

Paving Repair and Replacement 2018

Stages of Asphalt Deterioration

When estimating asphalt repair or replacement one should be aware of four recognizable states of deterioration that occur on paved surfaces. Some parts of a parking lot will likely be degraded to a greater extent than others and a typical un-maintained lot will show evidence of all four stages:

Stage I Pre-oxidation - The condition of a new parking lot before sunlight, rain and traffic started to wear off the asphalt emulsion topping. Solution: Preventative maintenance every 3-4 years by seal coating and re-striping

Stage II Oxidation - Moderate: Asphalt emulsion has worn away exposing the top surface of aggregate rock beneath Solution: Seal coat using a sand and latex asphaltic emulsion, res-tripe lot.



Not Seal Coated

Seal Coated

Stage III Oxidation - Severe: Voids between the aggregate rock have enlarged to a point where they cannot be satisfactorily bridged with a sealer. Solution: Overlay asphalt with 1&1/2 asphalt topping, re-stripe lot.

Stage IV Alligator Cracking: This condition most frequently appears in the high traffic areas of the lot where cracks form due, in most cases, to unstable base material below the asphalt exacerbated by heavy vehicle traffic. The cracks become connected to each other rendering the look of an alligator hide. This condition may spread rapidly once water has begun to seep through the cracks, liquefying the underlying base material and causing further subsidence and more cracking. Solution: Cut out the areas that are cracking and replace them with new asphalt, seal coat, stripe if necessary. Frequently, in high traffic areas, it is best to increase the thickness of the asphalt from 4" to between 6" and 8"

The prices given below were solicited from a bay area paving contractor. These are rule of thumb costs - several factors will influence the final figures for a specific project, they are:



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- Configuration and frequency of landscape islands
- Distance from asphalt plant to the site
- Space availability on the site for crew and equipment
- The number of phases for the work.

#	Common Paving Work	Unit	10 KSF to 50 KSF
1	Seal Coat to prevent further deterioration	S.F.	\$ 0.20
2	Seal Coat with Sand/latex, bridge small voids	S.F.	\$ 0.25
3	Asphalt overlay (1-1/2") where # 2 is inadequate	S.F.	\$ 2.00
4	Cut and replace up to a depth of 4"	S.F.	\$3.75
5	Cut and replace up to a depth of 6" (Trash lanes)	S.F.	\$ 5.50
6	Stripe parking stalls after any of the above	Each	\$6.00
7	HC stall, with logo, hatching, sign, Van Accessible	Each	\$500.00
8	HC stall, with logo, hatching, sign, Regular	Each	\$450.00

Isolated cracks can be repaired using the follow methods

Cracks less that ¼" wide	"Cold pour" crack fill	L.F.	\$ 0 .50
Cracks between ¼" and 1"	Hot rubberized filler	L.F.	\$ 1.10
Cracks over an inch	Sheet asphalt	L.F.	\$ 1.75
Landscape curb replacement	(minimum 100 Feet)	L.F.	\$ 40.00

Trade Contributor: Black Diamond Paving, Inc. (510) 770-1150 Chris Soria

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Sample report and other data available at www.ticon.com

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