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METHOD STATEMENT TITLE	Rev. A
Method Statement for Trial Pit Excavation for Operation Area (OA)	

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1. Introduction

This Method Statement is a safety working method & procedures documents to describing the health, safety, environment & quality requirements for carrying out the trial pit excavation works for operation area (OA) under the Contract 1701. The methodologies of elimination, mitigation and control of risks shall be addressed.

The details of the procedures contained herewith shall be reviewed periodically and updated based on the actual site conditions. The principle methods as described in the following sections are subject to review during construction and may be amended if required.

This method statement needs to be complied into EDOC and approved by MTR. Updated TTMS will be under separate submission.

2. Reference Documents

- General Specification for Civil Engineering Works (NEC4) (MTR Corporation Limited - 2022)
- Scope for Contract 1701.
- Materials and Workmanship Specification for Civil Engineering Works

3. Responsibilities for Activities described within Method Statement

CSHK is responsible to inspect and carry out the construction works. The responsible persons are listed below and be responsible for the activities:

Name	Position
Howard Siu	Construction Manager
CF Chan	Construction Manager
Anthony He	Assistant Construction Manager
Nick Wang	Site Agent
Tim Cai	Engineer
Andrew Mak	Engineer
Andrew Lo	Graduate Engineer
Charles Xu	Graduate Engineer
Vincent Li	Construction Manager
Nana Chung	Assistant Construction Manager
Johnson Chun	Senior Engineer
David Lam	Senior Engineer
Man Hin Li	Assistant Engineer
Ted Leung	Construction Manager
Li Yuk Wa	Assistant Construction Manager
Jack Wong	Senior Engineer
Andy Lo	Engineer
Edward Yang	Graduate Engineer
Kyle Lai	Graduate Engineer
Leung Kwok Fung	Safety Manager
Hui Wai Kwan	Safety Officer

Ernest Young	Assistant Safety Officer
Lau Yu Tat	Senior Surveyor
Cheung Siu Kei	Superintendent

(a) Construction Manager
Responsible for overall administration, monitoring, controlling progress and quality of works in a safe manner.

(b) Site Engineer / Superintendent / Foreman
Responsible for developing works procedures, controlling progress and quality of works in a safe manner. They also have to implement safety at works area for workers via guidance from safety officers.

(c) Safety Manager/ Safety Officer
Responsible for assessing working conditions of work areas in safety means. To prepare risk assessment before works, enforce safety works practice and environment in the workplace and work site.

(d) Worksite Person In Charge (WPIC)
WPIC is in charge of the work in the works areas, which are located at various positions of site. Site Supervisor is also responsible in implementing works control checklist. WPIC/ Site supervisor shall attend pre-work briefing and deliver the work arrangement, included but not limited to proposed working area, sequence of works and safety precautions measures.

(e) Registered Electrical Workers (REW)
Workers who have valid certificate of registered electrical worker and completed MTR RSI training and obtain qualification.

(f) Workers
Workers who have completed RSI training and received a valid qualification.

(g) Competent Person CP for Underground Utilities Survey and Trial Pit
CP shall undertake the investigation for the purpose of ascertaining within the proposed works site and its vicinity the existence, alignment and depth of any cable and provision of a written report on the findings.

(h) Competent Person (CP(T)/CP(NT))
CP shall provide pre-work briefing to all workers and anyone work within the Railway Operation Area (Siu Ho Wan Depot). Pre-work briefing shall cover the regulation within the proposed working area and relevant work safety precaution measures. Briefing attendance records shall be kept on site for inspection. CP shall report to depot before works could commence. CP(T)/CP(NT) is to ensure works are within OA area and any opening of the existing Manhole shall notify Depot relevant parties such as IMD in advance.

Emergency Team contact list is enclosed so that work can be safely arranged to suspend for contingency/ reasons. Please refer to **Appendix E**.

4. Programme and Working Hours

The method statement is applicable for the trial pit excavation at Operation Area (OA) under Contract 1701. The general working hours will be from 08:00 – 18:00 daily, from Monday to Saturday and expected to be completed within a week. It may be required to carry out works from 19:00 to 23:00 and Sunday and Public Holidays in case of essential speeding up of the working process. CSHK would check internally to fulfil the Construction Noise Permit Requirement.

All the works shall be led by WPIC during the approved working period at different areas, details are summarised in the below table. Competent Person for Underground Utilities Survey shall be assigned and in the presence of works. OA works will require CP (T) to supervise working parties as per RSR.

Location of Works	Allowed Working Period	Remarks
Mainline	Non-Traffic Hour (02:00 – 04:00)	3 days per week
Test Track	Night Shift (Exact time to be coordinated)	3 days per week
Depot Track Area	Non-Peak Hour (11:00 – 15:00) Night Shift (Exact time to be coordinated)	

5. Plant, Equipment & Material

All equipment will be inspected prior to the mobilization on site to ensure that they are in good working condition and comply with the current regulations. The major equipment will be deployed to carry out the works are as follow and the technical specification is attached in **Appendix D**:

- Hand tool for excavation.
- Excavator (Backhoe mounted with beaker/bucket) or equivalent mechanical plant.

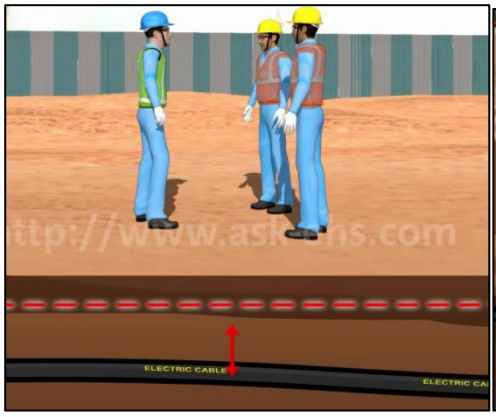
The locations of excavator and include in the updating of TTMS for these works will be under separate submission.

6. Works Methodology

6.1 Preparation Works

- Before carry out the excavation works, UU detection is to be carried out by CP. Method statement for UU detection is under separate submission. (ACC No.1701-W-000-CSC-760-000253)

- Set out the location of the trial pit. Please refer to the **Appendix A** for the proposed location trial pit.
- Fence off the works area by barriers and set up warning signs. Placement of barriers should be such that no vehicle driving pass and no material shall be stockpiled within 45 degree failure zone of the trial trench.
- Exact trial pit locations shall be further verified and agreed with the CSHK Engineer notified before commencement.
- Conduct cable detection by competent person CP with reference from updated underground utilities plan. Before commencement of any digging works, the underground utilities detection report shall be certified and signed **Permit-To-Dig** form shall be in place.



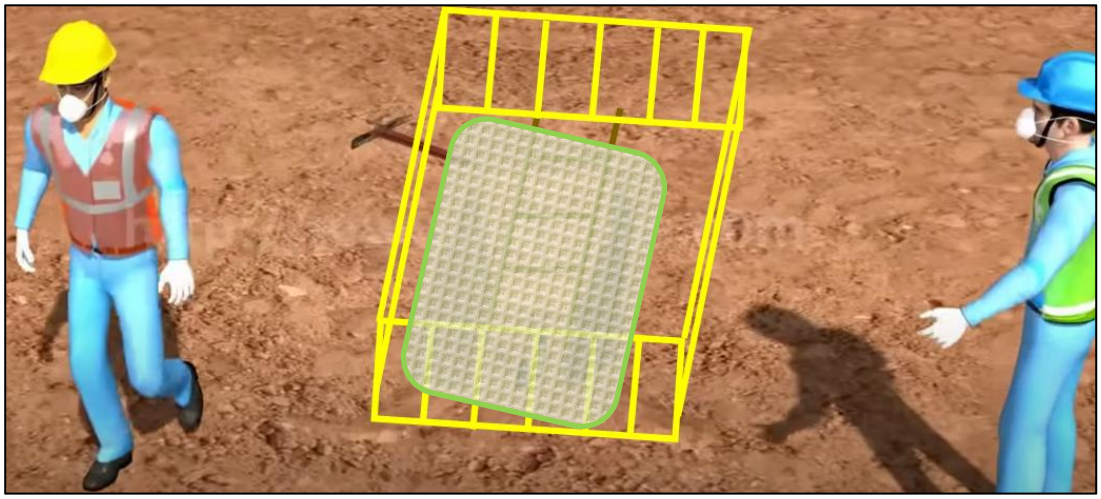
6.2 Pit Excavation

- The concrete / bitumen surface shall be broken by hand dig tool if necessary.

- Trial Pit shall be of size 1.5m x 1.5m and terminated at 1.5m deep at most. If necessary, excavator or other plant and equipment will be deployed to remove the existing concrete and hard material for opening of road paving or any obstruction to pit excavation.
- For trial pit excavations greater than 1.2m in depth, open cut excavation with maximum 30° slope need to be implemented. If insufficient space for open cut method, shoring/ELS system will need to be implemented. The typical shoring system for trial pit excavation is attached in **Appendix F.**
- Design and ICE cert for shoring will be provided prior the construction on site. Permit to load issued by TWC is required before loading.
- The proposed extent for trial pit is shown in the layout plans attached in **Appendix A**. The exact location and number of trial pit will be subjected to actual site conditions.
- For trial pit will be carried out by hand digging. No mechanical plant can be used for digging and can be only used as bucket for assistance.
- Excavated materials from the trial pit shall be temporarily stockpiled at designated areas and

covered properly to prevent rainwater seepage and suppress dust.

- For underground utilities encountered, the type, location, dimension and nature shall be recorded. Exposed UU should be labelled and protected on site.
- When groundwater is encountered before reaching the inspection pit tentative depth, the following procedures be followed:
  a. The location of the inspection pit should be set to identify target utilities in agreement with the MTR's representative.
  b. The excavation of the inspection pit should be stopped if the collapse of the inspection pit.
  c. MTR's agreement on the termination of the excavation will be sought.
- Trial pit shall be backfilled by the excavated granular soil material until the original ground level is restored.
- To ensure the worker carrying out the inspection pit excavation works are fully informed of the risks and they are aware of the measures to control those risks, the Briefing will be provided before operation commence.
- Trial pit shall be inspected on weekly basis by competent person and **Form 4** – Excavation of Earthworks shall be filled in to ensure the inspection pit is in safe conditions.
- Proper ladder access should be landed on firm and level base for workers excavation works /Supervisors inspection in the Trial Pit. The ladder should extend 1m higher than the landing place.
- No excavator crosses the track to access trial pit locations. Any equipment needs to cross the track must be properly positioned to avoid accident. When the tools are not in use, they must be secured with chains and padlocks or other locking devices. All belongings should be tidied 15mins before leaving work.
- Plastic baffle or Mesh safety net covering up the trial pit/ trench if backfilling cannot be completed in time.



7. Safety

- All workers shall be equipped with reflective vests and safety helmets during operation. All workers must go through a briefing by the Construction Manager / Engineer / Safety Officer / Safety Supervisor before commencement of any works.
- A pre-meeting will be arranged before commencement of the work among Survey Team, Construction Team and Safety Team to brief the nature of works, the safety aspects and the necessary safety requirements as identified in the Risk Assessment in **Appendix C**.
- Works near the track can only be carried out at the NTH / NPH, details refer to Section 4.0. CP(T) shall supervise at all time and lock the gate after work.

	● To ensure the worker carrying out the inspection pit excavation works are fully informed of the risks and they are aware of the measures to control those risks, the Briefing will be provided before operation commence. ● Safety helmets fitted with chin straps must be worn within the site, safety boots, hearing protectors (if needed), high visibility jackets / sashes, reflective vests, goggles, gloves and full body harnesses for work at height will be provided to all staff working on site. Plastic barriers and reflective traffic cones will be prepared prior to work commencement to demarcate the working area. ● Trial pit shall be inspected on weekly basis by competent person and Form 4 – Excavation of Earthworks shall be filled in to ensure the inspection pit is in safe conditions. ● Permit-to-Dig system shall be implemented and strictly followed to mitigate the risk of damages to underground utilities. Relevant valid underground utilities plans shall be obtained and cable detection shall be conducted by competent person before commencement of works. Briefing shall be conducted to workers to acknowledge them on the underground utility conditions at the works area and precautions required. The proposed working area should be marked physically on site by CP. ● Proper ladder access should be landed on firm and level base for workers excavation works /Supervisors inspection in the Trial Pit. The ladder should extend 1m higher than the landing place. ● Any emergency situation shall be reported to site supervisors (i.e. Construction Manager/ Engineer/ Foreman etc.) and Safety Department for prompt response. The emergency contact list is shown in **Appendix E.** The risk for the works shall be assessed and the Risk Assessment Analysis is shown in **Appendix C**.
8.	**Environmental**
	- Works near the track can only be carried out at the NTH / NPH, details refer to Section 4.0; - ULSD Diesel will be use in all PME; - Plant with QPME label will be employ if available; - Only regulated NRMM with NRMM label to be used on site; - All chemicals will be placed on drip tray; - Any wastewater produced during the work will be treated prior to disposal; - Excavated material will be stocked pile at designated area, covered properly to prevent dust generation and reused on site prior to disposal; - The works shall follow relevant mitigation measures as required under the Environmental Permit (EP) / EP submission and Contractor's Environmental Management Plan (EMP).
9.	**Quality Control**
	Refer to **Appendix B** for Inspection and Test Plan. ● Construction works shall be fully complied with Quality Plan. For work activity which is classified as "Quality Hold Point", no subsequent work can be started unless the former work activity was inspected and accepted by MTR's inspectorate.

10.	Appendices
	A. Proposed Trial Pit Layout B. Inspection and Test Plan (ITP) C. Risk Assessment D. Technical Specification for Equipment and Plants E. Emergency Contact List F. Typical Shoring System for Trial Pit Excavation