Land Use and Utility Requirements

Development of Utility Corridor Arrangements

Step I:

Understand Land Use

- Data collection and analysis (e.g. collection of as-builts. determination of utility capacities and condition).
- Consider the following influences:
 - Land Use Context
 - Plot use
 - Community facilities
 - Transport planning
 - Street Families

References:

USDM and other planning manuals

Step II:

Identify Infrastructure **Retrofitting Objectives** and Confirm Utility Requirements

- One or more utilities may require upgrade, addition, replacement or other modification for a variety of reasons, including:
 - o A change in Land Use
 - Additional utility demands
 - A need for more Travel Lanes or Parking
 - A need for new pipes, ducts or cables
- Develop Utility Network Plans for utilities to be retrofitted. considering:
 - Utility demand
 - External utility connections
 - Utility plot allocation

References:

- USDM and other planning manuals
- Utility providers' specifications

Step III:

Develop Cross Section of Existing Streets

- Identify a particular street to be developed.
- Draft cross section of existing street, including:
 - Existing utilities
 - Existing street elements
 - Proposed street elements, as applicable and in accordance with the USDM

• Output from Step I and Step II

References:

Step IV:

Select Closest Applicable **UCDM Cross Section** Arrangement

- Consider the street configuration and widths, including
 - o Overall RoW
 - o Travel Lane
 - Frontage Lane
 - Cycle Track/Sidewalk
 - o Parking

Step V:

Adjust and Finalise Utility Corridors Retrofit in **Optimal Location**

- Adjust selected UCDM cross section to suit street configuration.*
- Consider existing constraints, including:
 - Space available between any two utilities
 - Utility corridor allocation rules
 - Existing surface finish
- Consider priority of placement (e.g. space in Sidewalk).
- Utility corridors may be adjusted in accordance with:
 - Location rules (Table 4.1)
 - o Corridor width table (Table 4.2)

References:

• UCDM Tables 4.1 and 4.2

• UCDM Table 5.1

References:

Utility corridor plans may be developed by repeating Steps III, IV and V for each change in cross section/street.

Notes:

- * If a USDM 'typical street' configuration is used, no adjustment should be required (see Chapter 5 for further details).
- 1. To promote efficiency and minimise disruption, stakeholders installations likely to be impacted by retrofitting activities should be consulted and, where possible, multiple improvement works should be carried out as one project.
- 2. The development of utility corridors arrangement is most efficient when the street and Pedestrian Realm design follow the USDM and PRDM respectively.
- 3. Utility network design is subject to utility provider approval. For any given utility network design, larger utilities should be allocated to wider Street Families, in line with corridor widths provided in the Manual.

Figure 3.3: Step-by-step guide for the development of infrastructure retrofitting of utility corridors arrangements in existing streets