

**Jefferson County School District, R-1
Support Services**

TECHNICAL GUIDELINES

DIVISION 05 – METALS

AUGUST 2022

Jefferson County School District, R-1 TECHNICAL GUIDELINES 2022
Division 05 – Metals

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DIVISION 05 – METALS

05 00 00 Metals – October 2010

- Work in this Division is open to any product or material meeting the requirements of this Technical Guideline.
- In the absence of other information, standards of the following organizations apply to work in this Division:
 1. American Institute of Steel Construction (AISC)
 2. American Welding Society (AWS)
 3. Steel Joist Institute (SJI)
- Restrictions
 1. “Pot metal” (cast zinc) is prohibited in any form in any component of any product, item, or fabrication installed in Jefferson County School District R-1 facilities.
 2. Steel Lintels and Shelf Angles for Masonry:
 - a. Hot dipped galvanized

END SECTION 05 00 00

05 05 00 Common Work Results for Metals – October 2010

- Work in this section is open to any product or material meeting the requirements of this Technical Guideline.
- Metal Fastenings for concrete and masonry
 1. Mechanical Interlock type:
 - a. Permitted
 2. Friction/Expansion type:
 - a. Preferred
 3. Bonded type:
 - a. Permitted
 4. Through-wall bolted type:
 - a. Preferred for loading conditions that exceed 100 lb. per fastener.

END SECTION 05 05 00

05 10 00 Structural Metal Framing – October 2010

- Work in this section is open to any product or material meeting the requirements of this Technical Guideline.

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- Submittals
 - a. Shop Drawing: Required
 - b. Certificates: Documentation that each welder has passed the current applicable AWS qualification test.
 - c. Closeout: Submittals listed above, updated to record status.

END SECTION 05 10 00

05 20 00 Metal Joists – October 2010

- Work in this section is open to any product or material meeting the requirements of this Technical Guideline.
- In the absence of other information, standards of the following organizations apply:
 1. Steel Joist Institute (SJI)
- Submittals
 1. Product Data:
 - a. Required
 2. Shop Drawing:
 - a. Required
 3. Closeout:
 - a. Submittals listed above
 - b. Updated to record status.
- Fabrication
 1. Manufacturer must be a SJI member in good standing for a period of not less than 24 consecutive months prior to bid.
 2. Galvanized or shop-prime with rust-inhibitive paint.
 3. Where suspended ceiling is scheduled, extend joist bottom chord to within six inches of wall or column
 4. All components, fasteners, hardware by a single manufacturer.
 5. Field modifications are prohibited.

END SECTION 05 20 00

05 30 00 Metal Decking – October 2010

- In the absence of other information, standards of the following organizations apply:
 1. Steel Deck Institute (SDI)
- Submittals
 1. Shop Drawing: Preferred
 2. Closeout: Submittals listed above, updated to record status.
- Roof Decking:
 1. Work is open to any product or material meeting the requirements of this Technical Guideline.
- Floor Decking:

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1. Work is open to any product or material meeting the requirements of this Technical Guideline.
- Acoustic Decking
 1. Work is restricted to specific manufacturers that have been previously approved by Jefferson County School District, R-1:
 - a. Epic Metals Corp.
 - b. Approved equivalent
- Fabrication
 1. Factory galvanized or coated with aluminum zinc alloy
 - a. Painted primer coat is prohibited.
- Quality Control
 1. Cutting of openings larger than 8 inches in any dimension is prohibited in metal deck unless indicated on shop drawings or authorized in writing by the structural engineer.
 - a. Non-compliance with this restriction requires complete removal and reconstruction from bearing to bearing.
 2. Metal decking shall not be used for the attachment of anchorages or supports for suspended equipment, sub-framing, ceiling, or other miscellaneous mounting, bracing, or substructure.

END SECTION 05 30 00

05 40 00 Cold-Formed Metal Framing - October 2010

- Work in this section is open to any product or material.
- Load-Bearing Metal Studs
 1. Specifications must include the following minimum information:
 - a. Gauge, Thickness, Yield strength, Flange width

END SECTION 05 40 00

05 50 00 Metal Fabrications – October 2010

- Work in this section is open to any product or material meeting the requirements of this Technical Guideline.
- Submittals
 - a. Product Data: Required
 - b. Shop Drawing: Required
 - (1) Indicate splices
- 2. Welder Certificates:
 - a. Photocopy of having passed current applicable AWS qualification test.
- 3. Closeout:
 - a. Submittals listed above
 - b. Updated to record status.
- Applications
 1. OSHA-compliant fixed steps or ladders are required at roof access hatch and vertical offsets between roof levels that exceed 36 inches.

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- a. Treads and risers per code
 - (1) Ladder: minimum tread = 2 inches
 - b. "Ships Ladders" are not recommended unless serving as supplemental access.
 - c. Provide handrail each side
 - d. Roof Ladders: Configure top step to bridge parapet cap flashing (to protect it).
2. Coordinate protective grille covers required in other divisions.
 3. Loose steel lintels: Steel shapes: maximum deflection = 1/600
- Fabrication
 1. Factory rust-resistant prime coat.
 2. Corners/Joints/Seams:
 - a. Mitered
 - b. Hairline
 3. Connections:
 - a. Welded construction preferred
 - b. Exposed welds:
 - (1) Grind smooth, fill, and sand.
 - c. Conceal screws/bolts to the greatest extent possible
 4. Remove burrs and rough edges.
 - a. Treads/Risers: 1/8-inch tolerance to designated dimensions

END SECTION 05 50 00

[05 52 00 Handrails and Railings –August 2019](#)

- Pipe and Tube Railings
 - Exterior railing and handrails
 - Painted steel
 - Galvanized steel
 - Aluminum
 - Stainless steel - preferred
 - Casting posts directly into concrete is prohibited.
 - Use galvanized sleeve or surface mount detailing.
 - Interior railings and handrails
 - Stainless Steel at handrails only and with approval of District Project Manager
 - Painted steel
 - Anodized aluminum
 - Blued and clear/transparent coat powder coating
 - Exposed galvanized steel with approval of District Project Manager only.

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05 70 00 Decorative Metal – October 2010

- Work in this section is open to any product or material meeting the requirements of this Technical Guideline.
- Openings in perforated metal or screening within 7 feet of grade or floor level must be small enough to deter climbing yet large enough to prevent pinched extremities.
- Hem or tool exposed edges to prevent injury.
- Use of decorative metal with approval of District Project Manager only.

END SECTION 05 70 00