4 GUIDELINES FOR DEVELOPING A ROW UTILITIES CROSS SECTION

4.1 Introduction

The increase in the consumption of utilities due to continuous growth in population warrants for the expansion of different utility networks. Such expansion in utility networks results in space restrictions, utility conflicts and an ever increasing need to expropriate land. To address these challenges, this chapter details with the processes that have been derived from the following resources, related to the development of space efficient ROW with best order and arrangement of different utilities:

1. DoT: this document and other engineering standards, specifications and guidelines,
2. ADM: Town Planning Sector (TPS) design, construction and maintenance guidelines,
3. UPC: Urban Corridors Design Manual (UCDM),
4. standards and specifications practiced by the SAUP, and
5. international best practices.

4.2 Process for Developing a ROW Utilities Cross Section

The ROW is a set of different elements that have their own functionality and are integrated in the form of a road corridor. The development of a ROW utilities cross section is usually dependent on the following:

1. Functionality of the road; which is defined by the road hierarchy and the accessibility and mobility options.
2. Type of utilities and services; which is based on the demand of such services and utilities.
3. Order and arrangement of different types of utilities; which are dependent on the specifications and standards of the service providers.
4. Geometric design standards; which are related to the road furniture and other road elements e.g. medians and side walks.

4.3 Functionality of Roads

The functionality of roads plays a vital role in determining the road hierarchy and defining the factors, such as, corridor width and location of the services and utilities; which ultimately affects the overall design of the ROW including the utility corridor. Based on the functionality a road can be defined as follows:

1. Controlled access road; which provides higher level of mobility and lesser level of accessibility. The roads, which fall in this category, are Main roads.
2. Non controlled access road; which provides lower level of mobility and higher level of accessibility. The roads, which fall in this category, are local streets and collectors.

In this manual, the development of ROW will be discussed for Main roads. However, The ROW design specifications/standards for non controlled access roads can be obtained from the USDM and UCDM published by the UPC. In case, there is a transition between the type and hierarchy of