

DIVISION 5. METAL -- STRUCTURAL STEEL

A. SPECIFICATIONS: DESIGN, FABRICATION, AND ERECTION ARE TO BE GOVERNED BY THE LATEST REVISIONS OF THE FOLLOWING U.N.O.:

1. AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (AISC 360-10).
2. AISC CODE OF STANDARD PRACTICE (CONTRACTOR SHALL SUBMIT STEEL SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION).
3. AISC SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS (ALLOWABLE STRESS DESIGN).
4. PROJECT SPECIFICATION "STRUCTURAL STEEL FABRICATION AND ERECTION"
5. STRUCTURAL WELDING CODE, AWS D1.1 OF THE AMERICAN WELDING SOCIETY. WELDING PERSONNEL AND PROCEDURES ARE TO BE QUALIFIED PER AWS D1.1.

B. MATERIALS:

1. WIDE FLANGE AND WT SHAPES SHALL BE ASTM A992, $F_y = 50$ KSI, U.N.O.
2. ALL OTHER HOT-ROLLED SHAPES SHALL BE ASTM A36, $F_y = 36$ KSI, U.N.O.
3. STEEL PIPES SHALL BE ASTM A53, TYPE-S (SEAMLESS) GRADE B, U.N.O.
4. HOLLOW STRUCTURAL SECTIONS (HSS) SHALL BE ASTM A500, GRADE B, U.N.O.
5. PLATES AND BARS SHALL BE ASTM A36, U.N.O.

C. BOLTS

1. ALL BOLTS SHALL BE ASTM A325 HIGH STRENGTH WITH HARDENED WASHERS AND HEAVY HEX NUTS UNLESS NOTED OTHERWISE.
2. ALL BOLT HOLES SHALL BE 1/16" LARGER THAN THE BOLT DIAMETER U.N.O.
3. ALL BOLTS, NUTS, & WASHERS SHALL BE GALVANIZED, U.N.O.

D. CONNECTIONS:

1. ALL CONNECTIONS SHALL BE SHOP WELDED AND FIELD BOLTED UNLESS NOTED OTHERWISE
2. MINIMUM NUMBER OF BOLTS FOR ALL CONNECTIONS SHALL BE (2) UNLESS NOTED OTHERWISE
3. SPACING OF BOLTS SHALL BE 3" UNLESS NOTED OTHERWISE.
4. EDGE DISTANCE OF BOLTS SHALL BE 1 1/2" UNLESS NOTED OTHERWISE.
5. ALL CLIP ANGLES SHALL BE MINIMUM L3X3X1/4 UNLESS NOTED OTHERWISE.
6. GUSSET PL 3/8 (MIN) THICKNESS REQUIRED U.N.O.

E. WELDS

1. ALL WELDS SHALL BE WITH E70XX ELECTRODES IN ACCORDANCE WITH AWS D1.1. USE HIGHER STRENGTH ELECTRODE IF REQUIRED BY AWS D1.1 [ALL WELDING SHALL BE PERFORMED BY AWS QUALIFIED WELDERS].
2. MINIMUM SIZE OF FILET WELD SHALL BE 3/16" UNLESS NOTED OTHERWISE
3. SEAL WELD AROUND ALL WELDED CONNECTIONS WHERE WELDING IS NOT INDICATED TO PROVIDE WATERTIGHT CONNECTION.
4. FULL STRENGTH FIELD WELDS IN MATERIALS OVER 5/8" THICK AND WELDED FIELD SPLICES OF MAIN MEMBERS SHALL BE SUBJECTED TO NON-DESTRUCTIVE TESTING BY AN INDEPENDENT LABORATORY.

F. COATINGS

1. ALL UNEXPOSED STEEL SHALL BE SHOP PAINTED (IN ACCORDANCE WITH AISC STANDARDS) OR GALVANIZED.
2. ALL STEEL SHALL BE GALVANIZED OR PAINTED PER PROJECT SPECIFICATIONS.
3. AFTER ERECTION CONTRACTOR SHALL "TOUCH UP" WITH PAINT, GALVANIZING COMPOUND OR APPROVED COATING ALL ABRADED AREAS.

G. MISCELLANEOUS

1. METAL ROOFING (IF APPLICABLE) SHALL BE PER OWNER & MEET THE WIND REQUIREMENTS OF THIS DWG & GOVERNING BUILDING CODE.
2. SEAL ENDS OF OPEN MEMBERS SUCH AS PIPES AND TUBES WITH 1/8" THICK PLATE & 1/8" SEAL WELDS, UNLESS SPECIFICALLY NOTED OTHERWISE.