

**CONTENTS**

Clause	Description	Page PS-1-
<b>1</b>	<b>GENERAL.....</b>	<b>1</b>
<b>1.1</b>	<b>Preamble.....</b>	<b>1</b>
<b>1.2</b>	<b>Introduction .....</b>	<b>1</b>
<b>1.3</b>	<b>Contract Period .....</b>	<b>2</b>
<b>1.4</b>	<b>Abbreviations .....</b>	<b>2</b>
<b>1.5</b>	<b>Information to be furnished by the Authority .....</b>	<b>2</b>
<b>1.6</b>	<b>Specifications.....</b>	<b>3</b>
<b>1.7</b>	<b>Authority's Drawings .....</b>	<b>5</b>
<b>1.8</b>	<b>Nomenclature .....</b>	<b>8</b>
<b>1.9</b>	<b>Contractor's Responsibilities and Works .....</b>	<b>8</b>
<b>1.10</b>	<b>Back-Charges .....</b>	<b>8</b>

# **1 GENERAL**

## **1.1 Preamble**

- 1.1.1 The provisions in the Conditions of Contract shall always take precedence. All other documents are deemed to be mutually explanatory. However, where the provisions of this Particular Specification conflict with the requirements of the General Specification or the Materials & Workmanship Specifications, the more onerous requirement shall apply.

## **1.2 Introduction**

- 1.2.1 The proposed Cross Island Line Phase 2 (CRL2) is an underground Mass Rapid Transit (MRT) line of a total route length of approximately 15km. CRL2 starts at the contract boundary with CRL1 at Sin Ming and ends at Jurong Lake. There are six (6) stations including interchanges with the Downtown Line (DTL) and East West Line (EWL).
- 1.2.2 Contract CR206 (CR206) comprises the design, construction and completion of Maju Station and Tunnels. The Works include CR16 Maju Station, twin bored tunnel drive towards CR15 King Albert Park Station, and subway link connecting CR16 entrances. The general Contract Limits of CR206 are shown on Authority's Drawings.
- 1.2.3 The proposed station is located along Clementi Road adjacent to Clementi Forest. The Station will be an underground station and located within close proximity of the Singapore Institute of Management (SIM)/ Singapore University of Social Science (SUSS), Old Jurong Railway Corridor, Far East Flora and Ministry of Defence (MINDEF) Maju Camp.
- 1.2.4 The Contractor shall be aware that the Works will be carried out in close proximity to identified biodiversity areas at Clementi Forest and Maju Forest. It is necessary to manage the protection and preservation of the existing flora and fauna. The Contractor will be subjected to requirements set by relevant authorities/agencies. The Contractor shall engage and work closely with NParks, Nature Groups (NGs) and other interested parties to understand and mitigate their concerns. The Contractor shall refer to **Clause 13** and **Clause 23** of the Particular Specification for environmental and other requirements within this contract.
- 1.2.5 Contract CR206 interfaces with adjacent Contracts CR205 for the design and construction of King Albert Park Station, and Contract CR207 for the design and construction of Tunnels between Maju and Clementi Station.

- 1.2.6 The Contractor shall develop the design to meet the Authority's requirements. The Contractor's design shall comply with the geometric requirements specified in the Civil Design Criteria and be subjected to the acceptance of the Engineer.
- 1.2.7 The Contractor shall be responsible for the design and construction of the Works in accordance with the requirements stated in the Contract including but not limited to the Specifications and submissions to relevant government authorities/technical departments for obtaining all necessary clearances/approvals.
- 1.2.8 This project would have interfacing works with other contractors, utility agencies and stakeholders. The Contractor shall study, design and construct all necessary interfacing works for the completion of this Contract, which may extend beyond the Contract Limits. The Contractor shall reinstate/reconstruct any works affected by the Works.
- 1.2.9 The Contractor shall refer to **Clause 2** of the Particular Specification for the general breakdown of the scope of Works.

### **1.3 Contract Period**

- 1.3.1 The Contractor shall complete the Works in accordance with the key dates stated in **Appendix B** of the Particular Specification.

### **1.4 Abbreviations**

- 1.4.1 While this Particular Specification and other Contract documents generally define abbreviations used within them, the Contractor may encounter other abbreviations in the Authority's Drawings or, more particularly, in connection with the terminology used in the System-wide Contractors' contract documentation when carrying out his obligations with regard to the coordination of the System-wide Contractors. **Appendix J** of the Particular Specification therefore provides a Schedule of Abbreviations intended to cover terms which may be encountered in relation to the System-wide Contractors' works. It also includes a list of other common abbreviations, which may be encountered, but these may not be exhaustive.

### **1.5 Information to be furnished by the Authority**

- 1.5.1 The Authority will furnish the Contractor with the following documents for his information after Contract award.
- a) Trial Trenching Reports;

- b) Environmental Impact Study (EIS) Report;
- c) Topographical surveys;
- d) Authority Trackwork Drawings;
- e) IFC format of the Architecture and Structural Building Information Model (BIM); and
- f) Available As-built Structural and Foundation drawings of adjacent properties and structures

1.5.2 In the event that the as-built drawings and information are incorrect, incomplete or not available, the Contractor shall obtain the as-built drawings from relevant authorities, the owners and/or the design consultants of the buildings and structures, at his own cost.

1.5.3 The Authority does not warrant the accuracy and completeness of the information in the above documents. The use, interpretation and verification of the information therein shall be entirely the Contractor's responsibility.

## **1.6 Specifications**

1.6.1 The term 'the Specifications' used throughout the Contract shall be deemed to include: -

- a) General Specification with Appendices;
- b) Particular Specification with Appendices;
- c) Safety, Health and Environment (**Appendix A** of the General Specification, June 2022 Edition);
- d) Materials and Workmanship Specification for Civil and Structural Works (Revision A1, June 2010 Edition) for Mechanical and Electrical chapters;
- e) Materials and Workmanship Specification for Civil and Structural Works (Revision A2, September 2020 Edition) for Civil and Structural chapters;
- f) Civil Design Criteria for Road and Rail Transit Systems (Revision A2, September 2019 Edition);
- g) Materials and Workmanship Specification for Architectural Works (Volume 9);

- h) Standard Details of Road Elements (SDRE), April 2014 Edition issue, Revision E April 2022; and
- i) Infrastructure Design Criteria, Volume A, B1 Part 1, and C MRT Station (2022 Edition)

1.6.2

The Contractor shall comply with, but not limited to, the following regulations, handbook, guides and advisory notes or others that are issued by the relevant authorities including all other subsequent revisions:

- a) Code of Practice for Traffic Control at Work Zone, July 2019 Edition;
- b) Code of Practice for Works on Public Streets, September 2018 Edition;
- c) Code of Practice on Street Works Proposals Relating to Development Works, Version 2 April 2019 Edition;
- d) Guide to Carrying Out Engineering Works within Road Structure Safety Zone and Engineering Activity on Land adjoining Public Streets (January 2011 Edition);
- e) BCA Code on Accessibility in the Built Environment 2019;
- f) LTA Public Street Lighting System Guidelines (5 April 2019);
- g) Noise Guidance: Developing a Noise Management Plan in LTA Projects (April 2019);
- h) Code of Practice on Surface Water Drainage (Seventh Edition – December 2018, Addendum 1 April 2021)
- i) Code of Practice on Sewerage and Sanitary works (2<sup>nd</sup> Edition January 2019, Addendum 1 March 2021)
- j) Code of Practice for Pollution Control, (SS593: 2013) with amendments under Corrigendum No. 1 – Nov 2014;
- k) Prevention of Damage to the Sewerage System, PUB(WRN) Advisory Note (October 2019);
- l) Prevention of Damage to Watermains, PUB(WSN) Advisory Note (June 2020);
- m) PUB Drainage Department Standard Specification for Drainage Work (3<sup>rd</sup> Edition July 2002);

- n) Design Guide on Use of Alternative Structural Steel to BS 5950 and Eurocode 3 – BC1:2012 (Building and Construction Authority);
- o) Code of Practice for Railway Protection (October 2004 Edition);
- p) Handbook on Development and Building Works in Railway Protection Zone (January 2005 Edition);
- q) Guide to Carrying Out Restricted Activities within Railway Protection and Safety Zone (May 2009 Edition);
- r) Code of Practice for Info-Communication Facilities in Buildings 2018; and
- s) COVID-19 (Temporary Measures) (Control Order) Regulations 2020 and other COVID-19 related measures from BCA, MOM and other relevant agencies; and
- t) GIS Data Hub Data Collection Specifications Ver 2.9.
- u) Rapid Transit Systems (Railway Protection, Restricted Activities) Regulations; and
- v) BCA Circular on Submission of Site Investigation (SI) Data in Standardised Electronic Format to comply with the Implementation of new Stratigraphic Framework dated 1 March 2022

## **1.7 Authority's Drawings**

- 1.7.1 The Authority's Drawings shall be deemed to include drawings listed in **Appendix C** of the Particular Specification.
- 1.7.2 For the avoidance of doubt, unless otherwise specified and/or to the extent set out in the **Table** below, the Authority's Drawings are provided to the Contractor for reference only and shall not form part of the Authority's Requirements and/or the Contract. The following Authority's Drawings (or specified part(s) thereof) shall form part of the Authority's Requirements:-

<b><u>S/N</u></b>	<b><u>Element / Description</u></b>	<b><u>Drawing Nos</u></b>	<b><u>Reference</u></b>
1	Contract Boundaries; Railway Area and Road Reserve; Horizontal and Vertical Track Alignments at Contract Boundaries.	CR206/LTA-- /CR16/ZZ/A/ARW/DR/GNA/1001 T/CRL/SWD/PP/0401 to T/CRL/SWD/PP/0403 T/CRL/SWD/PP/0421 and T/CRL/SWD/PP/0423	PS Clause 3 and PS Clause 9
2	Interfacing Requirements with CR205 and CR207	T/CR206/TUN/INT/1492 and T/CR206/TUN/INT/1493	PS Clause 7.3 PS Clause 7.4
3	Station Location including Numbers and Locations of Exits	CR206/LTA-- /CR16/ZZ/A/ARW/DR/GNA/1001	
4	Structure Gauge and Clearance Requirements	L/CRL/SWD/TWSG/0001 L/CRL/SWD/TWSG/0002 L/CRL/SWD/TWSG/0011	PS Clause 9
5	Interface between Trackbed Concrete and Civil Works	L/CRL/SWD/TWTF/0004B and L/CRL/SWD/TWTF/0009A	PS Clause 9
6	Standard Types of Turnouts and Crossings	L/CRL/SWD/TWTO/0001	PS Clause 9
7	Bored Tunnel Segmental Lining Dimensions	T/CR206/CWD/CB/1336 T/CR206/CWD/CB/1337	PS Clause 18
8	Sump Pit Arrangement within Trackbed Area and Width of Sump Pit Opening at Trackbed Concrete and Civil Works Interface Level	L/CRL/SWD/TWTFN/0001, L/CRL/SWD/TWTF/0005, L/CRL/SWD/TWTF/0006	PS Clause 9

<b><u>S/N</u></b>	<b><u>Element / Description</u></b>	<b><u>Drawing Nos</u></b>	<b><u>Reference</u></b>
9	Earthing System	T/CR206/CR16/ELS/3401-	PS Clauses 11
10	Diaphragm wall as ERSS and top down as excavation method	CR206/LTA-- /CR16/XX/G/TMP/DR/LPL/ 3011	PS Clause 9
11	Minimum Zone of Influence	CR206/LTA-- /CR16/XX/G/IMS/DR/LPL/3 021	PS Appendix E



- 1.7.3 References to any of the Authority's Drawings shall mean the version of the drawing as originally issued by the Authority or, if amended, replaced, or supplemented by the Authority prior to close of the tender submission period (including as may be extended by the Authority), the version of such drawing as so amended, replaced, or supplemented.

## **1.8 Nomenclature**

- 1.8.1 The term "the Employer" used throughout this document shall mean the Authority unless the context otherwise requires.
- 1.8.2 The term "Qualified Person (QP)" used throughout the document shall mean the Professional Engineer (PE) as appointed to carry out design or supervision work whichever is applicable.
- 1.8.3 The terms "Utilities" and "Services" throughout this document may be used interchangeably and shall bear the same meaning, unless the context otherwise implies.
- 1.8.4 The term "As-Constructed" drawings used through the document shall mean the "As-built" drawings.

## **1.9 Contractor's Responsibilities and Works**

- 1.9.1 All Works required to be carried out by the Contractor and all responsibilities of the Contractor as described in the Specifications under the Contract shall be deemed included in the Contract Price.

## **1.10 Back-Charges**

- 1.10.1 All back-charges for recovery of costs incurred by the Authority for where recovery is permitted under the terms of the Contract shall comprise:
- a) Costs incurred by the Authority on the Contractor's behalf or based on the Authority's valuation of the cost of the works; plus
  - b) Insurance costs, if applicable; plus
  - c) 20% Administrative cost levied by the Authority on the total of (a)+(b); plus
  - d) Prevailing Goods and Services Tax chargeable on the total of (a)+(b)+(c).