

Formula B:

$$\begin{aligned} \text{ADT}(20) &= 4,000 + \left[\frac{15 \times 4,000}{100} \right] \times 5 + \left[\frac{10 \times 4,000}{100} \right] \times 15 \\ &= 4,000 + 3,000 + 6,000 \\ &= 13,000 \end{aligned}$$

203.03.03 Procedures for Traffic Volumes

Table 200.06 specifies the minimum procedures that shall be met when traffic studies are conducted to identify the present ADT. Collection of traffic volumes for three functional classes of highways (Primary, Secondary, and Local) and five types of improvements (upgrading existing Primary or Secondary Roads; new Primary or Secondary Road on new alignment/location; upgrading existing intersection/interchange on Primary or Secondary Roads; new intersection/interchange on existing Primary or Secondary Roads; and new Local Streets are considered.

203.04 SURVEY CONTROL/FIELD SURVEYS

203.04.01 Introduction

Each project requires initial field surveys to establish baseline topographic information for project scoping and design. Setting horizontal and vertical control is of great importance in mapping. Relative position in the horizontal plane is maintained by horizontal control. Horizontal control consists of a series of points accurately fixed in position by distance and direction in the horizontal plane.

For most topographic surveying, traverses furnish satisfactory control. For strip maps, the open traverse is used. The open traverse can be tied to fixed points at each end. For area maps, the closed traverse is used. The closed traverse can be closed to form a net which is accurate to the degree required.

Relative position in the vertical plane can be maintained by a series of benchmarks in the map area. These benchmarks are referred to a known datum, usually mean sea level.

203.04.02 Horizontal Control

The current inventory of horizontal control points established in the vicinity of the project will need to be investigated. The Abu Dhabi Municipality and Town Planning Department should be consulted on the order of accuracy and status of existing primary and secondary control points.

The need for setting new horizontal control points will be ascertained from the existing data. A discussion of surveying methods and procedures used to establish new horizontal control points is beyond the scope of this manual and will be covered in a companion Technical Manual on the subject of surveying and mapping.

203.04.03 Vertical Control

There are several vertical datum currently being used for construction in Abu Dhabi. Table 200.07 summarizes the most common vertical datum and the relationship between them. In addition, some Sewerage Projects Committee projects use their own datum, in which + 100.00 meters equals 0.00 meters, New Abu Dhabi Datum. All design work will be referred to the New Abu Dhabi Datum.

203.04.04 Coordinate System

A Coordinate System has been established by Abu Dhabi Municipality Town Planning Department. This Coordinate System shall be used for all surveys.

203.04.05 Field Surveys

Field Surveys will be required on nearly every project to supplement the aerial topography, record underground utility or drainage features, reflect new existing features, provide cross-sections and existing pavement elevations at the limits of improvement, obtain building floor elevations and other related information needed for preliminary and final design.

Once the horizontal alignment, including applicable alternative alignments, has been established, the roadway centerline will be staked