



Figure 10.12 The 1971 Concept Plan for Singapore.

has been the largest construction project in Singapore ever since then.

The first 67 kilometres of the system with 42 stations opened step by step between November 1987 and July 1990 at a cost of 1990\$5 billion. A spur was built in 1996 to form a loop connecting Woodlands in the north to new towns and industrial areas in the southeast and southwest. The system (see Figure 10.13) now has a route length of 89.4 kilometres and has 51 stations (16 underground, 34 elevated and one – Bishan – at ground level). The lines run underground in the central area for 23.3 kilometres (14.5 miles), above the ground for 62.3 kilometres (38.7 miles) and at ground level for 3.8 kilometres (2.4 miles). The new 20-kilometre (12.5-mile) long, 16-station North East Line was completed in April 2003. It is predominantly an underground line linking the

CBD (Harbour Front) to the Singapore Exposition Centre and Pungol. It was built at a cost of 2000\$4.6 billion. The 2001 Concept Plan contains a new orbital route and a radial MRT network. The total length of the MRT lines will be expanded to as much as 500 kilometres (310 miles) in the future to keep pace with and shape the location of Singapore's growth.

Construction has not always been easy. Perhaps not typical, but illustrative nevertheless, has been the construction of the new Chinatown station. Tunnelling had to be below existing buildings and streets. Complex traffic flows had to be maintained at ground level and major utility lines – water, sewage, telecommunications and electricity – all had to operate while construction took place. Links to existing routes and platforms had to be built at interchange stations.