AS 5488.1:2019

Australian STANDARD

Classification of subsurface utility information

Part 1: Subsurface utility information

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Geospatial Information & Technology Association
National Utility Locating Contractors Association
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Preface

This Standard was prepared by Standards Australia Committee IT-036, Subsurface Utility Engineering Information.

The objective of this Standard is to provide a framework for the consistent classification of information concerning subsurface utilities for the management of subsurface utilities. This Standard focuses on the classification of Subsurface Utility Information (SUI). AS 5488.2 provides guidance on the management of subsurface utilities, as referred to by Subsurface Utility Engineering (SUE).

This Standard also provides guidance on issues such as how subsurface utility information may be obtained (refer to AS 5488.2), and how that information should be conveyed to the information users. This Standard also recommends, through the adoption of Quality Level A, the absolute positioning of subsurface utilities in three dimensions, as an improvement upon the current widely adopted method of relative positioning.

NOTE In countries prone to natural disasters or terrorist attacks, absolute positioning has a major advantage in locating subsurface utility assets and infrastructure after such an event.

The terms “normative” and “informative” are used in Standards to define the application of the appendices to which they apply. A “normative” appendix is an integral part of a Standard, whereas an “informative” appendix is only for information and guidance.

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Section 1 Scope and general

1.1 Scope

This Standard provides a framework for the classification of subsurface utility location and attributes information in terms of specified quality levels for the management of subsurface utilities.

This Standard applies to subsurface utilities and associated surface features that facilitate the location, identification and engineering management of subsurface utility infrastructure.

This Standard also applies to all existing (including redundant) and under-construction subsurface utility infrastructure.

For the purpose of this Standard, the term "subsurface" includes "submerged" (see 1.4.28).

This Standard does not apply to utility infrastructure that is above the surface, such as overhead power and telecommunication lines.

1.2 Application

1.2.1 General

This Standard is intended for users of subsurface utility infrastructure information throughout the lifecycle of the utility; including those that collect, represent, map and manage such infrastructure information.

1.2.2 Representation of subsurface utilities

The representation of subsurface utilities on maps, plans and electronic records, in terms of symbology, line types and colours is the prerogative of the entity that owns or operates the utility. Although this Standard recommends how this information should be recorded (see Appendix B), it is not intended to prevent or encumber an entity that maps subsurface utilities from using its own symbology, line types and colours to depict and record subsurface utilities in its own geographic information systems, mapping databases, plans, drawings or other records.

1.2.3 Retrospective application

This Standard may be applied retrospectively to existing subsurface utilities with regard to classifying information from systems and repositories.

The principles of risk management and continuous improvement in the quality and accuracy of subsurface utility records should be considered.

1.2.4 Currency of subsurface utility information (SUI)

Quality Levels (QL) apply to a subsurface utility at the date that the information was obtained. Due to physical man-made and natural changes that may occur in the area around the subsurface utility since that date, at any future time and without further investigation the relative spatial position only indicates the best information available about the location of the subsurface utility. Similarly, catastrophic events such as earthquakes may affect the recorded absolute spatial position of the subsurface utility.