DIVISION 5 – METALS

05 00 00 METALS

05 10 00 –STRUCTURAL METAL FRAMING

A. Structural Steel

1. All structural steel shall meet appropriate ASTM specifications, for strength required.

2. Fabrication and erection shall conform to the requirements of the American Institute of Steel Construction, “Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings”.

3. Provide all loose lintels and other miscellaneous and related items.

4. Specify welding to be done only by qualified licensed welders and in conformance with all requirements of the American Welding Society, and shown on the drawings by AWS standard symbols. Require welding certificates of Constructor to be submitted to Owner.

5. Specify shop primer painting of all steel except that to be encased in concrete or where welds are to be made. Field touch-up after erection. Provide shop painted finish coat to the extent possible.

6. Shop drawings shall include detailed drawings showing size, layout, special connections, hole patterns, accessories, etc. for approval.

7. Indicate design loads on structural drawings.

8. Prefer ASTM A325 tension control bolts for structural connections.

9. The University may employ an independent firm to perform field quality control testing.

05 20 00– METAL JOISTS

1. Follow Steel Joist Institute (SJI) standards.

2. Specify adequate bridging.

3. Specify shop primer paint and touch-up after erection.

4. Joist manufacturer shall be a member of SJI.

5. The Design Professional shall specify all uniform and concentrated load combination possibilities for the manufactured item or assembly.

05 30 00- METAL DECKS

1. Require conformance with Metal Roof Deck Institute Standards and requirements of American Iron and Steel Institute’s “Specifications for the Design of Light Gage Cold-

Formed Steel Structural Members".

2. Specify methods of erection, connections and fasteners. Require weld washers for welded connections.

3. Follow Factory Mutual guidelines for limiting deflection.

4. Prefer galvanized deck, minimum 20 gauge.

5. Minimum bearing shall be 1 ½ inches.

6. The Design Professional shall specify all uniform and concentrated load combination possibilities for the manufactured item or assembly.

7. Where roof decks are exposed inside a building, consult with Owner on the use of acoustic decking.

05 40 00 – COLD-FORMED METAL FRAMING

1. The Design Professional shall specify all uniform and concentrated load combination possibilities for the manufactured item or assembly.

05 50 00 – METAL FABRICATIONS

A. General

1. Provide for necessary shop and field painting.

2. Where dissimilar metals are used next to each other, provide separation or coating to prevent electrolytic action from damaging either material.

B. Recommendations for Steel Stairs

1. Steel stairs shall be fully designed and detailed.

2. Where treads are to be steel, they shall have a non-slip surface.

3. Where pan type treads to receive terrazzo or other fill material (such as concrete) are used, provide slip-resistant nosings or abrasive surface.

4. Exterior stairs and ladders shall be galvanized and then painted.

C. Ladders

1. Stairs are preferred for access between levels wherever possible. However, when ladders are required, they shall follow standard OSHA details.

2. The top ring of all ladders shall be at the same elevation as the floor or landing that it serves.

3. Provide an attached ladder between roof sections that are greater than 30".

4. Exterior ladders are to be Aluminum or galvanized ~~with cages and landings as required. Obtain approval from Owner.~~

D. Handrails and Guardrails

1. Provide guardrails and handrails in compliance with IBC and ADA.
2. Design handrails to project beyond top and bottom steps or ramps as required by code.
3. Design handrails with smooth contours and return ends to wall or support. Design continuous rail at landings
4. Design for rigid and durable anchorage, to meet IBC and ADA forces.
5. Exterior handrails and guardrails shall be galvanized and painted.

E. Security Screens or Grills

1. Consult with the Owner's Representative on security and aesthetic requirements for each Project.

F. Paint

1. Sherwin Williams Macropoxy 646 is the basis of design for metal components.