

## SECTION 05 52 00

### HANDRAILS

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Furnish and install steel handrails as shown on the contract drawings. Railings shall be complete with all connections, end caps, and components to make the system complete in every respect.

##### 1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 03 30 00: Cast-in-Place Concrete

##### 1.3 QUALITY

- A. Welders: Use only certified welders in accordance with AWS D1.1-Current Edition., licensed in the State of Arkansas.
- B. Galvanized finish, hot dipped, ASTM 385/385M-15, grade 65.

##### 1.4 SHOP DRAWINGS

- A. Comply with Section 01 33 00.
- B. Shop drawings shall be prepared by railing manufacturer showing all railings and components in detail, along with anchorage methods, splices, and attachments and Architect's approval obtained prior to fabrication.
- C. Fabricator shall design handrails for maximum loading per governing code requirements. Unless shown otherwise on drawings, anchoring locations shall be as designed by fabricator and approved by Architect.

##### 1.5 REFERENCES

- A. Comply with State of Arkansas Adopted ADA Accessible Guidelines in regard to accessible or handicapped features.

##### 1.6 RAIL DESIGN REQUIREMENTS

- A. Fabricate and install railing system so that system is able to resist a load of 50 pounds per lineal foot and a concentrated force of 200 pounds at any point, applied in any direction along top of the rail, without damage of permanent set.

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- B. Furnish certification by an engineer, registered in the state where project is located stating that handrails meet specified structural loading requirements.

## PART 2 PRODUCTS

### 2.1 MATERIALS:

- A. Pipe Handrails
  - 1. Fabricate and install steel pipe handrails and guardrails as shown on drawings.
  - 2. Pipe to be 1-1/2" outside diameter. All welds to be ground flush. Furnish complete with wall returns, end caps, and mounting brackets made especially for the purpose.
  - 3. Handrail attachment to CMU walls shall use Hilti HIT-SC composite mesh sleeve with Hilti HIT-HY 270 ultimate performance hybrid mortar.
  - 4. All pipe handrail components are to be galvanized.

### 2.2 FINISH:

- A. Grind all factory or field welds where exposed to achieve smooth consistent surface. Field-apply galvanized touch-up paint immediately following grinding.
- B. Provide galvanized finish.

## PART 3 EXECUTION

### 3.1 WORKMANSHIP:

- A. All cuts shall be square and accurate for minimum joint gap.
- B. All holes shall be drilled and countersunk for proper size to receive fasteners.
- C. At CMU mounted rails all drilled holes to be completely cleaned of debris and dust prior to installing mesh sleeve and anchor.
- D. All fasteners shall be of compatible materials and of size and type recommended by the manufacturer.
- E. Railings and components shall be installed in a straight and plumb manner, with all bends and curves performed to fit the contour required. Provide return bends to wall where shown.
- F. All welds shall be ground smooth and consistent and joints blended to the finish of the tubular or pipe material. Field-apply galvanized paint immediately following grinding.
- G. There shall be no projections, burrs, or blemishes to present the user a hazard of any type upon completion of the installation.

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- H. Where handrails are attached to walls, ends will return to wall. Provide attachments to wall at 4'-0" on center, maximum, unless noted otherwise on drawings.
- I. Provide posts spaced evenly, but at no more than 4'-0" o.c. unless shown or noted otherwise.

END OF SECTION

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