

SINGAPORE STANDARD

**Code of practice for safety in trenches,
pits and other excavated areas**



Published by

Enterprise
Singapore

SS 562 : 2010
(ICS 93.020)

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ISBN 978-981-4278-71-3

This Singapore Standard was approved by the General Engineering and Safety Standards Committee on behalf of the Standards Council of Singapore on 7 October 2010.

First published, 2010

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Singapore Contractors Association Limited
Singapore Institution of Safety Officers
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Contents

	Page
Foreword _____	6

CLAUSES

1	Scope _____	8
2	Normative references _____	8
3	Definitions _____	8
4	Hazards in excavation works _____	9
5	Planning _____	12
6	Control measures _____	18

ANNEXES

A	Sample of permit-to-work application form _____	37
B	Engineering classification of soils _____	39
C	Requirements for protective system _____	45
D	Examples of shoring systems for excavations and trenches _____	50

TABLES

1	Gases or vapours commonly found in excavations and trenches _____	12
2	Toxic, flammable and asphyxiating gases _____	12

FIGURES

1	Benching and battering of excavation walls _____	19
2	Placement of spoil/surcharge away from zone of influence _____	35
C.1	Maximum allowable angle of repose _____	47
D.1	Sheet piling _____	50
D.2	Cofferdam with timber strutting _____	50
D.3	Cofferdam with steel strutting _____	51
D.4	Timber shoring _____	52
D.5	Trench box _____	53
D.6	Trench shield _____	53
D.7	Plate lining system _____	54

Foreword

This Singapore Standard code of practice was prepared by a Working Group appointed by the Technical Committee on Workplace Safety and Health under the direction of the General Engineering and Safety Standards Committee.

In the preparation of this Code, references were made to relevant legal documents including the Workplace Safety and Health Act where specific requirements are already in place for the protection of persons working at or near excavations. This is to ensure that the Code is in line with the legal requirements that provide the minimum standard of safety for such work. The Code is also intended to expand on these requirements and to provide the necessary details to help compliance.

This Code aims to assist personnel working at workplaces where excavation is carried out to design an excavation, perform and protect the excavation, and its subsequent back fill. This Code provides good practices for these activities, with the primary objective of protecting those persons working at or near the excavation, and minimising the risk to structures or activities that could be affected by such excavation.

As the size, nature and method of excavation may vary significantly from place to place, this Code could not cover every conceivable situation. This Code covers the general situation and inferences could then be drawn for specific cases.

In preparing this Code, references were made to the following publications:

- (1) ANSI A10.12 : 1998 (2005) Safety requirements for excavation
- (2) BS 6100-1 : 2004 Building and civil engineering – Vocabulary – Part 1: General terms
- (3) BS 8000-1 : 1989 Workmanship on building sites – Part 1: Code of practice for excavation and filling
- (4) SS CP 18 : 1992 Earthworks
- (5) TR 26 : 2010 Technical Reference for deep excavation
- (6) Code of practice for excavation – New South Wales Workcover Authority Publication (2000)
- (7) OSHA Excavation Standard, 29 CFR 1926.650
- (8) Geology of the Republic of Singapore (1976), Public Works Department, Singapore
- (9) TAN, S. B. LOY, W. C. and LEE, K. W. (1980), Engineering geology of the Old Alluvium in Singapore, Proc. 6th South Asian Conference on Soil Engineering, Vol. 1, pp. 673-684
- (10) TAN, S. B. and LEE, K. W. (1977), Engineering geology of the Marine Member of the Kallang Formation of Singapore, Inter. Symposium on Soft Clay, Bangkok, pp. 75-88
- (11) Trenching practice (Report 97) – CIRIA Publication (2001)
- (12) Building Control Act
- (13) Building Control Regulations 2003

- (14) Workplace Safety and Health Act
- (15) Workplace Safety and Health (Construction) Regulations 2007
- (16) Workplace Safety and Health (Confined Spaces) Regulations 2009

Acknowledgement is made for the use of information from the above publications.

Attention is drawn to the possibility that some of the elements of this Singapore Standard may be the subject of patent rights. Enterprise Singapore shall not be held responsible for identifying any or all of such patent rights.

NOTE

1. *Singapore Standards (SSs) and Technical References (TRs) are reviewed periodically to keep abreast of technical changes, technological developments and industry practices. The changes are documented through the issue of either amendments or revisions.*
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Code of practice for safety in trenches, pits and other excavated areas

1 Scope

This Code is for the protection of persons working in trenches, pits and other excavated areas, and includes persons at or near these places. This Code covers the typical hazards associated with excavations, such as collapse of excavation face, falling into the excavation, soil movement resulting from excavation and hazards posed by machines used.

The Annexes in this Code are aimed to provide the users with specific methods to use for protection of excavation based on the different circumstances that they are likely to encounter on site.

This Code covers any areas where excavation is conducted, such as in building and engineering construction worksites, road works and works associated with the utilities.

2 Normative references

The following referenced documents are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Building Control Act

Workplace Safety and Health Act

Workplace Safety and Health (Construction) Regulations