PART D83
DESIGN RAILWAY OVERHEAD WIRING

CONTENTS

1. GENERAL

.1 This Part specifies the requirements for the design of the Railway Overhead Wiring System.

2. RECORDS

.1 At a minimum, the documentation listed in this Part for the Overhead Wiring System shall be provided at the following stages unless otherwise specified by the Principal.

3. REQUIREMENTS DEFINITION (NOTIONALLY 15% COMPLETE)

.1 Concept layout plans for OHWS;

.2 Confirmation of existing OHWS System Design drawings and standards;

.3 Departures and/or proposed System Design drawings;

.4 Confirmation of existing Sectioning Diagram and any proposed modifications; and

.5 Design Basis Report.

4. PRELIMINARY DESIGN (NOTIONALLY 30% COMPLETE)

.1 Layout plans for route to OHWS, incorporating existing structures and foundations;

.2 Typical cross-sections for each different type of structure and arrangement;

.3 Bill of Materials;

.4 Design Development Report (including any Engineering Waivers); and

.5 Confirmation that no pedestrian or signalling sighting issues are created due to OHWs structure allocation along with associated sighting drawings.

5. DETAILED DESIGN (NOTIONALLY 70% COMPLETE)

.1 Detailed System Design drawings; including approval and manufacturer, of any proposed materials;

.2 Final approved Sectioning Diagram;

.3 Detailed Design Report;

.4 Detailed layout plans for route to OHWS, including spanlengths and wire heights;

.5 Detailed cross-sections for each structure and arrangement;

.6 Detailed switching arrangement drawings;

.7 Calculations: including but not limited to radial loads, structural loading, spanlengths and contact wire displacement;

.8 Dropper tables;

.9 Balance weight anchor sheets;

.10 Bonding plans;

.11 Special cross-sections e.g. Overbridges;

.12 Detailed Bill of Quantities;

.13 Foundation schedule;

.14 Height and Stagger sheets;

.15 Cantilever tube length schedules;

.16 Index sheets; and

.17 Confirmation that no pedestrian or signalling sighting issues are created due to OHWs structure allocation along with associated sighting drawings.

6. FINAL DESIGN (NOTIONALLY 100% COMPLETE)

.1 Final System Design drawings; including approval and manufacturer, of any proposed materials;

.2 Final approved Sectioning Diagram;

.3 Final Design Report;

.4 Final layout plans, including spanlengths and wire heights;

.5 Final cross-sections for each structure and arrangement;

.6 Final switching arrangement drawings;

.7 Calculations: including radial loads, structural loading, spanlengths and contact wire displacement;

.8 Dropper tables;

.9 Balance weight anchor sheets;

.10 Bonding plans;

.11 Special cross-sections e.g. Overbridges;

.12 Detailed Bill of Quantities;

.13 Foundation schedule;

.14 Height and Stagger sheets;

.15 Cantilever tube length schedules;

.16 Index sheets;

.17 Isolation procedures and instructions; and

.18 Confirmation that no pedestrian or signalling sighting issues are created due to OHWs structure allocation along with associated sighting drawings.

7. HOLD POINTS

.1 There are no Hold Points referenced in this Part.