

Appendix C

Simplified Pavement Design for Short Projects

Simplified Pavement Designs for Short Projects

Many projects exist such as bridge replacement projects which include a short stretch of new pavement or pavement replacement. For projects in which the total length of new pavement or pavement replacement is less than 300 feet (~100 m), the chart on the following page may be used in lieu of a complete pavement design per Sections 200, 300 and 400 of this Manual. The buildups given on the chart are conservative and are based on the amount of truck traffic expected for the opening day. The following procedures and precautions should be recognized:

1. The length of pavement replacement is exclusive of bridge length, where applicable.
2. The designer should first evaluate the buildup of the existing pavement. If the strength of the existing pavement exceeds the chart value, then the existing design should be perpetuated.
3. Where opening day truck traffic exceeds 800, this chart is not to be used and the procedures described in Sections 200, 300 and 400 of this Manual are to be followed.
4. If it is known in advance that poor soils may be encountered at subgrade level or if the designer is unsure of proper subgrade or slope treatments, review by the Geotechnical Design Section of the Office of Materials Management is recommended.
5. The designer is always welcome to do a complete design per Sections 200, 300 and 400 rather than using the chart.

Simplified Pavement Designs for Short* Projects															
Pavement Composition	Pavement Course Thicknesses														
	Number of Trucks in Opening Day ADT (ADT x T24)														
	<=10		11-25		26-50		51-100		101-200		201-400		401-800		>800
	in.	~mm	in.	~mm	in.	~mm	in.	~mm	in.	~mm	in.	~mm	in.	~mm	
Flexible Design															
448 AC Surface, Type 1, PG 64-22	1.25	32	1.25	32	1.25	32	1.25	32	1.25	32	1.25	32	1.25	32	n/a
448 AC Intermediate, Type 2, PG 64-22			1.75	45	1.75	45	1.75	45	1.75	45	1.75	45	1.75	45	n/a
301 Bituminous Aggregate Base	4	100	4	100	5	125	6	150	7	180	8	200	9	230	n/a
408 Bituminous Prime Coat	r	r	r	r	r	r	p	p	p	p	p	p	p	p	n/a
304 Aggregate Base	6	150	6	150	6	150	6	150	6	150	6	150	6	150	n/a
Alternate Flexible Design															
448 AC Surface, Type 1, PG 64-22	1.25	32	-	-	-	-	-	-	-	-	-	-	-	-	n/a
448 AC Intermediate, Type 2, PG 64-22	1.75	45	-	-	-	-	-	-	-	-	-	-	-	-	n/a
408 Bituminous Prime Coat	r	r	-	-	-	-	-	-	-	-	-	-	-	-	n/a
304 Aggregate Base	12	300	-	-	-	-	-	-	-	-	-	-	-	-	n/a
Rigid Design															
452 Plain Concrete Pavement	-	-	-	-	-	-	7	180	8	210	9	230	10	260	n/a
304 Aggregate Base	-	-	-	-	-	-	6	150	6	150	6	150	6	150	n/a

* Less than 300 linear feet (~100 meters) of total pavement replacement

r - required

p - optional