SECTION S4 - SPECIFICATION CONTROL

OBJECTIVE

To describe the procedure for preparation of Project Specification.

To ensure that the requirements, content, preparation, checking and approval of Project Specification for tender purposes on projects are established and undertaken in a controlled manner.

To ensure procedures are established for undertaking amendments to Master Specifications in a controlled manner.

RESPONSIBILITIES

The Project Manager shall assume overall responsibility for the Project Specification. He shall review the Client's requirements and any other special requirements and ensure the incorporation of the requirements into the Specification.

The Director-in-Charge shall assume the overall responsibility for amendments, if any for Master Specifications.

PROCEDURES

On the receipt of an instruction on a project, the Client's requirements regarding the structure, content and approval of the Specification shall be reviewed to ensure that the implications of the Company's obligations are fully understood.

The Client's specific requirements shall be recorded.

1. Conditions of Contract/Sub-Contract

The Project Manager shall be responsible for obtaining from the Client and/or Quantity Surveyor, details of the Conditions of Contract and amendments to the Standard Conditions for incorporation into the relevant section of the Specification and the Tender Documentation, as applicable.

On projects, where the commission requires the Company to propose the Conditions of Contract, they shall be established by the Project Manager in consultation with the Project Director. The proposed Conditions of Contract shall not be recommended to the Client without prior approval of the Project Director. Reference shall be made to the Company's Legal Advisor when the Client requests unusual Conditions of Contract.

The Project Manager shall ensure that the Conditions of Sub-Contract is in line with the Main Contract and liaise with the Quantity Surveyor for "Works Not Included" in the Sub-Contract and Preliminaries provided by the Main Contractor.

2. Technical Specification

All technical specification shall be derived from the Master Specification which serves as a guide for the engineering staff and is meant to be as 'broad' and 'general' as possible. The use of the contents in the Specification on a project shall be used with caution and with the prior approval of the Project Manager.

All Specifications prepared shall comply with the current Codes of Practice, Singapore Standards, BCA Green Mark, British Standards, and Statutory Requirements, applicable to the project, and shall incorporate environmental requirements (e.g. refrigerant, motor) as well as all Client's requirements, as agreed in the Design Brief Report.

3. Special Requirements

The Project Manager shall ensure that any special requirements specific to the project are identified, reviewed and incorporated in the relevant section within the Project Specification.

Unless otherwise specified by the Client or specific project requirements, the structure for a Specification shall be based on the following skeletal form:-

Front Cover
Title Page
Contents List
Instruction to Person Tendering
Form of Tender
Appendix 1 - Extract from the Main Contract
Condition of Sub-Contract
General Requirements
Specification
Schedule of Specification Drawing
Schedule of Technical Requirements
Schedule of Prices
Schedule of Rates
Schedule of Daywork Rates
Schedule of Servicing & Maintenance
Schedule of Technical Particular
Schedule of Deviations
Schedule of Site Staff
Schedule of Sub-let Works
Schedule of Current Works
Schedule of Previous Works

4. Contents

The Specification for the supply and installation of engineering services may comprise the following sections which shall contain the information required by the Tenderer to submit a price for undertaking the Work.

4.1 Technical Specification Section

This section shall specify the following requirements to be adhered to by the Tenderer in the execution of the works:-

(i) The design parameters to be achieved, where applicable, and shall generally indicate:

- Ambient Design Temperature
- Internal Design Conditions
- Lighting Levels,
- Noise Level etc.

(ii) A description of the scope of works and the Tenderer's involvement.

(iii) A description of the technical requirements for each system giving the overall features and performance expected, including where appropriate, the sequence of operations.

(iv) The Regulations and Standards of workmanship for material and methods of installation.

(v) Description of the items of plant and equipment to be provided and their interface with other plant where applicable.

(vi) The operation, maintenance and servicing requirements.

(vii) Specific requirements, for testing, distinguishing between test to prove the design and tests to prove the manufacture of each item of equipment.

4.2 Schedules

(i) A Schedule of Drawings to indicate all the drawings issued to the tenderers in association with the Tender Documents. The Schedule of Drawing shall indicate the unique drawing number and drawing title.

(ii) A Schedule of Technical Requirements to indicate all the parameters necessary for the tenderers to submit a price for the supply and installation of the item of equipment and subsequent ordering of the item by the nominated Sub-Contractor. The schedule shall cross-refer to the relevant section in the Technical Specification.

(iii) A Schedule of Prices to indicate breakdown of the tender prices according to the various Technical Specification section.

(iv) A Schedule of Unit Rates to indicate the unit rates for the various works as detailed in the Specification and tender drawings. These rates shall be used for any variation up or down in accordance with the work completed.

(v) A Schedule of Daywork Rates to indicate the daywork rates in the event that units rates are not available or not agreeable between the Sub-Contractor and Client.

(vi) A Schedule of Servicing and Maintaining to indicate the cost for future service and maintenance for three consecutive years or as requested by the Client commencing from the date of expiry of the Maintenance Period (Defect Liability Period).

(vii) A Schedule of Technical Particulars to indicate the particulars (brand/ manufacturer, country of origin, etc.) of all equipment and materials offered by the tenderers.

(viii) A Schedule of Deviation to indicate any deviations from the Specification.

(ix) A Schedule of Site Staff to indicate the name, qualifications and experience of the site staff to be appointed to carry out the works under Sub-Contract.

(x) A Schedule of Sub-let Works to indicate the portion of work to be sub-let value of work and the name and address of Company.

(xi) A Schedule of Current Works to indicate all current works undertaken/secured by the tenderer.

(xii) A Schedule of Previous Works to indicate all previous works of similar size and nature completed by tenderer.

5. Format

5.1 General

The pages in the Specification shall be A4 size.

5.2 Title Page of Specification

The title Page of the Specification shall indicate the name of the project, the Client, the Architect and other consultants.

5.3 Section and Clause Numbering

Main section of the Specification shall be given capital alphabetical lettering, whilst headed clauses shall each be sub-numbered using the conventional decimal system.

This numbering shall be given single figure numbers example 2.1. Further division of the clauses should also follow conventional decimal system like 2.1.1.

Main section shall be underlined capital letters or emboldened instead of underlining.

Clause headings emboldened, sub-clause headings and sub-sub headings shall be underlined with the initial letter of each key work being in capitals, the rest in lower case.

Each section shall begin with a new page showing the section number and section title on top of the first page.

5.4 Page Numbering

Pages shall be numbered in the centre at the bottom of the page, excluding title and contents pages. The Technical Specification pages shall indicate the reference number for the Project in the bottom left hand corner which shall comprise of Job No./Date of Issue. The pages of Specifications shall be numbered in sequence through all sections and schedules.

6. Design Check for Project Specifications

All Project Specification shall be subjected to 'Design Check' prior to issuance. The checker shall be the Project Manager or in his/her absence, the Project Director or any other person appointed by the Project Director.

All checker's comment shall be recorded or annotated in ink on the 'Check Print'. The 'Check Print' shall indicate the name of the checker and date it was checked, and kept by the project team member for record purposes.

The project team members shall ensure that all comments in the 'Check Print' are incorporated into the final Specification by initialising at the appropriate 'Prepared', 'Reviewed' and 'Approved' boxes on the Document Control Stamp. The Document Control Stamp shall be used on the 'Office Copy' of the Specification issued as record of authorisation to issue.

In the event of urgent issuance of Project Specification, the 'Design Check' may be done after issuance of the Specification. However, all comments arising from the 'Design Check' shall be consolidated and reissued to the necessary parties.

7. Client's Approval

On projects where the Client's approval of the Project Specification is required before final issuance, the Project Manager shall ensure that the Client's comments and subsequent approval are incorporated and recorded respectively.

8. Records

At least one copy of the Project Specification issued shall be retained in the office for future reference and be stamped 'Office Copy'.

9. Amendments to Project Specifications

The Client's requirements for the method of issuing amendments to the Project Specification shall be established and recorded.

In the absence of specific Client's requirements, amendments to a Project Specification shall be issued in the form of an Addendum to the Specification.

An Addendum to the Project Specification shall not be issued without the prior authorisation by the Project Manager and the approval of the Client, where applicable, which shall be confirmed in writing and recorded.

The Addendum shall be identified in numerical sequence e.g. No. 1 for the first Addendum.

The amended clauses or sub-clause shall be highlighted with a vertical line on the right hand side of the amended text. The Project Specification page to be amended shall be identified by the alphabet 'R' placed after the page number e.g. E/1(R1). Every subsequent amendment to the relevant page shall carry a revision to page number like E/1(R2) etc. The date of issue at the bottom left hand corner shall be changed according to the date of issue of the Addendum.

10. Amendment to Master Specifications

No changes/modifications shall be made on the Master Specifications files on the server. However when technical errors or enhancement are identified within a section of the Master Specifications the need to quickly amend the relevant section is established and the following procedures are initiated in implementing the amendment in a controlled manner.

The need to amend the Master Specifications is identified through a Feedback Report Form submitted by a staff member requesting the Director-in-Charge for consideration of the requested amendment.

The Director-in-Charge shall approve the amendment requested or may designate a staff member to check the amendment requested and recommend for implementation.

The Director-in-Charge shall hold the final authority to approve the requested amendment. The approved Feedback Report Form shall contain his signature authorizing approved corrective action.

The said amendment is incorporated in to the Master Specifications upon receipt of endorsed Feedback Report Form received from Director-in-Charge

The amendment implemented is then informed to all staff through an e-mail broadcast call.