

1.0 **GENERAL**

1.1 **Related UBC Guidelines & Documents**

- .1 Section 26 16 00 – Metering
- .2 Section 33 10 00 – Water Utilities
- .3 Section 33 51 00 – Natural Gas Distribution
- .4 Section 33 61 00 – District Hot Water Energy Distribution

1.2 **Related Documents External to UBC**

- .1 BC Plumbing Code and all references contained there within
- .2 BC Building Code and all references contained there within

1.3 **Description**

- .1 These guidelines apply to all work completed within UBC owned buildings at UBC Vancouver – this includes core academic buildings, student housing, athletics.
 - 1. For metering requirements for non-UBC owned buildings, coordinate with UBC Energy and Water Services
- .2 In instances where conflicts are found between these guidelines and provincial regulations or codes, please notify UBC Mechanical Engineer.
- .3 These guidelines are intended to be read by designers and their content integrated into construction drawings and specifications. Construction documents are not to reference the technical guidelines directly.
- .4 It is the requirement of the mechanical designer to coordinate these requirements with other disciplines.
- .5 This section of the Technical Guidelines is the parent of Division 21, 22 and 23. All requirements here, apply equally to those sections.

2.0 **MATERIALS AND DESIGN REQUIREMENTS**

- .1 The project shall bear all costs associated with installation of meters.
- .2 All site-level meters, unless otherwise specified, shall be supplied by the project, from local distributors as per spec in this document. Coordinate with UBC Energy and Water Services for approval.
- .3 All UBC owned and non UBC owned buildings and all irrigation systems constructed on UBC property shall have meters installed on all services, for example:
 - 1. Water
 - 2. District Energy System (DES)
 - 3. Gas
 - 4. Electricity
- .4 Main building water and gas meters shall be compatible with remote monitoring and wired directly to the building automation system. The Division 26 contractor shall be responsible to install all pathways and wiring for remote monitoring of these meters. Refer to Section 26 16 00 and standard drawing E4-6 for wiring methods.
- .5 Deleted.

- .6 DES meters shall be network connected for remote monitoring only. The Division 20 contractor shall provide all necessary communication equipment to ensure effective remote monitoring is achieved. Refer to Section 33 61 00 0 5.3.1 and 5.3.5 and standard drawings E4-6c.
- .7 All UBC buildings shall have the following services metered:
 - 1. Water: All buildings
 - 2. Gas: All buildings
 - 3. Electricity: All buildings
 - 4. District Energy: All buildings
- .8 Standard of acceptance of mechanical meters shall be as follows:
 - 1. Water: Badger M5000
 - 2. Gas: Dresser D800
 - 3. District Energy: Kamstrup Multical 603 with BACnet module
- .9 Electrical Meters
 - 1. Refer to Division 26.

END OF SECTION