

INSTRUCTIONS FOR USE

Construction Specification 81 – Metal Fabrication and Installation

1. Applicability

Construction Specification 81 is applicable to the construction of items of metalwork not covered by other specifications. It is applicable to such items as trash guards, anti-vortex hoods and baffles, flashboard guides, and similar structures or parts. It is not applicable to the installation of concrete reinforcing steel, water control gates, fences, wells, piles, or pipe conduits.

2. Material Specifications

Material Specification 581 and 582 and Construction Specification 82 complement Construction Specification 81.

3. Included Items

Items to be included in construction specifications and drawings follow:

- a. Detailed drawings as necessary to show the dimensions and method of fabrication and erecting the item or structure
- b. For aluminum, the alloy to be used in the work if other than specified in Material Specification 581. Alloys specified for use should be limited to those for which ASCE Specifications for Structures of Aluminum Alloy are available. Such specifications are published in Section A of the Aluminum Construction Manual of The Aluminum Association.
- c. Type of steel if other than structural quality. Use *commercial* or *merchant* quality only for small parts where the strength is not a major design consideration. Examples: Noncritical angles and other shapes less than 3 inches in maximum dimension of section, shear plates for construction joints in concrete, small trash rack parts, and other similar metal features.
- d. Details of connections showing sizes and number of bolts; sizes, kinds, and dimensions of welds; and sizes and number of rivets
- e. Designation of items to be galvanized or painted and designation of paint systems to be used

f. Ordering data listed in the material specifications, as appropriate, including such items as:

- 1) Type, kind, size, hardness, and length of bolts
- 2) Class, grade, condition, and finish of castings
- 3) Type, composition, hardness, size, and form of other material
- 4) Methods of measurement and payment if the standard specification includes more than one method

4. Methods

Section 6, Measurement and Payment

Method 1 – Intended for use when the metal-work is a minor portion of the contract and consists largely of items that would normally be fabricated by the contractor

Method 2 – Intended for use when the metal-work is a significant portion of the contract

Method 3 – Intended for use when the metal-work includes individual items of significant scope or complexity or which would normally be procured from outside sources or fabricated for the contractor by others

When specifications are prepared using electronic procedures and all methods but one are deleted for use in a contract specification, delete from the last paragraph, "*All Methods – The following provisions apply to all methods of measurement and payment.*" Left justify the remaining text.

5. Items of Work and Construction Details

Starting at the top of page 81–3, prepare and outline job specific "Items of Work and Construction Details" (IWCD) in accordance with these instructions. For ease of utilization, the use of recyclable color paper for the IWCD should be considered.