

Shop Drawings

General

Shop drawings are an essential part of project construction documentation and are usually produced for structural and building services engineering and specialised fabrication of architectural elements (such as aluminium windows).

Shop drawings for engineering services generally cover mechanical plant layout, duct work layouts, switchboards, distribution boards and control boards. For complex projects, co-ordination drawings are often produced which show the installation in relation to other services and building structure.

Shop drawings for structural engineering are principally used for structural steel and precast concrete. The structural design drawings show structural members and their connections with respect to their location and size for the satisfactory performance of the structure but do not show the accurate setting out necessary for the fabrication and erection. This is the function of shop drawings.

The preparation of shop drawings is generally the responsibility of the trade subcontractors and is carried out by specialist shop drawing contractors. The shop drawing contractors present the design information from the tender documents in a detailed format to enable the fabrication and erection of the building component.

Review of Shop Drawings

Review of shop drawings by the professional service contractor (PSC) is part of the risk management of the project. Similarly, for complex projects, the review of co-ordination drawings is important. Viewing drawings provides another quality management process and provides the opportunity for the client and designer to be familiar with the contractor's proposal.

While Department of Planning, Transport and Infrastructure (DPTI) contracts place no obligation on the Superintendent (or equivalent) to comment on shop drawings, DPTI practice is for PSCs and subcontractors to review, not approve, shop drawings. The PSC shall include appropriate wording in accordance with the 'General Requirements' section of the contract specification.

The review of shop drawings by the PSC shall not relieve the contractor from full responsibility for the accuracy of drawings and other information.

The review shall include:

- verification that the proposed installation meets design intent, especially when there is a component of 'design and construct' by the contractor (refer to the guide note 'Performance Based Specification (G6)' available for download from the Building Project Information Management System (BPIMS) project library)
- an assessment for potential future access, maintenance and serviceability problems
- verification of installations in critical or tight positions.

Specifications should nominate reasonable time frames for review to avoid related extension of time claims from the contractor.

Response to Contractors

Comments regarding submitted shop drawings can be in the form of marked up drawings, a letter or a dedicated shop drawings comment form.

Marked up drawings are to be scanned as a .pdf file to enable responses to all parties to be by electronic file transfer. All responses are to note that the shop drawings have been reviewed and associated comments are for information only and do not constitute a form of approval.

Where errors or omissions in contract documentation become evident during the preparation and review of shop drawings they are to be addressed in accordance with the applicable construction contract conditions. Any design changes resulting from the review are to be promptly issued as variations under the construction contract.

Contact

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