# Maintenance Funding & Investment Decisions

STACEY GLASS, P.E.

STATE MAINTENANCE ENGINEER

ALABAMA DEPARTMENT OF TRANSPORTATION

### Funding Allocations

- Routine State \$ 166 Million
- Resurfacing Federal \$ 260 Million
- Interstate Maintenance Federal \$ 200 Million
- Bridges Federal \$ 90 Million

### Fiscal Year 2016-17 Budget

Routine	\$140 N	<i>A</i> illior
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- Resurfacing Federal Aid (FM) \$260 Million
- Roadway \$5.5 Million
- Bridge \$7 Million
- Traffic \$3 Million
- Miscellaneous \$5 Million
- Emergency \$5 Million
- State's Park System \$0.5 Million
- ► Total \$426 Million

### Recapitulation

Area	Routine	Resurfacing	Total
Guntersville	15,068,636	32,552,000	47,620,636
Tuscumbia	10,726,106	23,062,000	33,788,106
Birmingham	19,310,145	20,280,000	39,590,145
Alexander City	12,865,924	24,362,000	37,227,924
Fayette	10,584,187	22,750,000	33,334,187
Tuscaloosa	13,835,000	21,788,000	35,623,000
Montgomery	19,676,648	34,268,000	53,944,648
Troy	11,326,540	37,830,000	49,156,540
Grove Hill	7,307,814	22,412,000	29,719,814
Mobile	19,299,000	20,696,000	39,995,000
Total	\$140,000,000	\$260,000,000	\$400,000,000

### Items Considered for Budgeting

- ▶ Miles 29,278 Lane Miles / 10,874 Center Line Miles
- Bridges 15,970 Total Structures / 5,752 State Owned
- Road Classes Interstate, National Highway, State Highway
- Pavement PCR Values (Age, IRI, Cracking, etc.)
- ▶ 19 Rest Areas / 8 Welcome Centers 27 Total
- Grades Level of Service Grades (A-F)
- Assets Guardrail, Signs, Striping, Mowing Area, etc.....
- Age Lifespan of Pavements and Bridges
- Emergencies Repairs for unplanned events
- Prioritization Risk and Needs

### Routine Money Captured

- RoadMAP
  - Road Maintenance Accountability Program
  - Off shelf Software
  - ▶ Implemented 2011
  - Replaced Handwritten Crew Day Cards
  - Captures Daily Maintenance Operations
  - Accomplishments and Costs
  - Employee Hours, Equipment & Material Usage



### ALABAMA DEPARTMENT OF TRANSPORTATION MAINTENANCE PERFORMANCE GUIDELINE

Activity: Guardrail Maintenance Activity Code: 6381

Effective Date: October 1, 2014

#### **DESCRIPTION AND PURPOSE**

Repair or replacement of guardrail sections, posts, and hardware due to accident damage or normal deterioration. (Consider replacing to latest standard.)

#### AUTHORIZATION AND SCHEDULING

Schedule this work as required throughout the year.

1 -		
No.	Class	Description
1	TMT III	Equipment Operator
4	TMT I/II	Equipment Operator Laborer

No.	Code	Description
gi.		
1	4	Pickup
1	12	Flat Bed Dump
1	106	Post Driver
1	130	Trailer
1		Arrow Board

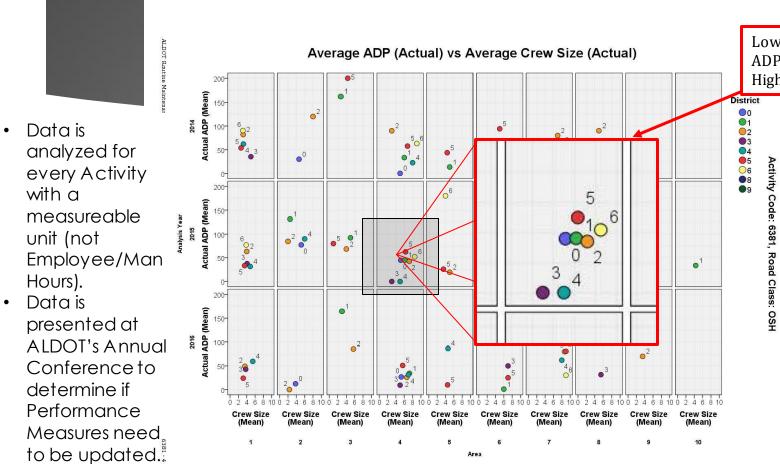
	MATERIALS
Code	Description
378	Guardrail Sections
1378	End Anchor Kits
2378	Guardrail Posts and Hardware

#### WORK METHODS AND NOTES

NOTE: Survey damage and obtain necessary material and equipment.

- 1. Utilize appropriate traffic control devices.
- Remove parts that cannot be straightened or repaired.
- 3. Realign loose posts and recompact earth.
- 4. Install new posts.
- 5. Install rail and hardware.
- 6. Clean up work area.
- 7. Terminate traffic control.

### AVERAGE DAILY PRODUCTION 90 linear feet



Area

Lower Crew Size - Lower ADP. Higher Crew Size -Higher ADP.

### 3 Year Statewide Grade Trends

S	tatewide Average - All Road	Classes - 3	Year Tren	Statewide Average - All Road Classes - 3 Year Trends									
Group	Feature	2014	2015	2016		Erosion Control - Front Slopes	A-	B+	Α				
	Potholes	C+	В	В		Erosion Control - Back Slopes	B+	B-	A-				
•	Raveling	В	В	C+	ı	Mowing	A-	A-	B+				
Asphalt Pavement  Concrete Pavement  Paved Shoulders  Unpaved Shoulders	Shoving	F	C+	F	Roadside	Undesirable Vegetation	C+	С	В				
	Spalling	В	В	B+		Brush Control	F	F	C+				
	Faulting	С	C+	В		Tree Removal	F	F	F				
	Joint Sealing	A-	A-	Α	,	ALDOT Fence	D+	C+	D+				
	Punchouts	C+	D+	C+		Litter Control	С	С	C-				
	Pumping	A+	A+	A+	ı,	Pavement Markings & Legends	С	С	C+				
	Potholes	A+	A+	A+	1	Pavement Striping	C-	C-	C+				
	Edge Raveling	В	В	C+		Raised Pavement Markers	C-	D	D				
Paved Shoulders	Sweeping	D+	С	B+		Delineators	C+	B-	C+				
		C-	C-	D+	•	Object Markers	D	D-	F				
Cla a ul al a na		C-	C-	C-	- Traffic	Signals	A-	C+	С				
		F	F	F	Services	Signs - Regulatory and Warning	B+	B+	В				
	Side Drains			-		Signs - Other	Α	A-	B+				
	Cross Drains	С	F	F	•	Guardrail	C+	B-	C-				
Drainage	Unpaved Ditches	В	В	В	(	Cablerail	С	D+	С				
	Paved Ditches	D+	D-	F		Impact Attenuators	B+	В	F				
	Drop Inlets	D	F	F		Barrier Walls	B+	B+	В				
	Curb & Gutter	D	D	D	1	Highway Lighting	A+	A+	A+				

### 2017 Budget Calculations

	FY 2016 Budget vs. FY	2017 Request	\$ 159,677,707	FY2016 % Over/Under	Calculat	eBudget	117	Div/Dis	Trial Budget t Share	re			
Div/Dist	FY 2016 budget	FY2016Exp (Actual)	FY 2017 Budget	Budget	% 17B:16E	% 17B:16B	Rewarded Trial a	FY2016	FY2017	b Pr	oportioned Trial	Trial:FY16	Trial:FY17
104	\$ 2,981,070	\$ 3,186,844	\$ 3,039,120	-7%	95%	102%	\$ 2,664,597.75	0.02129	0.01903	\$	2,664,597.80	-10.62%	-12.325
120	\$ 2,128,848	\$ 1,848,233	\$ 2,409,036	13%	130%	113%	\$ 2,112,161.00	0.01521	0.01509	\$	2,112,160.94	-0.78%	-12.329
130 140	\$ 3,978,819 \$ 3,566,495	\$ 3,823,173 \$ 3,704,345	\$ 3,928,395 \$ 3,949,477	4% -4%	103% 107%	99% 111%	\$ 3,978,819.00 \$ 3.949.477.00	0.02842 0.02547	0.02460	\$	3,928,395.14 3.462.767.49	-1.27% -2.91%	0.009 -12.329
150	\$ 2,385,546	\$ 2,254,119	\$ 2,637,781	6%	117%	111%	\$ 2,312,717.25	0.02347	0.01652	Š	2,312,717.13	-3.05%	-12.329
100	\$ 15,040,778	\$ 14,816,714	\$ 15,963,810	1%	108%	106%	\$ 15,963,810.00	0.10743	0.09998	\$	14,480,638.50	-3.72%	-9.29%
						Total Area 1	\$ 15,017,772.00						
204 210	\$ 2,516,991 \$ 2,818,307	\$ 2,224,281 \$ 2,180,802	\$ 2,882,303 \$ 2,925,283	12% 23%	130% 134%	115% 104%	\$ 2,527,105.50 \$ 2,436,549.50	0.01798 0.02013	0.01805	\$	2,527,105.44 2,564,788.97	0.40% -9.00%	-12.329 -12.329
220	\$ 2,302,395	\$ 2,716,271	\$ 2,977,214	-18%	110%	129%	\$ 2,479,804.75	0.01645	0.01865	\$	2,610,320.68	13.37%	-12.329
240	\$ 3,187,816	\$ 3,952,894	\$ 4,213,898	-24%	107%	132%	\$ 3,509,873.00	0.02277	0.02639	\$	3,694,603.19	15.90%	-12.329
200	\$ 10,825,509	\$ 11,074,249	\$ 12,998,699	-2%	117%	120% Total Area 2	\$ 12,998,699.00 \$ 10,953,332.75	0.07733 0.00000	0.08141	\$	11,396,818.27	5.28%	-12.329
304	\$ 2,378,638	\$ 4,179,204	\$ 3,203,783	-76%	77%	135%	\$ 2,259,706,00	0.01699	0.02006	s	2.808.968.48	18.09%	-12.325
310	\$ 10,476,708	\$ 10,144,368	\$ 12,339,257	3%	122%	118%	\$ 12,339,257.00	0.07483	0.07728	\$	10,818,642.53	3.26%	-12.329
320	\$ 4,049,049	\$ 3,756,576	\$ 4,049,049	7%	108%	200%	\$ 4,049,049.00	0.02892	0.02536	\$	4,049,049.00	0.00%	0.009
350 300	\$ 1,947,064 \$ 18,851,459	\$ 2,082,756 \$ 20,162,904	\$ 2,183,627 \$ 21,775,717	-7% - <b>72</b> %	105% 108%	112% 116%	\$ 1,914,530.13 \$ 17,908,886.00	0.01391	0.01368	5	1,914,530.15 19,591,190.16	-1.67% 3.92%	-12,325
	-	20,222,350		nort (poe		Total Area 3	\$ 20,562,542.13		5 1105-05	-			
404	\$ 2,755,891	\$ 2,263,868	\$ 2,970,602	18%	131%	108%	\$ 2,474,297.00	0.01968	0.01860	\$	2,604,523.16	-5.49%	-12.32%
410	\$ 1,515,631 \$ 2,005,599	\$ 1,804,916 \$ 1,681,681	\$ 1,581,962	-19% 16%	88%	104%	\$ 1,317,659.75	0.01083 0.01433	0.00991	\$	1,387,010.23 2.003.418.47	-8.49% -0.11%	-12.32% -12.32%
420 430	\$ 2,005,599 \$ 1,968,156	\$ 1,681,681 \$ 2,893,319	\$ 2,285,009 \$ 2,270,248	16% -47%	136% 78%	114% 115%	\$ 1,903,247.63 \$ 1.869.748.25	0.01433	0.01431	\$	2,003,418.47 1.990.476.68	-0.11%	-12.329 -12.329
440	\$ 3,189,519	\$ 3,015,368	\$ 3,215,933	5%	107%	101%	\$ 3,215,933.00	0.02278	0.02014	\$	2,819,621.01	-11.60%	-12.329
450	\$ 1,638,852	\$ 1,591,395	\$ 2,114,564	3%	133%	129%	\$ 2,114,564.25	0.01171	0.01324	\$	1,853,978.18	13.13%	-12.32%
400	\$ 13,073,648	\$ 13,250,547	\$ 14,438,318	-24%	109%	110% Total Area 4	\$ 12,026,077.00 \$ 12,895,449.88	0.09338	0.09042	5	12,659,027.74	-3.17%	-12.32%
504	\$ 2,306,826	\$ 2,171,621	\$ 3.772.640	6%	174%	164%	\$ 2,646,178.00	0.01648	0.02363	s	3.307.722.55	43.39%	-12.329
520	\$ 3,714,241	\$ 6,213,221	\$ 7,094,253	-67%	114%	191%	\$ 3,528,529.00	0.02653	0.04443	\$	6,220,000.91	67.46%	-12.32%
540	\$ 3,327,959	\$ 3,829,018	\$ 5,215,996	-15%	136%	157%	\$ 3,658,567.25	0.02377	0.03267	\$	4,573,208.83	37.42%	-12.329
550 560	\$ 1,824,080 \$ 2,283,273	\$ 1,781,314 \$ 2,585,008	\$ 3,084,059 \$ 3,750,741	2% -13%	173% 145%	169% 164%	\$ 2,158,841.50 \$ 2,630,817.75	0.01303 0.01631	0.01931	\$	2,703,998.58 3,288,522.25	48,24% 44,03%	-12.329 -12.329
500	\$ 13,456,379		\$ 22,917,689	-23%	138%	170%	\$ 11,763,451.00	0.09612	0.14352	\$	16,804,930.87	24.88%	-26.67%
						Total Area 5	\$ 14,622,933.50						
604	\$ 4,627,782		\$ 4,727,905 \$ 2,734,373	18% 30%	124%	102% 99%	\$ 3,938,003.75	0.03306 0.01968	0.02961	\$	4,145,266.98	-10.43% -0.74%	-12.32% 0.00%
610 620	\$ 2,754,885 \$ 2,661,443	\$ 1,938,997 \$ 4,254,026	\$ 2,734,373 \$ 2,665,957	-60%	141% 63%	200%	\$ 2,597,654.25 \$ 2,528,370.75	0.01966	0.01/12	S	2,734,372.92 2.337.421.07	-12.17%	-12.329
630	\$ 3,232,474	\$ 2,843,398	\$ 3,366,498	12%	118%	204%	\$ 2,951,631.25	0.02309	0.02108	\$	2,951,631.26	-8.69%	-12.32%
640	\$ 3,323,652	\$ 3,228,294	\$ 3,527,033	3%	109%	106%	\$ 3,527,032.75	0.02374	0.02209	\$	3,092,382.76	-6.96%	-12.32%
650 660	\$ 1,669,170 \$ 1,723,113	\$ 1,932,110 \$ 2,435,489	\$ 1,700,691 \$ 1,711,862	-16% -41%	88% 70%	102% 99%	\$ 1,416,552.88 \$ 1,636,957.38	0.01192 0.01231	0.01065	\$	1,491,108 19 1,711,861 90	-10.67% -0.65%	-12.32% 0.00%
600	\$ 19,992,519	\$ 20,440,231		-2%	100%	102%	\$ 20,434,320.00	0.14280	0.12797	5	16,752,183.18	-16.21%	-18.02%
			3,000,000,000			Total Area 6	\$ 18,596,203.00						
704	\$ 2,252,735		\$ 2,252,735	17%	120%	100%	\$ 2,140,098.25	0.01609	0.01411	\$	2,252,735.00	0.00%	0.009
710 720	\$ 1,595,991 \$ 1,618,410	\$ 1,706,313 \$ 1,695,316	\$ 1,582,945 \$ 1,772,532	-7% -5%	93% 105%	99% 110%	\$ 1,582,945.00 \$ 1,772,531.63	0.01140 0.01156	0.00991	\$	1,582,944.98 1,554,095.59	-0.82% -3.97%	0.009 -12.329
730	\$ 1,582,169	\$ 1,598,608	\$ 1,685,158	-1%	105%	107%	\$ 1,685,158.13	0.01130	0.01055	\$	1,477,489.51	-6.62%	-12.329
740	\$ 1,729,492	\$ 1,592,304	\$ 1,729,440	8%	109%	100%	\$ 1,729,439.75	0.01235	0.01083	\$	1,729,439.77	0.00%	0.00%
750 760	\$ 1,286,690 \$ 1,273,585	\$ 1,227,987 \$ 1,112,130	\$ 1,286,158 \$ 1,304,681	5% 13%	105% 117%	100% 102%	\$ 1,286,690.00 \$ 1,143,900.13	0.00919	0.00805	\$	1,286,158.42 1,143,900.16	-0.04% -10.18%	0.00%
700	\$ 11,339,072			5%	107%	102%	\$ 11,613,649.00	0.08099	0.07273	5	11,026,763.44	-2.75%	-5.05%
						Total Area 7	\$ 11,340,762.88						
804 820	\$ 1,698,399 \$ 1,826,516	\$ 1,228,595 \$ 1,841,209	\$ 1,786,751 \$ 1,951,612	28% -1%	145% 106%	105% 107%	\$ 1,488,234.88 \$ 1,951,612.25	0.01213 0.01305	0.01119	\$	1,566,563.00 1,711,107.46	-7.7 <i>6</i> % - <i>6.32</i> %	-12.329 -12.329
830	\$ 1,621,794	\$ 1,859,480	\$ 1,880,581	-15%	101%	116%	\$ 1,648.829.25	0.01363	0.01222	Š	1,648,829.23	1.67%	-12.32%
840	\$ 2,258,999	\$ 2,567,491	\$ 2,258,998	-14%	88%	100%	\$ 2,258,998.00	0.01614	0.01415	\$	2,258,998.11	0.00%	0.00%
800	\$ 7,405,708	\$ 7,496,775	\$ 7,877,942	-1%	105%	106% Total Area 8	\$ 7,877,942.00 \$ 7,347.674.38	0.05290	0.04934	5	7,185,497.79	-2.97%	8.79%
904	\$ 4,186,416	\$ 4,315,004	\$ 4,184,502	-3%	97%	200%	\$ 4,186,416.00	0.02990	0.02621	\$	4.184.501.76	-0.05%	0.009
910	\$ 4,596,312	\$ 4,315,004	\$ 4,596,312	9%	110%	100%	\$ 4,596,312.00	0.03283	0.02878	\$	4,596,311.97	0.00%	0.009
920	\$ 3,196,285	\$ 3,690,800	\$ 3,196,285	-15%	87%	100%	\$ 2,802,394.25	0.02283	0.02002	\$	2,802,394.37	-12.32%	-12.32%
930 950	\$ 3,034,801 \$ 4,508,010	\$ 3,464,467 \$ 5,125,382	\$ 3,034,801	-14% -14%	88% 96%	100% 110%	\$ 2,660,810.75	0.02168	0.01901	\$	2,660,810.68 4,334,221.83	-12.32% -3.86%	-12.32% -12.32%
900	\$ 19,521,824		\$ 4,943,419 <b>\$ 19,955,318</b>	-6%	96%	102%	\$ 18,578,240.00	0.03220	0.03096	5	18,578,240.61	-3.86% -4.83%	-12.32%
						Total Area 9	\$ 18,580,155.00						
F04	\$ 2,032,511	\$ 1,925,248	\$ 2,353,400	5%	122%	116%	\$ 2,353,400.25	0.01452	0.01474	\$	2,063,381.66	1.52%	-12.329
F10 F30	\$ 1,338,954 \$ 2,457,651	\$ 1,492,953 \$ 3,052,301	\$ 1,691,313 \$ 2,531,520	-12% -24%	113% 83%	126% 103%	\$ 1,482,885.75 \$ 2,108,573.50	0.00956 0.01755	0.01059 0.01585	\$	1,482,885.71 2,219,551.06	10.75% -9.69%	-12.32 -12.32
F80	\$ 2,457,651	\$ 2,244,779	\$ 2,551,520	-24% -5%	101%	106%	\$ 2,275,068.25	0.01755	0.01585	\$	1,994,702.79	-6.74%	-12.327
F90	\$ 2,525,170	\$ 2,846,917	\$ 2,850,944	-13%	100%	113%	\$ 2,499,611.50	0.01804	0.01785	\$	2,499,611.38	-1.01%	-12.329
F00	\$ 10,493,104	\$ 11,562,197	\$ 11,702,246	-10%	101%	112% Total Area 10	\$ 10,260,133.00 \$ 10,719,539.25	0.07495	0.07329	5	10,260,132.60	-2.22%	-12.32%
tewide	\$ 140,000,000	\$ 146,971,283	\$ 159,677,707	-5%	109%	114%	\$ 159,677,712.00	1.00000	1.00000	\$	140,000,000.00	0.00%	-12.329
					Total	al Reward Budget	\$ 140,636,364.75				128,475,290.56		

### 2014 Pavement Inventory

NHS Status	Centerline Miles	Percent of Total
Interstates	999	9.19%
Non-Interstate NHS	3,169	29.15%
Non-NHS	6,706	61.66%
Total	10,874	100.00%

### Condition of Lane Miles by Type

	<b>Go</b> PCR	od >= 70		air CR > 55	<b>Mar</b> ( PCR	Total	
Route Type	Lane Miles	Percent of Type	Lane Miles	Percent of Type	Lane Miles	Percent of Type	Lane Miles
Interstate	ate 2,811.7		627.7	16.5%	354.0	9.3%	3,793.4
Non-Interstate NHS	7,014.0	68.5%	1,963.4	19.2%	1,265.1	12.4%	10,242.5
Non-NHS	8,558.0	59.5%	2,367.3	16.4%	3,466.8	24.1%	14,392.1
Asphalt Total	18,383.7	64.7%	4,958.4	17.4%	5,085.9	17.9%	28,428.0

### Pavement Target Levels

Road	Good	Fair	Marginal
Interstate	70%	20%	10%
Non-Interstate NHS	70%	20%	10%
Non-NHS	60%	25%	15%

#### **FY 2016 ALDOT Pavement Preservation Program**

		Federal-Aid	Pav	rement Prese	rva	tion (FA)		State	-Fu	nded Pavem	ent	Preservation	n (N	/IC)	Total Pave	mei	nt Preservatio	n P	rogram
Reg/Area	Budget			Contract or Authorized		Available		Budget		Overruns		Contract or Authorized		Available	Budget		Contract or Authorized		Available
Reg 3 Area 1	\$	30,190,382	\$	27,773,529	\$	2,416,853	\$	250,000	\$	159,317	\$	409,317	\$	(159,317)	\$ 30,440,382	\$	28,182,846	\$	2,257,536
Reg 3 Area 2	\$	21,235,438	\$	21,061,025	\$	174,414	\$	350,000	\$	69,440	\$	419,440	\$	(69,440)	\$ 21,585,438	\$	21,480,465	\$	104,973
Reg 2 Area 3	\$	18,784,014	\$	18,096,908	\$	687,106	\$	250,000	\$	326,574	\$	576,574	\$	(326,574)	\$ 19,034,014	\$	18,673,483	\$	360,532
Reg 2 Area 4	\$	22,090,332	\$	22,175,562	\$	(85,230)	\$	600,000	\$	168,407	\$	768,407	\$	(168,407)	\$ 22,690,332	\$	22,943,969	\$	(253,637)
Reg 4 Area 5	\$	23,583,418	\$	23,476,487	\$	106,932	\$	400,000	\$	291,587	\$	691,587	\$	(291,587)	\$ 23,983,418	\$	24,168,073	\$	(184,655)
Reg 1 Area 6	\$	27,551,786	\$	27,474,765	\$	77,021	\$	250,000	\$	10,464	\$	260,464	\$	(10,464)	\$ 27,801,786	\$	27,735,228	\$	66,557
Reg 1 Area 7	\$	35,345,295	\$	38,141,220	\$	(2,795,925)	\$	450,000	\$	176,382	\$	626,382	\$	(176,382)	\$ 35,795,295	\$	38,767,602	\$	(2,972,307)
Reg 5 Area 8	\$	20,915,141	\$	19,679,084	\$	1,236,056	\$	300,000	\$	52,183	\$	352,183	\$	(52,183)	\$ 21,215,141	\$	20,031,267	\$	1,183,874
Reg 5 Area 9	\$	18,382,153	\$	15,439,869	\$	2,942,284	\$	1,000,000	\$	218,989	\$	1,218,989	\$	(218,989)	\$ 19,382,153	\$	16,658,858	\$	2,723,295
Reg 4 Area 10	\$	21,672,041	\$	21,988,384	\$	(316,343)	\$	400,000	\$	-	\$	400,000	\$	-	\$ 22,072,041	\$	22,388,384	\$	(316,343)
Total	\$	239,750,000	\$	235,306,831	\$	4,443,169	\$	4,250,000	\$	1,473,343	\$	5,723,343	\$	(1,473,343)	\$ 244,000,000	\$	241,030,174	\$	2,969,826
Percentages (compared to funding category)		100.0%		98.1%		1.9%	-	100.0%		34.7%		134.7%	-	-34.7%	100.0%		98.8%		1.2%
Percentages (compared to total program)		98.3%		96.4%		1.8%		1.7%		0.6%		2.3%		-0.6%	100.0%		98.8%		1.2%

#### FY 2016 Pavement Preservation Program - Southeast Region Montgomery Area

Note - Shaded Areas are for Input Budget Difference **Under Contract** Sheet Updated: 9/19/2016 \$ 27,551,785.78 \$ 27,474,764.76 \$ 77,021.02 FM Budget E&I Rate: 0.00% 10%: applies to FM and 99 \$250,000 \$ 260,463.60 \$ (10,463.60) 99 Budget \$ 27,801,785.78 \$ 27,735,228.36 \$ Indirect Cost Rate: 13.63%: applies to FM only 66,557.42 Total Budget

D=Del	Priority	County	Project Number	CPMS #	Funding Source	Additive Rate	"Original" Resurfacing Estimate on Program/CPMS	Resurfacing Estimate on Plans when Submitted	Date Submitted to OE	OE Updated Estimate Amount	Estimated Applicable Letting Amount	Contractor Bid (As-read/As-bid)	Date Let	Authorized <u>OR</u> Final Contract Amount (reported by OE)	Best Available Cost including E&I and Indirect as Applicable	Balance
	> <	PE	99-306-690-000-601	100064671	99	1.00	\$250,000	V	><	$\dot{N}$	$\sim$	$\geq$		$\rightarrow$	\$ 250,000	\$27,551,786
	><	Total Overruns as of date shown			99	1.00	10,463.60	M	><	$\mathcal{N}$	$\overline{M}$	$\sim$	11/9/15	$\rightarrow$	\$ 10,464	\$27,541,322
#	1	Montgomery	NH-HSIP 0006(556)	100060876	FM	1.00	4,192,023.46			3,155,105.61	3,943,661.15	2,979,606.58	12/4/15	\$ 3,277,383.69	\$ 3,277,384	\$24,263,938
	8	Montgomery	STPAA-HISP 0126(500)	100061514	FM	1.00	\$1,764,302	2,130,576.83	10/9/2015	2,144,602.72	2,680,603.27	1,634,186.50	12/4/15	\$ 1,879,209.23	\$ 1,879,209	\$22,384,729
	9	Montgomery	STPAA-HSIP 0293(500)	100061515	FM	1.00	\$565,693	605,227.65	10/9/2015	599,024.93	748,739.23	475,821.50	12/4/15	\$ 511,479.47	\$ 511,479	\$21,873,250
0	4	Macon	STPAA-HSIP 0008(580)	100062484	FM	1.00	\$2,598,101	2,354,159.37	11/19/2015	2,364,773.59	2,955,801.46	2,241,186.92	1/29/16	\$ 2,325,101.22	\$ 2,325,101	\$19,548,149
	2	Dallas	NH 0005(545)	100064449	FM	1.00	\$2,141,775	2,020,076.42	12/30/2016	1,761,142.00	2,201,304.22	1,934,671.25	2/26/16	\$ 2,418,203.64	\$ 2,418,204	\$17,129,945
	6	Butler	STPAA-HSIP 0003( 596)	100065058	FM	1.00	\$3,571,469			2,109,551.68	2,636,791.93	2,656,414.66	3/25/16	\$ 2,722,672.55	\$ 2,722,673	\$14,407,272
	7	Lowndes	STPAA-HSIP 0097(505)	100060033	FM	1.00	\$2,449,343			3,601,978.94	4,502,221.53	3,500,504.92	3/25/16	\$ 3,762,832.06	\$ 3,762,832	\$10,644,440
	5	Russell	STPAA 0169(502)	100064755	FM	1.00	\$2,391,171		3/4/2016	1,876,422.04	2,345,396.20	1,889,150.65	4/29/16	\$ 1,983,497.10	\$ 1,983,497	\$8,660,943
	10	Elmore	STPAA-HSIP 0111(501)	100056610	FM	1.00	\$1,201,971		3/4/2016	956,023.74	1,194,962.75	998,948.31	4/29/16	\$ 1,048,836.99	\$ 1,048,837	\$7,612,106
	3	Lee	STPAA-HSIP 0051(513)	100063148		1.00	\$2,634,350		4/1/2016	3,513,335.41	4,391,423.32	4,441,920.90	5/27/16	\$ 4,663,755.76	\$ 4,663,756	\$2,948,350
	11	Lee	STPAA 0169(503)	100065756	FM	1.00	\$1,000,000			1,025,400.00	1,281,678.22	1,085,332.80	8/26/16	\$ 1,356,590.03	\$ 1,356,590	\$1,591,760
	12	Dallas	NH 0008(571)	100060034	FM	1.00	\$1,143,222	1,092,143.59	6/10/2016	898,355.00	1,122,880.87	1,220,230.75	8/26/16	\$ 1,525,203.02	\$ 1,525,203	\$66,557
		Funding to T.	roy Area for 100065745			1.00	550,000.00							\$ 550,000.00	\$ 550,000	(\$483,443)
						1.00									\$ -	(\$483,443)
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<sup>\*\*\*</sup> STPAA 0185(502) is shown as deleted in CPMS.

<sup>\*\*\*</sup> STPAA-HSIP 0094(501) moved to June due to funding

<sup>\*\*\*</sup> STPAA 0041(516) is shown as deleted in CPMS.

### Resurfacing Program Yearly Amounts

	Budgeted	Budgeted	Budgeted	Budgeted	Budgeted	Budgeted	Budgeted	Budgeted	Budgeted	Budgeted	Budgeted	Budgeted
Fiscal Year	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Resurfacing Budget	\$ 101,418,692	\$ 99,492,011	\$ 107,268,031	\$ 158,000,000	\$ 179,366,587	\$ 200,000,000	\$ 230,000,000	\$ 230,000,000	\$ 230,000,000	\$ 230,000,000	\$ 230,000,000	\$ 235,000,000
ARRA Budget							\$ 144,000,000	\$ 81,000,000				
Resurf \$/mile	\$ 190,996	\$ 180,895	\$ 160,581	\$ 215,259	\$ 286,071	\$ 301,659	\$ 278,067	\$ 374,248	\$ 369,181	\$336,257	\$ 347,958	\$347,432
Miles Resurfaced	531	550	668	734	627	663	697	631	623	684	661	662
ARRA Miles Resurfaced							648	200				

# Did You Know? Pavement Preservation Comparisons

	Pavement Preservation Type					
	Thin Lift	Micro-Surface	Scrub Seal	Chip Seal		
Corrects Surface Distress	X	X	X	X		
Increase Skid Resistance	X	X	X	X		
Minimizes Curb Loss	X	X	X	X		
Can Be Applied In One Pass	X	X	X	X		
Eliminates Loose Aggragate	X	X				
Corrects Minor Rutting	X					
Minimizes Delamination	X					
Improves Ride Quality	X					
Increases Structural Strength	X					
Improves Pavement Drainage	X					

## DID You Know? Performance Life Estimates

- ► Thin Lift HMA = 10 Years
- Scrub Seal And Micro-Surfacing = 6 Years
- Scrub Seal = 5 Years
- ► High Performance Chip Seal = 5 Years
- Micro-Surfacing = 4 Years

# Thinking Smarter Extending Pavement Life

- Is "Worst First" the best thing to do?
- Educate ourselves to the preventative maintenance processes available to us to extend our pavement life.
- Evaluate pavement regularly to determine when to apply preventative applications.
- Have a good pavement management program in place.
- Perform routine pavement maintenance in a timely manner.
- Select the proper preventative application for the roadway condition.

Based on	Remaining Service Life	(RSL) Method		Area: N	Nontgomery		Program Year:	FY2016
	Lane Mil	es in Sout	heast Re	gion, M	ontgomery	Area		
Road Clas	s D61	D62	D63	D64	D65	D66	Area Total	
NT	9	7 115	196	213	0	88	709	
IHS	17	4 26	365	84	213	423	1285	
DSH	39	2 456	194	433	250	254	1979	
District To	ot 663	597	755	730	463	765	3973	
		Troa	tment In	formati	on			
	-		tillelit ili	iioiiiiati		· · · ·	<i>(</i> )	
Nicon	Treatmen	nt Description			- India	ife Extensio. High	n (Years) Used	
Num 0	Category	Description	8		Low 0	0	O O	
1	PM1	Crack Seal			3	5	4	
2	PM1	Cape Seal			4	6	5	
3	PM1	High Perf Ch	nip Seals		5	7	6	
4	PM1	OGFC/PLST	7. <b>6</b> . 11. 12. 12. 12. 12. 12. 12. 12. 12. 12		8	10	9	
5	PM2	Mill WS, Re	place		10	12	11	
6	MR	Mill WS/BL,			14	16	15	
	FY201	6 Paveme	nt Presei	rvation F	Results (Lan	e Mile Yea	ars)	
		Summa	ry of Projec	ts Listed on	"AreaProjList"	Tab		
	Road Class	D61	D62	D63	D64	D65	D66	Area Tot
	INT	-	631	247	449	-	376	1,70
	NHS		215	216	÷	518		94
	OSH	121	-	397	510	-	849	1,87
	Totals	121	845	860	959	518	1,226	4,53
	Treatment	D61	D62	D63	D64	D65	D66	Area Tota
PM1	Crack Seal	-	-	-	-	-	-	7000 100
PM1	Cape Seal	-	-		-	-	-	
PM1	<b>High Perf Chip Seals</b>	-	-			-	-	
PM1	OGFC/PLST	-	-	-	-	-		
PM2	Mill WS, Replace	121	845	247	449	227	810	2,69
MR	Mill WS/BL, Replace Totals:	121	845	613 <b>860</b>	510 <b>959</b>	291 <b>518</b>	416 <b>1,226</b>	1,83 <b>4,5</b> 3
	-						1,220	4,00
	90000	-			(Lane Mile ork Age. Desir	The second second second	10	
					Age. Undesire			
	Road Class	D61	D62	D63	D64	D65	D66	Area Tot
	INT	97	(516)	(51)	(236)	-	(288)	(99
	NHS	174	(189)	149	84	(305)	423	33
	OSH	271	456	(203)	(77)	250	(595)	10
	Totals	542	(248)	(105)	(229)	(55)	(461)	(55
	TOTALS	342	(248)	(102)	(229)	(33)	(461)	(55

List of S	E Region	Pavement	Preservation	Pro	ect
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					_			Total LnMiYrs:	4529.77
					Trea	tment			
istrict	Project Num	Road Class	Route	Num	Category	Description	Lane Miles	Life Extension (Years)	Years
D63	100060876	NHS	US-82	6	MR	Mill WS/BL, Replace	14.418	15	216.2
D63	100061514	OSH	AL-126	6	MR	Mill WS/BL, Replace	21.48	15	322
D63	100061515	OSH	AL-293	6	MR	Mill WS/BL, Replace	5	15	
D65	100064449	NHS	AL-5	5	PM2	Mill WS, Replace	20.656	11	227.2
D66	100063148	OSH	AL-51	6	MR	Mill WS/BL, Replace	27.72	15	415
D62	100062484	NHS	US-80	5	PM2	Mill WS, Replace	19.52	11	214.
D64	100065058	OSH	US-31	6	MR	Mill WS/BL, Replace	16.7	15	250
D64	100060033	OSH	AL-97	6	MR	Mill WS/BL, Replace	17.32	15	259
D61	100056610	OSH	AL-111	5	PM2	Mill WS, Replace	11.044	11	121.4
D65	100060034	NHS	US-80	6	MR	Mill WS/BL, Replace	19.4	15	2
D66	100061937	INT	1-85	5	PM2	Mill WS, Replace	34.204	11	376.2
D64	100055204	INT	1-65	5	PM2	Mill WS, Replace	40.8	11	44
D63	100055200	INT	1-65	5	PM2	Mill WS, Replace	22.412	11	246.5
D62	100055210	INT	1-85	5	PM2	Mill WS, Replace	16.424	11	180.6
D62	100061805	INT	1-85	5	PM2	Mill WS, Replace	21.8	11	23
D62	100061806	INT	1-85	5	PM2	Mill WS, Replace	19.112	11	210.2
D66	100064755	OSH	AL-169	5	PM2	Mill WS, Replace	19.41	11	213
D66	100065756	OSH	AL-169	5	PM2	Mill WS, Replace	20	11	2
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### Bridges

- ► As of October 25, 2016 there were 14,164 active structures over water in Alabama.
  - ► 7,885 Bridges
  - ► 6,279 Culverts

### Bridge Priorities

- FY 2013
  - ▶ 19 Bridges
- FY 2014
  - ▶ 13 Bridges & 1 Major Rehab
- ► FY 2015
  - ▶ 7 Bridges & 2 Major Rehabs
- FY 2016
  - ▶ 14 Bridges

### FHWA Proposed Performance Measures

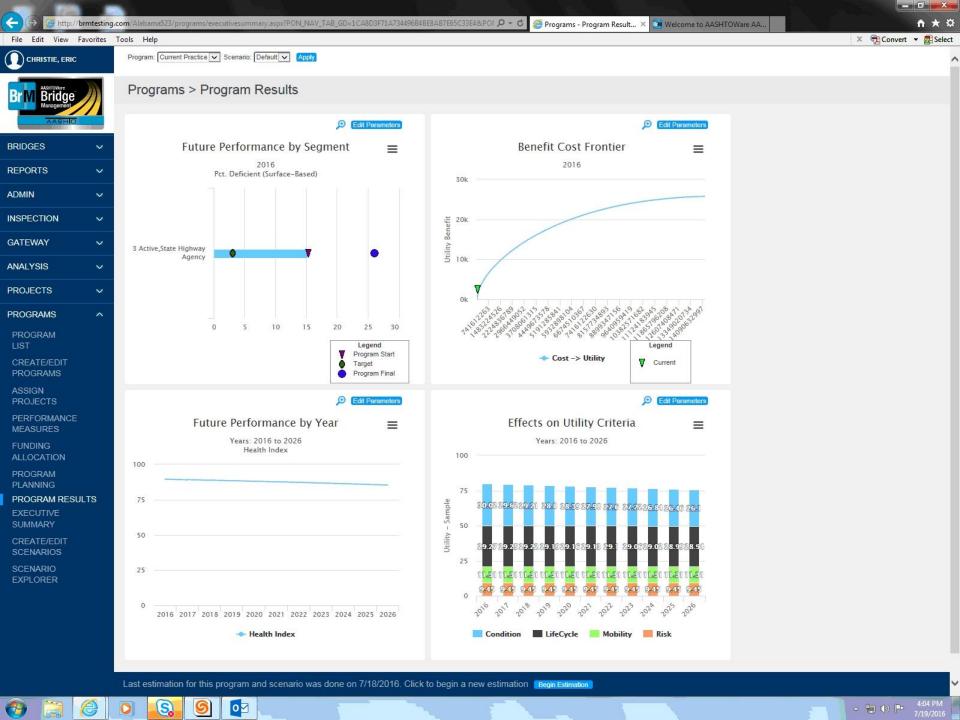
	GOOD	FAIR	POOR
Bridges	37.1%	61.3%	1.6%
Deck Area	33.6%	64.4%	2.0%

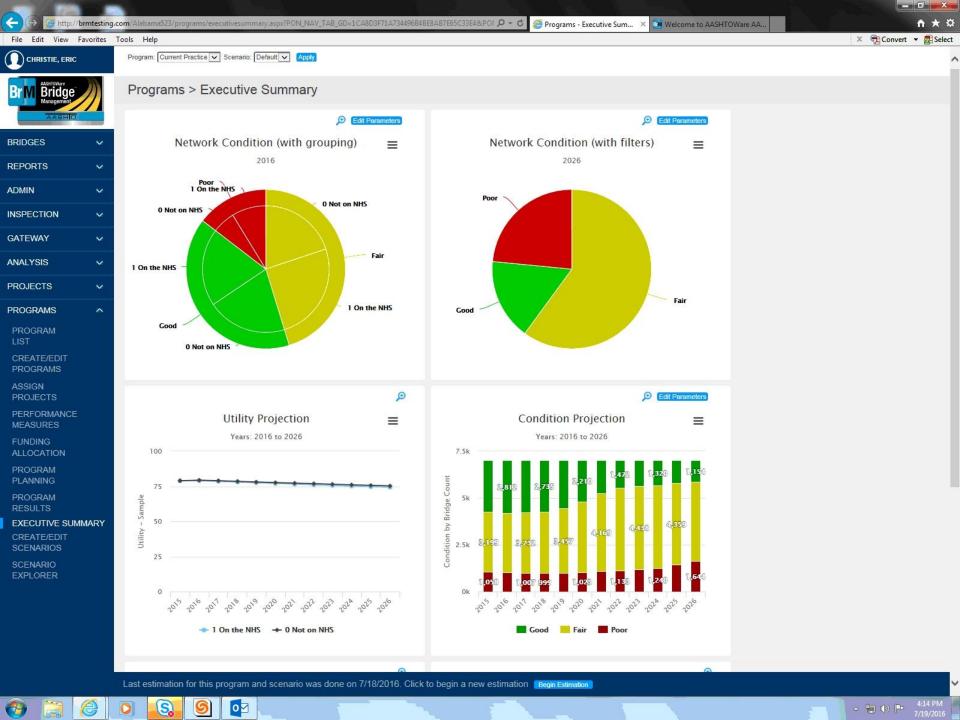
### 2015 Bridge Condition Summary

	Good		Fair		Poor	
	Deck Area (sq. ft.)	Percent	Deck Area (sq. ft.)	Percent	Deck Area (sq. ft.)	Percent
Bridges carrying interstate highways	7,051,529	20.3%	26,701,208	76.9%	947,435	2.7%
Bridges carrying other National Highway System roads - state-owned	10,840,597	44.1%	13,376,933	54.4%	360,551	1.5%
Bridges carrying other National Highway System roads - non-state-owned	344,238	57.2%	257,418	42.8%	0	0.0%
Bridges carrying non-NHS roads - state-owned	11,207,938	49.6%	11,030,512	48.9%	341,309	1.5%
Bridges carrying non-NHS roads - non-state-owned	16,483,446	55.7%	11,808,125	39.9%	1,309,804	4.4%
Total	45,927,748	41.0%	63,174,196	56.4%	2,959,099	2.6%
NHS Bridges	18,236,364	30.5%	40,335,559	67.4%	1,307,986	2.2%
State-Owned	29,100,064	35.5%	51,108,653	62.4%	1,649,295	2.0%

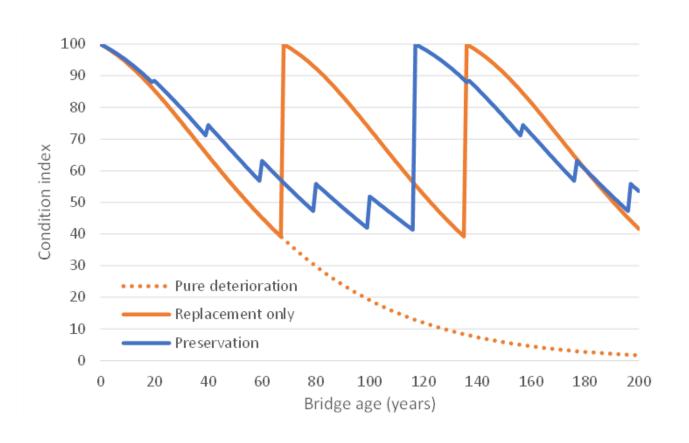
### AASHTOWare Bridge Management 5.2.3

- Planned Release in Fall 2016
- Fully supporting the FHWA Rule Making
- Key Features
- Capability to perform life cycle cost analysis
- Deterioration Models for Replacement
- Capability to perform network level analysis
- Dashboards for easy data visualization and tracking performance measures





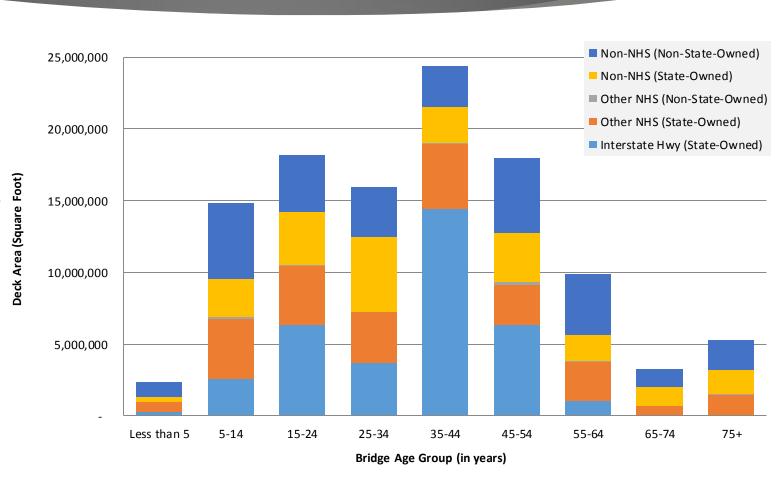
### Typical Bridge Service Life



### Bridge Issues

- Historical funding level is not sufficient
- Future funding uncertainty

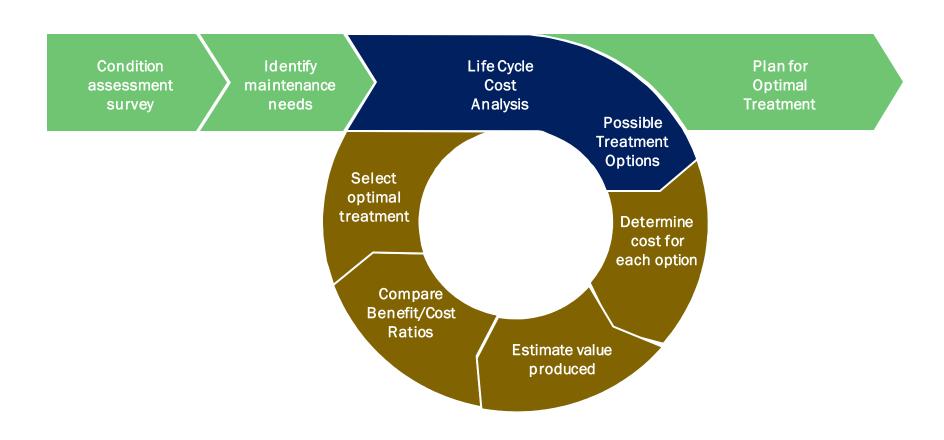
Age



# Average Bridge Age in Alabama

- ▶ The State owns 5751 bridges
- If we expect each bridge to last 100 years
- **▶** 5751/100 = 57.51
- The State would need to replace 58 bridges per year to maintain a 100 year service life

### What is TAM?



# Federal Asset Management Direction

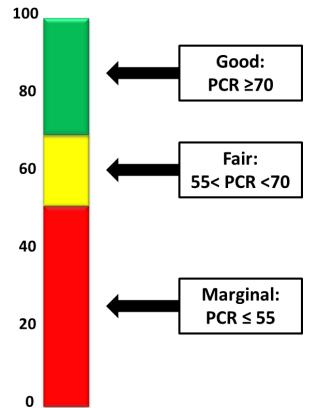
- AASHTO adopted TAM as a priority initiative in 1998
- Performance and risk-based TAM plan to be formalized on a nationwide basis
- Based on AASHTO Asset Management Guide, January 2011
- MAP-21 passed, July 2012

### MAP-21 TAMP Requirements

- ▶ FHWA's required components for the TAMP include:
  - Summary list, including condition of pavements and bridges on the National Highway System (NHS)
  - Asset management objectives and measures
  - Performance gap identification
  - ▶ Life cycle cost and risk management analysis
  - ► Financial plan
  - Investment

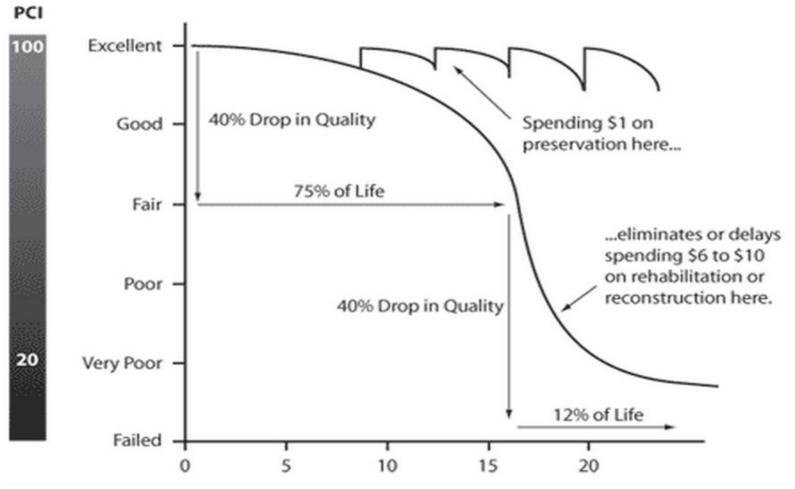
### Target Levels

- Quantitative goal for asset categories
- Requirement by MAP-21
- TAMP performance measures should coincide with data
  - Bridges: Condition Rating (Good/Satisfactory/Fair/Poor)
  - Pavement: PCR Score



### How Can TAM Help ALDOT?

Maximizing ROI - It's not about cost, it's about value



http://www.planning.dot.gov/documents/ASI\_report/images/image006.gif

### Investment Scenarios

- Determine possible LOS outcomes for asset categories (pavement and bridge) across various funding levels
- Scenarios
  - Funding remains level
  - Funding Increases
  - Achieve target performance levels
  - Maintain Current Performance Rating

### Pavement Scenarios 2025

Scenarios		Interstate	Non-Int NHS	Non-NHS
Achieving	Good	70.4%	69.5%	60.5%
Target	Fair	20.7%	23.2%	24.7%
Levels	Marginal	8.9%	7.2%	14.8%
	Good	57.5%	69.2%	25.3%
Current Budget	Fair	33.4%	19.6%	50.9%
	Marginal	9.1%	11.2%	23.9%
Budget	Good	63.1%	70.8%	31.5%
Increase	Fair	26.9%	18.0%	52.5%
10%	Marginal	10.1%	11.2%	15.9%

	. Budget M/year)	
Interstate	151.8	\$
Non-Int NHS	142.7	\$
Non-NHS	165.9	\$
Interstate	140.7	\$
Non-Int NHS	163.5	\$
Non-NHS	83.2	\$
Interstate	154.5	\$
Non-Int NHS	166.2	\$
Non-NHS	104.1	\$

### 10 Year Bridge Spending Projection

		Current Bridge Spending	Budget Increase 10%	Budget Increase 20%	Target 97% Good or Fair	Maintain Current % Good or Fair
% Deck Area in Good or Fair Condition	State - NHS	95.3	95.4	95.5	97.0	97.8
	State - Off NHS	96.8	96.9	97.0	97.0	98.5
	State - All	95.7	95.8	95.9	97.0	98.0
	State - NHS	\$ 66	\$72	\$ 79	\$161	\$ 204
\$M/Yr Required	State - Off NHS	\$ 25	\$ 27	\$ 30	\$ 29	\$ 67
	State - All	\$91	\$100	\$ 109	\$ 190	\$ 271

### Results of Bridge Scenarios

