

**NORTH BRANCH AREA SCHOOL DISTRICT
REQUEST FOR BIDS ADDENDUM
for the Addition to the Maintenance Storage Building
North Branch, MI. 48461
Original Request for Bids Posted July 20, 2023
Original Bids Due: August 4, 2023 by 2:00 PM
Addendum Revised Bids Due: August 10, 2023 BY 2:00 P.M.
At North Branch Area Schools Central Office
6655 Jefferson St North Branch, MI 48461**

Response To RFI Submitted on August 2, 2023

Below are questions and answers relating to the project: North Branch Schools – Addition to the Maintenance Storage Building

1. It states to match existing for both the siding and standing seam roof. Could you please provide a manufacturer of the existing roof.

See #5

2. Please provide a spec on the “optional prefinished metal ceiling”

Provide rib metal ceiling with exposed fasteners.

3. We recommend completely replacing the roof as if it is going to be a standing seam

See #5

4. metal roof, we feel that it would be difficult to properly lap a standing seam metal roof between new and existing. NOTE: After site visit, roof does not look to be Standing Seam.

Match existing rib metal roof and vertical siding. Field verify existing profile.

5. On Sheet A2, it states that the existing building remains as is. However, you have detailed that (2) 2 x 12 Headers are to be installed below existing headers. Are we to remove the steel siding to install those headers? If so, are we to replace/reinstall that siding or leave it open.

Cut existing metal siding to install new headers or provide alt for removal and reinstallation of metal siding. See attached specifications or equal.

6. In the middle of the new building, there is a 4-1/2" Wall noted. Please provide a spec/detail on that wall. What is that wall made of?

2x4 wood studs @ 16" o.c. with ½" o.s.b. each side.

7. How often should the 2" Diagonal bracing be used?

Bracing to be located at every post.

8. On Sheet C1, it says to relocate existing shed. Who is responsible for moving that? And roughly how far would that be moved?

School will relocate existing shed.

9. What size are the new yard basins to be installed?
6" PVC yard drain tied in to existing 6" PVC drain

10. Does topsoil remain on site, or is that to be hauled off site?

Yes, topsoil can stay on site. Coordinate with Jeff Drayton.

11. Is topsoil and seeding required for this project?

Hydro-seeding will be required around the new building site and relocation site of moved topsoil.

12. Who does the contractor go through for a permit? Lapeer County or State of MI?

State of Michigan

13. What permits are required?

Building, mechanical, electrical and plumbing from the State of Michigan.

14. What type of wiring is to be installed? Romex or EMT/MC cable?

EMT/MC cable

15. Is the existing electrical panel a load center or a panel board?

Panel Board

16. Are there enough spare openings or spare breakers in the existing electrical panel to serve the new addition?

Yes, there are openings.

17. What brand is the existing electrical panel?

100 amp Square D.

18. What is the mounting height of receptacles and switches on the walls?

48" for all

SECTION 07 42 13.13
METAL ROOF & WALL PANELS
MAX-RIB

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes: Factory-formed metal roof and wall panels, including fascia, soffit and liner panels and includes:
 - 1. Factory-formed panels in horizontal installation.

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. ASTM A653/A653M Standard Specification for Steel Sheets, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - 2. ASTM A792/A792M Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy Coated by the Hot-Dip Process.
 - 3. ASTM B209 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
 - 4. ASTM D2247 Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
 - 5. ASTM E1680 Standard Test Method for Determining the Rate of Air Leakage Through Exterior Metal Systems Under Specified Pressure Differences Across the Specimen.
 - 6. ASTM E1646 Standard Test Method for Water Penetration of Metal Systems by Uniform Static Air Pressure Difference.

1.3 SYSTEM DESCRIPTION

- A. Panel Performance Requirements: Provide panels, which have been manufactured, fabricated and installed to withstand structural and thermal movement, wind loading and weather exposure to maintain manufacturer's performance criteria without defects, damage, failure or infiltration of water.

Fire rating: Class A

- 1. Uplift Tests:
 - a. UL 580 Class 90
- 2. Class 4 Impact Resistance: UL 2218
- 3. Fire Resistance: UL 263

- B. Finish Performance Requirements:
 - 1. Two coat coil applied, baked on full strength (70% resin, PVF2) fluorocarbon coating:
 - a. Consisting of a nominal 0.25 mil dry film thickness primer, and a nominal dry film thickness of 0.7 -0.8 mil color coat for a total 0.9 to 1.1 mil total system dry film thickness.
 - b. Color change and fade resistance: No cracking, peeling, blistering or loss of adhesion when tested in accordance with ASTM G23; color change, after removal of surface deposits such as dirt or chalk, maximum 5 NBS units.

- c. Humidity resistance: No blistering, peeling or loss of adhesion after 1000 hours testing, in accordance with ASTM D2247.
- 2. Silicone Modified Polyester:
 - a. Consisting of a nominal .20-.30 mil dry film thickness primer and a nominal dry film thickness of 0.7-0.8 mil color coat for a total 0.9-1.1 mil total system dry film thickness.
 - b. Color change and fade resistance: No cracking, peeling, blistering or loss of adhesion when tested in accordance with ASTM D2244; color change, after removal of surface deposits such as dirt or chalk.
 - c. Humidity resistance: No blistering, peeling or loss of adhesion after 1000 hours testing, in accordance with ASTM D2247.

1.5 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
- B. Product Data: Submit manufacturer's product data for specified products.
 - 1. Product Test Reports for applicable sustainable sites credits: For metal panels, indicating that panels comply with solar reflectance index requirement.
 - 2. Product Data for applicable materials and resources credits: Indicating percentages by weight of post-consumer and pre-consumer recycled content for products having recycled content. Contractor to provide a statement indicating cost for each product having recycled content.
- C. Shop Drawings: Submit shop drawings showing layout, profiles and product components, including anchorage, accessories, finish colors and textures.
 - 1. Indicate layout of metal panels and metal panel sizes, including custom-fabricated metal panels if indicated; indicate each item of trim and accessories.
 - 2. Indicate in detailed drawings profile and gauge of interior and exterior sheets, and locations and types of fasteners; indicate locations, gauges, shapes and methods of attachment of metal panels, trim and accessory items.
 - 3. Include sealant location and denote those that are factory and field applied.
 - 4. Indicate products/materials required for construction activities and field worked conditions of this section not supplied by manufacturer of products of this section.
- D. Samples: Submit selection and verification samples for finishes, colors and textures.
 - 1. Selection Samples: For each product requiring color selection, 2 sets of manufacturer's sample chips representing full range of colors and finishes available.
 - 2. Verification Samples: For each color and finish selected, 2 chips indicating match to selected color and finish.
- E. Warranties:
 - 1. Substrate Warranty
 - 2. Finish Warranty
- F. Test and Evaluation Reports: Showing compliance with specified performance characteristics and physical properties.
- G. Quality Assurance Submittals: Submit the following:
 - 1. Contractor Certificates: Contractor's certification that:
 - a. Manufacturer of products of this section meets specified qualifications.
 - b. Installer of products of this section meets specified qualifications.
 - 2. Manufacturer's Instructions: Manufacturer's installation instructions.
 - 3. Manufacturer's Field Reports: Manufacturer's field reports if required.

H. Buy American Certification: Manufacturer's letters of compliance that supplied products comply

With requirements.

I. Closeout Submittals: Submit the following:

1. Warranty: Warranty documents specified herein.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. Provider of "hands on" installer training programs at manufacturer facility.
2. Minimum of ten years' experience in manufacturing metal roof and wall systems.
3. Provider of product produced in a permanent factory environment with fixed roll-forming equipment.

B. Installer Qualifications:

1. Experience on at least five projects of similar size, type and complexity as this project that have been in service for a minimum of two years with satisfactory performance of the metal panel system.
2. Employer of workers for this project who are competent in techniques required by manufacturer for installation indicated and who shall be supervised at all times when material is being installed.

1.7 DELIVERY, STORAGE & HANDLING

A. General: Comply with Division 1 Product Requirements Sections.

1. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.

B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact. Identify fabricated components with UL 90 label where appropriate.

C. Delivery and Acceptance Requirements: Ensure all panels are received in good condition. In cases where damage is visible, note all paperwork; inform architect and project superintendent.

D. Packing, Shipping, Handling and Unloading:

1. Bundle panels in waterproof wrapping paper when nested, or wooden crates when panels cannot be nested.
2. Package trim and accessories in waterproof wrapping paper.

E. Storage and Protection: Store materials protected from exposure to harmful conditions. Store material in dry, above-ground location.

1. Stack prefinished material to prevent twisting, bending, abrasion, scratching and denting. Elevate one end of each skid to allow for moisture runoff.
2. Store products of this section in manufacturer's unopened packaging until installation of products
3. Maintain dry, heated storage area for products of this section until installation of products.
4. Remove strippable plastic film before storage under high-heat conditions.

1.8 PROJECT CONDITIONS

A. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements, fabrication schedule with construction progress to avoid construction delays.

- B. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed in accordance with manufacturers' written instructions and warranty requirements.

1.9 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.
 - 1. Panel Material: Furnish manufacturers 25 year warranty covering the panel against rupture, structural failure, or perforation.
 - 2. Panel Coating:
 - a. Polyvinylidene Fluoride: Furnish manufacturer's 40-year warranty covering cracking, checking, and peeling, and 30 year warranty covering fade and chalk on the two coat coil applied, baked on full strength (70% resin, PVF2) fluorocarbon coating. Manufacturer's warranty may exclude surface deterioration due to physical damage and corrosive environments.
 - b. Silicone Modified Polyester: Furnish manufacturer's 30-year warranty covering cracking, checking, and peeling, and 30 year warranty covering fade and chalk. Manufacturer's warranty may exclude surface deterioration due to physical damage and corrosive environments.
- B. Special Warranty: Installer's standard form in which installer agrees to repair or replace panels that fail due to poor workmanship or faulty installation within the specified warranty period.
 - 1. Warranty Period: <Insert number of years> years from date of Substantial Completion.

PART 2 PRODUCTS

2.1 METAL PANELS

- A. Manufacturer: McElroy Metal, Inc.
 - 1. Contact: 1500 Hamilton Rd., Bossier City, LA 71111; Telephone: (800) 562-3576, (318) 747-8097; Fax: (318) 747-8099; E-mail: info@mcelroymetal.com; website: www.mcelroymetal.com.
 - 2. Proprietary Products: McElroy Metal Preformed Wall and Metal Panels Max-Rib
- B. Substitutions:
 - 1. Basis of Design Product: Subject to compliance with requirements provide McElroy Metal Max-Rib or equal.
- C. Forming: Use continuous end rolling method. No end laps are permitted on panels without architect approval. No portable rollforming machines will be permitted on this project, no installer—owner or installer-rented machines will be permitted. It is the intent of the Architect to provide factory-manufactured panel systems only for this project.

2.2 MANUFACTURED UNITS

- A. McElroy Metal Max-Rib Panel:
 - 1. Profile: Major longitudinal ribs 3/4" (45 mm) deep, spaced 9" (229 mm) on center; minor longitudinal ribs centered between major ribs.
 - 2. Size: 36" (914 mm) cover width, lengths indicated on drawings.

2.3 MATERIALS

- A. Material: Galvalume steel sheet conforming to ASTM A792, AZ55 coating for bare; AZ50 coating for painted; [29 or 26] gauge sheet thickness.
- B. Galvanized Steel Sheet: ASTM A653, G90 steel sheet, zinc coated galvanized by hot

dip process, structural quality.

2.4 METAL ROOF PANEL ACCESSORIES

General: Provide complete metal panel assembly incorporating trim, copings, fasciae, gutters and downspouts, and miscellaneous flashings, in [manufacturer's standard profiles] [profiles as indicated]. Provide required fasteners, closure strips, and sealants as indicated in manufacturer's written instructions.

- A. Flashing and Trim: Match material, thickness, and finish of metal panel face sheet.
- B. Panel Fasteners: Self-tapping screws and other acceptable corrosion-resistant fasteners recommended by metal panel manufacturer. Where exposed fasteners cannot be avoided, supply fasteners with EPDM or neoprene gaskets, with heads matching color of metal panels by means of factory-applied coating.
- C. Joint Sealers: Manufacturer's standard or recommended liquid and preformed sealers and tapes, and as follows:
 - 1. Tape Sealers: Manufacturer's standard non-curing butyl tape, AAMA 809.2.
 - 2. Concealed Joint Sealant: Non-curing butyl, AAMA 809.2.
- D. Steel Sheet Miscellaneous Framing Components: ASTM C 645, with ASTM A 653/A 653M, **G60 (Z180)** hot-dip galvanized zinc coating.
- E. Metal Accessories: Approved by metal panel manufacturer. Refer to [Section 07 72 00] "Metal Accessories" for requirements for metal accessories.
- F. Snow Guards: Approved by metal panel manufacturer. Refer to [Section 07 72 53] "Snow Guards" for requirements for snow guards attached to metal panels

2.5 FABRICATION

- A. General: Provide factory fabricated and finished metal panels and accessories meeting performance requirements, indicated profiles, and structural requirements.
- B. Fabricate metal panel joints configured to accept sealant providing weathertight seal and preventing metal-to-metal contact and minimizing noise resulting from thermal movement.
- C. Form panels in continuous lengths for full length of detailed runs, except where otherwise indicated on approved shop drawings.
- D. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's written instructions, approved shop drawings, and project drawings. Form from materials matching metal panel substrate.

2.6 FINISHES

- A. Two coat coil applied, baked on full strength (70% resin, PVF2) fluorocarbon coating consisting of a nominal 0.25 mil dry film thickness primer, and a nominal dry film thickness of 0.7 -0.8 mil color coat for a total 0.9 to 1.1 mil total system dry film thickness. Finish to be selected from manufacturer's standard color selection. The back side of the material should be 0.25 mil primer and a 0.25 mil polyester wash coat.

1. Metal & Wall Panel Color:
 - a. Selected from full range of manufacturer's standard colors.
 - b. Color: [Specify color.].
 - c. Color: As indicated on panel schedule.
 2. Metal Related Trim/Accessories Color:
 - a. Selected from full range of manufacturer's standard colors.
 - b. Color: [Specify color.].
 - c. Color: As indicated on panel schedule.
- D. Modified Silicone-Polyester color coat applied to sight-exposed face of sheet after pretreatment and priming in accordance with coating manufacturer's recommendations consisting of a nominal .20-.30 mil dry film thickness primer and a nominal dry film thickness of 0.7-0.8 mil color coat for a total 0.9-1.1 mil total system dry film thickness.

1. Metal Panel Color:
 - a. Selected from full range of manufacturer's standard colors.
 - b. Color: [Specify color.].
 - c. Color: As indicated on panel schedule.
2. Metal Related Trim/Accessories Color:
 - a. Selected from full range of manufacturer's standard colors.
 - b. Color: [Specify color.].
 - c. Color: As indicated on panel schedule.

2.7 RELATED MATERIALS

- A. General: Coordinate use of related materials:
1. Underlayment: Refer to Division 7 Metaling Section
 2. Plywood Deck: Refer to Division 6 Rough Carpentry Section
 3. Sealants: Refer to Division 7 Joint Sealants Section

2.8 SOURCE QUALITY

- A. Source Quality: Obtain metal panel products from a single manufacturer.
- B. Quality Control: Obtain metal panels, trim and other accessories from a manufacturer capable of providing on-site technical support and installation assistance.

PART 3 EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, recommendations and installation instructions for substrate verification, preparation requirements and installation.
1. Strippable Film: Remove manufacturer's protective film, if any, from surfaces of metal panels.
- B. Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.
1. Verification of Conditions:
 - a. Panel support systems are ready for construction activities of this section and within specified tolerances.
 - b. Rough-in utilities are in correct locations.
 2. Installer's Examination:

- a. Have installer of this section examine conditions under which construction activities of this section are to be performed, then submit written notification if such conditions are unacceptable.
- b. Transmit 2 copies of installer's report to Architect within 24 hours of receipt.
- c. Delay construction activities of this section until unacceptable conditions have been corrected.
- d. Beginning construction activities of this section indicates installer's acceptance of conditions.

3.2 PREPARATION

- A. Coordination: Coordinate metal panel work with other trades to provide a noncorrosive and leak-free metal installation.
 1. Install substrate boards, hat channels, purlins, or furring channels in accordance with manufacturer's recommendations.
 2. Coordinate work, with installation of other associated work, to ensure quality application.
 3. Coordinate work with installation of associated metal flashings and building walls.
 4. Coordinate work to minimize foot traffic and construction activity on installed finished surfaces.
 5. Coordinate location of pipe penetrations to allow centering of pipe in panel.
 6. Coordinate location of metal curbs, to allow proper integration with metal panel.
 7. Coordinate work to minimize foot traffic and construction activity on installed finished surfaces.
 8. Dissimilar Metals: Prevent galvanic action of dissimilar metals.

3.3 INSTALLATION

- A. General: Install metal panels to profiles, patterns and drainage indicated and required for leak-free performance. Provide for structural and thermal movement of work. Seal joints for leak-free metal installation.
 1. Shim or otherwise plumb substrates receiving metal panels.
 2. Flash and seal metal panels at perimeter of all openings. Fasten with self-tapping screws.
 3. Do not begin installation until air- or water-resistive barriers and flashings that will be concealed by metal panels are installed.
 4. Locate and space fasteners in uniform vertical and horizontal alignment.
 5. Install flashing and trim as metal panel work proceeds.
 6. Install continuous length panels if at all possible. If splices are required, locate panel splices over, but not attached to, structural supports and only with prior Architect approval.
 7. Align bottoms of metal panels and fasten with blind rivets, bolts, or self-tapping screws.
 8. Fasten flashings and trim around openings and similar elements with self-tapping screws.
 9. Provide weathertight EPDM Flashing for pipe- and conduit-penetrating panels.
 10. Fix panels at location depicted on reviewed shop drawings.
 11. Allow for required panel clearance at penetrations for thermal movement.
 12. Align pipe penetrations to occur in the flat of the metal panel. Report and have corrected improperly placed penetrations before proceeding with panel installation. Remove and replace metal panels which have improperly placed penetration flashings.
 13. Allow for required panel clearance at penetrations for thermal movement.

14. Fasteners: Conceal fasteners where possible in exposed work. Cover and seal fasteners and anchors for watertight and leak-free metal installation.
 15. Sealant-Type Joints: Provide sealant-type joint where indicated. Form joints to conceal sealant. Comply with Division 7 Joint Sealants Section for sealant installation.
- B. Metal Installation:
1. Install metal panels plumb, true and in correct alignment with structural framing, in accordance with shop drawings and manufacturer's printed installation instructions.
 2. Install metal panels using manufacturer's concealed fastening system or non-corroding fasteners color-matched to panel.
 3. Install trim using concealed fasteners where possible; sight-exposed non-corroding fasteners color-matched to trim are permitted on vertical surfaces only.
- C. Installation Tolerances:
1. Variation from Plumb: Maximum 1/8" (3.2 mm) in 20 feet (6.096 m).
 2. Variation from Level: Maximum 1/8" (3.2 mm) in 20 feet (6.096 m).
 3. Variation from True Plane: Maximum 1/8" (3.2 mm) in 20 feet (6.096 m).
- D. Underlayment Installation
1. Underlayment to be supplied by metal panel manufacturer.
 2. Self-adhered High-Temperature Underlayment: Provide self-adhering, cold-applied, sheet underlayment, a minimum of 40 mils thick adhesive, with release-paper backing. Provide primer when recommended by underlayment manufacturer.
 3. Thermal Stability: Stable after testing at 240 degree F; ASTM D1970.
 4. Low-Temperature Flexibility: Passes after testing at minus 20 degree F; ASTM D1970.
 5. Retain one of two subparagraphs below or delete both if indicated on Drawings.
 - a. Apply over the entire metal surface.
 - b. Apply over the metal area indicated below:
 6. Revise subparagraphs below to suit Project or delete if indicated on Drawings. If inserting dimensions, note that many self-adhering sheet underlayments are manufactured in 36-inch- (914-mm-) wide rolls.
 - a. Roof perimeter for a distance up from eaves of [24 inches] [36 inches] < Insert dimension> beyond interior wall line.
 - b. Valleys, from lowest point to highest point, for a distance on each side of [18 inches] < Insert dimension>. Overlap ends of sheets not less than 6 inches.
 - c. Rake edges for a distance of [18 inches] < Insert dimension>.
 - d. Hips and ridges for a distance on each side of [18 inches] < Insert dimension>.
 - e. Roof-to-wall intersections for a distance from wall of [18 inches] < Insert dimension>.
 - f. Around dormers, chimneys, skylights, and other penetrating elements for a distance from element of [18 inches] < Insert dimension>.
- E. Flashing and Trim Installation: Comply with performance requirements, manufacturer's written installation instructions, and the SMACNA "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and install units to true level. Install work with laps, joints, and seams that will be permanently watertight.
- F. Metal Curbs: Use .063 minimum thickness welded aluminum, or 18 gauge minimum welded stainless steel, factory-insulated, with integral cricket, and designed to fit metal panel module, sized to meet specification.

3.4 FIELD QUALITY REQUIREMENTS

- A. Site Tests: (Post-Installation Testing): Owner reserves right to perform post-installation testing of installed metal panel installation.

- B. Manufacturer's Field Services: Upon Owner's request, provide manufacturer's field service consisting of product use recommendations and periodic site visit for inspection of product installation in accordance with manufacturer's instructions.

3.5 CLEANING

- A. Cleaning: Remove temporary coverings and protection of adjacent work areas.
- B. Repair or replace damaged installed products.
- C. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance.
- D. Remove construction debris from project site and legally dispose of debris.
- E. Remove strippable coating and perform dry wipe-down cleaning of panels as erected.

3.6 PROTECTION

- A. Protection: Protect installed product's finish surfaces from damage during construction:
 - 1. Protect installed products from damage by subsequent construction activities.
 - 2. Replace products having damage other than minor finish damage.
 - 3. Repair products having minor damage to finish in accordance with panel Manufacturer's recommendation
 - 4. Architect shall be sole judge of acceptability of repair to damaged finishes; replace products having rejected repairs

3.7 SCHEDULES

- A. Schedules: Refer to panel schedule attached to this section.

END OF SECTION