Pavement Layers					
		Residential		Commercial/Arterial Route	Regional
Bound layers		**Cul de sac - Home Zone**	**Spine Rd - Heavily Trafficked**	**Industrial Estates/Link roads**	**AADT > 3000 vehicles**
Surface course	Minimum compacted thickness:	**40mm**	**40mm**	**40mm**	**40mm**
(Single course)	Chip size range:	10mm	10mm or 14mm	10mm or 14mm	10mm or 14mm
	Material name:	SMA surf (IS EN 13108-5)	SMA surf (IS EN 13108-5)	SMA surf (IS EN 13108-5)	SMA surf (IS EN 13108-5)
	Alternatively:		HRA (IS EN 13108-4)	HRA (IS EN 13108-4)	HRA (IS EN 13108-4)
Binder course	Minimum compacted thickness:	**100mm**	**60mm**	**60mm**	**60mm**
(Single course)	Chip size range:	20mm	20mm	20mm	20mm
	Material:	AC 20 dense bin (IS 13108-1)	AC 20 dense bin (IS 13108-1)	AC 20 dense bin (IS 13108-1)	AC 20 dense bin (IS 13108-1)
Base course	Minimum compacted thickness:		**80mm**	**120mm**	**220mm** (2 layers)
(Single or double course)	Chip size range:		32mm	32mm	32mm
	Material name:		AC 32 dense base (IS 13108-1)	AC 32 dense base (IS 13108-1)	AC 32 dense base (IS 13108-1)
	Minimum bituminous thickness:	**140mm**	**180mm**	**220mm**	**320mm**
		(Designer should be cognisant of Figure 4.2 of DN-PAV-03021 Dec 2010)			
Unbound layers					
Sub-base	Minimum compacted thickness:	**150mm**	**150mm**	**150mm**	**150mm**
	Material name:	**Refer to TII publication - Series 800** (Including Clauses 801-804)			
Capping	Compacted thickness:	**Refer to TII publication - DN-PAV-0321** (i.e. CBR, plate compaction, water tables, etc)			
	Material name:	**Refer to TII publication - DN-PAV-0321** (i.e. Class 6F2/6F1, water tables, etc)			
		Coloured Surface Course Options			
Surface course	Material description	**Red SMA**	**Buff SMA**	**Black SMA with Red Chip**	
(Single course)	For use on:	**DEMURS**	**Cul de sacs, DEMURS**	**Traffic Calming Ramps**	
	Min compacted thickness:	40mm	40mm	40mm	
	Chip size range:	10mm only	10mm only	10mm only	
	Min chip PSV value:	55	55	55	
	Material name:	SMA surf PMB (IS EN 13108-5)	SMA surf PMB (IS EN 13108-5)	SMA surf PMB (IS EN 13108-5)	
	Chip colour:	Red	Buff	Red	
	Aggregate colour ratio:	Chips >4mm: Coloured Aggregate	Chips >4mm: Coloured Aggregate	Chips >4mm: Coloured Aggregate	
	Pigment colour:	Red	Buff	n/a	
	Pigment % in mix:	5% (Typically)	5% (Typically)	None	
	Binder:	Black	**Clear**	Black	
	After treatment:	None	None	None	
	Protected from Traffic:	**4hrs min**	**4hrs min**	2hrs min	
Notes					
1. Any deviation from the requirements above must be approved in advance by SDCC Roads Department					
2. Design must is be in compliance with current **IS EN 13108 and SR28**					
3. Design must be signed off by a certified person					
4. Where a subgrade has a CBR lower than 2.5%, it is considered unsuitable for support, and must be 'permanently improved'					
5. SDCC require that 2 days advance notice by email is given by the developer to SDCC in advance of all bituminous work being carried out (date & approx times included)					
6. Cores will be required post completion to verify laying depths and proper compaction; and shall be taken in accordance to the requirements of BS 594987 Clause ‹					

Helpful notes for Builders and Inspectors

Developers/Builders and their staff who are involved in the construction of Road Pavements should be very familiar with the contents of the following documents:			
TII - DN-PAV-03021			
TII - Specification for Roadworks - Series 800 - Unbound materials (CC-SPW-00800)			
BS 594987:2015 - Specification for transport, laying, compaction and product-type testing protocols			
Notwithstanding the information contained in the above documents, SDCC TIC section draw particular attention to the items below where reoccurring problems are being regularly encountered at construction stage:			
Item	**Problems**	**Remedy**	**Reference**
Capping			
Material	Drying out	Avoid stock-piling	Series 800 Clause 802/1
Laying	Being laid in layers greater than 225mm	Remind ground workers of the max layer depth	Series 800 - Clause 802 - Laying
	Laid too high - decreasing the subbase layer depth	Better quality control by Builder, and supervision of Sub-Contractor	
Compaction	Incorrect procedures being employed	Compaction to be carried out to specification for unbound mixtures	Series 800 - Clause 802 - Table 8/4
Sub-base			
Material	Seperation of large and fine aggregate; not being placed to specification	Avoid stock-piling; random spot-checks, turn away trucks with segregated material	Series 800 - Clause 802 - Transport
Laying	Irregular surface profile	Sub-base to be machine laid; finished layer must have a closed blinded finish	Series 800 - Clause 802 - Laying
Compaction	Incorrect compaction procedures being employed	Compaction to be carried out to specification for unbound mixtures	Series 800 - Clause 802 - Table 8/4
Base			
Material	Segregation of material being loaded; cold material delivered to site	Better quality control by Builder, and supervision of Sub-Contractor; temp control	BS 594987 Clause 4.1 & 4.2
Laying	Laying during unsuitable weather conditions (i.e. heavy rain, cold temps)	Better programming	BS 594987 Clause 6.1, 6.2, 6.3 & 6.4
Compaction	Incorrect compaction procedures being employed	Compaction to be carried out to specification for bound mixtures	BS 594987 Clause 9.1, 9.2 & 9.3
Binder course & Surface course			
Protection of the exposed surface (Base)	Contaminated, open texture filled with clay/dirt	Prevention in the first instance; housekeeping; reduce time between laying courses	BS 594987 Clause 5.1
Bond coat between every bituminous course	Not being applied; not being verified; SDCC must receive notice of laying	Min bond coat - 0.7litres/m^2; solution must be allowed to oxidise & become tacky	BS 594987 Clause 5.5
Material	Segregation of material being loaded; cold material delivered to site	Better quality control by Builder, and supervision of Sub-Contractor; temp control	BS 594987 Clause 4.1 & 4.2
Laying	Laying during unsuitable weather conditions is completely unnacceptable	Better programming & quality control by Builder, and supervision of Sub-Contractor	BS 594987 Clause 6.1, 6.2, 6.3 & 6.4
Compaction	Incorrect compaction procedures being employed	Compaction requirements for bound materials must be met	BS 594987 Clause 9.1, 9.2 & 9.3
Joints			
Longitudinal	Mats not laid tightly together; joint holding water (freeze/thaw issues)	Better quality control by Builder, and supervision of Sub-Contractor	BS 594987 Clause 6.8
Edge-sealing			
Kerbs and other edges	No evidence sealing is being carried out	Better quality control by Builder, and supervision of Sub-Contractor	BS 594987 Clause 6.9
Topsealing:			
Longitudunal joints	TII/SDCC do not approve top-sealing with standard bitumen seal	Material must have min SRV (Skid Resistance Value) value of 55 (i.e. overbanding product)	
Temperatures			
Min on Arrival	**See Table A.1 (Range 110-140° C)**	Material & mix dependent	BS 594987 Table A.1
Min immediately prior to Rolling	**See Table A.1 (Range 80-110° C)**	Material & mix dependent	BS 594987 Table A.1
Gradients	Ponding	Min 1:100 longitudinal; 1:40 crossfall	