



Private Roads
Maintenance
Workshop

Been There/Done That

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Pavement Surface Evaluation and Rating (PASER) System

The PASER system is a management tool used to rate the condition of road pavement based on a visual inspection. It provides a way to compare roads within a community and suggests the type of maintenance that may be warranted.

Most pavements will deteriorate through various phases as shown. The rate at which pavement deteriorates from an excellent (10) to a very poor condition (1) depends largely on its environment, traffic loading conditions, original construction quality, and interim maintenance procedures. Two pavements constructed at the same time may have significantly different lives, or certain portions of a pavement may deteriorate more rapidly than others, due to material or construction problems.

The PASER rating scale can generally be translated into maintenance categories as shown. The normal maintenance or rehabilitation procedure has been found helpful in relating to the surface rating scheme. However, choosing an individual surface rating should not automatically dictate the final maintenance or rehabilitation technique. Future traffic projections, original construction and pavement strength should be considered since these may dictate a more comprehensive rehabilitation. On the other hand, it may be appropriate under special conditions to do nothing and let the pavement fully deteriorate, and then rebuild when funds are available.

The key to using the PASER program is to use it consistently and at regular intervals. Once a relative measure for the overall condition of each local road section has been determined it is possible to:

- select appropriate treatments for each section,
- evaluate road sections competing for immediate attention,
- anticipate future deterioration and apply inexpensive maintenance options while they are still feasible; and
- justify budgets for roadway improvements that are adequate to keep the roads in good condition so they will remain less expensive over the long term.

Pavement surface evaluation is an appropriate tool for smaller neighborhoods, yet it can be used on any size road system. It can be implemented inexpensively using the existing maintenance team and can provide a wealth of valuable information at a very reasonable cost.

The best use of PASER is for planning because it gives a picture of road conditions on all roads and can identify candidates for maintenance and rehabilitation. Pavement ride, skid resistance and other safety considerations should be used when selecting final priorities and types of improvement. The PASER system formalizes the procedure to improve consistency from year to year and between individuals, which in turn allows for better planning and decision making.

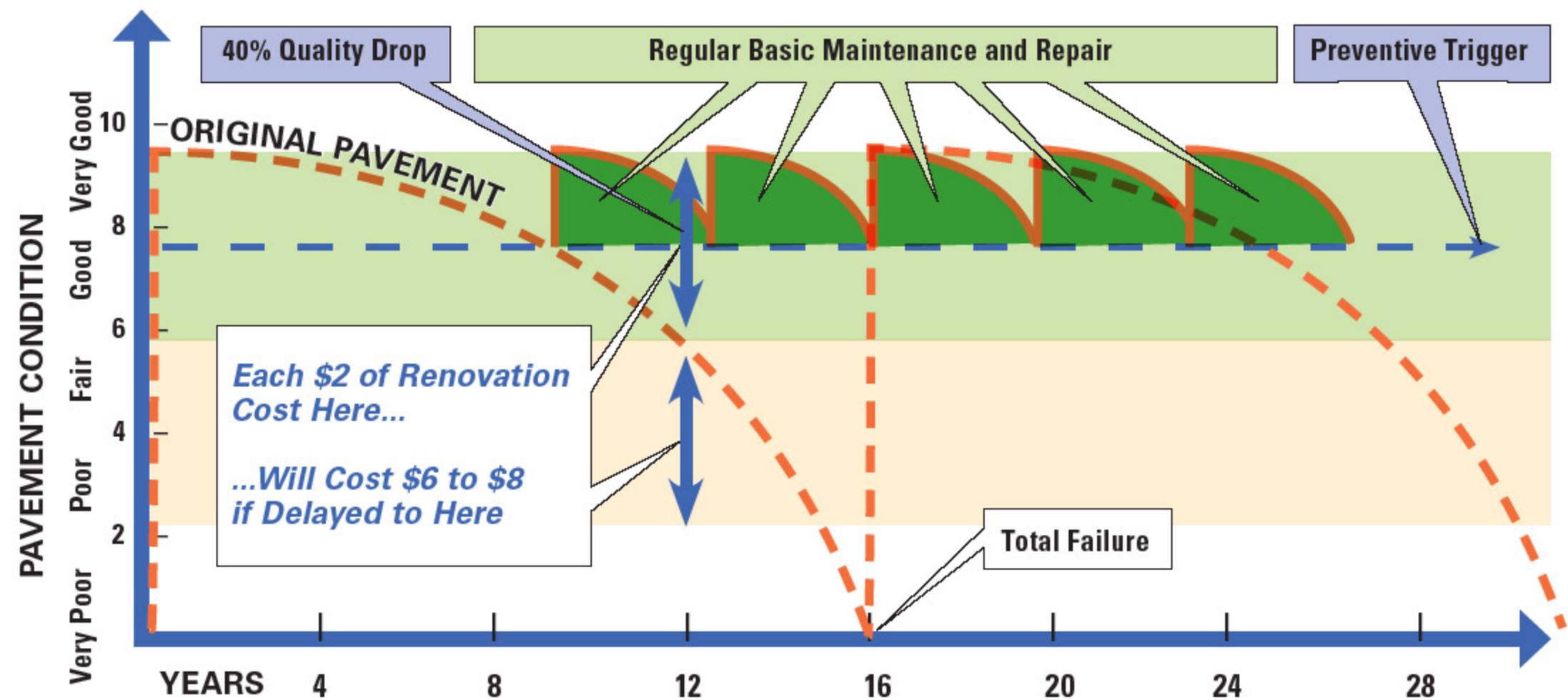
Pavement Surface Evaluation and Rating (PASER) System

PASER Rating	Maintenance Category
9 and 10	No maintenance required
7 and 8	Routine maintenance -- cracksealing and minor patching
5 and 6	Preservative treatments – sealcoating
3 and 4	Structural improvement and leveling - -- overlay
1 and 2	Reconstruction

This chart describes the PASER rating system in detail and provides a description of the all the rating levels from 1 to 10 and what can be expected for each rating level. Note that individual pavements will not have all of the types of distress listed for any particular rating. They may have only one or two types.

Surface Rating		Visible Distress	General Condition / Treatment Measures
10	Excellent	None	New construction
9	Excellent	None	Recent overlay, like new.
8	Very Good	No longitudinal cracks except reflection of paving joints. Occasional transverse cracks, widely spaced (40' or greater).	Recent sealcoat or new road mix. Little or no maintenance required.
7	Good	Very slight or no raveling, surface shows some traffic wear. Longitudinal cracks (open 1/4") spaced due to reflection or paving joints. Transverse cracks (open 1/4") spaced 10 feet or more apart, little or slight crack raveling. No patching or very few patches in excellent condition.	First signs of aging. Maintain with routine crack filling.
6	Good	Slight raveling (loss of lines) and traffic wear. Longitudinal cracks (open 1/4" - 1/2") due to reflection and paving joints. Transverse cracking (open 1/4" - 1/2") some spaced less than 10 feet. Slight to moderate flushing or polishing. Occasional patching in good condition.	Show signs of aging, sound structural condition. Could extend life with sealcoat.
5	Fair	Moderate to severe raveling (loss of lines and coarse aggregate). Longitudinal cracks (open 1/2") show some slight raveling and secondary cracks. First signs of longitudinal cracks near wheel path or edge. Transverse cracking and first signs of block cracking. Slight crack raveling (open 1/2"). Extensive to severe flushing or polishing. Some patching or edge wedging in good condition.	Surface aging, sound structural condition. Needs sealcoat or non-structural overlay.
4	Fair	Severe surface raveling. Multiple longitudinal and transverse cracking with slight raveling. Block cracking (over 25 - 50% of surface). Patching in fair condition. Slight rutting or distortions (1" deep or less).	Significant aging and first signs of need for strengthening. Would benefit from recycling or overlay.
3	Poor	Closely spaced longitudinal and transverse cracks often showing raveling and crack erosion. Block cracking over 50% of surface. Some alligator cracking (less than 25% of surface). Patches in fair to poor condition. Moderate rutting or distortion (1" or 2" deep). Occasional potholes.	Need patching and major overlay or complete recycling.
2	Very Poor	Alligator cracking (over 25% of surface). Severe distortions (over 2" deep). Extensive patching in poor condition. Potholes.	Severe deterioration. Need reconstruction with extensive base repair.
1	Failed	Severe distress with extensive loss of surface integrity.	Failed. Needs total reconstruction.

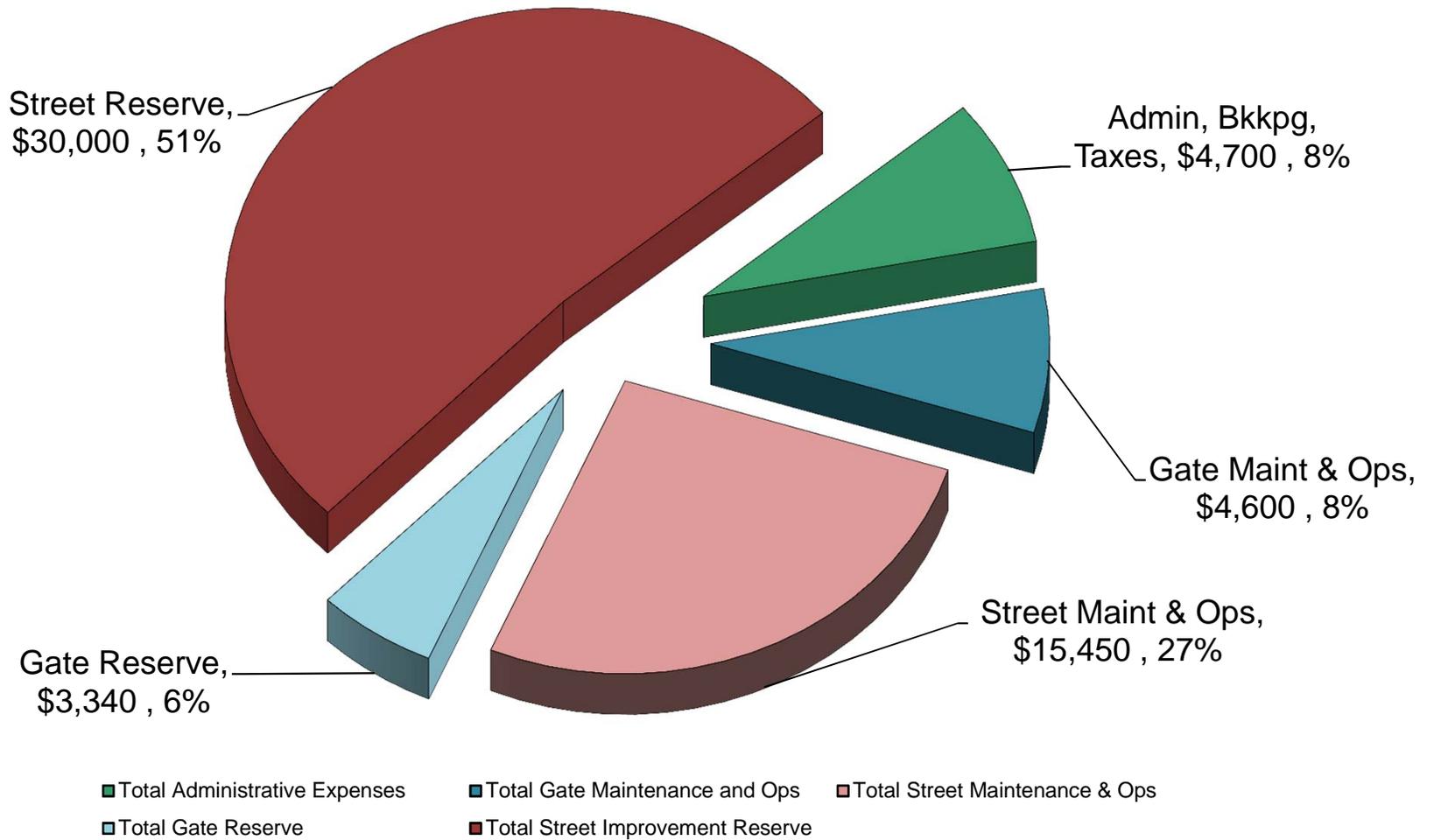
The Cost of "Timely" Maintenance



Determine High-Level Cost Options

- Complete Replacement / Reconstruction – Surface condition 2 or less.
 - \$1,255,000 (\$10,500 ten year OKC Assessment)
 - \$1,050,000 (Commercial low bid)
- Partial Replacement Reconstruction – Once the surface condition is 4 or 3.
 - \$368,000 to \$337,000 (\$2,200 to \$2,000 per homeowner)
- Renovation/Mill Overlay – Once surface conditions reach a level 5
 - \$115,000 (\$170 per homeowner over 4 years)
- Rehabilitation/Repairs - 2011
 - \$70,000 (\$100 per homeowner over 4 years)
- Preventative Maintenance - Annually
 - \$9,000 annually (\$53 per homeowner)

FGV Annual Budget 2013



Private Road Maintenance for Homeowners Associations

- ✓ Know who is responsible for your roads. Secure the documents.
- ✓ Cover all your legal protections. Incorporation, Insurance, and Adhere to your Bylaws.
- ✓ Know how much roadway you have to manage, measure, survey if needed; manage data in an electronic spreadsheet for cost and priority scenarios.
- ✓ Use the PASER system or similar to assess and rate the condition of your roads.
- ✓ Engage your neighbors, create awareness and communicate.
- ✓ Determine specific areas and types of repairs/maintenance as priorities.
- ✓ Solicit for estimates from reputable asphalt and paving contractors.
- ✓ Negotiate for unit costs and contracts; extrapolate for overall and scenario based repair plans. Develop a maintenance plan.
- ✓ Develop an annual budget, long-range reserve plan. Communicate.