

EXCAVATION & TRENCHING SAFETY

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Malaysian Regulatory Compliance · OSHA 1994 · FMA 1967 · BOWEC
1986

Malaysian Regulatory Framework

Malaysia's safety landscape is governed by stringent laws to prevent workplace fatalities. The 2024 amendments have significantly increased penalties for non-compliance, emphasizing the 'General Duty' of employers to ensure safe work systems during high-risk excavation activities.

OSHA 1994 (Amended 2024)

Fines up to RM 500,000 for systemic failures in ensuring worker safety during construction construction operations.

BOWEC 1986

Mandates a 'Competent Person' to supervise all



Key Excavation Hazards

CAVE-INS

Soil instability leads to rapid burial. Pressure from 1.5m of soil is fatal.

FALLING LOADS

Objects or equipment falling from the edge into the trench onto workers.

ATMOSPHERE

Toxic gases or oxygen levels <19.5% in deep trenches or near sewers.

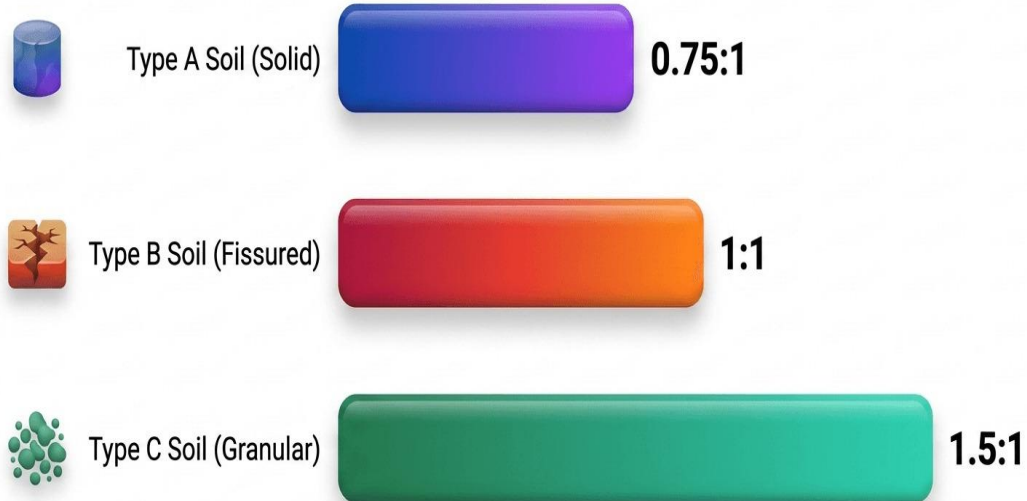
STRUCK-BY

Moving machinery or traffic near excavation boundaries and safe zones.



OSHA-Compliant Protective Systems

Mandatory for all trenches $\geq 1.5\text{m}$ deep. Systems must be designed and inspected daily by a 'Competent Person'.



SHORING

Installing timber, aluminum, or hydraulic supports to prevent the soil walls from collapsing inward.

SHIELDING

Using trench boxes to protect workers inside.
Must be designed by a PE for depths exceeding 6.1m.

Access, Egress & Spoil Management

Safe movement in and out of the excavation area is critical for emergency preparedness.

1.2m

MIN. DEPTH FOR LADDERS

7.5m

MAX. TRAVEL TO EXIT

0.6m

SPOIL PILE CLEARANCE

3.0m

FALL PROTECTION LIMIT



Utility Mapping & Underground Lines

Governed by JUPEM Circular 1/2006, identifying buried services is mandatory before any ground penetration. Strike-ins can lead to electrocution, explosions, and significant fines.

TECHNOLOGY	PRIMARY USE
GPR	Non-metallic pipes & voids
EML	Buried power cables & pipes

Setia Training Consultancy Services



Daily inspections are not optional.

A Competent Person must inspect every trench daily and after every rain event. Failure to verify stability before entry is the leading cause of Malaysian excavation fatalities.

THANK YOU