operations

Activity Number:	1A1	Priority Rank	12	
Activity Name:	Pavement Patching, Repair & Crack Sealing*			
Survey Period:	Summer	Detail Level:	Statewide	
Indicator:	Pavement deficiencies.			
Outcome Measure:	% of pavement in fair or better condition, as reported by WSPMS.			
Outcome Unit:				
Outcome Thresholds	Service Level			
	A	B	C	D
Comments:	Since 2006, data collected for this performance measure was from WSPMS, using part of the data collected by the system. Effective 2011, WSDOT is transitioning to an integrated approach using WSPMS condition rating, which takes into account all maintenance and preservation work completed and/or needed.			
Data Source	WSPMS			

Activity Number:	1A3	Priority Rank	28	
Activity Name:	Shoulder Maintenance			
Survey Period:	Summer	Detail Level:	Area/Section	
Indicator:	Paved shoulder with deficiencies.			
Outcome Measure:	Percent of paved shoulder area with deficiencies.			
Outcome Unit:	% SF			
Outcome Thresholds	Service Level			
	A	B	C	D
	0 - 2%	2.1% - 4%	4.1% - 8%	8.1% - 15%
Comments:	Rolls up shoulder potholes, alligator cracking, longitudinal and transverse cracking, humps and sags, edge ravelling, and edge drop-off.			
Data Source	Field Surveys			

Group 1 - Roadway Maintenance and Operations

Activity Number:	1A4	Priority Rank	19	
Activity Name:	Sweeping and Cleaning			
Survey Period:	Summer	Detail Level:	Area/Section	
Indicator:	Sand, rocks, and debris on paved shoulder.			
Outcome Measure:	Percent of paved shoulder area with debris.			
Outcome Unit:	% SF			
Outcome Thresholds	Service Level			
	A	B	C	D
	0 - 5%	5.1% - 10%	10.1% - 20%	20.1% - 40%
Comments:				
Data Source	Field Surveys			

Group 2 - Drainage Maintenance and Slope Repair

Activity Number:	2A1	Priority Rank	20		
Activity Name:	Maintain Ditches				
Survey Period:	Summer	Detail Level:	Area/Section		
Indicator:	Ditches with sediment build-up, unable to carry design flow.				
Outcome Measure:	Percent of ditches greater than 50% filled with sediment/debris.				
Outcome Unit:	% Full				
Outcome Thresholds	Service Level				
	A	B	C	D	F
	0 - 1%	1.1% - 5%	5.1% - 10%	10.1% - 15%	>15%

Comments:

Data Source	Field Surveys
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Activity Number:	2A2	Priority Rank	24		
Activity Name:	Maintain Culverts				
Survey Period:	Summer	Detail Level:	Area/Section		
Indicator:	Cross culvert pipes plugged with dirt and/or debris, unable to carry design flow.				
Outcome Measure:	Percent of pipes/culverts greater than 50% filled, or otherwise deficient.				
Outcome Unit:	% Full				
Outcome Thresholds	Service Level				
	A	B	C	D	F
	0 - 2%	2.1% - 5%	5.1% - 10%	10.1% - 20%	>20%

Comments:

Data Source	Field Surveys
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Group 2 - Drainage Maintenance and Slope Repair

Activity Number:	2A3	Priority Rank	11		
Activity Name:	Maintain Catch Basins and Inlets				
Survey Period:	Summer	Detail Level:	Area/Section		
Indicator:	Catch basins/ inlets that are blocked, have damaged grate, sediment build-up or are structurally deficient per Highway Runoff Manual page 5-223.				
Outcome Measure:	Percent of catch basins/inlets blocked; grate damaged; sediment build-up greater than 60% or 6 inches from outfall; cracks in top slab; grout separated or cracked.				
Outcome Unit:	% Deficient				
Outcome Thresholds	Service Level				
	A	B	C	D	F
	0 to 3%	3.1% - 7%	7.1% - 15%	15.1% - 30%	>30%
Comments:	See Highway Runoff Manual for all specific criteria that shall be considered a deficiency.				
Data Source	Field Surveys/HATS				

Activity Number:	2A4	Priority Rank	30		
Activity Name:	Maintain Stormwater Facilities				
Survey Period:	Summer	Detail Level:	Statewide		
Indicator:	Silt Basins unable to hold design capacity.				
Outcome Measure:	Percent of silt basins greater than 25% filled with sediment.				
Outcome Unit:	% Def.				
Outcome Thresholds	Service Level				
	A	B	C	D	F
	0 - 1%	1.1% - 5%	5.1% - 10%	10.1% - 15%	>15%
Comments:	Performance measure development is in process, in conjunction with NPDES permit requirements.				
Data Source					

Maintenance Accountability Process
Performance Measures

Group 2 - Drainage Maintenance and Slope Repair

Activity Number:	<input type="text" value="2A5"/>	Priority Rank	<input type="text" value="9"/>		
Activity Name:	<input type="text" value="Slope Repair"/>				
Survey Period:	<input type="text" value="Summer"/>	Detail Level:	<input type="text" value="Area/Section"/>		
Indicator:	<input type="text" value="Unrepaired erosion or slides encroaching on, or undermining the shoulder or traveled lane."/>				
Outcome Measure:	<input type="text" value="Percent of centerline miles with slides or erosion encroaching on, or undermining the shoulder or traveled way."/>				
Outcome Unit:	<input type="text" value="% CLM"/>				
Outcome Thresholds	Service Level				
	A	B	C	D	F
	0 - 2%	2.1% - 4%	4.1% - 7%	7.1% - 10%	>10%
Comments:	<input type="text" value="Presence of one or more slope failures (Spring 01), reported as a yes or no."/>				
Data Source	<input type="text" value="Field surveys"/>				

Group 3 - Roadside and Vegetation Management

Activity Number:	3A1	Priority Rank	34	
Activity Name:	Litter Pickup			
Survey Period:	Summer	Detail Level:	Area/Section	
Indicator:	Presence of litter on the roadside.			
Outcome Measure:	Number of fist sized or larger objects present per centerline mile.			
Outcome Unit:	EA/CLM			
Outcome Thresholds	Service Level			
	A	B	C	D
	0 - 125	126 - 250	251 - 500	501 - 1000
	F			
	>1000			

Comments:

Data Source	Field Surveys
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Activity Number:	3A2	Priority Rank	27	
Activity Name:	Noxious Weed Control			
Survey Period:	Summer	Detail Level:	Area/Section	
Indicator:	Presence of noxious weeds on the roadside.			
Outcome Measure:	Percent of roadside area with legally designated noxious weeds present.			
Outcome Unit:	% Roadside			
Outcome Thresholds	Service Level			
	A	B	C	D
	0 - 1%	1.1% - 2.5%	2.6% - 5%	5.1% - 15%
	F			
	>15%			

Comments:

This data is to be collected by persons qualified to identify noxious weeds. Current IVM weed lists can be found online.	
Data Source	Field Surveys

Activity Number:	3A3	Priority Rank	32	
Activity Name:	Nuisance Vegetation Control			
Survey Period:	Summer	Detail Level:	Area/Section	
Indicator:	Presence of nuisance vegetation on the roadside.			
Outcome Measure:	Percent of roadside area with nuisance vegetation present.			
Outcome Unit:	% Roadside			
Outcome Thresholds	Service Level			
	A	B	C	D
	0 - 2.5%	2.6% - 5%	5.1% - 10%	10.1% - 20%
	F			
	>20%			

Comments:

This data is to be collected by persons qualified to identify noxious weeds. Current IVM weed lists can be found online.	
Data Source	Field Surveys

Group 3 - Roadside and Vegetation Management

Activity Number:	3A4	Priority Rank	17	
Activity Name:	Control of Vegetation Obstructions			
Survey Period:	Summer	Detail Level:	Area/Section	
Indicator:	Presence of vegetation blocking site lines to intersections or signs.			
Outcome Measure:	Percent of centerline miles with instances of vegetation obstructions.			
Outcome Unit:	% CLM			
Outcome Thresholds	Service Level			
	A	B	C	D
	0 - 0.5%	0.6% - 1.5%	1.6% - 3.5%	3.6% - 6%
	F			
	>6%			
Comments:	Presence of one or more vegetation obstruction reported as a yes or no.			
Data Source	Field Surveys			

Activity Number:	3A5	Priority Rank	33	
Activity Name:	Landscape Maintenance			
Survey Period:	Summer	Detail Level:	Region	
Indicator:	Appearance and health of landscaped roadside areas.			
Outcome Measure:	Condition score. Sum of Weed Control, Plant Health, and Trimming/Pruning/Planting condition ratings. See MAP Landscape Survey Matrix.			
Outcome Unit:	Score			
Outcome Thresholds	Service Level			
	A	B	C	D
	3	4	5 - 6	7 - 8
	F			
	9			
Comments:	Regions will update landscape locations as needed, each year.			
Data Source	Landscape surveys			

Maintenance Performance Measures

Group 3 - Roadside and Landscape Maintenance

3A5 - Landscape Maintenance Condition Description Matrix

	<i>Weed Control</i>	<i>Plant Health</i>	<i>Trimming, Pruning and Planting</i>
Condition 1	Planting beds with less than 5% visible weeds.	Plants healthy and lush. Less than 5% of the plants exhibit visible stress or disease. Ground cover has 100% coverage. Lawns contain less than 5% visible weeds and dry spots.	All plants exhibit appropriate shape and character. Lawns mowed and trimmed regularly, 5% voids in plant beds. Plants have not overgrown their location.
Condition 2	Planting beds with less than 15% visible weeds.	Less than 15% of plants exhibiting some stress or disease. Ground cover has no less than 90% coverage. Less than 15% of lawn area contains visible weeds or dry spots.	No more than 15% of all plants exhibit sprouting or contain a few dead or dying branches. Lawns mowed but not trimmed regularly. Less than 15% voids in plant beds. Plants have not overgrown their location.
Condition 3	Planting beds with greater than 15% visible weeds.	Greater than 15% of plants exhibiting some stress or disease. Ground cover has less than 90% coverage. Greater than 15% of lawn area contains visible weeds, dry spots, and are allowed to go dormant in the summer.	More than 15% of all plants may exhibit sprouting or contain dead or dying branches. Lawns mowed until dormant but not trimmed. Greater than 15% voids in plant beds. Greater than 15% of plants have overgrown their location.

Condition Total = Weed Control Condition + Plant Health Condition + Trimming, Pruning Planting Condition

<u>Service Level</u>	<u>Condition Total</u>
A	3
B	4
C	5 to 6
D	7 to 8
F	9

Group 4 - Bridge and Urban Tunnel Maintenance and Operations

Activity Number:	4A1	Priority Rank	13	
Activity Name:	Bridge Deck Repair			
Survey Period:	Summer	Detail Level:	Area/Section	
Indicator:	Unrepaired deck spalling of 6" or greater on the bridge deck			
Outcome Measure:	Percent of bridge deck with spalling.			
Outcome Unit:	% Def.			
Outcome Thresholds	Service Level			
	A	B	C	D
	0 - 0.0025%	0.0026 - 0.015%	0.0151 - 0.05%	0.051 - 0.15%
Comments:	SF of spalling on the bridge deck obtained from BPO inspection reports. Total deck SF from the bridge inventory.			
Data Source	Bridge inspection reports, via BPO			

Activity Number:	4A2	Priority Rank	7	
Activity Name:	Structural Bridge Repair			
Survey Period:	Summer	Detail Level:	Region	
Indicator:	Priority 1 deficiencies identified on bridges.			
Outcome Measure:	Percent of Priority 1 repairs completed.			
Outcome Unit:	% Completed			
Outcome Thresholds	Service Level			
	A	B	C	D
	100% - 90%	89% - 80%	79% - 65%	64% -50%
Comments:	Modified 9/2003. Review bridge repair list for applicable Priority 1 repairs completed. Regions will also document Priority 1 repairs completed before making it on to the repair list. Includes emergent P1. Reporting time frame - repairs completed between July 1 through June 30 (fiscal year).			
Data Source	Bridge Repair List and Regional emergent repair lists. MPET will be queried for those regions using it for management. Remaining regions will be expected to provide data.			

Group 4 - Bridge and Urban Tunnel Maintenance and Operations

Activity Number:	4A3	Priority Rank	31		
Activity Name:	Bridge Cleaning				
Survey Period:	Summer	Detail Level:	Area/Section		
Indicator:	Dirty bridge surfaces and sidewalks, blocked bridge drains, graffiti.				
Outcome Measure:	Condition score. Sum of Deck/Sidewalks, Bridge Drains and Graffiti condition ratings. See MAP Bridge Survey Form and scoring matrix.				
Outcome Unit:	Score				
Outcome Thresholds	Service Level				
	A	B	C	D	F
	0 - 4	5 - 7	8 - 10	11 - 13	14 - 16
Comments:	Modified 12/2006. Added drain score back in. Did not modify service level thresholds.				
Data Source	Maintenance Bridge Surveys				

Activity Number:	4B1	Priority Rank	1		
Activity Name:	Movable and Floating Bridge Operations				
Survey Period:	Summer	Detail Level:	Region		
Indicator:	Delayed opening/closing due to mechanical malfunction.				
Outcome Measure:	Percent openings/closings delayed due to mechanical malfunction.				
Outcome Unit:	% Delayed				
Outcome Thresholds	Service Level				
	A	B	C	D	F
	0 - 2%	2.1% - 5%	5.1% -10%	10.1% 20%	> 20%
Comments:	Query period is Oct 1 through Sept 30.				
Data Source	NW, OL, and SC regions provide data.				

Group 4 - Bridge Maintenance

4A3 - Bridge Cleaning Condition Description Matrix

	<i>Decks and Sidewalks</i>	<i>Grates and Drains</i>	<i>Rails, Girders, Trusses, Piers Abutments</i>
Condition 1	Free of visible sand and debris.	Free of visible sand & debris.	Free of graffiti, moss, bird droppings, rust or other surface dirt.
Condition 2	Less than 10% of surface area covered with sand or debris.	Less than 5% blocked or partially blocked.	Less than 10% of bridge surface covered with graffiti, moss, bird droppings, rust or other surface dirt.
Condition 3	Less than 20% of surface area covered with sand or debris.	Less than 10% blocked or partially blocked.	Less than 30% of bridge surface covered with graffiti, moss, bird droppings, rust or other surface dirt.
Condition 4	Less than 40% of surface area covered with sand or debris.	Less than 20% blocked or partially blocked.	Less than 50% of bridge surface covered with graffiti, moss, bird droppings, rust or other surface dirt.
Condition 5	Greater than 40% of surface area covered with sand or debris.	More than 20% blocked or partially blocked	More than 50% of bridge surface covered with graffiti, moss, bird droppings, rust or other surface dirt.

Condition Total = Decks and Sidewalks + Graffiti

<u>Service Level</u>	<u>Condition Total</u>
A	3
B	4 to 5
C	6 to 7
D	8 to 9
F	10 or more

Group 4 - Bridge and Urban Tunnel Maintenance and Operations

Activity Number:	4B2	Priority Rank	5		
Activity Name:	Keller Ferry Operations				
Survey Period:	Summer	Detail Level:	Region		
Indicator:	Service availability.				
Outcome Measure:	Hours of operational downtime.				
Outcome Unit:	hours downti				
Outcome Thresholds	Service Level				
	A	B	C	D	F
	<= 40	41 - 80	81 - 165	166 - 360	>360
Comments:	Beginning 2011. performance measure changed to total hours available, 18 hrs/day, 365 days/year = 6,570 hours. Reporting period is from Oct 1 through Sept 30.				
Data Source	Request total hours down from Eastern Region, Davenport Maintenance Office				

Activity Number:	4B3	Priority Rank	6		
Activity Name:	Urban Tunnel Systems Operation				
Survey Period:	Summer	Detail Level:	Region		
Indicator:	Tunnel closure to flammable cargo for maintenance or malfunctioning mechanical, electrical, or hydraulic systems.				
Outcome Measure:	Number of tunnel closures to flammable cargo per year.				
Outcome Unit:	Closure/Year				
Outcome Thresholds	Service Level				
	A	B	C	D	F
	0 - 5	6 -10	11 - 25	26 -50	>50
Comments:	Reporting period is Oct 1 through Sept 30.				
Data Source	I-90 Tunnels.				

Group 5 - Snow and Ice Control Operations

Activity Number:	5B1	Priority Rank	4		
Activity Name:	Snow and Ice Control Operations				
Survey Period:	Spring	Detail Level:	Area/Section		
Indicator:	Snow and/or ice on the roadway reducing traction and safety.				
Outcome Measure:	Improved road conditions from application of sand or deicer to the highway surface when snow and/or ice is present.				
Outcome Unit:	Score				
Outcome Thresholds	Service Level				
	A	B	C	D	F
	1 -1.99	2 - 2.99	3 - 3.99	4 - 4.99	=> 5
Comments:	Reporting period is Nov 1 through March 31.				
Data Source	Snow and Ice application records and AVL records.				

MAP Snow and Ice Level of Service (LOS) (excerpt from 11-13 S&I Plan)

What: WSDOT snow & ice operation performance is measured in terms of the results of these operations. The most important overall result is the condition of the travel lanes provided by maintenance actions (i.e. anti-icing, deicing, or plowing) during winter conditions (i.e. snow, ice, frost). Performance measurement information is used to determine the Level of Service (LOS) provided by the maintenance program throughout any given winter season. LOS ratings can be determined on different scales that range from statewide to route specific.

When: Road surface conditions are assessed after snow and ice response activities occur during the winter season. There are no specified days or times during which road surface conditions should be documented. Assessment and documentation should be made after the activity is completed and the outcome (i.e. bare pavement, wheel tracks bare, etc) is known. Maintenance personnel should assess and document road surface conditions in the course of their daily work as opposed to making a special trip to a specific location solely to document road surface conditions.

Where: Road surface condition outcomes as a result of winter maintenance operations can be documented at any location where such operations were performed.

How: Maintenance personnel conduct the condition assessments by observing the surface condition of a roadway (all lanes, both directions). Observations are documented on the winter maintenance Personalized Digital Assistant (PDA) application, or entered into the data collection device attached to the data modem in AVL/GPS equipped trucks.

Ratings: Road surface conditions are assigned different point values based on the assessed condition of that roadway. The point values are used to calculate the LOS ratings. There are two classes of road surface conditions on the form that represent the two primary methods by which WSDOT provides snow and ice control. One is to enhance traction on top of snow/ice by spreading abrasives (i.e. sand) on the travel lane. The other is to attempt to provide a bare pavement surface by applying chemicals to the travel lane. Point values for different conditions are as follows with commensurate LOS ratings:

Road Condition Rating for Sand Treatment	Points	LOS Rating
100% of roadway has sand present	3	C+
50% or more of roadway has sand present	3.5	C
All emphasis areas have sand present	4	D+
50% or more of emphasis areas have sand present	5	F+
50% or less of emphasis areas have sand present	5.9	F
Unable to evaluate	-	-

Road Condition Rating for Chemical Treatment	Points	LOS Rating
Bare Pavement	1	A+
Patches of frost, black ice, slush, or compact.	1.5	A
Wheel tracks bare, frost, snow, or ice encountered.	2	B+
50% of roadway with compact snow and ice.	3	C+
Entire roadway covered with compact snow and ice.	4	D+
Unable to evaluate	-	-

Note: Emphasis Areas include hills, bridges, curves, intersections and known problem areas.

Group 6 - Traffic Control Maintenance and Operations

Activity Number:	6A1	Priority Rank	15		
Activity Name:	Pavement Striping Maintenance				
Survey Period:	Summer	Detail Level:	Region		
Indicator:	Lane or edge strip reflectivity, as measured with a retro reflectometer, immediately prior to restriping.				
Outcome Measure:	% of retro reflectometer readings greater than or equal to 90 RL.				
Outcome Unit:	Score				
Outcome Thresholds	Service Level				
	A	B	C	D	F
	<= 90%	70-89.9%	40-69.9%	20-39.9%	<20%
Comments:	Data is collected by striping crew, prior to striping, and forwarded to M&O MAP personnel on a monthly basis, during striping season.				
Data Source	Striping crew retro-reflectometer				

Activity Number:	6A2	Priority Rank	16		
Activity Name:	Raised/Recessed Pavement Marker Maintenance				
Survey Period:	Summer	Detail Level:	Area/Section		
Indicator:	Missing or damaged pavement markers (buttons).				
Outcome Measure:	Percent of pavement markers damaged or missing.				
Outcome Unit:	% Def.				
Outcome Thresholds	Service Level				
	A	B	C	D	F
	0 - 5%	5.1% - 10%	10.1% - 20%	20.1% - 30%	> 30%
Comments:					
Data Source	Field Surveys				

Activity Number:	6A3	Priority Rank	26		
Activity Name:	Pavement Marking Maintenance				
Survey Period:	Summer	Detail Level:	Area/Section		
Indicator:	Stop bars, arrows, crosswalks, etc., having more than 25% of marking worn or missing.				
Outcome Measure:	Percent of pavement markings with more than 25% worn or missing.				
Outcome Unit:	% Def.				
Outcome Thresholds	Service Level				
	A	B	C	D	F
	0 - 2%	2.1% - 10%	10.1% - 20%	20.1% - 30%	> 30%
Comments:					
Data Source	Field Surveys				

Group 6 - Traffic Control Maintenance and Operations

Activity Number:	6A4	Priority Rank	8	
Activity Name:	Regulatory Sign Maintenance			
Survey Period:	Fall	Detail Level:	Region	
Indicator:	Regulatory signs that are unreadable at night.			
Outcome Measure:	Percent of regulatory signs that are unreadable at night.			
Outcome Unit:	% Def.			
Outcome Thresholds	Service Level			
	A	B	C	D
	0 - 1%	1.1% - 2%	2.1% - 5%	5.1% - 10%
Comments:	Effective 2005, regions must review half of signs each year, data is input into sign database.			
Data Source	HQ Traffic sign database			

Activity Number:	6A5	Priority Rank	29	
Activity Name:	Guide Sign Maintenance			
Survey Period:	Fall	Detail Level:	Region	
Indicator:	Guide signs that are unreadable at night.			
Outcome Measure:	Percent of guide signs that are unreadable at night.			
Outcome Unit:	% Def.			
Outcome Thresholds	Service Level			
	A	B	C	D
	0 - 2%	2.1% - 5%	5.1% - 10%	10.1% - 15%
Comments:	Effective 2005, regions must review half of signs each year, data is input into sign database.			
Data Source	HQ Traffic sign database			

Group 6 - Traffic Control Maintenance and Operations

Activity Number:	6A6	Priority Rank	22		
Activity Name:	Guidepost Maintenance				
Survey Period:	Summer	Detail Level:	Area/Section		
Indicator:	Missing or broken guideposts.				
Outcome Measure:	Percent of guideposts that are broken or missing.				
Outcome Unit:	% Def.				
Outcome Thresholds	Service Level				
	A	B	C	D	F
	0 - 1%	1.1% - 5%	5.1% - 10%	10.1% - 20%	> 20%
Comments:	Fall 2006, ME's agreed that guidepost locations will be marked, making it easier to locate for MAP, and identifying missing guideposts. The marking will be done by construction projects and maintenance personnel. The goal is to have all guidepost locations marked by the end of 2008.				
Data Source	Field Surveys				

Activity Number:	6A7	Priority Rank	14		
Activity Name:	Guardrail Maintenance				
Survey Period:	Summer	Detail Level:	Area/Section		
Indicator:	Damaged or defective guardrail.				
Outcome Measure:	Percent of guardrail that is damaged or missing.				
Outcome Unit:	% Def.				
Outcome Thresholds	Service Level				
	A	B	C	D	F
	0 - 1%	1.1% - 3%	3.1% - 5%	5.1% - 10%	> 10%
Comments:	Surveys indicate type of guardrail, i.e. beam, cable or jersey.				
Data Source	Field Surveys				

Group 6 - Traffic Control Maintenance and Operations

Activity Number:	6B1	Priority Rank	3		
Activity Name:	Traffic Signal Systems				
Survey Period:	Fall	Detail Level:	Region		
Indicator:	Traffic signals at an intersection flashing, with burned out bulbs, or with a control system malfunction.				
Outcome Measure:	Number of repairs per signal system required for this type of malfunction. Preventive maintenance is NOT included.				
Outcome Unit:	Rep./Sig./Yr				
Outcome Thresholds	Service Level				
	A	B	C	D	F
	1 per 2 years	1 per year	2 per year	3 per year	4 per year
Comments:	Reporting period is Oct 1 through Sept 30.				
Data Source	SIMMS database, with regional concurrence.				

Activity Number:	6B2	Priority Rank	21		
Activity Name:	Highway Lighting Systems				
Survey Period:	Fall	Detail Level:	Region		
Indicator:	Burned out or cycling highway lights.				
Outcome Measure:	Percent of highway lights malfunctioning.				
Outcome Unit:	% Mlfctn				
Outcome Thresholds	Service Level				
	A	B	C	D	F
	0 - 5 %	5.1% - 7.5%	7.6% - 10%	10.1% -20%	> 20%
Comments:	Region personnel perform night reviews.				
Data Source	Region personnel.				

Activity Number:	6B3	Priority Rank	10		
Activity Name:	Intelligent Transportation Systems				
Survey Period:	Fall	Detail Level:	Region		
Indicator:	Malfunctioning ramp meters, reversible lane gates, signs, cameras, etc.				
Outcome Measure:	Number of repairs per ITS component required for this type of malfunction. Preventive maintenance is NOT counted.				
Outcome Unit:	Rep./ITS/Yr				
Outcome Thresholds	Service Level				
	A	B	C	D	F
	1 per 2 years	1 per year	2 per year	3 per year	4 per year
Comments:	Reporting period is Oct 1 through Sept 30.				
Data Source	SIMMS database, with regional concurrence.				

Group 7 - Rest Area Operations

Activity Number:	7B1	Priority Rank	18	
Activity Name:	Rest Area Operations			
Survey Period:	Fall	Detail Level:	Region	
Indicator:	Cleanliness of building, non-functional building/utility systems (hand dryer, soap dispenser, RV dump station), appearance of landscaped areas, and sidewalks and pavement.			
Outcome Measure:	Condition score. See MAP Rest Area Survey Form.			
Outcome Unit:	Score			
Outcome Thresholds	Service Level			
	A	B	C	D
	<5	6 - 9	10 - 13	14 - 17
Comments:				
Data Source	HQ Rest Area Surveys			

Activity Number:	8B1	Priority Rank		
Activity Name:	Employee Technical and Safety Training			
Survey Period:		Detail Level:		
Indicator:	None			
Outcome Measure:	None			
Outcome Unit:	None			
Outcome Thresholds	Service Level			
	A	B	C	D
Comments:				
Data Source				

Activity Number:	8B2	Priority Rank		
Activity Name:	Support and Testing			
Survey Period:		Detail Level:		
Indicator:	None			
Outcome Measure:	None			
Outcome Unit:	None			
Outcome Thresholds	Service Level			
	A	B	C	D
Comments:				
Data Source				

Group 9 - 3rd Party Damage Repairs and Disaster Operations

Activity Number:	9B1	Priority Rank		
Activity Name:	3rd Party Damages			
Survey Period:		Detail Level:		
Indicator:	None			
Outcome Measure:	None			
Outcome Unit:	None			
Outcome Thresholds	Service Level			
	A	B	C	D

Comments:

Data Source

Activity Number:	9B2	Priority Rank	2	
Activity Name:	Disasters			
Survey Period:		Detail Level:		
Indicator:	None			
Outcome Measure:	None			
Outcome Unit:	None			
Outcome Thresholds	Service Level			
	A	B	C	D

Comments:

Data Source