



General Geometry of Commercial and Industrial Estates and Premises

3.2.1 The guidance contained in this part is intended to help you design industrial and commercial street layouts that provide for the safe and free movement of all street users, including pedestrians, cyclists, bus passengers, and motorists, and which meet their movement requirements. You should select and assemble the design elements in table T3.2.1 with the aim of creating an environment that is safe for everyone and that encourages people to walk, cycle, and use public transport.

Table T3.2.1

Geometry Requirements for Industrial/Commercial Roads				
Road type	Major industrial access road	Minor industrial access road	Access to Premises	
Function	Large Retail (supermarkets), General Industry, Warehouse / Distribution	Offices / Light Industry and Assembly and Leisure	All	
Size	No limit subject to Transport Assessment (TA). Must include multiple points of access with provision for cyclists and buses.	No limit subject to TA provided all employment units are within a 400m maximum walking distance of a bus stop.	Usually a single point of access subject to TA depending on scale	
Target speed	30mph	25mph	N/A	
Minimum carriageway width	7.3m	6.0m for offices and assembly and leisure uses 6.75m for light industry.	N/A	
Carriageway centre-line radius and widening on bends	55m minimum			
	Radius (m)	55 to 74	75 to 89	90 to 150
	Min. widening (m)	1.2	0.7	0.6
Widening should be on both sides of the curve, or on the inside.				

Geometry Requirements for Industrial/Commercial Roads

Road type	Major industrial access road	Minor industrial access road	Access to Premises
Junction radii	See Design Manual for Road and Bridges CD123 Else subject to vehicle tracking.		Usually a minimum 10m wide entrance 15m dropped kerb when across a 2.0m wide footway. Else radius kerbs
Junction spacing	90m on the same side of the road that maybe reduced to 60m if the priority road is speed restrained unless it can be demonstrated by way of speed-readings that short stagger distance would remain adequate. 40m on opposite sides.		Not within twice the junction radii
Junction approach	Wherever possible 90 degrees to priority road for at least twice the kerb radius length along the centreline.		Wherever possible 90 degrees to priority road.
Turning heads	Not normally required if more than one point of access.	In accordance with Freight Transport Association publication 'Designing for Deliveries'.	
Carriageway crossfall	1:40 (2.5%)		N/A
Carriageway/access longitudinal gradient	Flexible surfacing: minimum 1:100 (1%) maximum 1:20 (5%) Not to exceed 1:25 (4%) for the first 10m of a junction		Not to exceed 1:25 (4%) for the first 10m of a junction
Carriageway vertical curves	See: Vertical Curves		N/A
Visibility splays at junctions, 'Y' distance also applicable on bends and vertical crests	Minimum 2.4m (X) x 59m (Y)	Minimum 2.4m (X) x 47m (Y)	As per road type from 2.4m minimum setback (X distance)
	Speed-readings may be required from existing roads to establish visibility splay length.		
Service strips	2.0m usually combined with footway (see verges)		N/A

Geometry Requirements for Industrial/Commercial Roads			
Road type	Major industrial access road	Minor industrial access road	Access to Premises
Carriageway margins	0.5m increasing to 0.75m if containing street lighting (Development on opposite side of the road only)		N/A
Verges	Not normally acceptable in the highway		N/A
Footway width	Usually 2.0m minimum width on both sides of the carriageway		N/A
Footway pinch points	Minimum 1.2m for a maximum length of 6.0m		N/A
Footway gradients	Minimum 1:100 (1%), Maximum 1:20 (5%) Maximum crossfall 1:35 (2.85%) Maximum 1:14 (7%) at accesses		
Pedestrian visibility splays at access	2.0m x 2.0m		
Bus stops	To include real time bus stop poles & displays including associated electrical connections, shelters, lighting and timetable cases and bus stop clearways. 300m – 400m interval 180mm raised kerbing height for 4m min. Lowered kerbs for access 3m min. footway width To include shelters, lighting, real-time displays, timetable cases, & bus stop clearways		N/A
Bus frequency	Target every 30 minutes minimum day time services, evenings and weekends minimum hourly		
Cycling facilities	To comply with Department for Transport LTN 1/20		

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