

Preserving the Infrastructure

TxDOT's Strategic Plan

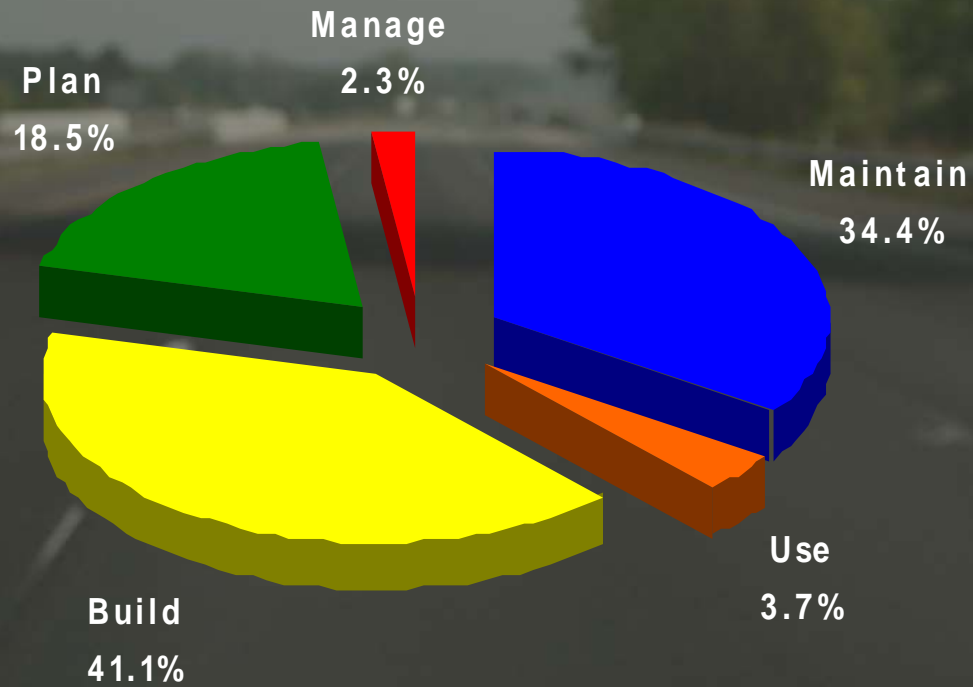
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Texas Department of Transportation

- Maintain 190,357 LM
- 15 million drivers
- 460.6 million daily vehicle miles
- 49,094 bridges
- Everyday 1200 people move to Texas

Allocation of Transportation Funds



What's new?

Seal Coat Courses began this Spring:

1. Seal Coat Inspection and Applications
2. Seal Coat Planning and Design

Prioritizing Pavement Preservation

PREVENTIVE MAINTENANCE

2/19/2008:35 PM



CYCLE (YEARS)		SEAL COAT			CYCLE (YEARS)		SEAL COAT			RAINFALL		OVERLAY			CYCLE (YEARS)		2006-2007 Average Yearly Conc PM		FY Cal. 1 Alloc	\$1,700,000,000	% PM
Desirable		8	9	10	Desirable		6	7	8	Low Value	20	10	12	14	Desirable		Cost (Adjusted to 07 Dollars)	\$14,647,489	PM Allocation	\$510,000,000	30%
										High Value	35						Cost for system	\$1,000	per mile		

District	District Yearly Rainfall	Rated Lane Miles Flex Pmnt < 500 ADT	SEAL COAT LM			Rated Lane Miles Flex Pmnt > 500 < 10,000 ADT	SEAL COAT LM			Yearly Seal Coat Cost \$17,000/LM	Rated Lane Miles Flex Pmnt >= 10,000 ADT	OVERLAY LM			Yearly Overlay Cost \$110,000/LM	Lane Miles of Concrete Pavement (TPP 2006)	Conc PM Cost \$1000 Per District Lane Mile of Conc Pmnt	TOTAL Yearly PM Cost	PERCENT OF STATE	CURRENT PERCENT	CURRENT ALLOCATION	PROPOSED ALLOCATION	DIFFERENCE		
			8 Yr Cycle	9 Yr Cycle	10 Yr Cycle		6 Yr Cycle	7 Yr Cycle	8 Yr Cycle			10 Yr Cycle	12 Yr Cycle	14 Yr Cycle											
ABILENE	24.83	3927		436		3912				\$16,918,346	321				27		\$2,946,167	28	\$27,500.00	\$19,892,013	3.43%	3.44%	\$10,330,637	\$17,492,259	\$7,161,622
AMARILLO	18.83	4222			422	4177			522	\$16,052,803	299				21		\$2,350,857	368	\$367,800.00	\$18,791,460	3.24%	5.27%	\$15,824,479	\$16,524,476	\$699,997
ATLANTA	46.52	773	97			4532	755			\$14,482,158	745	75					\$8,198,300	155	\$154,500.00	\$22,834,958	3.94%	3.00%	\$8,999,666	\$20,080,171	\$11,080,505
AUSTIN	30.07	901		100		4815		686		\$13,395,110	2,456				205		\$22,509,667	138	\$138,300.00	\$36,043,076	6.21%	5.16%	\$15,470,978	\$31,694,874	\$16,223,896
BEAUMONT	47.14	473	59			3235	539			\$10,170,250	697	70					\$7,662,600	893	\$892,700.00	\$18,725,550	3.23%	2.95%	\$8,858,201	\$16,466,518	\$7,608,316
BROWNWOOD	29.84	2625		292		2932		419		\$12,078,419	157				13		\$1,439,167		\$13,517,586	\$13,517,586	2.33%	3.09%	\$9,232,671	\$11,886,837	\$2,653,966
BRYAN	42.86	1046	131			4604	767			\$15,266,425	1,004	100					\$11,045,100	60	\$60,200.00	\$26,371,725	4.55%	3.59%	\$10,777,589	\$23,190,265	\$12,412,678
CHILDRESS	23.21	3241		360		1891		270		\$10,713,940	16				1		\$148,500	179	\$178,800.00	\$11,041,240	1.90%	2.70%	\$6,102,117	\$9,709,235	\$1,607,118
CORPUS CHRISTI	32.16	1681		187		4115		588		\$13,167,633	915				76		\$8,362,917		\$21,550,550	\$21,550,550	3.72%	3.93%	\$11,782,031	\$18,950,712	\$7,168,681
DALLAS	34.05	733		81		3706		529		\$10,384,329	2,020				168		\$18,513,917	3,488	\$3,487,600.00	\$32,385,845	5.58%	5.70%	\$17,107,489	\$28,478,848	\$11,371,359
EL PASO	12.34	1589			159	1793			224	\$6,511,085	468				33		\$3,677,143	797	\$797,400.00	\$10,985,628	1.89%	2.55%	\$7,650,002	\$9,660,332	\$2,010,331
FORT WORTH	34.05	923		103		3953		565		\$11,344,019	2,003				167		\$18,361,750	1,571	\$1,571,300.00	\$31,277,069	5.39%	4.69%	\$14,058,036	\$27,503,833	\$13,445,797
HOUSTON	47.34	145	18			2438	406			\$7,213,808	1,806	181					\$19,868,200	4,770	\$4,770,500.00	\$31,851,508	5.49%	6.09%	\$18,244,696	\$28,008,973	\$9,764,277
LAREDO	23.48	1971		219		2571		367		\$9,967,127	276				23		\$2,525,417	30	\$29,600.00	\$12,522,144	2.16%	2.59%	\$7,745,540	\$11,011,484	\$3,265,945
LUBBOCK	19.11	5176			518	5934		742		\$21,409,290	219				16		\$1,718,357	437	\$437,000.00	\$23,564,647	4.06%	5.07%	\$15,223,509	\$20,721,831	\$5,498,322
LUFKIN	46.52	1555		194		4013	669			\$14,673,833	721	72					\$7,931,000	8	\$8,000.00	\$22,612,833	3.90%	3.35%	\$10,062,336	\$19,884,843	\$6,922,508
ODESSA	15.01	2544			254	5387		648		\$15,342,423	302				22		\$2,322,071	12	\$11,800.00	\$17,731,344	3.06%	3.13%	\$9,382,255	\$15,589,252	\$6,202,497



Scheduling Rehabilitation



Rehabilitation



District Number	District Name	ROADWAY CONDITION		ADDITIONAL NEEDS		LOADING		PACE		Proposed Allocation	Current Allocation
		05-07 LM OF DEEP DISTRESS	% Of Statewide	VMT	% of statewide	ESAL MILES	% Of Statewide	05-07 Condition Score	% of Statewide		
FACTOR:		0.325		0.2		0.325		0.15			
8	Abilene	679.60	0.0266	7,440,575	0.0152	7,755,728	0.0287	0.9107	0.0220	2.43%	2.94%
4	Amarillo	1941.50	0.0759	9,338,097	0.0191	11,510,037	0.0426	0.8512	0.0499	4.98%	4.92%
19	Atlanta	170.80	0.0067	11,297,325	0.0231	10,190,809	0.0377	0.9403	0.0081	2.02%	2.47%
14	Austin	1241.70	0.0485	32,826,881	0.0670	12,009,427	0.0444	0.8754	0.0385	4.94%	4.07%
20	Beaumont	699.90	0.0274	16,303,499	0.0333	9,806,610	0.0363	0.8394	0.0554	3.57%	3.57%
23	Brownwood	185.60	0.0073	4,243,670	0.0087	3,298,542	0.0122	0.9404	0.0080	0.93%	1.30%
17	Bryan	919.80	0.0360	14,547,388	0.0297	10,934,630	0.0404	0.8438	0.0533	3.88%	3.90%
25	Childress	179.20	0.0070	2,567,878	0.0052	4,323,403	0.0160	0.9203	0.0174	1.11%	1.68%
16	Corpus Christi	2138.20	0.0836	15,191,506	0.0310	8,949,814	0.0331	0.8010	0.0734	5.51%	4.87%
18	Dallas	2385.60	0.0933	69,402,799	0.1417	33,306,322	0.1232	0.7464	0.0991	11.35%	10.73%
24	El Paso	361.40	0.0141	12,799,617	0.0261	11,595,498	0.0429	0.8576	0.0469	3.08%	3.23%
2	Fort Worth	1465.90	0.0573	44,101,537	0.0900	17,650,689	0.0653	0.8455	0.0526	6.57%	5.60%
12	Houston	2344.50	0.0917	84,873,231	0.1733	28,883,410	0.1088	0.7854	0.0808	11.13%	11.12%
22	Laredo	1048.40	0.0410	6,020,721	0.0123	4,928,588	0.0182	0.8493	0.0508	2.93%	3.07%
5	Lubbock	2071.80	0.0810	10,037,399	0.0205	6,058,170	0.0224	0.9041	0.0250	4.15%	4.61%
11	Lufkin	380.80	0.0149	8,813,488	0.0180	6,129,425	0.0227	0.8805	0.0361	2.12%	2.36%
6	Odessa	516.90	0.0202	7,712,735	0.0157	8,449,944	0.0312	0.9551	0.0011	2.00%	2.39%
1	Paris	857.30	0.0335	11,183,570	0.0228	7,307,140	0.0270	0.8265	0.0615	3.35%	3.09%
21	Pharr	647.40	0.0253	18,998,828	0.0388	8,853,491	0.0327	0.8671	0.0424	3.30%	2.63%
7	San Angelo	263.80	0.0103	5,077,281	0.0104	4,306,735	0.0159	0.9575	0.0000	1.06%	1.64%
15	San Antonio	2015.20	0.0788	40,498,817	0.0827	16,858,774	0.0623	0.8327	0.0566	7.12%	6.82%
10	Tyler	739.90	0.0289	17,355,068	0.0354	9,961,476	0.0368	0.8899	0.0317	3.32%	3.72%
9	Waco	725.70	0.0284	18,956,614	0.0387	11,231,514	0.0415	0.9150	0.0199	3.35%	3.41%
3	Wichita Falls	584.90	0.0229	7,664,252	0.0158	6,015,436	0.0222	0.9171	0.0189	2.06%	2.28%
13	Yoakum	1011.30	0.0395	12,498,125	0.0255	10,099,120	0.0373	0.8543	0.0484	3.74%	3.60%

JUSTIFICATION -

ROADWAY CONDITION - Takes into account district pavement needs for rehabilitation. Through 3-Yr average of distress score, indirectly address soil and climate affects.

The following distress types warrant rehabilitation:

ACP - Deep rutting, failures, alligator cracking, and longitudinal cracking CRCP - Punchouts, ACP patching JCP - Failures, shattered slabs, longitudinal cracking

The following distress types should be addressed with PM funding or routine maintenance:

ACP - Ride, shallow rutting, patching, block cracking, transverse cracking CRCP - Ride, spalled cracks, PC patching JCP - Ride, failed joints and cracks, and PC patching

VMT - Takes into account district needs for non-pavement uses of Cat. 1 money and affects of passenger vehicles on roadways.

ESAL Miles's - Takes into account rate of deterioration due to traffic loading and number of miles in district subject to ESAL loading.

PACE - Self-adjusting factor to slow rate of improvement of districts at or nearing goal and speeds rate of improvement for districts far from goal.

The background of the slide is a blurred photograph of a multi-lane highway. An overpass structure is visible at the top of the frame. The road surface is dark asphalt with white dashed lane markings. The overall image is out of focus, creating a sense of motion or depth. The text is overlaid in the center in a white, bold, sans-serif font.

The Future of Preservation and Rehabilitation In Texas

Funding Challenges

- Costs up 62% since 2002
- Unreliable Federal funding
- State funds moved to priority programs
- Access to private equity restricted.

Meeting Our Goals



Preserving the State Highway
System

Our Goals are Simple

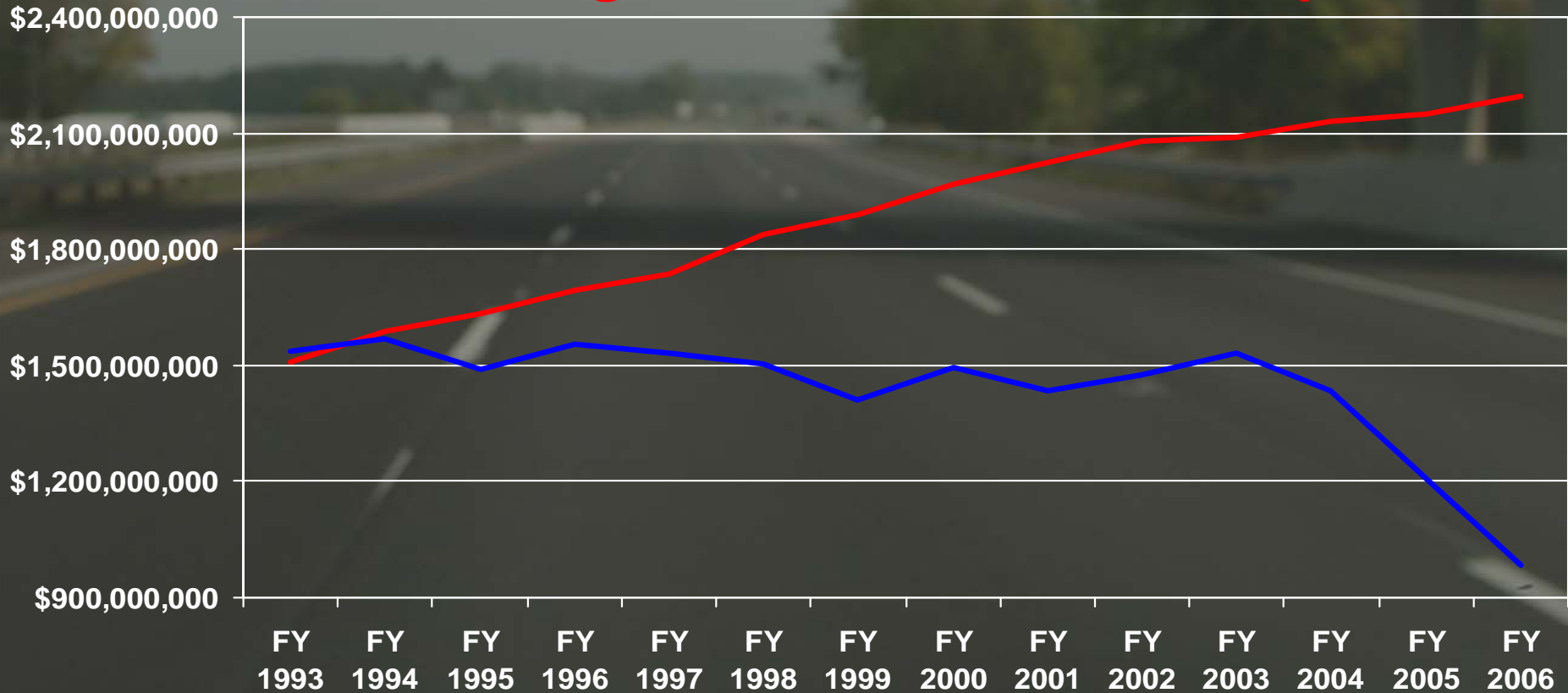
- Improve mobility
- Improve safety
- Improve air quality
- Support economic opportunity
- Maintain our assets

Preservation is Key

With so much attention given to congestion and mobility, the importance of preservation activities is often overlooked.

Inflation Impacts Ability to Meet Goals

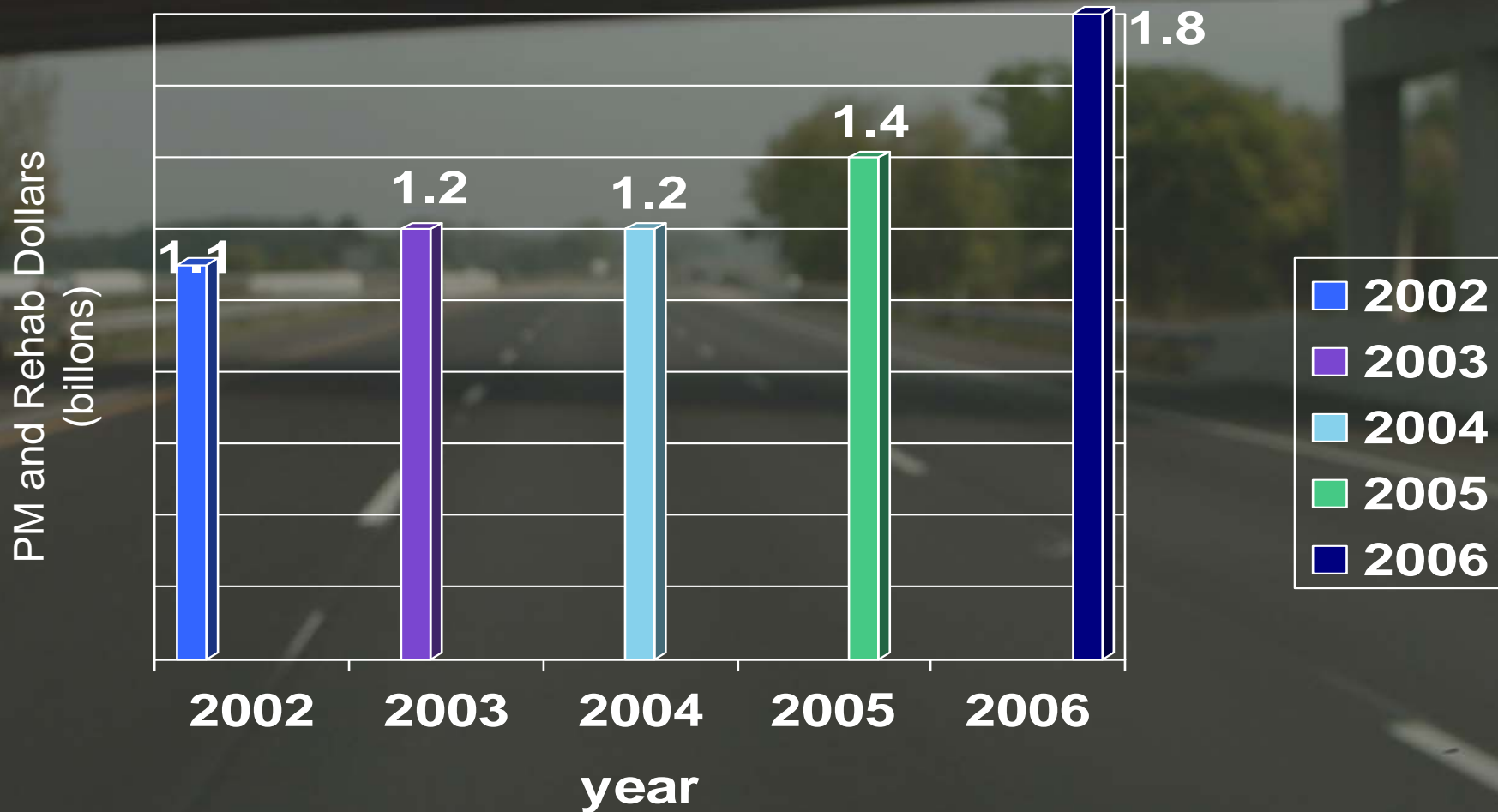
Gross State MFT Deposits Purchasing Power of State MFT Deposits



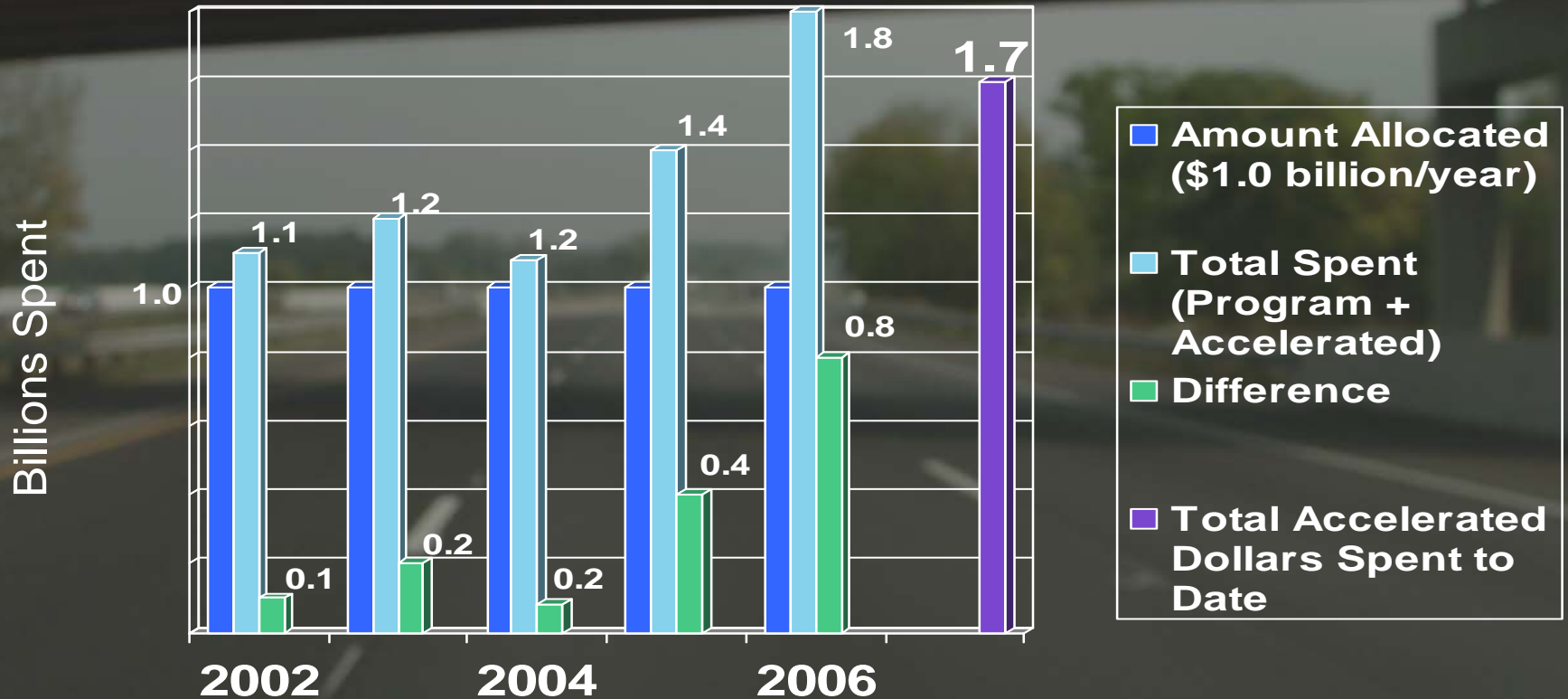
Texas Truck Traffic

- To compound the problem, there are more trucks on the road today.
 - Each truck damages the highway 9,600 times as much as a car.
 - Overweight truck permits increased 45% from 2002 to 2006.

Preservation and Rehabilitation



We are Spending Future Money



- We are currently spending future money to just stay even with inflation

Funds Necessary to Stay Even

* At 86.8% Good or Better

Dollars (Billions)
Needed to Stay Even



Conclusions so far:


- Maintenance and Preservation makes sense and saves money in the long run.
- We are not meeting our goals with our current funding.
- We would need \$3.4 billion more to stay even.
- We would need \$6.4 billion more to meet our goals.
- Inflation has caused us to spend future funds to stay even.

Recommendation

- Move additional funds from Mobility to Preservation and Rehabilitation

We Can't Afford to Meet Our Pavement Goal

To Stay Even with Pavement Conditions	Reduce Mobility Funds by 66%
To Meet Pavement Condition Goal	Reduce Mobility Funds by > 100%



Reducing Mobility Results in:

- Reduced Economic Opportunity
- Reduced Air Quality
- Reduced Safety
- Increased Congestion



End of the Road

Questions?

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