

Thank you for choosing Northern Services for your steel construction needs. Steel Fabrication is a production; there are many moving parts that make up your finished product. The following is intended to educate our customers about the production process, so we can better work together to complete your job on time and within budget.

Our process is based on the American Institute of Steel Construction (AISC) Code of Standard Practice for Steel Buildings and Bridges. You will see several references within this document to specific sections, and for full publication please see: <https://www.aisc.org/publications/steel-construction-manual-resources/>

**1) Bid/Estimation Process**

This is done from the design drawings. At this stage of the process we have to work under a lot of assumptions to what the end product will look like, the design drawings do not give us cut dimensions or even a break down to the final materials that will need to be ordered.

*A pre-detailing conference should be held after the contract is initially awarded to establish these lines of communication. This conference should also include discussion about the scope of work, sequences, and special considerations.*

**Definitions:**

**"Sequences"**

In a nut shell Partial Approval = Sequencing. Or in other words separating the project into smaller sections. Generally, this increases the time needed to produce the job – and sometimes increases costs due to inefficiency.

**"RFI"**

a.k.a. Request for Information  
This can involve questions to the architect, engineer, other trades, or field dimensions for clarification

**"Approval Process"**

Without this we are blind!!  
The information given to the steel supplier from the design drawings does not give us the 360\* view of what the other trades (Carpentry, Plumbing, Electrical) need to attach to our work. For instance, in the case of a remodel access is a common issue. Therefore, we require field dimensions to be provided by the Owner Representative. It is common to have questions for the project engineer in this process.

**"Released for Construction"**

These documents come from the Owner.

**"Released for Fabrication"**

Fabrication shop drawings that become de facto contract documents.

**Special Circumstances:**

Sometimes the owner or general contractor may have time constraints or wishes to rush the ordering process. Depending on the scope of work, pre-ordering materials may be appropriate. However, pre-ordering will incur additional costs and is less efficient. We are always willing to pre-order steel upon request of the General Contractor with the acknowledgement that the purchase order amount will change.

**2) Contract Signing/Bid Award**

Establish Lines of Communication for the Contract:

We need 4 contacts that are responsible for:

- a) The final authority on making changes to contract documents;
- b) the person that receives all submittals from us;
- c) the person(s) authorized to tell us what is approved (what to order);
- d) Contact for billing and payments.

**"Shop Drawings"**

This gives our shop fabricators exact cut lengths, hole placement, and angles to ensure the proper fitment/Installation in the field. **These also give us the information needed to order materials**

**3) Detailing**

Production of Shop Drawings for Northern Services are done by independent steel detailers as authorized by AISC 4.2.1. We subcontract these services to highly trained and competent companies – just like the rest of us they are juggling other customers as well. The better the information we provide to them, the faster and more complete their work will be. Generally, it takes 14 to 21 days depending on response time on RFI's  
*Response time is critical for us to order materials!*

**4) Approval Needed!!**

Unfortunately, this is a sometimes frustrating and a greatly misunderstood process – you are not alone. We try to make this as easy as possible, but the steps are critical in getting you the customer the finished product you desire.

Owner representative is responsible for approval of Shop Drawings before Steel can be ordered and Fabrication can begin. And we need this in writing. This means the drawings have been reviewed and all the final measurements have been provided to us. *We cannot build what we do not have dimensions for.* Additions or changes after approval or after we start detailing puts us in a Change Order situation, potentially incurring more time for the job and additional costs.

We purchase pre-processed materials that we continue to fabricate to your specifications. This saves all of us time and money.

(For instance, we may order a beam cut to your specified length, this saves us shop time in attaching all the other items\* needed to place the beam, and saves you shipping costs for a full-length beam.) \*Other items may include holes, welded studs, plates, braces, and other types of welded connection.

**What we need in writing: (Ask yourself, will these fabrications fit your project space?)**

Per AISC 4.4.1

"Approval, approval subject to corrections noted, and similar approvals of the approval documents shall constitute the following:

- (a) Confirmation that the *fabricator* has correctly interpreted the *contract documents* in the preparation of those submittals.
- (b) Confirmation that the *owner's designated representative* for design has reviewed and approved the *connection* details and dimensions shown in the *approval documents* and submitted in accordance with Section 3.1.1, if applicable. Ask yourself, will these fabrications fit your project space?
- (c) Release by the *owner's designated representatives* for design and *construction* for the *fabricator* to begin fabrication using the approved submittals."

**Note: The confirmation can be easily conveyed by a cover letter and or transmittal letter attached to the front of the returned drawings.**

Per AISC 4.4, "The approval documents shall be returned to the fabricator within 14 calendar days."

"Approved approval documents shall be individually annotated by the owner's designated representatives for design and construction as either approved or approved subject to corrections notes. When so required, the fabricator shall subsequently make the corrections noted and furnish corrected fabrication and erection documents to the owner's designated representatives for design and construction."

Per AISC 4.1

"When the owner issues design documents and specification that are released for construction, the fabricator and the erector rely on the fact that these are the owner's requirements for the project. This release is required by the fabricator prior to the ordering of material and the preparation and completion of the approval documents."