

## Part 631 - Geology

### Chapter 2 - Engineering Geology Investigations

- 631.0200 Introduction
- 631.0201 Intensity of engineering geology site investigations
- 631.0202 Minimum requirements for engineering geology investigations
- 631.0203 Geologic reconnaissance
- 631.0204 Preliminary site investigation
- 631.0205 Detailed site investigation
- 631.0206 Minimum requirements for sampling and testing of structure sites
- 631.0207 Investigation of potential seismic hazards
- 631.0208 Geologic investigation during project implementation and construction (as-built)
- 631.0209 Investigations for repair, rehabilitation, and decommissioning of structures
- 631.0210 Groundwater investigations
- 631.0211 Investigation of structural problems caused by erosion or sedimentation
- 631.0212 Watershed sediment yield studies for structures and conservation practices
- 631.0213 Stream channels and stream corridors
- 631.0214 References
  - Table

### Chapter 3 - Engineering Classification of Earth Materials

- 631.0300 Introduction
- 631.0301 Physical and mineralogical characteristics of earth materials
- 631.0302 Rock characteristics related to engineering properties
- 631.0303 Geologic properties of materials
- 631.0304 Unified Soil Classification System
- 631.0305 References
  - Tables
  - Figures

### Chapter 4 - Engineering Classification of Rock Materials

- 631.0400 Engineering properties of rock
- 631.0401 Rock material properties
- 631.0402 Rock mass properties: general
- 631.0403 Rock mass properties: stratigraphic discontinuities
- 631.0404 Rock mass properties: structural discontinuities
- 631.0405 Properties related to both rock materials and rock mass
- 631.0406 Rock material field classification system
- 631.0407 References
  - Appendices
  - Tables
  - Figures

### Chapter 5 - Engineering Geology Logging, Sampling, and Testing

- 631.0500 Introduction
- 631.0501 Safety
- 631.0502 Logging earth materials
- 631.0503 Sampling earth materials
- 631.0504 Samples
- 631.0505 Testing earth materials
- 631.0506 References
  - Tables
  - Figures

### Chapter 11 - Cone Penetrometer

- 631.1100 Purpose and scope
- 631.1101 Introduction
- 631.1102 Applications
- 631.1103 Advantages, disadvantages, and cautions
- 631.1105 Equipment
- 631.1106 Standards
- 631.1107 Field operations—performing the CPT
- 631.1108 Field operations—readings and calculations
- 631.1109 Soil mechanics laboratory use of CPT data
- 631.1110 Use of CPT data in design
- 631.1111 SPT
- 631.1112 Glossary
- 631.1113 References
  - Tables
  - Figures

#### Chapter 12 - Rock Material Field Classification System

- 631.1210 The rock material field classification system
- 631.1220 Evaluating earth material for excavation by a ripping index
- 631.1250 References
  - Tables
  - Figures

#### Chapter 30 - Groundwater Hydrology and Geology

- 631.3000 Introduction
- 631.3001 Groundwater hydrology
- 631.3002 Groundwater geology
- 631.3003 References

#### Chapter 31 - Groundwater Investigations

- 631.3100 Groundwater investigations
- 631.3101 Groundwater methods and equipment
- 631.3102 References
  - Tables
  - Figures

#### Chapter 32 - Well Design and Spring Development

- 631.3200 Water well design
- 631.3201 Spring development
- 631.3202 References

#### Chapter 33 - Groundwater Recharge

- 631.3300 Groundwater recharge
- 631.3201 References
  - Tables
  - Figures