

# American Mezzanine Systems

## Mezzanine and Platform Specifications

### The Highest Quality Structural Steel Mezzanines and Platforms, Custom Solutions Backed By A One of a Kind Lifetime Warranty.

Mezzanine shall be custom designed by an established firm specializing in mezzanine systems such as American Warehouse Systems.

Mezzanine design firm shall be a member in good standing with the International Code Council to ensure code compliance and the highest level of structural safety.

Final mezzanine design shall be approved by a licensed professional engineer.

All finished materials will be made in the United States of America to ensure the highest quality.

Mezzanine shall be free standing and shall be capable of being erected, dismantled and relocated with hand tools.

Mezzanine fabrication shall be completed by confirmed certified welders.

All projects shall come standard with engineered drawings that will meet customers approval before any fabrication begins.

Mezzanine structure shall come standard with a printed Lifetime Warranty Certificate.

The American Mezzanine System design is completed in accordance with Thirteenth Edition American Institute Steel Construction (AISC). The structure shall be designed per IBC 2006 and OSHA.

Vertical Loading shall consist of specified design Loading, plus dead load of structure. Maximum vertical deflection of beam shall not exceed  $L/360$  ( $L$ =beam length).

Vertical design Loading shall be as required by application, but not less than the minimum design Loading specified by the governing building code.

Seismic design is performed on all American Warehouse Systems structures.

The minimum horizontal Loading shall be taken as 1% of the Live loading. The horizontal Loading shall be combined with the maximum column Load per AISC specifications. The Lateral deflection of the column shall not exceed  $h/400$  ( $h$ =top of deck).

All columns must be braced using a wide flange beam in all directions (no bar joist connection directly to the column) Web of beam must attach directly to the face of the HSS column tube without any attachment plates. No use of knee bracing is allowed.



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Come Standard With A Printed  
Lifetime Warranty Certificate.**



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Column: Structural support columns shall be totally free standing and constructed from cold formed structural tubing. All columns shall have a welded top cap to completely seal the tube from any debris. Columns shall continue past the mezzanine deck to provide a stable structure to attach the guardrail whenever possible. Minimum column size is 8" x 8" x 07 ga. Minimum base plate size is 14"x14"x1"

Columns -ASTM A500 Grade B Fy=46 ksi  
Base Plate -ASTM A36 Fy=36 ksi  
Anchor Bolt -Powers power - studs and SDI, 3/4" x 5-1/2" minimum length



Framing: Framing members consist of wide flange beams and C-Sections (standard) or wide flange beams and steel bar joists. C-Sections are cold formed steel members designed in accordance with AISC "Specifications for the design of cold-formed steel structural members." Bar joists must be designed to meet the SJI standards. All structural angle connections shall be bolted and made of a minimum of 1/4" thick material. Distance between bolts of any structural connection shall not exceed 6" at column connections and 3" at angle connections.

W-Beam -ASTM A992 Fy=50 ksi  
Connections -ASTM A36 Fy=36 ksi  
C-section -ASTM A1011 Fy=50 ksi  
Bar Joists -ASTM A606 Fy=50ksi



Hardware: All structural connections shall use a 1/2" minimum diameter A325bolt. For technical properties see AISC manual section 7. Hardware shall be tightened to a snug tight condition, then the nut shall be turned an additional 1/3 turn. No high strength bolts should be reused. Retightening is not considered reuse.

Bolts: 1-2" x 1-1/2" LG (MIN) A325



Guardrail: Three rails (11" opening), 1-1/2" x 2-1-2" x 3-16" tube uprights, 1 1/2" square horizontal rails, 1-1/2" x 4" rectangular kickplate. All tubing used in handrail shall be 14 gauge wall thickness and 11 ga. at kickplate.. Standard handrail is fastened directly to the structural mezzanine columns using self drilling screws.

Tubing: -ASTM A500 Grade B Fy=46ksi  
Flat Steel: -A36 Fy=36 ksi



Stair: Stairs shall be designed to meet IBC 2006. Stairs shall be all welded one piece construction shipped completely assembled except for bolted on rails. Stringers are constructed of MC10x8.4 structural channel and all treads shall be constructed of solid 12 gauge diamond-pattern floor plate. Minimum Length of run is 11" and maximum rise is 7". Risers shall be closed risers. Handrail and guardrail are provided on both sides of the stair and has a 1 1/2" grip.



Paint: All steel is to be washed before painting. The paint is a two part Urethane sprayed on material. Paint must then be cured in an oven to a temperature of 180 degrees Fahrenheit. The finished thickness of paint must be at Least 1.5 mills.

Colors: Columns and Beams -American Mezzanine Systems Blue  
Handrail -American Mezzanine Systems Red  
Stair -American Mezzanine Systems Blue  
Bar Joists -Standard Factory Grey