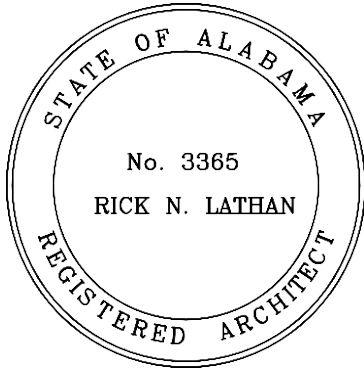




300 CHASE PARK SOUTH • SUITE 200 • HOOVER, ALABAMA 35244
205-988-9112

ADDENDUM NO. 3
NEW GYMNASIUM FOR BARKLEY BRIDGE ELEMENTARY SCHOOL
Architect Job No. 24-107
April 29, 2025
DCM # 2025141

BIDS DUE:

Thursday, May 1, 2025, until
2:00 p.m., local time, held at
Hartselle City Board of Education
305 College Street, NE
Hartselle, AL 35640

The Plans and Specifications are hereby amended. The following supersedes all contrary and/or conflicting information and is made part of the contract documents.

GENERAL

1. There was a Mandatory Pre-Bid Meeting held on 4/24/2025, see attached sign-in sheet for a list of all attendees.

SPECIFICATIONS

1. **SECTION 09624 – POLYURETHANE FLOOR SYSTEM:** **ADD** specification in its entirety.
2. **SECTION 07240 – EXTERIOR INSULATION AND FINISH SYSTEM:** **DELETE** specification in its entirety.
3. **SECTION 07410 – METAL WALL PANELS:** **REVISED** specification to be used in lieu of previous version.
4. **SECTION 13100 – PRE-ENGINEERED STEEL BUILDING:** **REVISED** specification to be used in lieu of previous version.
5. **SECTION 16000 – ELECTRICAL:** **DELETE SECTION 2.29 INTERCOM SOUND SYSTEM** in its entirety.

CLARIFICATIONS

1. Reference Finish Schedule: Flooring shall be Interface to match the specifications.

2. Reference Finish Schedule: Corridor 112 shall be RSF-1 to match plans on A8.1.
3. Reference Section 16000 – Electrical / 2.8 Data Cabling System / G. PRODUCTS: Hubbell is an acceptable manufacturer in lieu of 3 Com.
4. Room 201 Flooring: Paint plywood for the mezzanine area.
5. Schedule provided on civil plans is relative to the overall project schedule as defined by the contract. Time periods shown on C5-00 should be adjusted proportionally from the schedule shown to a two hundred forty (240) contract period.
6. The Intercom Sound System will be owner-provided and has been removed from the project's scope of work at this time. Disregard any reference to the Intercom Sound System in the specifications.
7. Sargent is the current keying system.

APPROVED MANUFACTURERS

The following manufacturers have submitted data for prior approval and have been approved by our office, **contingent upon the stipulation that their products must meet or exceed the contract specifications.**

Product

A8.1 Rubber Sports Flooring

DynaForce 7+2 (9mm)

Manufacturer

Dynamic Sports Construction, Inc.

MANDATORY PRE-BID CONFERENCE SIGN-IN SHEET

Project: New Gymnasium for Barkley Bridge Elementary School
Architects Job No. 24-107

Date / Time: Thursday, April 24, 2025, at 10:00 a.m.

Location: Barkley Bridge Elementary School, 2333 Barkley Bridge Road SW, Hartselle, AL 35640

[illegible]

1.0 - GENERAL

1.1 Summary

- A. Section includes: Factory-formed metal panels, including flashing and accessories.
Metal panel includes: Wall Panels
- B. Related Sections: Section(s) related to this section include:
 - 1. Flashing and Trim: Division 7 Flashing and Sheet Metal Section.
 - 2. Sealants: Division 7 Joint Sealers Sections.

1.2 References

- A. American Society for Testing and Materials (ASTM):
- B. Underwriters Laboratories (UL Classified Tests):
- C. Sheet Metal and Air Conditioning Contractors National Association (SMACNA):
 - 1. SMACNA Architectural Sheet Metal Manual

1.3 System Description

- A. Performance Requirements: Provide sheet metal wall panels that 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 of infiltration of water.
 - 1. Wind-Uplift: Wall panel assembly shall comply with UL Classification 580 for UL Classified 90 rated assemblies
 - 2. Static Air Infiltration: Completed wall system shall have a maximum of .06 cfm/sf with 6.24 kPa air pressure differential as per ASTM E283/1680.
 - 3. Water Infiltration: No evidence of water penetration at an inward static air pressure differential of not less than 6.24 psf (43 kPa) and not more than 12.0 psf (83 kPa) as per ASTM E331/1646.

1.4 Submittals

- A. General: Submit listed submittals in accordance with *Conditions of the Contract* and Division 1 Submittal Procedures Section.
 - 1. Product Data: Submit product data, including manufacturer's specification data product sheet, for specified products.
- B. Shop Drawings:
 - 1. Submit complete shop drawings and erection details, approved by the metal panel manufacturer, to the architect for review. Do not proceed with manufacturer of wall panel materials prior to review of shop drawings and field verification of all dimensions. Do not use drawings prepared by the architect for shop or erection drawings.
 - 2. Shop drawings show elevations, methods of erection, and flashing details.
- C. Performance Tests:
 - 1. Submit certified test results by a recognized testing laboratory in accordance with specified test methods for each panel system.

- D. Samples: Submit selection and verification samples for finishes, colors and textures.
- E. Quality Assurance Submittals: Submit the following:
 - 1. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and physical requirements.
 - 2. Manufacturer's Instructions: Manufacturer's installation instructions.
- F. Closeout Submittals: Submit the following:
 - 1. Operation and Maintenance Date: Operation and maintenance date for installed products in accordance with Division 1 Closeout Submittals, Maintenance Data and Operation Data Section. Include methods for maintaining installed products and precautions against cleaning materials and methods detrimental to finishes and performance.
 - 2. Project Warranty: Warranty documents specified herein.
 - 3. Manufactures warranty: Submit, for owners acceptance, manufacturer's 20-year non-prorated warranty covering a PAC-CLAD finish, including color, fade, chalking and film integrity. Manufacturer's warranty is in addition to and not limited of, other rights the owner may have under the contract documents.

Warranty Period: 20 years commencing on Date of Substantial Completion.
 - 4. Record Documents: Project record documents for installed materials in accordance with Division 1 Closeout Submittals, Project Record Documents Section.

1.5 Quality Assurance

- A. Installer Qualifications: Installer experienced in performing work of this section who has specialized in the installation of work similar to that required for this project.
- B. Sheet Metal Industry Standard: Comply with Sheet Metal and Air Conditioning Contractors National Association (SMACNA) *Architectural Sheet Metal Manual*.
- C. Pre-Installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, Manufacturer's installation instructions and manufacturer's warranty requirements. Comply with Division 1 Coordination, Project Meetings Section.

1.6 Delivery, Storage and 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 Classified label where appropriate.
- C. 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 to run off.
2. Prevent contact with material that may cause corrosion, discoloration or staining.
3. Do not expose to direct sunlight or extreme heat trim material with factory applied strippable film.

1.7 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.

1.8 Warranty

- A. Project Warranty: Refer to *Conditions of the Contract* for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's 20-year nonprorated warranty covering PAC-CLAD finish, including color, fade, chalking and Film integrity executed by authorized company official. Manufacturer's warranty is in addition to and not a limitation of, other rights Owner may have under the Contract Documents.

Warranty Period: 20 years commencing on Date of Substantial Completion.

2.0 - PRODUCTS

2.1 Sheet Metal Wall Panels

- A. Manufacturer: Petersen Aluminum Corporation or other manufacturers as submitted and prior approved to meet specifications. Comply with Section 01360 – Product Substitutions.

B. Wall Panels:

1. Type: Reveal Panel
2. Material: 24 ga G-90 Hot dipped Galvanized Steel
3. Panel Dimension: 18 in. o.c.
4. Texture: Smooth

C. Acoustic Wall Panels:

1. Type: Perforated (PAC-CLAD or Approved Equal)
2. Material: 24 GA G-90 Hot Dipped Galv. Steel
3. Panel Dimension: 18" O.C.
4. Texture: Perforated

D. Panel Finish:

1. Panel Topside: PAC-CLAD finish color selected from Petersen Aluminum Corp. standard colors: To be selected by Architect.
2. Panel Underside: Polyester washcoat with dry film thickness of 0.3 mils.

- E. Flashing and Trim: Manufacturer's standard flashing and trim profiles, factory formed, gauge as recommended by manufacturer, color and

finish to match metal wall panels.

2.2 Related Materials

A. General: Coordinate use of related materials.

2.3 Fabrication

A. General:

1. Continuous Length: Fabricate panels 55' (16.2 m) and less in one continuous length.
2. Trim and Flashings: Fabricate trim and flashings from same material as wall Panel system material.
3. Portable Roll Former: Panels fabricated by portable roll former shall not be approved.

2.4 Finishes

A. Factory Applied Finish:

1. Topside: Full-strength fluoropolymer (70% Kynar® 500 or Hylar® resin) system of 1.0 mil (.025 mm) total dry film thickness.
2. Underside: Wash coat of 0.3 - 0.4 mil dry film thickness.
3. Texture: Smooth texture, dull matte specular gloss 25 - 35% at 60°
4. Protective film: Strippable vinyl film applied during panel fabrication and finishing.

3.0 - EXECUTION

3.1 Manufacturer's Instructions

- A. Compliance: Comply with manufacturer's product data, recommendations and installations instructions for substrate verification, preparation requirements and installation.
1. Strippable Film: Remove manufacturer's protective film, if any, from surfaces of wall panels.

3.2 Examination

- A. Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for project installation in accordance with manufacturer's instructions.

3.3 Preparation

- A. Coordination: Coordinate metal wall panels with other Work (drainage, flashing and trim, copings, walls) and other adjoining work to provide a non-corrosive and leak-proof installation.
- B. Dissimilar Metals: Prevent galvanic action of dissimilar metals.

3.4 Installation

- A. General: Install metal wall panels to profiles, patterns and drainage indicated and required for leak-proof installation. Provide for structural and thermal movement at work. Seal joints for leak-proof installation.
1. Seams: Provide uniform, neat seams.

2. Fasteners: Conceal fasteners where possible in exposed work. Cover and seal fasteners and anchors for watertight and leak-proof installation.
3. Sealant-Type Joints: Provide sealant-type joint where indicated. Form joints to conceal sealant. Comply with Division 7 Joint Sealants Section for Sealant installation.

3.5 Field Quality Requirements

- A. Manufacturer's Field Services: Use recommendations and inspection of product installation in accordance with manufacturer's instructions.

3.6 Cleaning

- A. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to owner's acceptance. Remove construction debris from project site and legally dispose of debris.

3.7 Protection

- A. Protection: Protect installed product from damage during construction.

END OF SECTION

1.0 -GENERAL

1.1 Description

- A. Scope
The complete installation of Robbins PULASTIC Classic 110 polyurethane surfacing over high-performance resilient base mat, by Robbins, Inc. of Cincinnati, Ohio, including adhesives, resilient base mat, polyurethane sealer, polyurethane structure layer, surface topcoat, and court markings.
- B. Related work specified under other sections. (A cross-reference should be incorporated in these sections.)
1. Concrete and Concrete Finishing - Section 03300
 - Concrete Slab Depression: a total of 11mm, equal to system thickness, (0.433 inches).
 - Surface Finish: steel troweled and finished smooth.
 - Concrete Tolerance: 1/8" (3mm) in radius of 10' (3m). Floor Flatness and Floor Levelness (FF and FL) numbers are not recognized.
 - No Curing Agents or Sealers Are to Be Applied to The Concrete Slab.
 2. Membrane Waterproofing and Dampproofing - Section 07180
 - Concrete subfloors on or below grade shall be adequately waterproofed beneath the slab and at the perimeter walls and on the earth side of below grade walls by general contractor using suitable type membrane.
 - Sand-Poly-Sand slab construction is not an acceptable construction.
 3. Thresholds - Section 08710
 4. Game Standard Inserts - Section 11662

1.2 Quality Assurance

- A. Floor System Supplier Qualifications
1. Supplier shall be an established firm experienced in field and have been in business for a minimum of ten (10) years; Robbins, Inc. or an approved equal.
 2. Formulator shall be ISO-9001 certified for quality control, and ISO-14001 certified for environmental care, and provide copy of Certification document upon request.
- B. Floor Contractor/Installer Qualifications and Certifications:
Floor Contracting Company and field personnel shall be trained by supplier on proper installation and finishing process.

C. System Technical Data:

<u>Technical Data</u>			
Character	Point-elastic		
Classification	P1		EN 14904
Nominal thickness	11 mm	(0.4331 inches)	
Shock Absorption	28%		EN 14808
Shock Absorption (DIN)	(35%)		(DIN 18032-91)
Vertical Deformation	1.4 mm		EN 14809
Linear Friction (dry)	98		EN 13036-4
Linear Friction (damp)	0.3		Leroux
Ball Bounce	98 %		EN 12235
Gloss	3%		EN 2813
Resistance to rolling load	≥1500 N		EN 1569
Resistance to impact	≥800 gr @ 10°C		EN 1517
	≥1200 gr @ 17°C		EN 1517
Resistance to indentation	0.35 mm @ 5 min		EN 1516
	0.15 mm @ 24 hrs.		EN 1516
Resistance to wear	150 mg		EN ISO 2813
Flammability	Bfl-S1		EN 13501-1
V.O.C. content - Adhesive	Solvent free		
V.O.C. content - Topcoat	0.01 gr/lit (EU)		2004/42/EG
	45 gr/lit (US)		ASTM D 3960
Adhesive composition	Free of solvents and heavy metals		
Resin composition	Free of solvents and heavy metals		
Elongation at break - Structure	150%		DIN 53455
Tensile Strength - Structure	8 N/mm ²	(1,160 psi)	DIN 53455
Tear Strength - Structure	25 N/mm	(142 pli)	DIN 53455
Color fastness	8 (excellent)		DIN 54004

1.3 Submittals

- A. Manufacturer's Product Data
Submit as required in accordance with Section 01350 the requested information including the Floor System specification sheets.
- B. Concrete Guidelines
Submit copies of Recommendations for correct preparation, finishing and testing of concrete subfloor surfaces to receive granulated base mat and polyurethane floor system.
- C. Samples
 1. Submit sample of flooring
 2. Submit Topcoat Standard Color Chart
 3. Submit Linepaint Color Chart
- D. Maintenance Literature
Submit copy of Maintenance Instructions with closeouts and deliver copy to Owner's representative during training.
- E. References
 1. Submit Letter attesting that Floor Contractor and Field Personnel have been properly trained to perform work per specifications and contract.

2. Reference list of three individual for whom installer has worked on projects of similar size and magnitude. If requested.
- 1.4 Delivery, Storage and Handling
 - A. Delivery of Materials
 1. Material shall not be delivered or installed until all masonry, painting, plastering, tile work, marble and terrazzo work are completed and all overhead mechanical work, lighting, backstops, scoreboards are installed. Room temperature shall be at least 55 degrees Fahrenheit, and ambient relative humidity shall be 75% or less. Vapor emission of concrete slab shall be 4.0 pounds per 1,000 square feet or less as tested with calcium chloride test(s), and in-slab relative humidity shall be 75% or less.
 2. Area where materials are to be stored should be maintained at 55 degrees Fahrenheit and under 75% relative humidity by the General Contractor.
- 1.5 Job Conditions-Sequence
 - A. Do not install floor system until concrete has been cured 60 days and the requirements in paragraph 1.1 and 1.4 are obtained.
 - B. General Contractor is responsible to ensure slab is clean and free of all dirt and debris prior to floor installation beginning.
 - C. Permanent heat, light and ventilation shall be installed and operating during and after installation. Environmental temperatures must average a minimum of 65 degrees Fahrenheit for one full week proceeding, throughout, and 72 hours following application.
 - D. After floors are finished, area to be kept locked by general contractor to allow curing time for the paint and finish system(s). No other trades are to be allowed on floor until it is accepted in writing by owner or owner's authorized agent.
- 1.6 Guarantee
 - A. Guarantee shall not cover damage caused in whole or in part by casualty, ordinary wear and tear, abuse, use for which material is not designed, faulty construction of the building, settlement of the building walls, failure of the other contractors to adhere to specifications, separation of the concrete slab and excessive dryness or excessive moisture from humidity, spillage, migration through the slab or wall, or any other source.
 - B. Manufacturer shall hereby warrant the flooring material to be free from manufacturing defects for a period of 2 years. This warranty is in lieu of all other warranties, expressed or implied including but not limited to any warranty of merchantability or fitness for a particular purpose, and of any other obligations on the part of Manufacturer. In the event of breach of any warranty, the liability of Manufacturer shall be limited to repairing or replacing product material and system components supplied by manufacturer and proven to be defective in manufacture, and shall not include any other damages, either direct or consequential.

2.0 - PRODUCTS

2.1 Materials

NOTE: Use of any Non-Approved Component Substitutions Shall Void Warranty.

- A. Robbins Pulastic Flooring system is used as a Basis of Design. Other manufacturers must submit in compliance with Section 01360 for pre-approval. Request must be sent to Architect at least 10 days prior to Bid. All approved vendors will be notified in writing via Addendum.
 - 1. Adhesive
Pulastic Tacky Adhesive: a two-component polyurethane adhesive
 - 2. Shock Pad
Shock Pad, a granulated rubber/polyurethane mat 9mm thick.
 - 3. Pad Sealer
Pulastic EG Sealer: a two-component polyurethane sealer
 - 4. Polyurethane Resin
Pulastic GM1500 Compound: a pigmented two-component polyurethane resin
 - 5. Coating
Pulastic Coating 221W: a pigmented, two-component, water-dispersed polyurethane surface coating.
Color Options: Topcoat color to be selected from standard colors.
- B. Game line Paint
 - 1. Pulastic Linepaint: a pigmented, two-component polyurethane paint. Refer to the drawings for color selections.
 - 2. Color Options: Court Marking colors. Refer to the drawings for color selections.

3.0 - EXECUTION

3.1 Inspection

- A. Inspect concrete slab for proper levelness tolerance, dryness, and possible contamination, (see Part 1 –Sec 1.01 and Sec. 1.04) and report any discrepancies to the general contractor and architect in writing.
- B. All work required to put the concrete subfloors in acceptable condition shall be the responsibility of the general contractor.
- C. Subfloor shall be broom cleaned by general contractor.
- D. General Contractor will notify the flooring installation company to proceed with the installation after concrete slab specifications are met.
- E. Installer shall perform tests for moisture and adhesion prior to application and report adverse conditions to the general contractor in writing.
- F. Installer shall document all working conditions provided in General Specifications prior to commencement of installation.

3.2 Installation

- A. Robbins Pulastic
 - 1. Shock Pad
 - 2. Mix two-component Tacky Adhesive according to supplier's instructions and spread adhesive using ROBBINS PULASTIC notched trowel.

3. Unroll polyurethane/rubber granulated base mat into freshly applied adhesive. Seams shall be in virtual contact with absence of compression fit. Roll surface of base mat with a medium-size roller.
- B. **Sealer**
Mix two-component EG Sealer according to supplier's instructions and spread sealer over base mat using a straight trowel. Allow to cure minimum 12 hours before proceeding.
- C. **Structure Layer**
 1. Mix two-component Robbins Pulastic GM1500 pigmented polyurethane resin and spread over EG Sealer according to supplier's instructions. Allow to cure minimum 12 hours before proceeding.
 2. Mix two-component Robbins Pulastic GM1500 pigmented polyurethane resin and apply at proper thickness according to supplier's instructions. Allow to cure minimum 12 hours before proceeding.
- D. **TopCoat**
Mix two-component Robbins Pulastic Coating 221W and apply using Robbins Pulastic lambswool roller(s) according to supplier's instructions. Allow 24 to 48 hours curing time before proceeding.
- E. **Gamelines**
 1. Mix two-component Robbins Pulastic PU-Linepaint according to supplier's instructions.
 2. Line painting should be in accordance with supplier's directions.
 3. Color of court markings shall be chosen from Robbins Pulastic PU-Linepaint standard colors.
 4. Consult architectural drawings for game line locations and chosen colors.
- F. **Perimeter Molding**
Install a rubber base, anchored to the walls with standard base cement.

3.3 Cleaning

Clean up all unused materials and debris and remove from the premises. Dispose of empty containers in accordance with federal and local regulations.

3.4 Protection

- A. **Cure Time**
No traffic or other trades shall be allowed on the surface for a period of one week following completion to allow for complete and proper cure of the finish.
- B. **Other Trades**
It shall be the responsibility of the general contractor to protect the surface from damage by other trades before acceptance by the owner or the owner's authorized agent.
- C. **Safety**
No smoking, open flames or sparks from electrical equipment or any other source shall be permitted during the installation process, or in areas where materials are stored

END OF SECTION

1.0 - GENERAL

1.1 Scope

The pre-engineered steel building package shall consist of primary and secondary structure, metal roof panel or deck, exterior wall cover, fascia panel, trim and flashing, closures, caulking, fasteners and other miscellaneous metal building components or accessory items as shown or called for in the drawings or specifications and as required.

1.2 Related Sections

A. Section 07610 – Standing Seam Roof and Sheet Metal System

1.3 Qualifications

- A. A complete structural analysis of the design by a structural engineer is to be made to demonstrate that requirement of design and load criteria are met.
- B. A copy of manufacturer's stamped and signed engineer's calculations and analysis shall be furnished to the Architect.
- C. Metal building manufacturer shall be accredited by the International Accreditation Services' IAS Accreditation for Inspection Programs for Manufacturers of Metal Building Systems (AC472). Metal Building Manufacturer shall be currently enrolled in an IAS accreditation program and shall maintain such throughout the course of the project.
- D. Metal building shall be designed in accordance with "The Metal Building Manufacturers Association's Design Practice Manual."
- E. The metal building design engineer is responsible for the complete design of the metal building system.

1.4 Submittals

- A. Shop Drawings for approval. Drawings and design analysis shall bear the seal of a registered professional engineer registered in the State of Alabama. Submittal shall include layout of all members, connections, and accessories and associated details for erection. All calculations must be provided.
- B. Documentation of manufacturer's current (up-to-date) IAS certification shall be submitted to the Architect. If accreditation expires during the course of the project renewed certificate shall be submitted as well.
- C. Record or certificate of erector training for metal building system being erected.
- D. Building exterior components samples.
- E. Color samples for approval.

1.5 Warranties

All materials and workmanship covered by this section shall be guaranteed from date of final acceptance of the Contract, or from occupancy of the building whichever is earlier.

A. Wall Paint Warranty

All wall panels shall be guaranteed for a period of ten (10) years against chalk, fade, crack, check, blister or peel.

1.6 General

A. All components including, but not limited to the following will be furnished and installed for the complete steel structural framework: anchor bolts, wall and roof panels, downspouts, gutters, fascias, insulation, all necessary closures, trims, flashing and fasteners to provide a weather proof building, and miscellaneous accessories as specified.

B. All steel shall be new, clean and straight. Welding shall be done by qualified operators and the specifications of the American Welding Society adhered to. Workmanship on all parts will be equal to that of best modern shop practices.

2.0 - PRODUCT

2.1 General

A. All structural mill sections or welded up plate sections shall be designed in accordance with the AISC "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings", latest edition.

B. All Cold-formed steel structural members shall be designed in accordance with the AISI "Specification for the Design of Cold-formed Steel Structural Members", latest edition.

2.2 Design Loads

A. The design loads for the building shall be, in addition to their own dead load, the live, wind, snow and seismic loads required of the following as specified:

1. 2021 International Building Code.
2. Low Rise Building Systems Manual, by the Metal Building Manufacturers Association.

B. The building components shall be designed to meet the most severe conditions of load combinations set by the specified building code, but in no case be less than that produced by the following load combinations:

1. Building dead load plus roof live load (or snow).
2. Building dead load plus wind load.
3. Building dead load plus wind load plus one-half roof snow load.
4. Building dead load plus roof snow load plus one-half wind load.

C. Roof live and snow loads shall be applied on the horizontal roof projection. Wind loads shall be assumed to act horizontally and shall be applied as pressure and suction perpendicular to the building surface.

D. Design load requirements shall be determined by local conditions, applicable codes, building end use, etc. Application of design loads shall be in accordance with the Design Practices sections of the Metal Building Manufacturers Association (MBMA) Building Systems Manual, unless specified otherwise. NOTE: See all

drawings for additional point loading on the roof structure (including but not limited to roof top mechanical units, hanging equipment loads, continuous heavy piping loads, etc.).

- E. Minimum design collateral loads supported on or hung from the roof structure shall be as follows:

Minimum Design Collateral Load (MDCL) 10 psf

These collateral loads shall be applied in addition to self-weight of building frame, roof decking and roof covering weights.

- F. Deflection Limits:
- Roof Purlins and Rafters: DL Span/360, LL Span/360, TL Span/240.
 - **Wall Girts: Horizontal deflection Span/600.**
 - Overall Building Drift: **H/300** where "H" is the building eave height.
 - Note specific deflection requirements and expansion joints noted on drawings.

2.3 Primary Framing Steel

- A. Steel for hot-rolled structural sections shall conform to the requirements of ASTM specification A 36.
- B. Steel for all built-up sections shall meet as applicable the physical and chemical properties of ASTM A 572 modified to 55,000 psi minimum yield and 70,000 psi minimum tensile strength, or ASTM A 607-85, Grade 55, or ASTM A 570-88, Grade 55.
- C. Steel for all endwall "C" sections shall meet the physical and chemical properties of ASTM A 570-88, Grade 55.
- D. Rigid Frame: All rigid frames shall be welded, built-up "I" sections. The columns shall be straight or sloped with a minimum depth of 12" for primary frame members. Bases of frames are to be pinned.
- E. Endwall Frames: All endwall roof beams and endwall columns shall be cold-formed "C" sections, mill-rolled sections, or built-up "I" sections as required for future bay addition.
- F. Plates, Stiffeners, etc.: All base plates, splice plates, cap plates, and stiffeners shall be factory welded into place on the structural members.
- G. Bolt Holes, etc: All base plates, splice plates and flanges shall be shop fabricated to include bolt connection holes. Webs shall be shop fabricated to include cable brace or rod brace holes and flange brace holes.

2.4 Secondary Framing Steel

- A. Steel used to form purlins, girts, eave struts and "C" sections shall meet the physical and chemical properties of ASTM A 570-88, Grade 55.
- B. Steel used to form zinc-coated (galvanized) rolling service door frames shall meet the physical and chemical properties of ASTM A 446-87, Grade D and G 90 Coating designation as described in ASTM A 525-87.
- C. Purlins and Girts: Purlins and girts shall be cold-formed "Z" or "C" sections with stiffened flanges. They shall be prepunched at the factory to provide for field

bolting to the primary framing. They shall be simple or continuous span as required by design.

- D. Bracing Struts: Provide bracing struts of round HSS or pipe sections sized as required to transfer lateral forces into primary structural frame system.
- E. Eave Struts: Eave Struts shall be unequal flange, cold-formed "C" sections.
- F. Base Angle: A base member will be supplied by which the base of the wall covering may be attached to the perimeter of the slab. This member shall be secured to the concrete slab with concrete anchors.
- G. Provide attachment and support framing for wall mounted gymnasium equipment.

2.5 Bracing

- A. Diagonal Bracing: Diagonal bracing in the roof shall be used to resolve horizontal loads (wind, seismic, crane, etc.) from the roof structure into the longitudinal bracing frames or transverse rigid frames. This bracing will be furnished to length and equipped with bevel washers and nuts at each end. It may consist of rods threaded each end or galvanized cable with suitable threaded end anchors.
- B. Flange Braces: The compression flange of all primary framing shall be braced laterally with angles connecting to the webs of purlins or girts so that the flange compressive stress is within allowable limits for any combination of loadings.
- C. Longitudinal and Special Bracing: **Diagonal bracing is not permitted in the sidewall**, a rigid frame type portal with pinned bases must be used. Coordinate load path of sidewall bracing frames with load path of wind/seismic bracing in the roof. Provide additional bracing as required to transfer all horizontal loads into the primary structural system.
- D. Coordinate trades with locations of bracing. Bracing shall not be removed or cut to facilitate installation of other trades unless approved in writing by the metal building design engineer.

2.6 Wall Panel Material

Panel material as specified shall be 24-gauge zinc-coated (galvanized) steel, coating designation G 90, conforming to the requirements of ASTM A 446 Grade D. Minimum yield stress shall be 50,000 psi.

2.7 Connections

- A. All field connections shall be bolted (unless otherwise noted).
- B. All shop connections shall be welded using either submerged or shielded arc process, and welding shall be in accordance with the applicable sections, relating to design requirements and allowable stresses, of the latest editions of the American Welding Society "Structural Welding Code."
- C. Metal building designer shall size anchor rods and provide details for required anchorage to the foundations.

2.8 Roof Covering

- A. The roof system shall be provided under Section 07610.
- B. The roof system shall carry a UL wind uplift rating. Comply with FM I-90 and the

2021 International Building Code.

- C. Purlins shall be insulated so as to eliminate "thermal short circuits" between purlins and roof panels, with continuous thermal spacer blocks.

2.9 Wall Covering

The Exterior wall covering shall be first quality 24 gauge galvanized steel architectural type panels (A.S.T.M. Galvanized Specifications). Panels will be precision roll-formed 36" panels with ribs at 12" o.c. The interior liner panels shall be minimum 3/4" thick 24 gauge - panel profile to be approved by architect.

2.10 Panel Fasteners

Panel fasteners will be galvanized self-tapping hex head screws. A self sealing washer will be used under the head of all panel fasteners. Galvanized screws will be used on the sidewalls of all colored buildings. Fasteners shall be pre-finished to match wall panel color.

2.11 Weather Sealing

A. Sealant

Sealant to be used in all end panel laps on roofs and all other locations recommended by the manufacturer or required for weathertightness.

B. Weather Seal Strips

Sealer strips to be moulded from first grade high quality polyurethane to ensure long life.

2.12 Paint

A. Exterior Paint and Interior Paint (For Exterior Wall Panels and , Interior Liner Panels)

A 70% minimum Kynar 500 finish shall be applied over galvanized steel and shall be given a chemical conversion treatment prior to painting. See paragraph 1.4 for Warranty requirements. Color shall be approved by the Architect to match existing.

B. Structural Paint

1. All fabricated structural steel to be shot blast cleaned to remove loose rust, mill scale, etc. After inspection for accuracy of fabrication, it shall receive one shop coat of manufacturer's standard gray finish.

2. Any field touch-up necessary shall be the responsibility of the erector.

2.13 Gutters, Downspouts, and Flashings

A. Gutters and Downspouts: Gutters and downspouts to be furnished by Metal Building Manufacturer. Members to be fabricated from galvanized steel with supporting brackets properly spaced. Gutters shall be 24 gauge and downspouts 28 gauge. Finish shall match roof/wall panels.

B. Flashings: Roof, gables and eaves will be flashed with 26 gauge galvanized fascia trim. Corners of the building will be provided with 26 gauge galvanized steel corner trim. Door, window and sill trim will be provided in 26 gauge galvanized steel. Painted galvanized steel flashings will be fabricated from prefinished steel using the same paint specifications as wall and roof sheets.

2.14 Glass Fiber Insulation

Glass Fiber Insulation to be fabricated from first grade high quality glass

fiber blanket and faced with white vinyl reinforced polyester film. Insulation shall have Underwriter's Label. Glass fiber insulation shall be .60 density - 6" thick - 25 flame spread - "R" value of R19. All insulation shall be protected and maintained dry. Wet Insulation shall be rejected.

- 2.15 Framed Openings This contractor to provide framed openings with pre-finished flashing to accommodate mechanical equipment such as louvers, grilles, piping, conduit furnished by other trades.
- 2.16 Roof and Wall Penetrations
All roof penetrations shall be flashed by building manufacturer/installer. All circular roof penetrations shall be made of a one piece construction from an EPDM membrane with aluminum base. Roof curbs shall be provided by building manufacturer/installer.

3.0 - EXECUTION

- 3.1 Erection
All components herein specified and indicated shall be furnished and erected in accordance with details and manufacturer's instructions. Erection shall be performed by a qualified erector who has attended training by the building manufacturer of the system being installed using proper tools and equipment. It shall be the responsibility of the erector to comply with all applicable legal and safety requirements. It shall further be the responsibility of the erector to determine and provide any and all temporary bracing, bridging, blocking, shoring, and/or securing of components, etc. as required for stability during the entire erection process.

END OF SECTION