104.01.03 Expressways

Expressways are analyzed using a series of nomographs covering a range of average roadway speeds. The charts are based on 3.65 m lanes, full width shoulders, and adequate clearances. (See HCM Section 100.04.02)

104.01.04 Expressway Ramps and Weaving Sections

Capacities of urban expressways are influenced by entrance and exit volumes, weave distance, and the geometric layout. All of these factors should be considered in the capacity analysis. (See HCM Section 100.04.02)

104.01.05 Intersection Capacity

Intersections capacity generally governs the capacity of the associated roadway. Signal timing, intersection spacing, turning movement all play a critical role in determining the overall capacity. (See HCM Section 100.04.02)

105 CONTROL OF ACCESS

105.01 GENERAL

Control of access is achieved by limiting the number and location of roadway access points so that the through traffic capacity or safety of the facility will not be significantly impaired. There are three degrees of access control:

Full Access Control - Gives preference to through traffic by providing access only through selected frontage/sector roads and by prohibiting at-grade crossings or direct access from abutting property.

Partial Access Control - Still gives preference to through traffic but permits some at-grade crossings and some private driveway connections.

Approach Road and Driveway Regulations - Without access control, abutting properties are permitted access to the roadway, but the number, location and geometrics are regulated.

Table 100.03
Control of Access by Road Type

Roadway Type	*Degree of Access Control*
Freeway	Full Access Control
Expressway	Full or Partial Access Control
Major Collector	
Main Road	Partial Access Control
Minor Arterial	Approach Road
Sector Road	and Driveway
Local Road	Regulations

All Roadways will have some degree of access control. The appropriate degree of access control by roadway type is given in Table 100.03. More detailed guidelines for establishing the control of access lines by roadway classification are presented in the following section.

105.02 ACCESS CONTROL DESIGN CRITERIA

105.02.01 Primary Roadways

The number of access openings on expressways with access control should be held to a minimum. Parcels which have access to another frontage or sector road as well as expressway frontage are not allowed expressway access. In some instances, parcels fronting only on the expressway may be given access to another sector road by constructing suitable connections if such access can be reasonably provided.

With the exception of extensive expressway frontages, access openings are limited to one opening per parcel. Wherever possible, one opening should serve two or more parcels. In the case of a large expressway frontage under one ownership, the feasibility of limiting access to one opening may be prohibitive, or the property may be divided by a natural physical barrier such as a wadi or ridge, making it necessary to provide an additional opening. However, in the latter case, it may be preferable to connect the physically separated portions with a low-cost structure or road rather than permit two openings.

Access rights shall be acquired along interchange ramps to their junction with the nearest public road, and shall extend to the end of the ramp taper