Parallel parking arrangement

Perpendicular parking arrangement

Figure 8.18 Suggested parallel and perpendicular parking arrangements.
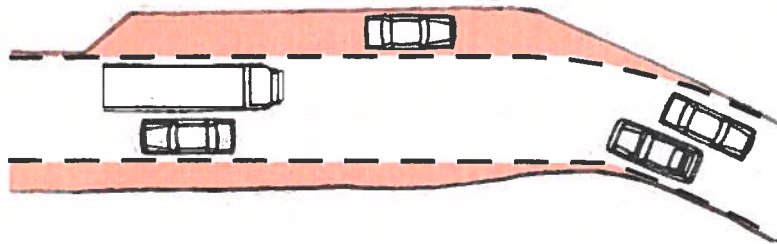

Figure 8.19 Gradual widening of the carriageway to create on-street spaces, with running carriageway checked using vehicle tracking.

8.3.50   Figures 8.18 and 8.19 show some suggested arrangements.

8.3.51   The width (W in Fig. 8.18) needed to access echelon or perpendicular spaces conveniently, depends on the width of the bay and the angle of approach. For a 2.4 m wide bay, these values are typically:

- at 90 degrees, W = 6.0 m;
- at 60 degrees, W = 4.2 m; and
- at 45 degrees, W = 3.6 m.

8.3.52   These width requirements can be reduced if the spaces are made wider. Swept-path analysis can be used to assess the effect of oversized spaces on reducing the need for manoeuvring space (Fig 8.20).

8.3.53   Where space is limited it may not be possible to provide for vehicles to get into the spaces in one movement. Some back and fore manoeuvring may be required. This is likely to be acceptable where traffic volumes and speeds are low.

8.3.54   The dimensions given above for parking spaces and manoeuvring areas can also be applied to the design of underground and multi-storey car parks. For detailed guidance on the design of these types of parking, reference can be made to guidelines prepared by the Institution of Structural Engineers (IStructE).[23]

Tracking assessment
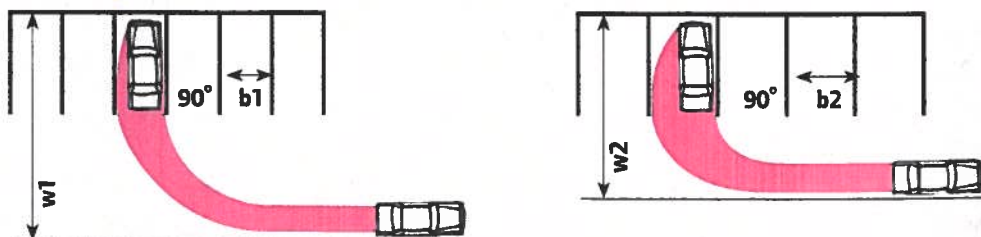
b1 < b2
w1 > w2

Figure 8.20 The effect on overall street width requirements when wider car parking spaces are provided.

23 IStructE (2002) *Design Recommendations for Multi-storey and Underground Car Parks.* London: IStructE.