

SECTION 05 50 00

METAL FABRICATIONS

PART 1 GENERAL

1.1 SUMMARY

- A. Furnish labor and materials for installation of miscellaneous metal products as indicated on plans and/or specified herein.
- B. Roof Access Ladder

1.2 INTEGRATION WITH OTHER TRADES

- A. Each Trade shall provide all items necessary to be built into masonry, concrete, tile, etc., prior to when needed. Construction Manager is to be responsible for coordination and scheduling of such items and coordinate installation with other trades.

1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01 40 00 – Quality Control: Required Special Inspections
- B. Section 03 30 00: Cast-in-Place Concrete:
- C. Section 09 91 00: Painting and Finishing

1.4 QUALITY

- A. Welders: Use only certified welders in accordance with AWS D1.1-Current Edition., licensed in the State of Arkansas.
- B. Codes and Standards
 - 1. "Specification for the Design, Fabrication, and Erection of Structural Steel for Buildings", A.I.S.C.
 - 2. "Code for Welding in Building Construction", American Welding Society.
 - 3. Applicable codes and ordinances.

1.5 SHOP DRAWINGS

- A. Comply with requirements of Section 01 33 00.

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PART 2 PRODUCTS

2.1 METALS

- A. Metals shall conform to applicable ASTM specifications, including but not limited to:
 - 1. Steel wide flanges and tees ASTM A992 with 50 KSI yield strength
 - 2. Standard steel pipe ASTM A501
 - 3. Steel tubing ASTM A500, Grade C
 - 4. Steel plate ASTM A36
 - 5. Other Structural Steel ASTM A36
 - 6. Bolts ASTM A307
 - 7. Anchor Rods – ASTM F1554, Grade 36
 - 8. Exterior steel angle lintels and exposed steel plates and bent plates – Galvanized finish, hot dipped, ASTM 385/385M-15, grade 65.

2.2 PAINT

- A. Primer paint: Manufacturer's standard, compatible with finish coat paint specified in Section 09 91 00.
- B. Dissimilar metals shall be protected from galvanic action by coating with one coat of zinc chromate primer prior to assembly.

2.3 MISCELLANEOUS ANCHORS:

- A. Furnish anchor rods and miscellaneous anchors as required except where such items are specified in other sections of these specifications, or where customarily furnished with the items to be attached.

2.4 MISCELLANEOUS ITEMS

- A. Furnish and install where shown in accordance with drawings and details other items of miscellaneous metals except where same are specified in other sections of these specifications. These items to include, but not be limited to:
 - 1. Slip angles, stiffener channels, equipment frames, legs, supports, etc.
 - 2. All other materials, not specifically described, but required for a complete and proper installation.

2.5 ROOF ACCESS LADDER

- A. Steel Wall Ladder:
 - 1. Side Rails: 3/8 x 2-1/2" steel bar at 20 inches apart.
 - 2. Rungs: 3/4 inch square textured solid steel rods (steel texture on steel) at 12 inches on center. Rungs to be "SlipNOT round rungs, grade 2, manufactured by W. S. Molnar Company, **800-754-7668**. Alternate Rung: Model M6LRST2448 steel "Traction Tread" ladder rung, 11 gauge, Manufactured by McNichols.
 - a. Weld each rung to stringers.

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3. Space rungs seven inches from wall.
4. Attach with steel mounting brackets welded to side rails.
5. Finish: Prime paint and field painted finish.
6. Each step or rung shall be capable of supporting a single concentrated load of at least 250 pounds.
7. If ladder extends 24'0" in height or higher, a personal fall arrest system or ladder safety system is to be provided, per OSHA requirements.
8. Shop fabricate, welded construction.

PART 3 EXECUTION

3.1 QUALITY CONTROL

- A. All materials shall be new, of the best quality, and subject to the approval of the Architect.
- B. Weld or rivet permanent connections; do not use screws or bolts where they can be avoided.
- C. Fastenings shall be concealed where practical, and heads countersunk where required. Use lock washers to prevent loosening.
- D. Provide holes and connections for the work of other trades.
- E. Welds in flat surfaces, where exposed in finished rooms, or where noted shall be ground smooth and exposed corners or edges shall be rounded where practicable.
- F. All items shall be properly located, set level, plumb, square and in alignment, and shall be securely attached.
- G. Grind all factory or field welds where exposed to achieve smooth consistent surface. Field-apply primer (or galvanized paint if metal is galvanized) immediately following grinding. Paint all exposed steel per section 09 91 00.
- H. Provide galvanized finish on exterior, exposed angle lintels, exposed steel plates and steel bent plates unless noted otherwise, Provide galvanized finish on other items where specified and called for.

3.2 TOUCH-UP PAINTING

- A. Wire brush, clean and paint scarred areas, welds, and rust spots on top and bottom surfaces of decking units and supporting steel members.
- B. Touch-up shop painted surfaces with same paint used in shop and apply as recommended by manufacturer.

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- C. Touch-up galvanized welded areas with Galvilite By ZRC Products Company, or approved equal.

3.3 SPECIAL INSPECTIONS

- A. Inspection of miscellaneous metal placement and connections for conformance to the construction documents and the IBC shall be completed by the designated third party Special Inspector.

END OF SECTION

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