The list of stages presented below is general, and it should be recognised that in practice the programme of activities varies widely. The sequence for a specific project will frequently differ from the general case:

1. Feasibility
2. Outline proposals
3. Scheme design
4. Detail design
5. Production information
6. Bills of quantities
7. Tender action
8. (Contractor's) project planning
9. Operations on site
10. Completion (and handover)
11. Feedback

Designing to facilitate construction requires a well-managed design process throughout these stages. The designer must address the following six points, which are addressed in the Sections that follow:

- recognise the complexity of the design process
- establish an appropriate design team
- agree information and programme
- coordinate contributions
- manage the interfaces
- control design development.

2.3.1 Complexity of design

Design is a complex process, and it continues to grow in complexity as knowledge increases. Contributions are made by a large number of individuals from a broad range of organisations, necessitating a continual exchange and refinement of information. The lead designer must aim to provide as accurate and as complete information as possible to the relevant parties on time.

The design of the frame itself has in many ways become simpler in recent years, with the widespread use of computers. However, although software enables rapid and accurate calculation of forces and moments, it is essential that a qualitative feel for how structures behave is not lost as frames grow in complexity[5] .

2.3.2 The design team

The most successful projects are often those in which the client has a long term relationship with the design consultants and trade contractors. When such 'partnering' is not adopted, the client must choose a suitable method for selection of a designer and the formation of a design team.

The construction scenario takes a different form depending on the type of contract adopted. The three most common types of contract use one of the following approaches, and the corresponding teams are as noted:

Traditional, in which the client appoints an 'Engineer' (to undertake the design and to ensure satisfactory construction) and a 'Contractor' (to undertake the construction).

Design and build, in which the client appoints a single contractor, or consortium, to undertake both the design and construction of the works. One of the advantages of this type of contract is that the contractor and/or subcontractors are more likely to be involved from an early stage, so that their construction experience can be incorporated in the design.

Construction management, in which the client appoints a project manager, who in turn appoints the other team members on behalf of the client. Because specialist steelwork contractors usually undertake some, if not all, of the steelwork design, they should be appointed early.

2.3.3 Agreement of information / programme

A programme should be compiled and agreed, so that dates by which information is required are fixed. The lead designer for a zone should ensure that every aspect of the work is detailed fully and correctly. A system should be established to carefully monitor drawing and schedule revisions, to ensure that all parties are working to the latest information.

The client's representative, for example the Engineer or Project Manager, must make decisions to proceed at key points, or inform the client of decisions to be made. At each stage through the design process, he should liaise with the design team to assemble all the necessary information, agree the content, and sign off the stage or package.

Terms such as 'complete information' or 'full and final information' are often used in the context of the design programme, in an attempt to ensure that information is 'frozen' at key points. The objective of this is to permit construction to proceed without interruption beyond that date. Sometimes the process is necessarily more complicated, and the following guidance should be considered:

- Construction work, on or off-site, cannot proceed without construction issue information. How this corresponds to earlier information, upon which the tender was based, is a matter for clarification in the contract, but only the construction information is important as far as progressing construction work is concerned.
- All contracts allow the construction issue information to be altered at a later date if necessary, and such variations must be executed by the contractor. The latter will however be entitled to appropriate additional payment and/or a revised programme.
- If, at a given point in time, the construction information is known to be incomplete, work can generally progress provided areas of missing or preliminary information are identified and they are not on the critical path. Clarity is essential, since information which appears to be complete, but is actually not so, is a major source of contractual disputes.

Often a designer will have difficulty in determining the detailed requirements of the site. A contractor may find that the designer does not understand the constraints imposed by site conditions. A clear understanding between the relevant parties is necessary to ensure that information supply is integrated with construction need.