

SECTION 800 UTILITIES

801 GENERAL

Utilities are an important element of roadway design, especially in an urban environment. There are three categories of utility improvements:

Utility Protection- Existing utilities within the project limits that have been determined to be geometrically compatible with the proposed improvements; and are in good condition with an acceptable remaining service life; may remain in place and must be protected from traffic loads and maintenance operations. The traffic loads consist of both construction loading and post-construction vehicular loading.

Utility Relocation- Existing utilities that are incompatible with the roadway geometrics will require relocation, which may extend beyond the limits of the proposed improvement depending on connection requirements. Relocated utilities will be replaced in-kind with the same size or capacity as the existing utility. The existing capacity may be undersized and require an increase in capacity or other utility expansions or improvements may be required. Such an up grade or development work must be requested by the responsible utility agency and approved by the Road Section before the design of the upgraded utility can be included in the roadway project.

New Utilities- New service facilities that may be required to support growth within the typical 20-year design life of the proposed roadway improvements; may replace redundant or outdated facilities or are major trunk lines routed through the project corridor that serve a broader purpose.

Utility planning begins in the preliminary design phase and is a factor in the project scoping process that leads to identification of the final roadway geometrics. A thorough investigation of existing utility location and condition is undertaken as an early final design activity.

The Department's objective is that Roadway and Bridge projects are developed to include all required construction of utility protection, relocation and installation by the Contractor. This provides for single source responsibility for the procurement of materials, and the scheduling of the proposed improvements; while minimizing disruption of services to the public. This concept reduces Contractor delay claims and the time required for advance utility works. The actual timing and responsibility for construction of individual services will be determined on a project by project basis.

Although contained in a single set of construction documents, there are normally several Consultants involved in the preparation of individual utility plans, specifications and BOQ. Several Municipality Departments use designated Consultants for the planning and design of their respective services, as further described in Section 804.01. The Roadway/Bridge Consultant is responsible for overall coordination and packaging of the documents into a complete and comprehensive set of tender documents. The parallel development of plans and specifications by multiple Consultants must be continuously monitored to avoid conflict and contradiction.

802 UTILITY PLANNING

The Utilities Section of the Town Planning Department is responsible for master planning and coordination of utility services. Service corridors will be reserved within each project for utilities in accordance with the planning data obtained from the Utilities Section. The corridors are established based on the approved design concept and reflect the anticipated growth and overall needs of the individual utility agencies. The agencies or Municipality department responsible for the individual services are as follows:

- **Water** - Water and Electricity Department (WED)
- **Telephone and Telecommunications** - ETISILAT
- **Drainage** - Abu Dhabi Municipality Sanitary Drainage Network Division