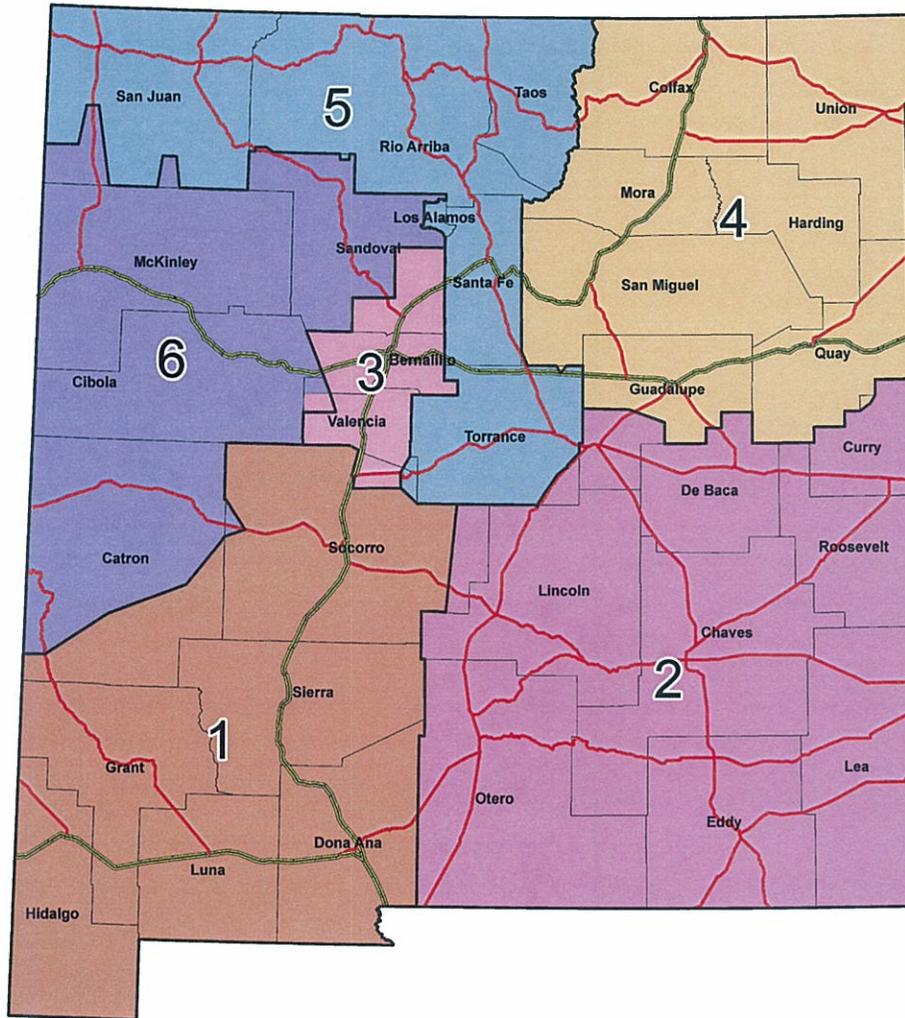




State of the Department of Transportation System

Presented to the
Transportation Infrastructure Revenue Subcommittee
November 6, 2014

NMDOT Roadway Assets



Transportation Infrastructure

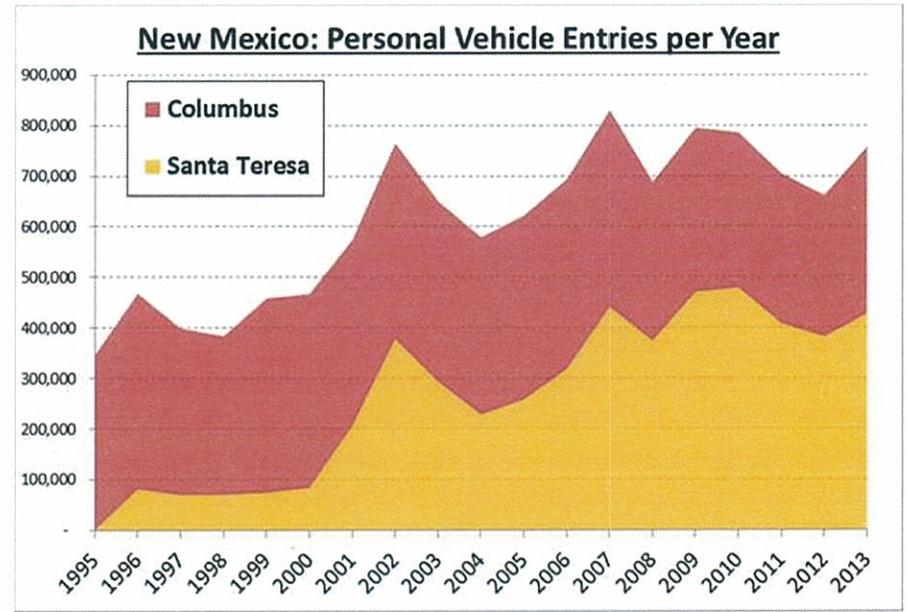
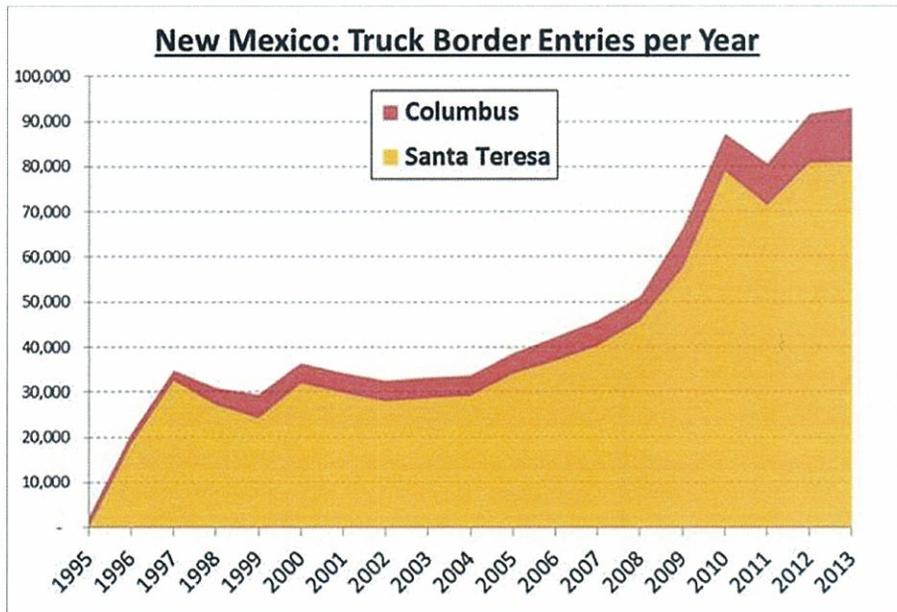
30,000 lane miles,
4,061 lane miles of interstate corridors
8,282 lane miles of US routes
14,294 lane miles of state routes
3,363 lane miles of other routes

265 non right-of-way parcels (649 acres of land)
31 rest areas
82 patrol yards
38 project offices
3,768 span rail, pedestrian & culvert bridges
72 dynamic message signs
43 traffic sensors
2 roadside weather information systems
7 highway advisory radio systems
\$5.5B in depreciable assets

Challenges

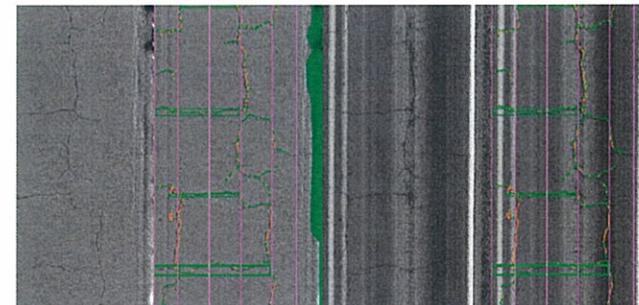
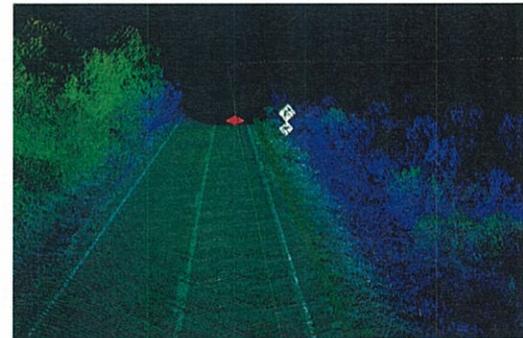
Highway Operations

- Current staffing levels are equivalent to 1999 levels
- Lane Miles have increased by 2,737 since 1999
- Lane miles per FTE have increased by 3 lane miles
- Loss of specialized/technical knowledge base due to the attrition of senior engineers and maintenance workers
- **Financial**
- The economic growth in recent years in New Mexico has impacted the roadways and presents a challenge for the future.
- The Port of Entry expansion in Santa Teresa has increased the oversize overweight truck traffic which has led to deteriorating roads and increased congestion within the region.
- The Oil field flourish has had an enormous impact on roadways throughout much of Southeast and Northwest New Mexico. The roadway system within the areas has not been able to sustain the heavy truck traffic leading to deteriorating roads and increased accidents and fatalities.
- NMDOT's Long Term Debt obligation is taking 55% of Construction project budget.

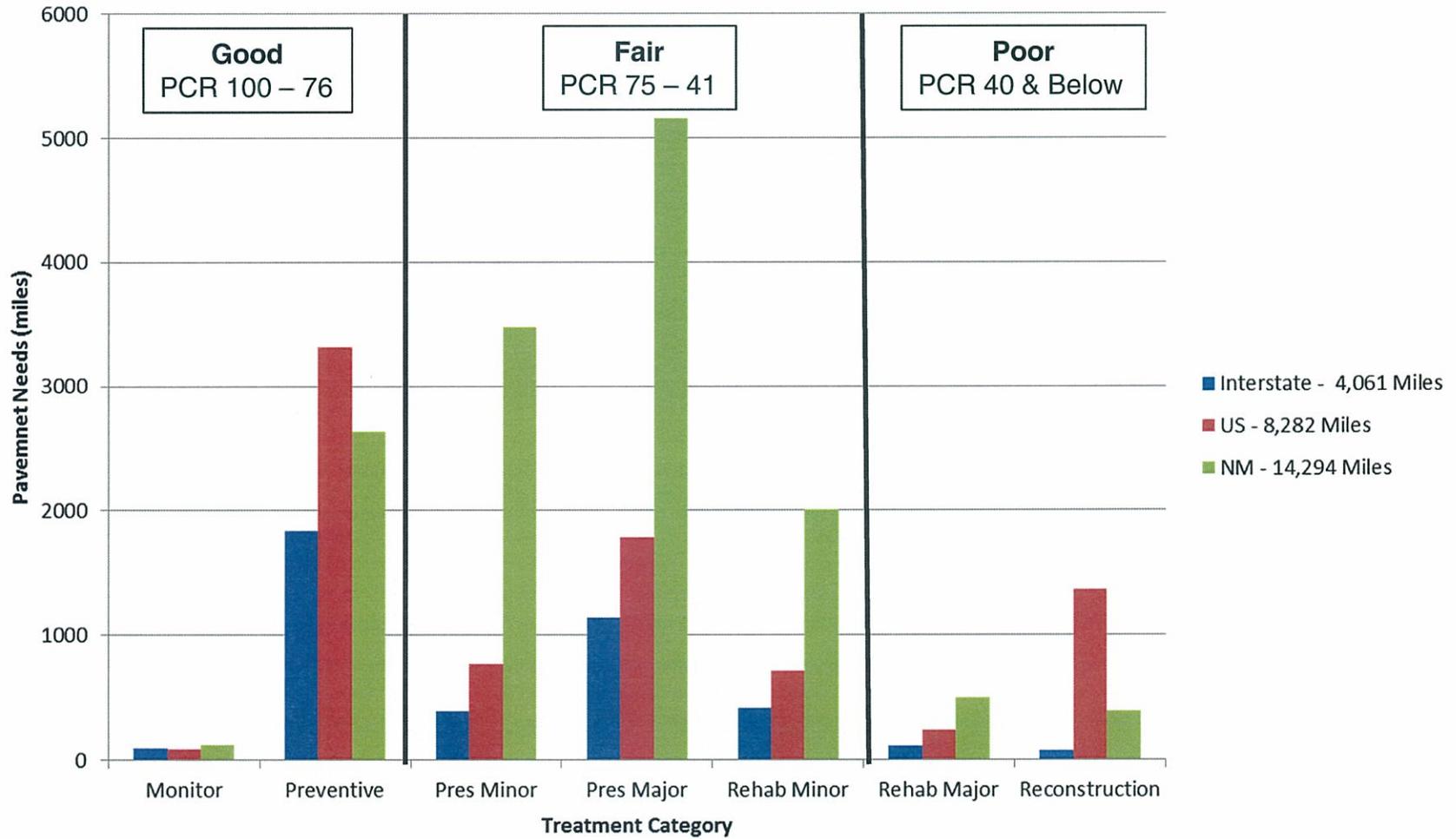


Automated Pavement and Asset Data Collection

- Automated, statewide, full-coverage survey conducted for the first time for the 2013 data cycle.
 - 30,000 lane-miles of pavement data, assets included: Signs, medians, shoulders, rumble strips, retaining walls, vertical clearances, all GPS located.
 - NHS every year, non-NHS on a 2-year cycle
 - 15,000 miles/year of driving lanes
- Pavement Evaluated using Laser Crack Measurement System
 - Pavement Definitions
 - Weathering & Raveling, Bleeding, Rutting & Shoving, Longitudinal Cracking, Transverse Cracking, Alligator Cracking, Edge Cracking, Patching
 - Detects cracks $\geq 1\text{mm}$ in width
 - Automated classification of cracking tailored to NM needs and definitions



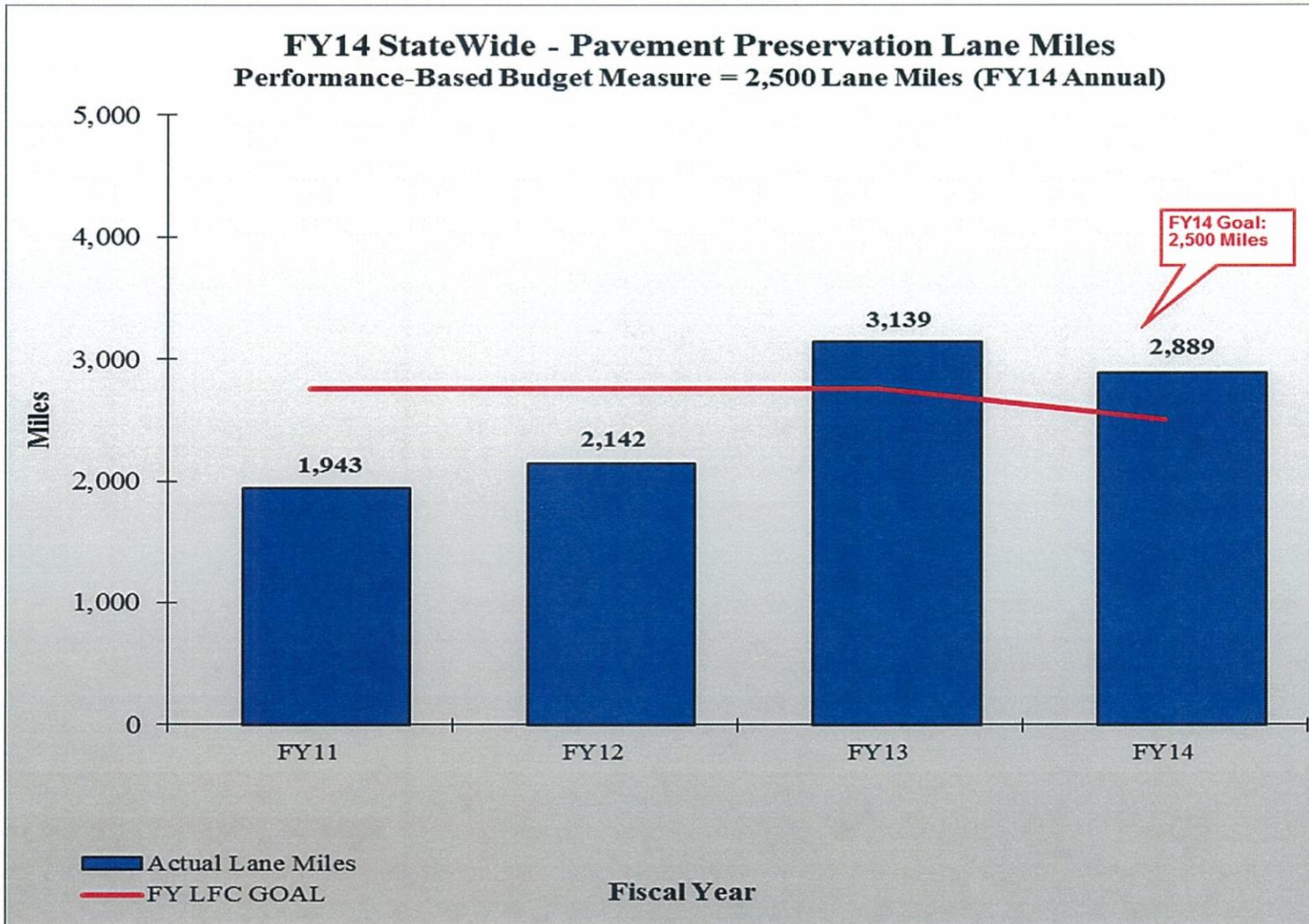
Statewide Repair Needs by Treatment Category



NMDOT Pavement Conditions Rating FY 15

Route Type	Total Mileage	Good Condition Mileage	Need Minor Rehab to Reconst.	% of Good Condition
Interstate	4,061	3,456	605	85%
US	8,282	5,962	2,320	72%
NM	14,294	11,392	2,902	80%
	Total	20,810	5,826	

Annual Pavement Preservation Program



Annual Chip Seal Program Costs and Lane Miles Maintained

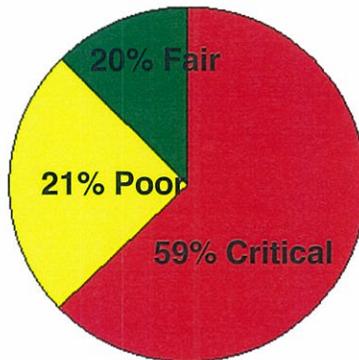


Fleet Management

Fleet Replacement Criteria

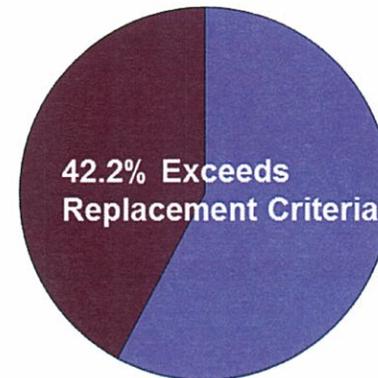
- Light Duty - 125k miles or 7 years
 - Avg. replacement is currently 10 years
- Heavy Duty - 2400-5000 hrs or 10-12 yrs
 - Avg. replacement is currently 20 years
- Average age of equipment 11 years

Condition of Equipment Meeting Replacement Criteria



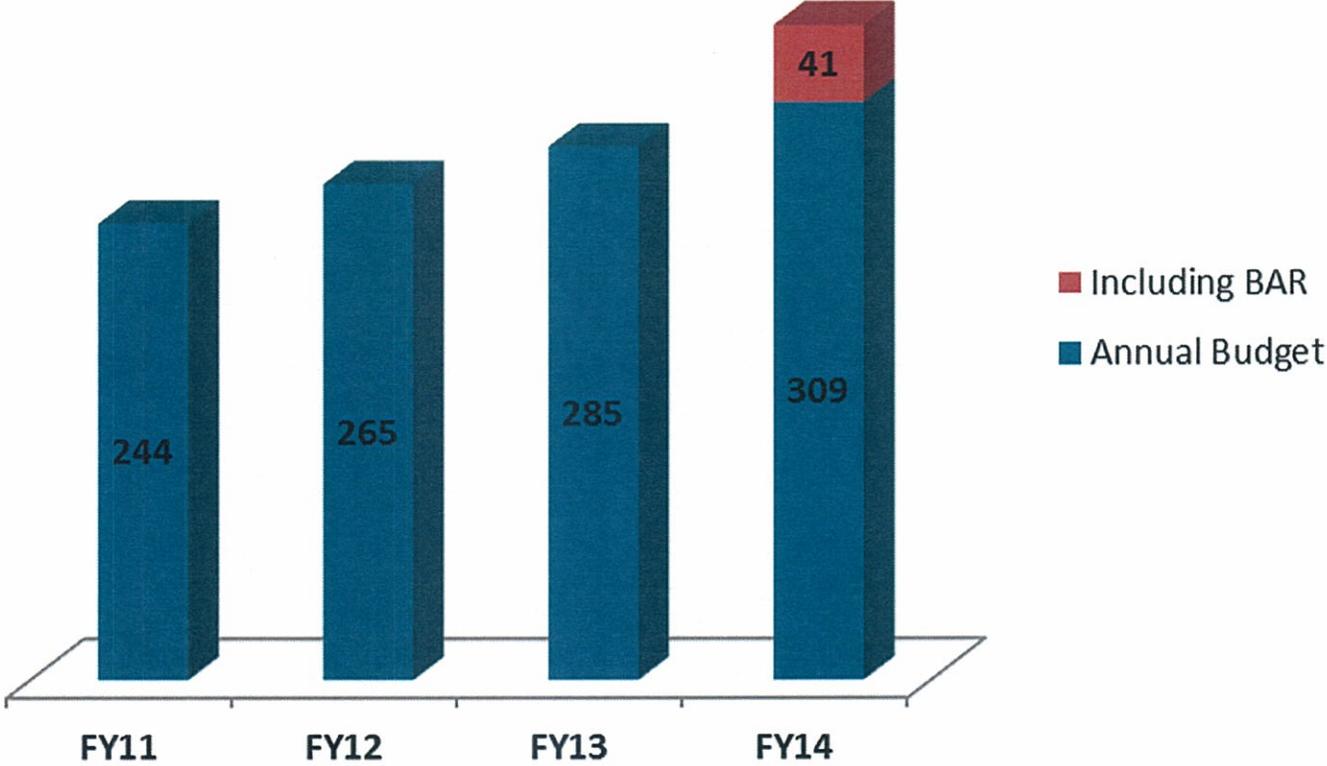
Cost of Equipment Meeting Replacement Criteria

- Asset value: \$232 million

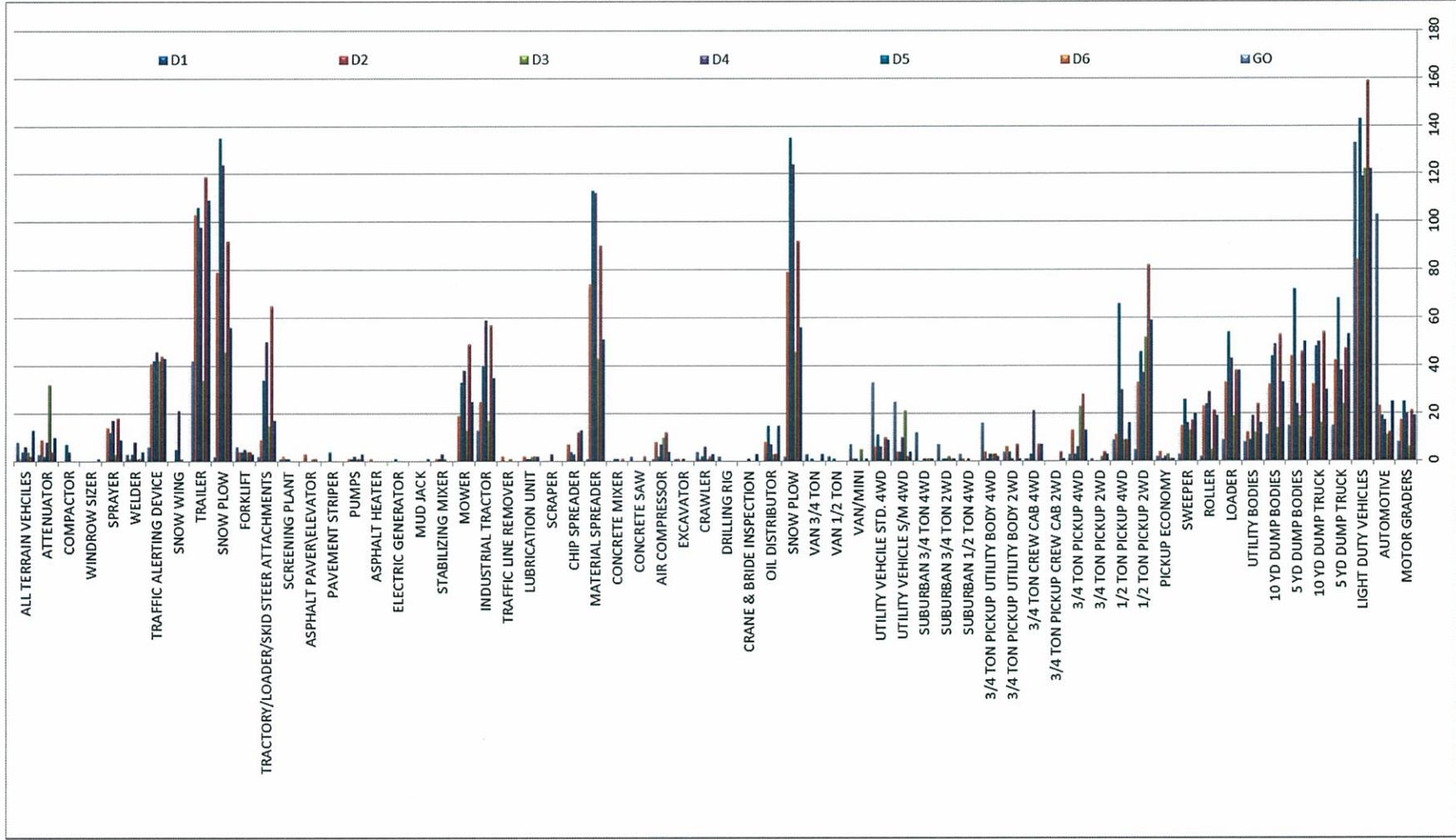


- Estimated lagging replacement costs \$112M
- 2,721 Units exceed replacement criteria
- Current strategy is to downsize and purchase multi-use equipment

Equipment Units Purchased



Current Fleet Distribution



Maintenance Gaps

Fiscal Year 2015 Approved Operating Budget Compared to Estimated Need				
	(In Millions)			
Routine Maintenance		Budget	Needs	Gap
Routine Pavement & Roadway Maintenance	Blade Patching, Pothole Repair, Ditch Cleaning, Drainage, Mowing, Guardrail Repair & Replacement, Post & Cable Repair & Replacement.	\$ 16.8	\$ 33.5	\$ 16.7
Routine Sign Maintenance	Inventory of 187,506 Signs - approximately 13,400 need to be replaced at an average cost of \$440 per sign on a 14 year cycle.	\$ 4.3	\$ 9.0	\$ 4.7
Routine Pavement Striping	Benchmark of 188.0M liner foot, striped at \$0.12 per liner foot.	\$ 8.9	\$ 22.6	\$ 13.7
Pavement Preservation	5 Year Average Need - Preventive Maintenance, Preservation Minor, Preservation Major. 30 year cycle at 10% or 3,000 lane mile benchmark	\$ 65.0	\$ 97.9	\$ 32.9
Chip Seal Program	5-6 Year cycle or 2,500 lane mile benchmark	\$ 11.5	\$ 28.5	\$ 17.0
Emergency Response	Snow Removal, Emergency Repair, Litter Removal	\$ 12.1	\$ 14.7	\$ 2.6
Equipment Replacement	Loaders, Tractors, Backhoes, Mowers, etc.	\$ 10.0	\$ 33.0	\$ 23.0
Equipment Repair	Loaders, Tractors, Backhoes, Mowers, etc.	\$ 6.4	\$ 8.1	\$ 1.7
Natural Disasters (Event Specific)		\$ -	\$ -	\$ -
Bridge Maintenance	Preventative Maintenance and other minor reconstruction and rehab.	\$ 15.2	\$ 18.7	\$ 3.5
Total		\$ 150.2	\$ 266.0	\$ 115.8

Construction Gaps

Fiscal Year 2015 Approved Operating Budget Compared to Estimated Need				
(In Millions)				
		Budget	Needs	Gap
Roadway Reconstruction and Rehabilitation	Estimated need of 11.9 billion over the next 20 years or an average of \$595 million per year. Performing 75 percent of the estimated requirement would address the most critical needs.	\$ 198.0	\$ 452.6	\$ 254.6
Bridge Replacement and Repair	Replace or rehab all Structurally Deficient (SD) bridges in a 5 year period	\$ 39.4	\$ 48.1	\$ 8.7
Bridge Replacement	Need to replace approximately 27 bridges per year based upon an average 50 year design life at an average cost of 3.6 million per bridge, (cost per bridge is based on a average bridge cost).	\$ 17.9	\$ 85.1	\$ 67.2
Buried Bridges Replacement and Repair	Replace/Repair buried bridges (concrete box culverts and some CMP's) which have met their design life. 20 culverts per year at \$715,000 per buried bridge.	\$ 2.0	\$ 14.3	\$ 12.3
	If all 128 functionally obsolete bridges were used as FY15 Need at a cost ranging from \$116,000 to \$14.2 million per bridge. (Note: Not included in Total)		\$ 337,945.0	
Total		\$ 257.3	\$ 600.1	\$ 342.8
Grand Total For Maintenance and Construction		\$ 407.5	\$ 866.1	\$ 458.6