

APPENDIX 4: TYPICAL PAVEMENT M&R SCHEDULES FOR CALIFORNIA

The following pavement M&R schedules are the consolidation of the “Pavement M&R Decision Trees” (used for activity scheduling) included in Caltrans districts’ ten-year pavement plans. Currently, each Caltrans district has its own set of pavement decision trees, most of which have different sequences of pavement M&R activities, depending on route class (alternatively known as maintenance service level) and pavement type. The following compilation of California-specific pavement M&R schedules has been developed to simplify the selection of a pavement M&R schedule for the LCCA.

The categorization of these California-specific pavement M&R schedules was based on four factors: the climate region, maintenance service level, existing pavement type/final surface type, and project type/initial M&R strategy (i.e., project alternative). The nine climate regions shown in Figure A4-1 are grouped into the five climate regions (i.e., All Coastal, Inland Valley, High Mountain & High Desert, Desert, and Low Mountain & South Mountain), and the pavement M&R decisions applicable to these five climate regions are collected from the district offices.

If a pavement decision tree for a particular pavement type was not available for a particular climate region, a similar decision tree from another region was utilized. For pavement decision trees for products with limited to no examples available in California (such as continuously reinforced concrete pavement), information from national sources and other states with similar climates/products was used.

Remaining Service Life (RSL)

When doing a widening project with a RSL alternative that is different from the values in the M&R Schedules, the life of the initial activity must be adjusted to reflect the difference in pavement design life. So for example, if a widening project has a RSL alternative of 25 years, and the service life of the initial activity in the M&R schedule for a 20-year pavement design life is 23 years, then the initial activity period that should be entered into *RealCost* should be 28 years (23 + 5 from difference in remaining life of existing pavement to theoretical 20-year pavement.)

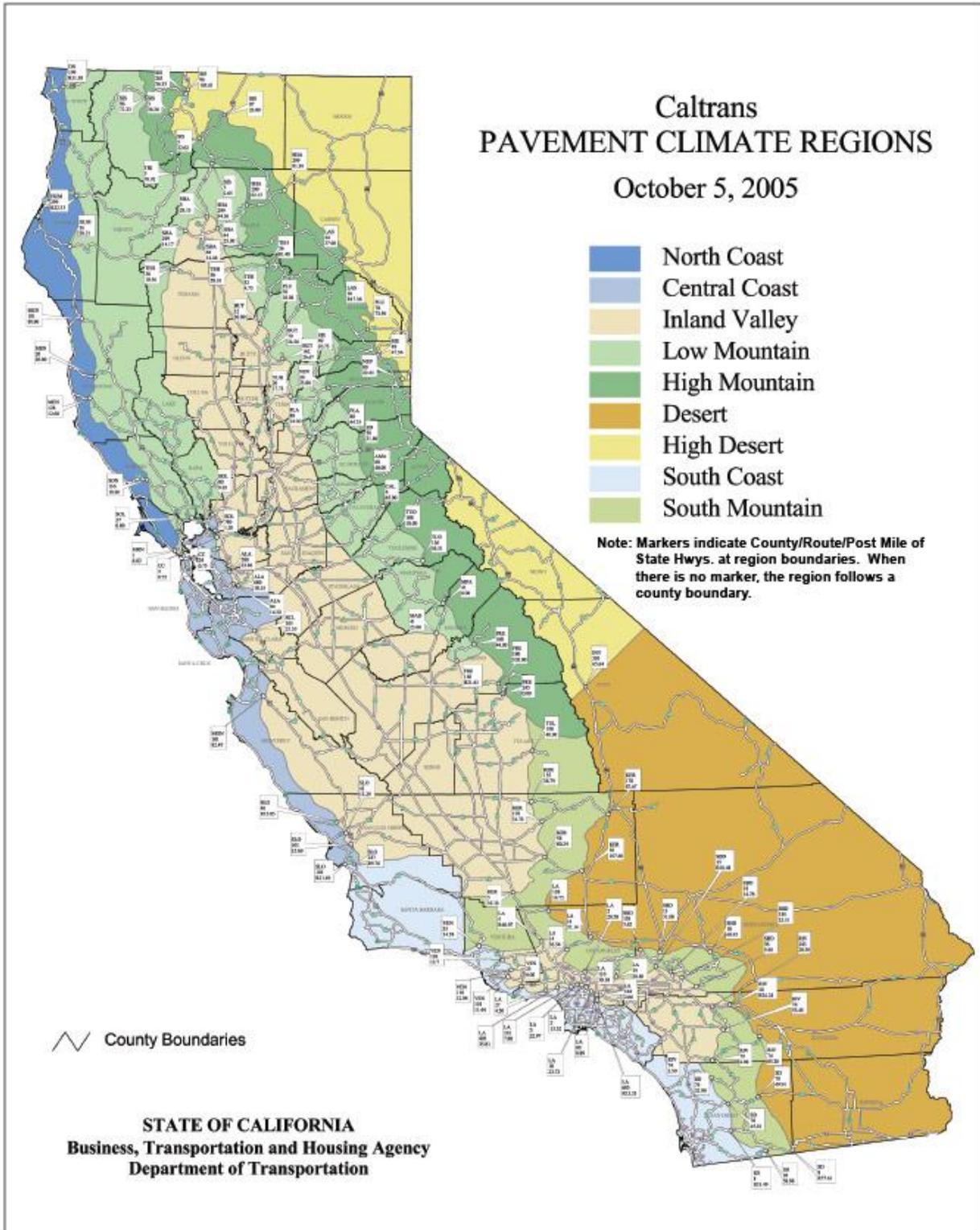


Figure A4-1: Map of Caltrans Climate Regions

(This map can be found at

http://www.dot.ca.gov/hq/maint/Pavement/Offices/Pavement_Engineering/Climate.html

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TABLE F-1 (a)
All Coastal Climate Regions
HOT MIX ASPHALT PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55				
New Construction/Reconstruction																			
HMA	20	1,2	Year of Action	0				20		25				45		50			
			Activity Description	New / Reconstruct				CAPM HMA		Rehab HMA (20 yr)				CAPM HMA		Rehab HMA (20 yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	20	3,300	5	1,100	20	2,900	5	1,100	20	2,900					
		3	Year of Action	0				20				30				40		45	
			Activity Description	New / Reconstruct				CAPM HMA				CAPM HMA				CAPM HMA		Rehab HMA (20 yr)	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	20	3,300	10	6,100			10	6,100			5	1,100	20	2,900	
CAPM																			
HMA	5+	1,2	Year of Action	0		5				25		30				50			
			Activity Description	CAPM HMA		Rehab HMA (20 yr)				CAPM HMA		Rehab HMA (20 yr)				CAPM HMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	5	1,100	20	2,900			5	1,100	20	2,900			5	1,100	
		3	Year of Action	0				10				30		35					
			Activity Description	CAPM HMA				CAPM HMA				CAPM HMA		Rehab HMA (20 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	6,200	10	6,100			5	1,100	20	2,900					
Rehabilitation																			
HMA	20	1,2,3	Year of Action	0				20		25				45		50			
			Activity Description	Rehab HMA (20 yr)				CAPM HMA		Rehab HMA (20 yr)				CAPM HMA		Rehab HMA (20 yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	20	2,900	5	1,100	20	2,900	5	1,100	20	2,900					

TABLE F-1 (b)
All Coastal Climate Regions
HOT MIX ASPHALT W/ OGFC PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55				
New Construction/Reconstruction																			
HMA w/ OGFC	20	1,2	Year of Action	0						22		32		54					
			Activity Description	New / Reconstruct						CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20 yr)		CAPM HMA w/ OGFC					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	22	2,300					10	3,700	22	3,600	10	3,700			
		3	Year of Action	0						22		32		42		52			
			Activity Description	New / Reconstruct						CAPM HMA w/ OGFC		CAPM HMA w/ OGFC		CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20 yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	22	2,300					10	3,700	10	6,800	10	6,800	22	3,600	
	40	1,2	Year of Action	0								40		50					
			Activity Description	New / Reconstruct								CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20-yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	5,200							10	3,700	22	2,300			
		3	Year of Action	0								40		50					
			Activity Description	New / Reconstruct								CAPM HMA w/ OGFC		CAPM HMA w/ OGFC					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	5,200							10	3,700	10	3,700			
CAPM																			
HMA w/ OGFC	5+	1,2	Year of Action	0		10						32		42					
			Activity Description	CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20 yr)						CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	3,700	22	2,300					10	4,000	22	3,200			
		3	Year of Action	0		10		20		30						52			
			Activity Description	CAPM HMA w/ OGFC		CAPM HMA w/ OGFC		CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20 yr)						CAPM HMA w/ OGFC			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	3,700	10	6,800	10	6,800	22	3,600					10	3,700	
Rehabilitation																			
HMA w/ OGFC	20	1,2,3	Year of Action	0						22		32		54					
			Activity Description	Rehab HMA w/ OGFC (20 yr)						CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20 yr)		CAPM HMA w/ OGFC					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	22	2,300					10	4,000	22	3,200	10	4,000			
	40	1,2,3	Year of Action	0								40		50					
			Activity Description	Rehab HMA w/ OGFC (40 yr)								CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (40 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	5,700							10	3,700	40	5,700			

TABLE F-1 (c)
All Coastal Climate Regions
HOT MIX ASPHALT W/ RHMA PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55			
New Construction/Reconstruction																		
HMA w/ RHMA	20	1,2	Year of Action		0				23				33					
			Activity Description		New / Reconstruct				CAPM HMA w/ RHMA				Rehab HMA w/ RHMA (20 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	23	2,700	10	3,500	23	3,500								
		3	Year of Action		0				23				33		43		53	
			Activity Description		New / Reconstruct				CAPM HMA w/ RHMA				CAPM HMA w/ RHMA		CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	23	2,700	10	3,500	10	6,500	10	6,500	23	3,500				
	40	1,2	Year of Action		0								40				50	
			Activity Description		New / Reconstruct								CAPM HMA w/ RHMA				Rehab HMA w/ RHMA (20 yr)	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	4,000	10	3,500	23	2,700								
		3	Year of Action		0								40				50	
			Activity Description		New / Reconstruct								CAPM HMA w/ RHMA				CAPM HMA w/ RHMA	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	4,000	10	3,500	10	3,500	10	3,500						
CAPM																		
HMA w/ RHMA	5+	1,2	Year of Action		0		10				33				43			
			Activity Description		CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)				CAPM HMA w/ RHMA				Rehab HMA w/ RHMA (20 yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	3,500	23	3,500	10	3,500	23	3,500						
		3	Year of Action		0		10		20		30						53	
			Activity Description		CAPM HMA w/ RHMA		CAPM HMA w/ RHMA		CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)				CAPM HMA w/ RHMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	3,500	10	7,600	10	7,600	23	3,500	23	3,500				
Rehabilitation																		
HMA w/ RHMA	20	1,2,3	Year of Action		0				23				33					
			Activity Description		Rehab HMA w/ RHMA (20 yr)				CAPM HMA w/ RHMA				Rehab HMA w/ RHMA (20 yr)					
	Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	23	3,500	10	3,500	23	3,500										
	40	1,2,3	Year of Action		0								40				50	
Activity Description			Rehab HMA w/ RHMA (40 yr)								CAPM HMA w/ RHMA				Rehab HMA w/ RHMA (40 yr)			
Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	4,800	10	3,500	40	4,800											

TABLE F-1 (d)
All Coastal Climate Regions
RUBBERIZED HOT MIX ASPHALT PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55				
New Construction/Reconstruction																			
RHMA	20	1,2	Year of Action	0								22	28			50			
			Activity Description	New / Reconstruct								CAPM RHMA	Rehab RHMA (20 yr)			CAPM RHMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	22	2,200							6	900	22	2,500	6	900	
		3	Year of Action	0								22			32			42	51
			Activity Description	New / Reconstruct								CAPM RHMA			CAPM RHMA			CAPM RHMA	Rehab RHMA (20 yr)
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	22	2,200							10	4,100			10	4,000	9
CAPM																			
RHMA	5+	1,2	Year of Action	0		6		28		34									
			Activity Description	CAPM RHMA		Rehab RHMA (20 yr)		CAPM RHMA		Rehab RHMA (20 yr)									
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	6	900	22	2,500	6	900	22	2,500							
		3	Year of Action	0		10		20		29						51			
			Activity Description	CAPM RHMA		CAPM RHMA		CAPM RHMA		Rehab RHMA (20 yr)						CAPM RHMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	4,000	10	4,100	9	4,400	22	2,500			10	4,000			
Rehabilitation																			
RHMA	20	1,2,3	Year of Action	0								22	28			50			
			Activity Description	Rehab RHMA (20 yr)								CAPM RHMA	Rehab RHMA (20 yr)			CAPM RHMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	22	2,500							6	900	22	2,900	6	900	

TABLE F-1 (e)
All Coastal Climate Regions
RUBBERIZED HOT MIX ASPHALT W/ RHMA-O PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55	
New Construction/Reconstruction																
RHMA w/ RHMA-O	20	1,2	Year of Action		0				24		35					
			Activity Description		New / Reconstruct				CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)					
		Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	24	2,700	11	3,100	24	1,900							
		Year of Action		0				24		35		46				
	Activity Description		New / Reconstruct				CAPM RHMA w/ RHMA-O		CAPM RHMA w/ RHMA-O		CAPM RHMA w/ RHMA-O					
	Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	24	2,700	11	3,100	11	7,000			11		7,000			
	40	1,2	Year of Action		0						40				51	
			Activity Description		New / Reconstruct						CAPM RHMA w/ RHMA-O				Rehab RHMA w/ RHMA-O	
Activity Service Life (years)		Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	3,800	11	3,100			24		1,900					
Year of Action		0						40				51				
Activity Description		New / Reconstruct						CAPM RHMA w/ RHMA-O				CAPM RHMA w/ RHMA-O				
Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	3,800	11	3,100			11		7,000						
CAPM																
RHMA w/ RHMA-O	5+	1,2	Year of Action		0		11		35		46					
			Activity Description		CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)		CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)					
	Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	11	3,800	24	1,900	11	3,800	24	1,900						
	Year of Action		0		11		22		33							
Activity Description		CAPM RHMA w/ RHMA-O		CAPM RHMA w/ RHMA-O		CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)								
Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	11	3,800	11	7,000	11	7,000	24	1,900							
Rehabilitation																
RHMA w/ RHMA-O	20	1,2,3	Year of Action		0				24		35					
			Activity Description		Rehab RHMA w/ RHMA-O (20 yr)				CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)					
	Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	24	1,900	11	3,300	24	1,900								
	Year of Action		0						40				51			
Activity Description		Rehab RHMA w/ RHMA-O (40 yr)						CAPM RHMA w/ RHMA-O				Rehab RHMA w/ RHMA-O (40 yr)				
Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	5,000	11	3,300			40		5,000						

TABLE F-2 (a)
Inland Valley Climate Region
HOT MIX ASPHALT PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55						
New Construction/Reconstruction																					
HMA	20	1,2	Year of Action	0				18		23				41		46					
			Activity Description	New / Reconstruct				CAPM HMA		Rehab HMA (20 yr)				CAPM HMA		Rehab HMA (20 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	18	3,600	5	1,100	18	2,700	5	1,100	18	2,700	5	1,100	18	2,700			
		3	Year of Action	0				18				27				36		43			
			Activity Description	New / Reconstruct				CAPM HMA				CAPM HMA				CAPM HMA		Rehab HMA (20 yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	18	3,600	9	5,600			9	4,900			7	5,700	18	2,700			
CAPM																					
HMA	5+	1,2	Year of Action	0		5				23		28				46		51			
			Activity Description	CAPM HMA		Rehab HMA (20 yr)				CAPM HMA		Rehab HMA (20 yr)				CAPM HMA		Rehab HMA (20 yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	5	1,100	18	2,700	5	1,100	18	2,700	5	1,100	18	2,700	5	1,100	18	2,700	
		3	Year of Action	0				9		18		25				43				52	
			Activity Description	CAPM HMA				CAPM HMA		CAPM HMA		Rehab HMA (20 yr)				CAPM HMA				CAPM HMA	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	9	5,600	9	5,100	7	5,700	18	2,700	9	5,600	9	5,600	9	5,100	9	5,100	
Rehabilitation																					
HMA	20	1,2,3	Year of Action	0				18		23				41		46					
			Activity Description	Rehab HMA (20 yr)				CAPM HMA		Rehab HMA (20 yr)				CAPM HMA		Rehab HMA (20 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	18	2,700	5	1,100	18	2,700	5	1,100	18	2,700	5	1,100	18	2,700			

TABLE F-2 (b)
Inland Valley Climate Region
HOT MIX ASPHALT W/ OGFC PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55			
New Construction/Reconstruction																		
HMA w/ OGFC	20	1,2	Year of Action	0			20				28				48			
			Activity Description	New / Reconstruct			CAPM HMA w/ OGFC				Rehab HMA w/ OGFC (20 yr)				CAPM HMA w/ OGFC			
		Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	20	2,700	8	4,400	20	3,600	8	4,400			8	4,400			
		Year of Action	0			20				30				40		50		
	Activity Description	New / Reconstruct			CAPM HMA w/ OGFC				CAPM HMA w/ OGFC				CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20 yr)			
	Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	20	2,700	10	3,700	10	6,800	10	6,800	10	6,800	20	3,600				
	Year of Action	0			38				38				48		48			
	Activity Description	New / Reconstruct			CAPM HMA w/ OGFC				CAPM HMA w/ OGFC				Rehab HMA w/ OGFC (20-yr)		CAPM HMA w/ OGFC			
Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	38	6,400	10	3,400	20	3,600	20	3,600			20	3,600					
40	3	Year of Action	0			38				38				48		48		
		Activity Description	New / Reconstruct			CAPM HMA w/ OGFC				CAPM HMA w/ OGFC				CAPM HMA w/ OGFC		CAPM HMA w/ OGFC		
	Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	38	6,400	10	3,400	10	3,400	10	3,400	10	3,400	10	3,400	10	3,400		
	Year of Action	0			38				38				48		48			
Activity Description	New / Reconstruct			CAPM HMA w/ OGFC				CAPM HMA w/ OGFC				CAPM HMA w/ OGFC		CAPM HMA w/ OGFC				
Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	38	6,400	10	3,400	10	3,400	10	3,400	10	3,400	10	3,400	10	3,400			
CAPM																		
HMA w/ OGFC	5+	1,2	Year of Action	0			8				28				36		36	
			Activity Description	CAPM HMA w/ OGFC			Rehab HMA w/ OGFC (20 yr)				CAPM HMA w/ OGFC				Rehab HMA w/ OGFC (20 yr)		Rehab HMA w/ OGFC (20 yr)	
		Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	8	4,400	20	5,600	8	4,400	20	5,600			20	5,600			
		Year of Action	0			10				20				30		50		50
Activity Description	CAPM HMA w/ OGFC			CAPM HMA w/ OGFC				CAPM HMA w/ OGFC				Rehab HMA w/ OGFC (20 yr)		CAPM HMA w/ OGFC		CAPM HMA w/ OGFC		
Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	3,700	10	6,800	10	6,800	10	6,800	20	3,600	10	3,700	10	3,700			
Rehabilitation																		
HMA w/ OGFC	20	1,2,3	Year of Action	0			20				28				48		48	
			Activity Description	Rehab HMA w/ OGFC (20 yr)			CAPM HMA w/ OGFC				Rehab HMA w/ OGFC (20 yr)				CAPM HMA w/ OGFC		CAPM HMA w/ OGFC	
	Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	20	5,600	8	4,400	20	3,600	8	4,400	20	3,600	8	4,400	8	4,400		
	Year of Action	0			38				38				46		46		46	
Activity Description	Rehab HMA w/ OGFC (40 yr)			CAPM HMA w/ OGFC				CAPM HMA w/ OGFC				CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (40 yr)		Rehab HMA w/ OGFC (40 yr)		
Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	38	5,200	8	4,400	38	5,200	38	5,200			38	5,200	38	5,200			

TABLE F-2 (c)
Inland Valley Climate Region
HOT MIX ASPHALT W/ RHMA PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55		
New Construction/Reconstruction																	
HMA w/ RHMA	20	1,2	Year of Action	0				21				31		52			
			Activity Description	New / Reconstruct				CAPM HMA w/ RHMA				Rehab HMA w/ RHMA (20 yr)		CAPM HMA w/ RHMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	21	3,000	10	3,700	21	2,000	10	3,700					
		3	Year of Action	0				21				31		41		51	
			Activity Description	New / Reconstruct				CAPM HMA w/ RHMA				CAPM HMA w/ RHMA		CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	21	3,000	10	3,700	10	6,800	10	6,800	21	2,000			
	40	1,2	Year of Action	0								40		50			
			Activity Description	New / Reconstruct								CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	7,200			10	3,700			21	3,400			
		3	Year of Action	0								40		50			
			Activity Description	New / Reconstruct								CAPM HMA w/ RHMA		CAPM HMA w/ RHMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	7,200			10	3,700			10	3,700			
CAPM																	
HMA w/ RHMA	5+	1,2	Year of Action	0		10				31		41					
			Activity Description	CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)				CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	3,700	21	3,400	10	3,700	21	3,400					
		3	Year of Action	0		10		20		30				51			
			Activity Description	CAPM HMA w/ RHMA		CAPM HMA w/ RHMA		CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)				CAPM HMA w/ RHMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	3,700	10	6,800	10	6,800	21	2,000	10	3,700			
Rehabilitation																	
HMA w/ RHMA	20	1,2,3	Year of Action	0				21				31		52			
			Activity Description	Rehab HMA w/ RHMA (20 yr)				CAPM HMA w/ RHMA				Rehab HMA w/ RHMA (20 yr)		CAPM HMA w/ RHMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	21	3,400	10	3,700	21	3,400	10	3,700					
	40	1,2,3	Year of Action	0								40		50			
			Activity Description	Rehab HMA w/ RHMA (40 yr)								CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (40 yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	7,000			10	3,700			40	7,000			

TABLE F-2 (d)
Inland Valley Climate Region
RUBBERIZED HOT MIX ASPHALT PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55				
New Construction/Reconstruction																			
RHMA	20	1,2	Year of Action	0								21	26			47	52		
			Activity Description	New/Reconstruct								CAPM RHMA	Rehab RHMA (20 yr)			CAPM RHMA	Rehab RHMA (20 yr)		
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	21	2,200							5	1,100	21	2,600	5	1,100	21
		3	Year of Action	0								21	30			47			
			Activity Description	New/Reconstruct								CAPM RHMA	CAPM RHMA	39 CAPM RHMA		Rehab RHMA (20 yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	21	2,200							9	4,400	9	4,400	8	5,100	21
CAPM																			
RHMA	5+	1,2	Year of Action	0		5							26	31			52		
			Activity Description	CAPM RHMA		Rehab RHMA (20 yr)							CAPM RHMA	Rehab RHMA (20 yr)			CAPM RHMA		
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	5	1,100	21	2,600							5	1,100	21	2,600	5
		3	Year of Action	0				9			18	23			44			53	
			Activity Description	CAPM RHMA				CAPM RHMA			CAPM RHMA	Rehab RHMA (20 yr)			CAPM RHMA			CAPM RHMA	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	9	4,400			9	4,400			5	5,100	21	2,600			9
Rehabilitation																			
RHMA	20	1,2,3	Year of Action	0								21	26			47	52		
			Activity Description	Rehab RHMA (20 yr)								CAPM RHMA	Rehab RHMA (20 yr)			CAPM RHMA	Rehab RHMA (20 yr)		
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	21	2,600							5	1,100	21	2,600	5	1,100	21

TABLE F-2 (e)
Inland Valley Climate Region
RUBBERIZED HOT MIX ASPHALT W/ RHMA-O PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55				
New Construction/Reconstruction																			
RHMA w/ RHMA-O	20	1,2	Year of Action	0								22		32		54			
			Activity Description	New / Reconstruct								CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)		CAPM RHMA w/ RHMA-O			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	22	2,900							10	3,700	22	3,800	10	3,700	
		3	Year of Action	0								22		32		42		53	
			Activity Description	New / Reconstruct								CAPM RHMA w/ RHMA-O		CAPM RHMA w/ RHMA-O		CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	22	2,900							10	3,400	10	6,300	11	6,300	22
	40	1,2	Year of Action	2900								40		50					
			Activity Description	New / Reconstruct								CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	4,900							10	3,700	22	3,800			
		3	Year of Action	0								40		50					
			Activity Description	New / Reconstruct								CAPM RHMA w/ RHMA-O		CAPM RHMA w/ RHMA-O					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	4,900							10	3,400	10	3,400			
CAPM																			
RHMA w/ RHMA-O	5+	1,2	Year of Action	0		10				32				42					
			Activity Description	CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)				CAPM RHMA w/ RHMA-O				Rehab RHMA w/ RHMA-O (20 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	3,400	22	3,800					10	3,400	22	3,800			
		3	Year of Action	0		10				20				52					
			Activity Description	CAPM RHMA w/ RHMA-O		CAPM RHMA w/ RHMA-O				CAPM RHMA w/ RHMA-O				Rehab RHMA w/ RHMA-O (20 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	3,400	10	3,400	10	3,400					22	3,800	10	3,400	
Rehabilitation																			
RHMA w/ RHMA-O	20	1,2,3	Year of Action	0								22		32		54			
			Activity Description	Rehab RHMA w/ RHMA-O (20 yr)								CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)		CAPM RHMA w/ RHMA-O			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	22	3,800							10	3,700	22	3,800	10	3,700	
	40	1,2,3	Year of Action	0								40		50					
			Activity Description	Rehab RHMA w/ RHMA-O (40 yr)								CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (40 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	5,100							10	3,700	40	5,100			

TABLE F-3 (a)
Desert Climate Region
HOT MIX ASPHALT PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55					
New Construction/Reconstruction																				
HMA	20	1,2	Year of Action	0						18	23									
			Activity Description	New/Reconstruct						CAPM HMA	Rehab HMA (20 yr)									
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	18	3,600					5	1,100	18	3,000	5	1,100	18	3,000		
		3	Year of Action	0						18	25			31	37					
			Activity Description	New/Reconstruct						CAPM HMA	CAPM HMA			CAPM HMA	Rehab HMA (20 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	18	3,600					7	5,700	6	5,700	6	6,800	18	3,000		
CAPM																				
HMA	5+	1,2	Year of Action	0		5					23	28								
			Activity Description	CAPM HMA		Rehab HMA (20 yr)					CAPM HMA	Rehab HMA (20 yr)								
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	5	1,100	18	3,000					5	1,100	18	3,000	5	1,100	18	3,000
		3	Year of Action	0				7	14	20				38			45	52		
			Activity Description	CAPM HMA				CAPM HMA	CAPM HMA	Rehab HMA (20 yr)				CAPM HMA			CAPM HMA	CAPM HMA		
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	7	5,700			7	5,500	6	6,800	18	3,000				7	5,700	7
Rehabilitation																				
HMA	20	1,2,3	Year of Action	0						18	23									
			Activity Description	Rehab HMA (20 yr)						CAPM HMA	Rehab HMA (20 yr)									
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	18	3,000					5	1,100	18	3,000						

TABLE F-3 (b)
Desert Climate Region
HOT MIX ASPHALT W/ OGFC PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55			
New Construction/Reconstruction																		
HMA w/ OGFC	20	1,2	Year of Action		0		20		28		48							
			Activity Description		New / Reconstruct		CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20 yr)		CAPM HMA w/ OGFC							
		Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	20	4,900	8	4,600	20	4,000	8	4,500							
		Year of Action		0		20		29		38		47						
	Activity Description		New / Reconstruct		CAPM HMA w/ OGFC		CAPM HMA w/ OGFC		CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20 yr)							
	Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	20	4,900	9	4,000	9	7,400	9	7,400	20	4,000						
	40	1,2	Year of Action		0		38		29		38		47					
			Activity Description		New / Reconstruct		CAPM HMA w/ OGFC		CAPM HMA w/ OGFC		CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20-yr)					
		Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	38	6,700	9	4,100	20	4,000	20	4,000							
		Year of Action		0		38		38		38		47						
	Activity Description		New / Reconstruct		CAPM HMA w/ OGFC		CAPM HMA w/ OGFC		CAPM HMA w/ OGFC		CAPM HMA w/ OGFC		Rehab HMA w/ OGFC					
	Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	38	6,700	8	4,100	9	7,400	9	7,400								
CAPM																		
HMA w/ OGFC	5+	1,2	Year of Action		0		8		28		36							
			Activity Description		CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20 yr)		CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20 yr)							
		Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	8	4,600	20	4,000	8	4,600	20	4,000							
		Year of Action		0		9		18		27		47						
Activity Description		CAPM HMA w/ OGFC		CAPM HMA w/ OGFC		CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20 yr)		CAPM HMA w/ OGFC								
Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	9	4,000	9	7,400	9	7,400	20	4,000	9	4,000							
Rehabilitation																		
HMA w/ OGFC	20	1,2,3	Year of Action		0		20		28		48							
			Activity Description		Rehab HMA w/ OGFC (20 yr)		CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20 yr)		CAPM HMA w/ OGFC							
	Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	20	4,000	8	4,600	20	4,000	8	7,300								
	Year of Action		0		38		38		38		46							
Activity Description		Rehab HMA w/ OGFC (40 yr)		CAPM HMA w/ OGFC		CAPM HMA w/ OGFC		CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (40 yr)								
Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	38	7,300	8	4,600	38	7,300	38	7,300									

TABLE F-3 (c)
Desert Climate Region
HOT MIX ASPHALT W/ RHMA PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55			
New Construction/Reconstruction																		
HMA w/ RHMA	20	1,2	Year of Action		0				21		30				51			
			Activity Description		New / Reconstruct				CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)				CAPM HMA w/ RHMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	21	5,400	9	4,000	21	3,700	9	5,400						
		3	Year of Action		0				21				31				51	
			Activity Description		New / Reconstruct				CAPM HMA w/ RHMA				CAPM HMA w/ RHMA				Rehab HMA w/ RHMA (20 yr)	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	21	3,300	10	3,700	10	7,900	10	7,900	21	3,700				
	40	1,2	Year of Action		0								40				49	
			Activity Description		New / Reconstruct								CAPM HMA w/ RHMA				Rehab HMA w/ RHMA (20-yr)	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	5,400	9	4,000	21	4,300								
		3	Year of Action		0								40				49	
			Activity Description		New / Reconstruct								CAPM HMA w/ RHMA				CAPM HMA w/ RHMA	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	5,400	9	4,000	9	4,000								
CAPM																		
HMA w/ RHMA	5+	1,2	Year of Action		0		9				30				39			
			Activity Description		CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)				CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	9	4,100	21	3,700	9	4,100	21	3,700						
		3	Year of Action		0		10				20				30		51	
			Activity Description		CAPM HMA w/ RHMA		CAPM HMA w/ RHMA		CAPM HMA w/ RHMA		CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)		CAPM HMA w/ RHMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	3,700	10	7,900	10	7,900	21	3,700	10	3,700				
Rehabilitation																		
HMA w/ RHMA	20	1,2,3	Year of Action		0				21		30				51			
			Activity Description		Rehab HMA w/ RHMA (20 yr)				CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)				CAPM HMA w/ RHMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	21	3,700	9	4,100	21	3,700	9	4,100						
	40	1,2,3	Year of Action		0								40				49	
			Activity Description		Rehab HMA w/ RHMA (40 yr)								CAPM HMA w/ RHMA				Rehab HMA w/ RHMA (40 yr)	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	5,900	9	4,000	40	5,900								

TABLE F-3 (d)
Desert Climate Region
RUBBERIZED HOT MIX ASPHALT PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55								
New Construction/Reconstruction																							
RHMA	20	1,2	Year of Action	0						20	25					45	50						
			Activity Description	New/Reconstruct						CAPM RHMA	Rehab RHMA (20 yr)					CAPM RHMA	Rehab RHMA (20 yr)						
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	20	2,500					5	1,100	20	3,500					5	1,100	20	3,500	
		3	Year of Action	0						20			27	34					41				
			Activity Description	New/Reconstruct						CAPM RHMA			CAPM RHMA	CAPM RHMA					Rehab RHMA (20 yr)				
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	20	2,500					7	2,900			7	5,500	7	5,700					20
CAPM																							
RHMA	5+	1,2	Year of Action	0		5					25	30					50						
			Activity Description	CAPM RHMA		Rehab RHMA (20 yr)					CAPM RHMA	Rehab RHMA (20 yr)					CAPM RHMA						
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	5	1,100	20	3,500					5	1,100	20	3,500					5	1,100	
		3	Year of Action	0				7	14					21	41					48			
			Activity Description	CAPM RHMA				CAPM RHMA	CAPM RHMA					Rehab RHMA (20 yr)	CAPM RHMA					CAPM RHMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	7	5,500			7	5,500	7	5,700					20	3,500	7	5,500			
Rehabilitation																							
RHMA	20	1,2,3	Year of Action	0						20	25					45	50						
			Activity Description	Rehab RHMA (20 yr)						CAPM RHMA	Rehab RHMA (20 yr)					CAPM RHMA	Rehab RHMA (20 yr)						
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	20	3,500					5	1,100	20	3,500					5	1,100	20	3,500	

TABLE F-3 (e)
Desert Climate Region
RUBBERIZED HOT MIX ASPHALT W/ RHMA-O PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55				
New Construction/Reconstruction																			
RHMA w/ RHMA-O	20	1,2	Year of Action	0								22		32		54			
			Activity Description	New / Reconstruct								CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)		CAPM RHMA w/ RHMA-O			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	22	3,100							10	3,700	22	3,900	10	3,700	
		3	Year of Action	0								22		33		44		55	
			Activity Description	New / Reconstruct								CAPM RHMA w/ RHMA-O		CAPM RHMA w/ RHMA-O		CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	22	3,100							11	3,400	11	3,400	11	6,800	22
	40	1,2	Year of Action	0								40		50					
			Activity Description	New / Reconstruct								CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20-yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	4,500							10	3,700	22	4,500			
		3	Year of Action	0								40		51					
			Activity Description	New / Reconstruct								CAPM RHMA w/ RHMA-O		CAPM RHMA w/ RHMA-O					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	4,500							11	3,400			11	4,500	
CAPM																			
RHMA w/ RHMA-O	5+	1,2	Year of Action	0		10								32		42			
			Activity Description	CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)								CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	3,700	22	3,900							10	3,700	22	3,900	
		3	Year of Action	0		11								22		33			
			Activity Description	CAPM RHMA w/ RHMA-O		CAPM RHMA w/ RHMA-O								CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	11	3,400	11	4,500							11	6,800	22	3,900	
Rehabilitation																			
RHMA w/ RHMA-O	20	1,2,3	Year of Action	0								22		32		54			
			Activity Description	Rehab RHMA w/ RHMA-O (20 yr)								CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)		CAPM RHMA w/ RHMA-O			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	22	3,900							10	3,700	22	3,900	10	3,700	
	40	1,2,3	Year of Action	0								40		50					
			Activity Description	Rehab RHMA w/ RHMA-O (40 yr)								CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (40 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	6,100							10	3,700	40	6,100			

TABLE F-4 (a)
Low Mountain & South Mountain Climate Regions
HOT MIX ASPHALT PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55				
New Construction/Reconstruction																			
HMA	20	1,2	Year of Action	0				19		24				43		48			
			Activity Description	New/Reconstruct				CAPM HMA		Rehab HMA (20 yr)				CAPM HMA		Rehab HMA (20 yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	19	3,500	5	1,100	19	2,800	5	1,100	19	2,800					
		3	Year of Action	0				19				28				37		45	
			Activity Description	New/Reconstruct				CAPM HMA				CAPM HMA				CAPM HMA		Rehab HMA (20 yr)	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	19	3,500	9	5,700	9	5,700	8	5,600	19	2,800					
CAPM																			
HMA	5+	1,2	Year of Action	0		5		24		29				48					
			Activity Description	CAPM HMA		Rehab HMA (20 yr)		CAPM HMA		Rehab HMA (20 yr)				CAPM HMA		Rehab HMA (20 yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	5	1,100	19	2,600	5	1,100	19	2,600	5	1,100	19	2,600			
		3	Year of Action	0				9		18				26				45	
			Activity Description	CAPM HMA				CAPM HMA		CAPM HMA				Rehab HMA (20 yr)				CAPM HMA	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	9	5,700	9	5,700	8	5,600	19	2,800	9	5,700	9	5,700			
Rehabilitation																			
HMA	20	1,2,3	Year of Action	0				19		24				43		48			
			Activity Description	Rehab HMA (20 yr)				CAPM HMA		Rehab HMA (20 yr)				CAPM HMA		Rehab HMA (20 yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	19	2,600	5	1,100	19	2,600	5	1,100	19	2,600					

TABLE F-4 (b)
Low Mountain & South Mountain Climate Regions
HOT MIX ASPHALT W/ OGFC PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55						
New Construction/Reconstruction																					
HMA w/ OGFC	20	1,2	Year of Action	0								22		28		50					
			Activity Description	New/Reconstruct								CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20 yr)		CAPM HMA w/ OGFC					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	22	2,700							6	500	22	3,700	6	500			
		3	Year of Action	0								22				32		42		52	
			Activity Description	New/Reconstruct								CAPM HMA w/ OGFC				CAPM HMA w/ OGFC		CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20 yr)	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	22	2,700							10	4,800			10	6,800	10	6,800	22
	40	1,2	Year of Action	0										40				46			
			Activity Description	New/Reconstruct										CAPM HMA w/ OGFC				Rehab HMA w/ OGFC (20-yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	7,500									6	500			22	2,700	
		3	Year of Action	0										40				50			
			Activity Description	New/Reconstruct										CAPM HMA w/ OGFC				CAPM HMA w/ OGFC			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	7,500									10	6,800			10	6,800	
CAPM																					
HMA w/ OGFC	5+	1,2	Year of Action	0		6						28		34							
			Activity Description	CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20 yr)						CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20 yr)							
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	6	500	22	3,700					6	500	22	3,700					
		3	Year of Action	0		10				20		30				52					
			Activity Description	CAPM HMA w/ OGFC		CAPM HMA w/ OGFC				CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20 yr)				CAPM HMA w/ OGFC					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	4,800	10	6,800			10	6,800	22	3,700			10	4,800			
Rehabilitation																					
HMA w/ OGFC	20	1,2,3	Year of Action	0								22		28		50					
			Activity Description	Rehab HMA w/ OGFC (20 yr)								CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (20 yr)		CAPM HMA w/ OGFC					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	22	3,700							6	500	22	3,600	6	500			
	40	1,2,3	Year of Action	0										40		46					
			Activity Description	Rehab HMA w/ OGFC (40 yr)										CAPM HMA w/ OGFC		Rehab HMA w/ OGFC (40 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	7,800									6	500	40	7,800			

TABLE F-4 (c)
Low Mountain & South Mountain Climate Regions
HOT MIX ASPHALT W/ RHMA PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55				
New Construction/Reconstruction																			
HMA w/ RHMA	20	1,2	Year of Action	0								23		30		53			
			Activity Description	New / Reconstruct								CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)		CAPM HMA w/ RHMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	23	3,000							7	800	23	3,900	7	800	
		3	Year of Action	0								23		33		43		53	
			Activity Description	New / Reconstruct								CAPM HMA w/ RHMA		CAPM HMA w/ RHMA		CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	23	3,000							10	600	10	5,300	10	5,300	23
	40	1,2	Year of Action	0								40		47					
			Activity Description	New / Reconstruct								CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20-yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	5,000							7	800	23	3,000			
		3	Year of Action	0								40		50					
			Activity Description	New / Reconstruct								CAPM HMA w/ RHMA		CAPM HMA w/ RHMA					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	5,000							10	600	10	5,300			
CAPM																			
HMA w/ RHMA	5+	1,2	Year of Action	0		7						30		37					
			Activity Description	CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)						CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	7	800	23	4,000					7	800	23	4,000			
		3	Year of Action	0		10		20						30		53			
			Activity Description	CAPM HMA w/ RHMA		CAPM HMA w/ RHMA		CAPM HMA w/ RHMA						Rehab HMA w/ RHMA (20 yr)		CAPM HMA w/ RHMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	600	10	5,100	10	5,100					23	3,900	10	600	
Rehabilitation																			
HMA w/ RHMA	20	1,2,3	Year of Action	0								23		30		53			
			Activity Description	Rehab HMA w/ RHMA (20 yr)								CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)		CAPM HMA w/ RHMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	23	4,000							7	800	23	4,300	7	800	
	40	1,2,3	Year of Action	0								40		47					
			Activity Description	Rehab HMA w/ RHMA (40 yr)								CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (40 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	5,400							7	800	40	5,400			

TABLE F-4 (d)
Low Mountain & South Mountain Climate Regions
RUBBERIZED HOT MIX ASPHALT PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55					
New Construction/Reconstruction																				
RHMA	20	1,2	Year of Action		0						21		26		47		52			
			Activity Description		New / Reconstruct						CAPM RHMA		Rehab RHMA (20 yr)		CAPM RHMA		Rehab RHMA (20 yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	21	2,300					5	1,100	21	2,600	5	1,100	21	2,600		
		3	Year of Action		0						21		30		39		47			
			Activity Description		New / Reconstruct						CAPM RHMA		CAPM RHMA		CAPM RHMA		Rehab RHMA (20 yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	21	2,300					9	4,400	9	4,400	8	4,900	21	2,600		
CAPM																				
RHMA	5+	1,2	Year of Action		0		5						26		31		47		52	
			Activity Description		CAPM RHMA		Rehab RHMA (20 yr)						CAPM RHMA		Rehab RHMA (20 yr)		CAPM RHMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	5	1,100	21	2,600					5	1,100	21	2,600			5	1,100
		3	Year of Action		0				9				18		26		47			
			Activity Description		CAPM RHMA				CAPM RHMA (10 yr)				CAPM RHMA		Rehab RHMA (20 yr)		CAPM RHMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	9	4,400			9	4,400			8	4,900	21	2,600	8	4,400		
Rehabilitation																				
RHMA	20	1,2,3	Year of Action		0						21		26		47		52			
			Activity Description		Rehab RHMA (20 yr)						CAPM RHMA		Rehab RHMA (20 yr)		CAPM RHMA		Rehab RHMA (20 yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	21	2,600					5	1,100	21	2,600	5	1,100	21	2,600		

TABLE F-4 (e)
Low Mountain & South Mountain Climate Regions
RUBBERIZED HOT MIX ASPHALT W/ RHMA-O PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55				
New Construction/Reconstruction																			
RHMA w/ RHMA-O	20	1,2	Year of Action	0								24		32					
			Activity Description	New/Reconstruct								CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	24	2,600							8	700	24	3,500			
		3	Year of Action	0								24		34		44		54	
			Activity Description	New/Reconstruct								CAPM RHMA w/ RHMA-O		CAPM RHMA w/ RHMA-O		CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	24	2,600							10	600	10	600	10	5,000	24
	40	1,2	Year of Action	0								40		48					
			Activity Description	New/Reconstruct								CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20-yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	3,900							8	700	24	4,100			
		3	Year of Action	0								40		50					
			Activity Description	New/Reconstruct								CAPM RHMA w/ RHMA-O		CAPM RHMA w/ RHMA-O					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	3,900							10	600	10	700			
CAPM																			
RHMA w/ RHMA-O	5+	1,2	Year of Action	0		8								32		40			
			Activity Description	CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)								CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	8	700	24	5,200							8	700	24	5,200	
		3	Year of Action	0		10		20								44		54	
			Activity Description	CAPM RHMA w/ RHMA-O		CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)								CAPM RHMA w/ RHMA-O		CAPM RHMA w/ RHMA-O	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	600	10	5,000	24	3,500							10	600	10
Rehabilitation																			
RHMA w/ RHMA-O	20	1,2,3	Year of Action	0								24		32					
			Activity Description	Rehab RHMA w/ RHMA-O (20 yr)								CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (20 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	24	5,200							8	700	24	3,500			
	40	1,2,3	Year of Action	0								40		48					
			Activity Description	Rehab RHMA w/ RHMA-O (40 yr)								CAPM RHMA w/ RHMA-O		Rehab RHMA w/ RHMA-O (40 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	3,100							8	700	40	3,100			

TABLE F-5 (a)
High Mountain & High Desert Climate Regions
HOT MIX ASPHALT PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55				
New Construction/Reconstruction																			
HMA	20	1,2	Year of Action	0						18	23								
			Activity Description	New/Reconstruct						CAPM HMA	Rehab HMA (20 yr)								
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	18	2,300					5	1,100	18	2,300					
		3	Year of Action	0						18			26	34					
			Activity Description	New/Reconstruct						CAPM HMA			CAPM HMA	CAPM HMA					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	18	2,300					8	3,500			8	7,700	8	7,700	
CAPM																			
HMA	5+	1,2	Year of Action	0		5					23	28							
			Activity Description	CAPM HMA		Rehab HMA (20 yr)					CAPM HMA	Rehab HMA (20 yr)							
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	5	1,100	18	2,300					5	1,100	18	2,300			
		3	Year of Action	0				8			16	24			42				
			Activity Description	CAPM HMA				CAPM HMA			CAPM HMA	Rehab HMA (20 yr)			CAPM HMA				
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	8	3,500			8	7,700			8	7,700	18	2,300			8
Rehabilitation																			
HMA	20	1,2,3	Year of Action	0						18	23								
			Activity Description	Rehab HMA (20 yr)						CAPM HMA	Rehab HMA (20 yr)								
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	18	2,300					5	1,100	18	3,300					

TABLE F-5 (b)
High Mountain & High Desert Climate Regions
HOT MIX ASPHALT W/ RHMA PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55				
New Construction/Reconstruction																			
HMA w/ RHMA	20	1,2	Year of Action	0								20		25		45		50	
			Activity Description	New / Reconstruct								CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)		CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	20	8,800	5	0	20	9,800	5	0	20	9,800					
		3	Year of Action	0								20		30		40		50	
			Activity Description	New / Reconstruct								CAPM HMA w/ RHMA		CAPM HMA w/ RHMA		CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	20	8,800	10	5,900	10	7,900	10	7,900	20	9,800					
	40	1,2	Year of Action	0								40		45					
			Activity Description	New / Reconstruct								CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	12,300	5	0	20	9,800									
		3	Year of Action	0								40				50			
			Activity Description	New / Reconstruct								CAPM HMA w/ RHMA				CAPM HMA w/ RHMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	12,300	10	5,900	10	5,900	10	5,900	10	5,900					
CAPM																			
HMA w/ RHMA	5+	1,2	Year of Action	0		5								25		30		50	
			Activity Description	CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)								CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)		CAPM HMA w/ RHMA	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	5	0	20	9,800	5	0	20	9,800	5	0	20	9,800	5	0	
		3	Year of Action	0		10		20								30		50	
			Activity Description	CAPM HMA w/ RHMA		CAPM HMA w/ RHMA		CAPM HMA w/ RHMA								Rehab HMA w/ RHMA (20 yr)		CAPM HMA w/ RHMA	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	5,900	10	7,900	10	7,900	20	9,800	10	5,900					
Rehabilitation																			
HMA w/ RHMA	20	1,2,3	Year of Action	0								20		25		45		50	
			Activity Description	Rehab HMA w/ RHMA (20 yr)								CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)		CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (20 yr)	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	20	9,800	5	0	20	9,800	5	0	20	9,800	5	0	20	9,800	
	40	1,2,3	Year of Action	0								40		45					
			Activity Description	Rehab HMA w/ RHMA (40 yr)								CAPM HMA w/ RHMA		Rehab HMA w/ RHMA (40 yr)					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	40	14,300	5	0	40	14,300									

TABLE F-5 (c)
High Mountain & High Desert Climate Regions
RUBBERIZED HOT MIX ASPHALT PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Surface Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55				
New Construction/Reconstruction																			
RHMA	20	1,2	Year of Action	0				20		25				45		50			
			Activity Description	New / Reconstruct				CAPM RHMA		Rehab RHMA (20 yr)				CAPM RHMA		Rehab RHMA (20 yr)			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	20	2,100	5	1,100	20	3,100	5	1,100	20	3,100	5	1,100	20	3,100	
		3	Year of Action	0				20				29				38		47	
			Activity Description	New / Reconstruct				CAPM RHMA				CAPM RHMA				CAPM RHMA		Rehab RHMA (20 yr)	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	20	2,100	9	3,100	9	6,700	9	6,700	9	6,700	20	3,100			
CAPM																			
RHMA	5	1,2	Year of Action	0		5				25		30				50			
			Activity Description	CAPM RHMA		Rehab RHMA (20 yr)				CAPM RHMA		Rehab RHMA (20 yr)				CAPM RHMA			
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	5	1,100	20	3,100	5	1,100	20	3,100	5	1,100	5	1,100			
		3	Year of Action	0				9				18				27		47	
			Activity Description	CAPM RHMA				CAPM RHMA				CAPM RHMA				Rehab RHMA (20 yr)		CAPM RHMA	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	9	3,100	9	6,700	9	6,700	20	3,100	9	3,100	9	3,100			
Rehabilitation																			
RHMA	20	1,2,3	Year of Action	0				20				25				45		50	
			Activity Description	Rehab RHMA (20 yr)				CAPM RHMA				Rehab RHMA (20 yr)				CAPM RHMA		Rehab RHMA (20 yr)	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	20	3,100	5	1,100	20	3,100	5	1,100	20	3,100	5	1,100	20	3,100	

TABLE R-1 (a)
Inland Valley, Desert, Low Mountain, South Mountain, and all Coastal Climate Regions
RIGID AND COMPOSITE PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Pavement Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55			
New Construction/Reconstruction																		
Composite	20	1,2,3	Year of Action		0						30		38		45			
			Activity Description		New / Reconstruct						CAPM (FO+ JPCP SR)		CAPM (FO+ JPCP SR)		Lane Replace		Select a lane replace option listed under the rigid and composite pavement M&R table and follow the strategy sequence	
	Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	30	4,100					8	700	7	800						
	Year of Action		0												50			
Activity Description		New / Reconstruct												CAPM (FO+ JPCP SR)				
40	1,2,3	Activity Description		New / Reconstruct												8		
		Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	50	4,800											700		
Rigid - Jointed Plain Concrete Pavement (JPCP)	20	1,2,3	Year of Action		0						25		30		40		45	
			Activity Description		New / Reconstruct						CAPM (CPR C ³)		CAPM (CPR B ²)		CAPM (CPR A ¹)		Roadway Rehab	
	Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	25	700					5	3,000	10	1,500	5	3,100				
	Year of Action		0												45		50	
Activity Description		New / Reconstruct												CAPM (CPR C ³)		CAPM (CPR B ²)		
40	1,2,3	Activity Description		New / Reconstruct												5		
		Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	45	800											3,000		
Rigid - Continuously Reinforced Concrete Pavement (CRCP)	20	1,2,3	Year of Action		0						30		35		45			
			Activity Description		New / Reconstruct						CAPM (PR C ⁷)		CAPM (PR B ⁶)		CAPM (PR A ⁵)			
	Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	30	200					5	1,400	10	600			10	600		
	Year of Action		0															
Activity Description		New / Reconstruct																
40	1,2,3	Activity Description		New / Reconstruct														
		Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	55	200													

CPR = Concrete Pavement Rehabilitation, CSFOL = Crack, Seal, and Flexible Overlay, FO = Flexible Overlay, MSRO = Mill, Slab Replacement & Overlay, PR = Punchout Repair, SR = Slab Replacement

Notes:

- Concrete Pavement Rehabilitation A involves pavement grinding, **significant** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs that were replaced or exhibit third stage Rigid Cracking greater than or equal to 5% and less than or equal to 7%. For greater than 7%, the project should be scoped and analyzed as a roadway rehabilitation project.
- Concrete Pavement Rehabilitation B involves pavement grinding, **moderate** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs in the lane that were replaced or exhibit third stage Rigid Cracking between 2 and 5%.
- Concrete Pavement Rehabilitation C involves pavement grinding, **minor** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs in the lane that were replaced or exhibit third stage Rigid Cracking 2% or less.
- The schedule for this strategy is based on pavement that has previously been cracked, sealed and overlaid. It should not be used as an alternative on rigid JPCP pavements with cracking or faulting near or above the threshold for roadway rehabilitation.
- Punchout Repair A involves **significant** punchout repairs & 0.15' of flexible overlay. It applies to **continuously reinforced concrete pavements** that had previous punchout repairs and a flexible overlay.
- Punchout Repair B involves **moderate** punchout repairs & 0.15' of flexible overlay. It applies to **continuously reinforced concrete pavements** where the total number of current & previous punchout repairs exceed 4 per mile.
- Punchout Repair C involves **minor** punchout repairs & limited diamond grinding around the punchout repair area. It applies to **continuously reinforced concrete pavements** where the total number of punchout repairs do not exceed 4 per mile.

TABLE R-1 (b)
Inland Valley, Dessert, Low Mountain, South Mountain, and all Coastal Climate Regions
RIGID AND COMPOSITE PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Pavement Type	Pvmt Design Life	Maint. Service Level	Year	0	5	10	15	20	25	30	35	40	45	50	55
CAPM															
Slab Replacement (CPR ³)	10	1,2,3	Year of Action	0		10		15		20		Select a rehabilitation option listed under the rigid and composite pavement M&R table and follow the strategy sequence			
			Activity Description	CAPM (CPR C ³)		CAPM (CPR B ²)		CAPM (CPR A ¹)		Roadway Rehab ⁴					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	2,098	5	4,135	5	4,135					
Composite	5	1,2,3	Year of Action	0		The maintenance and rehabilitation schedules depend on the previous history and condition of the existing pavement. To determine the appropriate M&R schedule to use, first determine the initial pavement type and the original rehabilitation completed. Next, determined any other rehabilitations and/or CAPM projects completed after the initial rehabilitation. Ignore projects that only removed and replaced RHMA-G or RHMA-O. Finally, find a schedule on the rehabilitation M&R table that best describes the original rehabilitation completed and that sequence. However, from the pavement history, take into consideration the activities already completed in that sequence.									
			Activity Description	CAPM (Flex Overlay)											
	5	1,2,3	Year of Action	0		EXAMPLE: You are doing a Flexible Overlay and JPCP Slab Replacement on a previously cracked, seated, and overlaid project (doesn't matter whether it was 10 or 20 year). Previous work included a remove and replace RHMA-O 7 years after the crack, seat, and flexible overlay (CSFOL) rehabilitation, and a 0.10' HMA overlay at 18 years after the CSFOL project. From this information it can be determined that the initial pavement type was rigid and the original rehabilitation completed was a CSFOL. If the RHMA-O project at year 7 is ignored, it can be determined that the best fit for this sequence is the 20-year CSFOL. The 0.10' HMA overlay at 18 years after the completion of the CSFOL is the first CAPM under this sequence and the future activities will include a CAPM (FO + JPCP SR) at Year 23 and a 20-year rehab at Year 28. Remember to follow the sequence until you fulfill the analysis period.									
			Activity Description	CAPM (FO + JPCP SR)											
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life											
Rigid - Jointed Plain Concrete Pavement (JPCP)	5	1,2,3	Year of Action	0		5		Select a rehabilitation option listed under the rigid and composite pavement M&R table and follow the strategy sequence							
			Activity Description	CAPM (CPR A ¹)		Roadway Rehab									
				Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	5	3,100								
	10	1,2,3	Year of Action	0		10		15		Select a rehabilitation option listed under the rigid and composite pavement M&R table and follow the strategy sequence					
			Activity Description	CAPM (CPR B ²)		CAPM (CPR A ¹)		Roadway Rehab							
				Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	1,500	5	3,100						
5	1,2,3	Year of Action	0		5		15								
		Activity Description	CAPM (CPR C ³)		CAPM (CPR B ²)		CAPM (CPR A ¹)								
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	5	3,000	10	1,500	5	3,100					
Rigid - Continuously Reinforced Concrete Pavement (CRCP)	5	1,2,3	Year of Action	0		10		Select a lane replace option listed under the rigid and composite pavement M&R table and follow the strategy sequence							
			Activity Description	CAPM (PR A ⁵)		Lane Replace with CRCP									
				Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	600								
	10	1,2,3	Year of Action	0		10									
			Activity Description	CAPM (PR B ⁶)		CAPM (PR A ⁵)									
				Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	600	10	600						
10	1,2,3	Year of Action	0		5		15								
		Activity Description	CAPM (PR C ⁷)		CAPM (PR B ⁶)		CAPM (PR A ⁵)								
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	5	1,400	10	600	10	600					

CPR = Concrete Pavement Rehabilitation, CSFOL = Crack, Seat, and Flexible Overlay, FO = Flexible Overlay, MSRO = Mill, Slab Replacement & Overlay, PR = Punchout Repair, SR = Slab Replacement

Notes:

- Concrete Pavement Rehabilitation A involves pavement grinding, **significant** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs that were replaced or exhibit third stage Rigid Cracking greater than or equal to 5% and less than or equal to 7%. For greater than 7%, the project should be scoped and analyzed as a roadway rehabilitation project.
- Concrete Pavement Rehabilitation B involves pavement grinding, **moderate** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs in the lane that were replaced or exhibit third stage Rigid Cracking between 2 and 5%.
- Concrete Pavement Rehabilitation C involves pavement grinding, **minor** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs in the lane that were replaced or exhibit third stage Rigid Cracking 2% or less.
- The schedule for this strategy is based on pavement that has previously been cracked, seated and overlaid. It should not be used as an alternative on rigid JPCP pavements with cracking or faulting near or above the threshold for roadway rehabilitation.
- Punchout Repair A involves **significant** punchout repairs & 0.15' of flexible overlay. It applies to **continuously reinforced concrete pavements** that had previous punchout repairs and a flexible overlay.
- Punchout Repair B involves **moderate** punchout repairs & 0.15' of flexible overlay. It applies to **continuously reinforced concrete pavements** where the total number of current & previous punchout repairs exceed 4 per 1/4 mile.
- Punchout Repair C involves **minor** punchout repairs & limited diamond grinding around the punchout repair area. It applies to **continuously reinforced concrete pavements** where the total number of punchout repairs do not exceed 4 per mile.

TABLE R-1 (c)
Inland Valley, Desert, Low Mountain, South Mountain, and all Coastal Climate Regions
RIGID AND COMPOSITE PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Pavement Type	Pvmt Design Life	Maint. Service Level	Year	0	5	10	15	20	25	30	35	40	45	50	55					
Rehabilitation (a)																				
Flexible/ composite	20	1,2,3	Year of Action	0								18	23	28						
			Activity Description	20-yr Rehab (CSFOL)								CAPM (Flex Overlay)	CAPM (FO + JPCP SR)	20-yr Rehab (MSRO)			CAPM (FO + JPCP SR)	CAPM (FO + JPCP SR)		
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	18	1,400							5	1,100	5	1,100	18	1,400	5	1,100
	20	1,2,3	Year of Action	0								18	23	30						
			Activity Description	20-yr Rehab (MSRO)								CAPM (FO + JPCP SR)	CAPM (FO + JPCP SR)	Lane Replace						
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	18	1,400							5	1,100	7	800	Select a lane replace option listed under the rigid and composite pavement M&R table and follow the strategy sequence			
	20 & 40	1,2,3	Year of Action	0																
			Activity Description	Lane Replace																
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	Follow the strategies for new construction/reconstruction in the applicable flexible pavement tables for the appropriate climate region															
	20	1,2,3	Year of Action	0								30		38		45				
			Activity Description	20-yr Rehab (Lane Replace)								CAPM (FO+ JPCP SR)		CAPM (FO+ JPCP SR)		Lane Replace				
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	30	4,100							8	700	7	800	Select a lane replace option listed under the rigid and composite pavement M&R table and follow the strategy sequence			
	40	1,2,3	Year of Action	0																
			Activity Description	40-yr Rehab (Lane Replace)																
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	50	4,800									50		CAPM (FO+ JPCP SR)			
					50	4,800									8	700				

CPR = Concrete Pavement Rehabilitation, CSFOL = Crack, Seat, and Flexible Overlay, FO = Flexible Overlay, MSRO = Mill, Slab Replacement & Overlay, PR = Punchout Repair, SR = Slab Replacement

Notes:

- Concrete Pavement Rehabilitation A involves pavement grinding, **significant** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs that were replaced or exhibit third stage Rigid Cracking greater than or equal to 5% and less than or equal to 7%. For greater than 7%, the project should be scoped and analyzed as a roadway rehabilitation project.
- Concrete Pavement Rehabilitation B involves pavement grinding, **moderate** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs in the lane that were replaced or exhibit third stage Rigid Cracking between 2 and 5%.
- Concrete Pavement Rehabilitation C involves pavement grinding, **minor** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs in the lane that were replaced or exhibit third stage Rigid Cracking 2% or less.
- The schedule for this strategy is based on pavement that has previously been cracked, seated and overlaid. It should not be used as an alternative on rigid JPCP pavements with cracking or faulting near or above the threshold for roadway rehabilitation.
- Punchout Repair A involves **significant** punchout repairs & 0.15' of flexible overlay. It applies to **continuously reinforced concrete pavements** that had previous punchout repairs and a flexible overlay.
- Punchout Repair B involves **moderate** punchout repairs & 0.15' of flexible overlay. It applies to **continuously reinforced concrete pavements** where the total number of current & previous punchout repairs exceed 4 per mile.
- Punchout Repair C involves **minor** punchout repairs & limited diamond grinding around the punchout repair area. It applies to **continuously reinforced concrete pavements** where the total number of punchout repairs do not exceed 4 per mile.

TABLE R-1 (d)
Inland Valley, Dessert, Low Mountain, South Mountain, and all Coastal Climate Regions
RIGID AND COMPOSITE PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Pavement Type	Pvmt Design Life	Maint. Service Level	Year	0	5	10	15	20	25	30	35	40	45	50	55					
Rehabilitation (b)																				
Rigid - Jointed Plain Concrete Pavement (JPCP)	20	1,2,3	Year of Action	0								25		30		40		45		Select a rehabilitation option listed under the rigid and composite pavement M&R table and follow the strategy sequence
			Activity Description	20-yr Rehab (Lane Replace)								CAPM (CPR C ³)		CAPM (CPR B ²)		CAPM (CPR A ¹)		Roadway Rehab		
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	25	700							5	3,000	10	1,500	5	3,100		
	40	1,2,3	Year of Action	0												45		50		
			Activity Description	40-yr Rehab (Lane Replace)												CAPM (CPR C ³)		CAPM (CPR B ²)		
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	45	800									5	3,000	10	1,500		
Rigid - Continuously Reinforced Concrete Pavement (CRCP)	20	1,2,3	Year of Action	0								30		35		45				
			Activity Description	20-yr Rehab (Lane Replace)								CAPM (PR C ⁷)		CAPM (PR B ⁶)		CAPM (PR A ⁵)				
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	30	200							5	1,400	10	600	10	600		
	40	1,2,3	Year of Action	0																
			Activity Description	40-yr Rehab (Lane Replace)																
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	55	200														

CPR = Concrete Pavement Rehabilitation, CSFOL = Crack, Seal, and Flexible Overlay, FO = Flexible Overlay, MSRO = Mill, Slab Replacement & Overlay, PR = Punchout Repair, SR = Slab Replacement

Notes:

- Concrete Pavement Rehabilitation A involves pavement grinding, **significant** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs that were replaced or exhibit third stage Rigid Cracking greater than or equal to 5% and less than or equal to 7%. For greater than 7%, the project should be scoped and analyzed as a roadway rehabilitation project.
- Concrete Pavement Rehabilitation B involves pavement grinding, **moderate** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs in the lane that were replaced or exhibit third stage Rigid Cracking between 2 and 5%.
- Concrete Pavement Rehabilitation C involves pavement grinding, **minor** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs in the lane that were replaced or exhibit third stage Rigid Cracking 2% or less.
- The schedule for this strategy is based on pavement that has previously been cracked, sealed and overlaid. It should not be used as an alternative on rigid JPCP pavements with cracking or faulting near or above the threshold for roadway rehabilitation.
- Punchout Repair A involves **significant** punchout repairs & 0.15' of flexible overlay. It applies to **continuously reinforced concrete pavements** that had previous punchout repairs and a flexible overlay.
- Punchout Repair B involves **moderate** punchout repairs & 0.15' of flexible overlay. It applies to **continuously reinforced concrete pavements** where the total number of current & previous punchout repairs exceed 4 per mile.
- Punchout Repair C involves **minor** punchout repairs & limited diamond grinding around the punchout repair area. It applies to **continuously reinforced concrete pavements** where the total number of punchout repairs do not exceed 4 per mile.

TABLE R-2 (a)
High Mountain and High Desert Climate Regions
RIGID AND COMPOSITE PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Pavement Type	Pvmt Design Life	Maint. Service Level	Year	Begin Alternative Construction	5	10	15	20	25	30	35	40	45	50	55				
New Construction/Reconstruction																			
Composite	20	1,2,3	Year of Action		0						30		40		45				
			Activity Description		New / Reconstruct						CAPM (FO+ JPCP SR)		CAPM (FO+ JPCP SR)		Lane Replace		Select a lane replace option listed under the rigid and composite pavement M&R table and follow the strategy sequence		
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	30	7,300	10	5,900	5	1,100									
	40	1,2,3	Year of Action		0										50				
			Activity Description		New / Reconstruct										CAPM (FO+ JPCP SR)				
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	50	8,400	5	1,100											
Rigid - Jointed Plain Concrete Pavement (JPCP)	20	1,2,3	Year of Action		0						25		30		40		45		
			Activity Description		New / Reconstruct						CAPM (CPR C ³)		CAPM (CPR B ²)		CAPM (CPR A ¹)		Roadway Rehab		Select a rehabilitation option listed under the rigid and composite pavement M&R table and follow the strategy sequence
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	25	3,100	5	3,000	10	1,500	5	3,100							
	40	1,2,3	Year of Action		0										45		50		
			Activity Description		New / Reconstruct										CAPM (CPR C ³)		CAPM (CPR B ²)		
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	45	3,800	5	3,000	5	1,500									

CPR = Concrete Pavement Rehabilitation, CSFOL = Crack, Seat, and Flexible Overlay, FO = Flexible Overlay, MSRO = Mill, Slab Replacement & Overlay, SR = Slab Replacement

Notes:

1. Concrete Pavement Rehabilitation A involves pavement grinding, **significant** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs that were replaced or exhibit third stage Rigid Cracking greater than or equal to 5% and less than or equal to 7%. For greater than 7%, the project should be scoped and analyzed as a roadway rehabilitation project.
2. Concrete Pavement Rehabilitation B involves pavement grinding, **moderate** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs in the lane that were replaced or exhibit third stage Rigid Cracking between 2 and 5%.
3. Concrete Pavement Rehabilitation C involves pavement grinding, **minor** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs in the lane that were replaced or exhibit third stage Rigid Cracking 2% or less.
4. The schedule for this strategy is based on pavement that has previously been cracked, seated and overlaid. It should not be used as an alternative on rigid JPCP pavements with cracking or faulting near or above the threshold for roadway rehabilitation.

TABLE R-2 (b)
High Mountain and High Desert Climate Regions
RIGID AND COMPOSITE PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Pavement Type	Pvmt Design Life	Maint. Service Level	Year	0	5	10	15	20	25	30	35	40	45	50	55
CAPM															
Slab Replacement (CPR ³)	10	1,2,3	Year of Action	0				10		15		20		Select a rehabilitation option listed under the rigid and composite pavement M&R table and follow the strategy sequence	
			Activity Description	CAPM (CPR C ³)		CAPM (CPR B ²)		CAPM (CPR A ¹)		Roadway Rehab ⁴					
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	2,098	5	4,135	5	4,135					
Composite	5	1,2,3	Year of Action	0		The maintenance and rehabilitation schedules depend on the previous history and condition of the existing pavement. To determine the appropriate M&R schedule to use, first determine the initial pavement type and the original rehabilitation completed. Next, determine any other rehabilitations and/or CAPM projects completed after the initial rehabilitation. Ignore projects that only removed and replaced RHMA-G or RHMA-O. Finally, find a schedule on the rehabilitation M&R table that best describes the original rehabilitation completed and that sequence. However, from the pavement history, take into consideration the activities already completed in that sequence. EXAMPLE: You are doing a Flexible Overlay and JPCP Slab Replacement on a previously cracked, seated, and overlaid project (doesn't matter whether it was 10 or 20 year). Previous work included a remove and replace RHMA-O 7 years after the crack, seat, and flexible overlay (CSFOL) rehabilitation, and a 0.10' HMA overlay at 18 years after the CSFOL project. From this information it can be determined that the initial pavement type was rigid and the original rehabilitation completed was a CSFOL. If the RHMA-O project at year 7 is ignored, it can be determined that the best fit for this sequence is the 20-year CSFOL. The 0.10' HMA overlay at 18 years after the completion of the CSFOL is the first CAPM under this sequence and the future activities will include a CAPM (FO + JPCP SR) at Year 23 and a 20-year rehab at Year 28. Remember to follow the sequence until you fulfill the analysis period.									
			Activity Description	CAPM (Flex Overlay)											
	Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	5												
	5	1,2,3	Year of Action	0											
Rigid - Jointed Plain Concrete Pavement (JPCP)	5	1,2,3	Year of Action	0		5		Select a rehabilitation option listed under the rigid and composite pavement M&R table and follow the strategy sequence							
			Activity Description	CAPM (CPR A ¹)		Roadway Rehab									
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	5	5,100									
	10	1,2,3	Year of Action	0				10		15		Select a rehabilitation option listed under the rigid and composite pavement M&R table and follow the strategy sequence			
			Activity Description	CAPM (CPR B ²)		CAPM (CPR A ¹)		Roadway Rehab							
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	10	1,500	5	3,100							
5	1,2,3	Year of Action	0		5				15		20		Select a rehabilitation option listed under the rigid and composite pavement M&R table and follow the strategy sequence		
		Activity Description	CAPM (CPR C ³)		CAPM (CPR B ²)		CAPM (CPR A ¹)		Roadway Rehab						
		Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	5	3,000	5	1,500	5	4,393						

CPR = Concrete Pavement Rehabilitation, CSFOL = Crack, Seat, and Flexible Overlay, FO = Flexible Overlay, MSRO = Mill, Slab Replacement & Overlay, SR = Slab Replacement

Notes:

- Concrete Pavement Rehabilitation A involves pavement grinding, **significant** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs that were replaced or exhibit third stage Rigid Cracking greater than or equal to 5% and less than or equal to 7%. For greater than 7%, the project should be scoped and analyzed as a roadway rehabilitation project.
- Concrete Pavement Rehabilitation B involves pavement grinding, **moderate** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs in the lane that were replaced or exhibit third stage Rigid Cracking between 2 and 5%.
- Concrete Pavement Rehabilitation C involves pavement grinding, **minor** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs in the lane that were replaced or exhibit third stage Rigid Cracking 2% or less.
- The schedule for this strategy is based on pavement that has previously been cracked, seated and overlaid. It should not be used as an alternative on rigid JPCP pavements with cracking or faulting near or above the threshold for roadway rehabilitation.

TABLE R-2 (c)
High Mountain and High Desert Climate Regions
RIGID AND COMPOSITE PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Pavement Type	Pvmt Design Life	Maint. Service Level	Year	0	5	10	15	20	25	30	35	40	45	50	55			
Rehabilitation (a)																		
Flexible/ Composite	20	1,2,3	Year of Action	0				18		23		28		46		51		
			Activity Description	20-yr Rehab (CSFOL)				CAPM (Flex Overlay)		CAPM (FO+ JPCP SR)		20-yr Rehab (MSRO)		CAPM (FO+ JPCP SR)		CAPM (FO+ JPCP SR)		
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	18	6,300	5	1,100	5	1,100	18	6,300	5	1,100	7	900		
	20	1,2,3	Year of Action	0				18		23		30		Select a lane replace option listed under the rigid and composite pavement M&R table and follow the strategy sequence				
			Activity Description	20-yr Rehab (MSRO)				CAPM (FO + JPCP SR)		CAPM (FO + JPCP SR)		Lane Replace						
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	18	6,300	5	1,100	7	900								
	20 & 40	1,2,3	Year of Action	0		Follow the strategies for new construction/reconstruction in the applicable flexible pavement tables for the appropriate climate region												
			Activity Description	Lane Replace														
	20	1,2,3	Year of Action	0						30				40		45		Select a lane replace option listed under the rigid and composite pavement M&R table and follow the strategy sequence
			Activity Description	20-yr Rehab (Lane Replace)						CAPM (FO+ JPCP SR)				CAPM (FO+ JPCP SR)		Lane Replace		
40	1,2,3	Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	30	7,300	10	5,900	5	1,100									
		Year of Action	0												50			
40	1,2,3	Activity Description	40-yr Rehab (Lane Replace)												CAPM (FO+ JPCP SR)			
		Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	50	8,400	5	1,100											

CPR = Concrete Pavement Rehabilitation, CSFOL = Crack, Seat, and Flexible Overlay, FO = Flexible Overlay, MSRO = Mill, Slab Replacement & Overlay, SR = Slab Replacement

Notes:

- Concrete Pavement Rehabilitation A involves pavement grinding, **significant** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs that were replaced or exhibit third stage Rigid Cracking greater than or equal to 5% and less than or equal to 7%. For greater than 7%, the project should be scoped and analyzed as a roadway rehabilitation project.
- Concrete Pavement Rehabilitation B involves pavement grinding, **moderate** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs in the lane that were replaced or exhibit third stage Rigid Cracking between 2 and 5%.
- Concrete Pavement Rehabilitation C involves pavement grinding, **minor** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs in the lane that were replaced or exhibit third stage Rigid Cracking 2% or less.
- The schedule for this strategy is based on pavement that has previously been cracked, seated and overlaid. It should not be used as an alternative on rigid JPCP pavements with cracking or faulting near or above the threshold for roadway rehabilitation.

TABLE R-2 (d)
High Mountain and High Desert Climate Regions
RIGID AND COMPOSITE PAVEMENT MAINTENANCE AND REHABILITATION SCHEDULE

Final Pavement Type	Pvmt Design Life	Maint. Service Level	Year	0	5	10	15	20	25	30	35	40	45	50	55			
Rehabilitation (b)																		
Rigid - Jointed Plain Concrete Pavement (JPCP)	20	1,2,3	Year of Action		0						25		30					
			Activity Description		20-yr Rehab (Lane Replace)						CAPM (CPR C ³)		CAPM (CPR B ²)		40		45	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	25	3,100					5	3,000	10	1,500	5	5,100		
	40	1,2,3	Year of Action		0										45		50	
			Activity Description		40-yr Rehab (Lane Replace)										CAPM (CPR C ³)		CAPM (CPR B ²)	
			Activity Service Life (years)	Annual Maint. Cost (\$/lane-mile) over Activity Service Life	45	3,200									5	3,000	10	1,500
														Roadway Rehab		Select a rehabilitation option listed under the rigid and composite pavement M&R table and follow the strategy sequence		

CPR = Concrete Pavement Rehabilitation, CSFOL = Crack, Seat, and Flexible Overlay, FO = Flexible Overlay, MSRO = Mill, Slab Replacement & Overlay, SR = Slab Replacement

Notes:

- Concrete Pavement Rehabilitation A involves pavement grinding, **significant** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs that were replaced or exhibit third stage Rigid Cracking greater than or equal to 5% and less than or equal to 7%. For greater than 7%, the project should be scoped and analyzed as a roadway rehabilitation project.
- Concrete Pavement Rehabilitation B involves pavement grinding, **moderate** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs in the lane that were replaced or exhibit third stage Rigid Cracking between 2 and 5%.
- Concrete Pavement Rehabilitation C involves pavement grinding, **minor** slab replacement, spall repair, & joint seal repair. It is for **JPCP** projects with a total number of slabs in the lane that were replaced or exhibit third stage Rigid Cracking 2% or less.
- The schedule for this strategy is based on pavement that has previously been cracked, seated and overlaid. It should not be used as an alternative on rigid JPCP pavements with cracking or faulting near or above the threshold for roadway rehabilitation.