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## OPERATION AND MAINTENANCE MANUALS

### General

The sub-contractor shall provide all content for As-built Record Drawings and Operation and Maintenance Manuals prior to practical completion via the Grazer "C Projects" web portal. Printed and electronic O&M Manuals need not be provided by the sub-contractor.

Content and data requirements are established in the C Projects system and the services contractor is obligated to ensure the data provided is in compliance with the requirements of the services contract.

The information provided shall be sufficient for the effective and cost efficient ownership, management and maintenance of all services and equipment within the services contractor's work.

Support and Training for C Projects will be provided by Grazer Pty Ltd and system login access will be provided by the Head Contractor.

Information required from the sub-contractor by the C Project system includes but is not limited to:

- System descriptions
- Asset/Equipment Register Schedules
- As-built Record Drawings
- Technical description of all plant and equipment
- Operating procedures
- Commissioning data and performance test results
- Warranties/Guarantees
- All appropriate compliance certification
- Training Certificates

### As-Built Record Drawings

- a) The Sub-contractor shall prepare As-Built Record Drawings and submit them via the C Projects system for approval.
- b) Final payment shall not be made until the As-built Record Drawings are complete in all respects. The Sub-contractor shall not be entitled to any extra payment or extension of time for the preparation of the As-built Record Drawings.

### General

The Sub-contractor shall submit to the Consultant for review and approval all drawings, data, samples, prototypes, results and the like as called for via the C Projects system. The Sub-contractor's submittals will be reviewed by the Consultant and any alteration and/or agreements reached shall be incorporated into the Design Drawings and technical work sections of the specification.

The sub-contractor's submittals will be reviewed by Consultant and any alteration and/or agreements reached shall be managed via the C Projects system and incorporated into the final documents.

## **Method of Submitting**

The Sub-contractor shall deliver submittals by means of the C Projects system. The transmittal shall fully describe the submittal contents as per the standards defined in the C Projects system.

In each transmittal the Sub-contractor shall state the drawing numbers and technical work sections of the Specification Sections, parts, and paragraphs to which the submittal pertains. Accompanying datasheets, catalogues and brochures shall be identified in the same manner. Where several types or models are included in a single data sheet, catalogue or brochure, the Sub-contractor shall delete non-applicable portions or specifically indicate which portions are intended and applicable.

## **Review and Approval**

The Consultant will review submittals for general and practical conformity to the requirements of the Subcontractor. Submittals that meet these requirements will be stamped or marked in accordance with the procedure described herein. Submittals which are incomplete or erroneous, or which are not required, will be appropriately marked and a new submittal shall be made as necessary. The Consultants review will not be exhaustive and does not relieve the Sub-contractor of the responsibility for any omission or deficiencies.

Re-submittals shall follow the same procedure as initial submittals and shall identify changes made since previous submittals. The approval of submittals shall not relieve the Sub-contractor of responsibility for any deviation from the requirements of the Project Documentation unless otherwise agreed with and confirmed in writing by the Consultant. Any approval shall not relieve the Sub-contractor of responsibility for errors or omissions in the submittals.

## **Corrections and Re-submittals**

The Sub-contractor shall make all required corrections and shall resubmit corrected submittals until approved by the Consultant. The Sub-contractor shall be responsible for and shall pay the extra cost, if any, occasioned by any discrepancies, errors or omissions in submittals supplied by him, whether they have been approved by the Consultant or not.

## **Incomplete Submittals**

Submittals which are incomplete, including those not correctly transmitted, not containing a complete data set, not correctly titled and identified, may be returned to the Sub-contractor without review by the Consultant.

## **Progress Payments Requirements**

The subcontractor shall upload all available equipment and plant schedules including Asset list, Luminaire Schedule and Drawings list prior to submitting a claim for payment under the subcontract.

During construction the subcontractor shall ensure that all information relating to a particular asset or item of plant or equipment is submitted, reviewed and approved via the C Projects system prior to requesting progress payments in relation to the assets. Evidence that the information has been uploaded shall be included with the claim.

Payment claims may be with-held until all required data and asset information has been supplied to the Consultants satisfaction. Appropriate consideration will be given to the availability of information in relation to the timing of the claim eg. the available of test reports.

### **Cost of the C Projects service**

There is no charge to access the C Projects service to be paid by the Sub-contractor.

The Sub-contractor must allow for the provision of all required data and materials and for the management of the review and approval process to ensure compliance with the project specification requirements.

### **Asset Knowledge and Management Standards**

The project, asset and maintenance information collated via the C Project service will be used to establish graphically based asset management solution (C Suite) which will be utilised by the facility management after practical completion. This involves the importation of the collated data into the C Suite system.

It is important that the quality and standards of the data provided is in strict compliance to the standards and data requirement defined in the C Projects system.