

SECTION 126623 – TELESCOPIC CHAIR PLATFORM SPECIFICATION

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Telescoping Gym Seating includes, either manually or electrically operated systems of multiple-tiered seating rows comprising of seat, deck components, understructure that permits closing without requiring dismantling, into a nested configuration for storing or for moving purposes.

EDITORS NOTE: REVISE BELOW TO SUIT PROJECT

1. Typical applications include the following:
 - a. Wall Attached Telescoping Platform Seats.
 - b. Recessed Telescoping Platform Seats.
 - c. Floor-Attached (Freestanding) Telescoping Platform Seats.
 - d. Portable/Movable Telescoping Platform Seats.
 - e. Reverse Fold Telescoping Platform Seats.
 - f. Traveling Telescopic Platform Seating Unit

EDITORS NOTE: REVISE BELOW TO SUIT PROJECT

2. Special applications include the following:
 - a.
 - b.
 - c.
- B. Related Sections:
 1. Division 9 finishes sections for adequate floor & wall construction for operation of Telescoping Platforms. Flooring shall be level and rear wall plumb within 1/8" [3mm] in 8'-0 [2438mm]. Maximum bleacher force on the floor, of a 25'-6" [7772] section, shall be a static point load of less than 300 psi [2.068 N/mm²].
 2. Division 16 Electrical sections for electrical wiring and connections for electrically operated Telescoping Gym Seats.
- C. Alternates: This section specifies alternates for Telescoping Platform products. Refer to Part 2 products for alternate products, and to Division 1 Alternates sections and other bid documents, if any, for alternate requirements.
- D. Qualifications and Capabilities:
 1. **BIDDER QUALIFICATIONS:**

Bidders are required to be an authorized dealer or manufacturer for equipment proposed which on a day-to-day basis regularly provide the equipment offered. Bidders are further advised that only standard production models or standard options will be acceptable for award. Equipment offered shall be currently manufactured on an active assembly line. The State is only interested in proven equipment; provided, installed, and serviced by Authorized Dealers capable of providing references.
 2. **INSTALLER QUALIFICATIONS:**

Bleacher installer shall be Factory Certified by the Manufacturer. Proof of Factory Certified Installation Certificate shall be provided along with the Invitation to Bid. Failure to provide this information shall result in rejection of bid. (No Exceptions Taken)
 3. **SERVICE CAPABILITY:** The Bleacher Contractor must be able to show proof of full time service capability by factory certified technicians directly employed by the Bleacher Contractor. Sub-Contractors of the Bleacher Contractor or Factory Technicians located outside of the State do not qualify under this service response requirement. Adequate and satisfactory availability of repair parts

and supplies, and ability to meet warranty and service requirements are a requirement of this Invitation to Bid. The State reserves the right to satisfy itself by inquiry or otherwise as to bidder's capabilities in this regard. A four (4) to eight (8) hour maximum on-site repair response is required during normal working hours, 8 a.m. to 5 p.m. weekdays (excluding holidays) All Full Time Service Personnel shall be Factory Authorized and Trained. Proof of Service Capability along with a listing of service parts regularly maintained in inventory shall be provided along with the Invitation for Bid. Failure to provide this information shall result in rejection of bid.

1.02 REFERENCE

- A. International Building Code (IBC)
- B. ICC 300 – Standard for Bleachers, Folding and Telescopic Seating and Grandstands
- C. American Welding Society (AWS)
 - 1. AWS D1.1 Structural Welding Code – Steel
 - 2. WS D1.3 Structural Welding Code - Sheet Steel
- D. American Institute of Steel Construction (AISC):
 - 1. AISC - Design of Hot Rolled Steel Structural Members.
- E. American National Standards Institute (ANSI).
- F. American Iron & Steel Institute (AISI):
 - 1. AISI - Design Cold Formed Steel Structural Members.
- G. Aluminum Association (AA):
 - 1. AA - Aluminum Structures, Construction Manual Series.
- H. American Society for Testing Materials (ASTM):
 - 1. ASTM - Standard Specification for Properties of Materials.
- I. National Forest Products Association (NFoPA):
 - 1. NFoPA - National Design Specification for Wood Construction.
- J. Southern Pine Inspection Bureau (SPIB):
 - 1. SPIB - Standard Grading Rules for Southern Pine.
- K. National Bureau of Standards/Products Standard (NBS/PS):
 - 1. PS1 - Construction and Industrial Plywood.
- L. Americans with Disability Act (ADA)
 - 1. ADA - Standards for Accessible Design.

1.03 MANUFACTURER'S SYSTEM ENGINEERING DESCRIPTION

- A. Structural Performance: Engineer, fabricate and install telescopic gym seating systems to the following structural loads without exceeding allowable design working stresses of materials involved, including anchors and connections. Apply each load to produce maximum stress in each respective component of each gym seat unit.

EDITORS NOTE:

REVISE BELOW IF MORE STRINGENT REQUIREMENTS APPLY. ICC 300 – 2012 EDITION DESIGN LOADS FOR RAILING; VERIFY WITH JURISDICTIONAL AUTHORITY IF RAILINGS LOADS NEED TO BE INCREASED TO MEET AUTHORITY REQUIREMENTS.

1. Design Loads: Comply with ICC 300 – 2012 Edition

B. Manufacturer's System Design Criteria:

1. Gymnasium seat assembly; Design to support and resist, in addition to its own weight, the following forces:
 - a. Live load of 120 lbs per linear foot [162.69 N/m] on seats and decking
 - b. Uniformly distributed live load of not less than 100 lbs per sq. ft. [135.58N/m] of gross horizontal projection.
 - c. Parallel sway load of 24 lbs. [32.53 N/m] per linear foot of row combined with (b.) above
 - d. Perpendicular sway load of 10 lbs. [13.56 N-m] per linear foot of row combined with (b.) above
2. Hand Railings, Posts and Supports: Engineered to withstand the following forces applied separately:
 - a. Concentrated load of 200 lbs. [90.72 kg] applied at any point and in any direction.
 - b. Uniform load of 50 lbs. per foot [.344 N/mm²] applied in any direction.
3. Guard Railings, Post and Supports: Engineered to withstand the following forces applied separately:
 - a. Concentrated load of 200 lbs. [90.72 kg] applied at any point and in any direction along top rail.
 - b. Uniform load of 50 lbs. per foot [.344 N/mm²] applied horizontally at top rail and a simultaneous uniform load of 100 lbs. per foot [.689 N/mm²] applied vertically downward.
4. Member Sizes and Connections: Design criteria (current edition) of the following shall be the basis for calculation of member sizes and connections:
 - a. AISC: Manual of Steel Construction
 - b. AISI: Specification for Design of Cold Formed Steel Structural Members
 - c. AA: Specification for Aluminum Structures
 - d. NFOPA: National Design Guide For Wood Construction.

C. Chairs

1. Seats:
 - a. Shall be cantilevered, self-centering, automatic three-quarters lift with over center retracting feature for ease of row passage and janitorial access.
 - b. Seat shall be tested and professionally certified through an independent testing laboratory to support and withstand an evenly distributed 600 lb [2669 N] static load without failure or irregularities that would impair usefulness.
 - c. Self-lifting seat shall be tested and professionally certified through an independent testing laboratory to withstand 350,000 operating cycles without failure of seat mechanism or measurable component wear.
 - d. Seat shall be tested and professionally certified to withstand 10,000 impacts of a 40 lb [178 N] sandbag dropped on the center of the seat from each of the following heights: 6"[152mm], 8"[203mm], 10"[254mm], and 12"[305mm]. The rate of impacts shall be approximately 18 per minute with the total quantity of impacts equaling 40,000.
2. Backs:
 - a. Back shall withstand an evenly distributed front or rear static load of 450 lbs [2002 N].
 - b. Back shall be tested and professionally certified to withstand, without failure, 40,000 swinging impacts each to the front and rear of the back by means of two opposing 40 lb. [18 Kg] sandbags. The sandbags shall be moved horizontally and equally for 10,000 cycles each at the following distances of 6"[152mm], 8"[203mm], 10"[254mm], and 12"[305mm] at a rate of 35 cycles per minute.
 - c. Back shall withstand, without failure, an evenly distributed Horizontal Traverse Static Load of 200 lbs [890 N] The load shall be applied to the top of the back at a 45-degree angle to the row of seats.

3. Armrests shall be tested and professionally certified to withstand, without failure, a 200 lb [890 N] static load applied both perpendicular to and vertically down on the arm.
4. Materials (Flammability) shall satisfy applicable test, codes, standards, or requirements as follows:
 - a. Copolymer polypropylene shall have a burn rate of 1 inch [25 mm] per minute or less per ASTM 635.
 - b. Upholstery materials shall meet requirements as set forth in the state of California Bureau of Home Furnishings Technical Bulletin 117.
 - c. Fire-performance Characteristics of Seat Padding: Provide seating that complies with test method: California Technical Bulletin 117.
 - d. Cushioning and padding shall be self-extinguishing as defined in the requirements as set forth in the State of California Bureau of Home Furnishings Technical Bulletin 117.

EDITORS NOTE: SELECT THE FOLLOWING, AS REQUIRED. Full Scale Fire Performance Characteristics of Finished Chair: **(REQUIRES INCLUSION OF CAL TB133 FIRE BARRIER)** Provide seating that complies with test method: California Technical Bulletin 133 & British Standard Crib 5.

1.04 SUBMITTALS

- A. Section Cross-Reference: Required submittals in accordance with "Conditions of the Contract" and Division 1 General Requirements sections of this "Project Manual."
- B. Project Data: Manufacturer's product data for each system. Include the following:
 1. Project list: Ten(10) seating projects of similar size, complexity and in service for at least five (5) years.
 2. Deviations: List of deviations from these project specifications, if any.
- C. Shop Drawings: Indicate Telescoping Gym Seat assembly layout. Show seat heights, row spacing and rise, aisle widths and locations, assembly dimensions, anchorage to supporting structure, material types and finishes.
 1. Wiring Diagrams: Indicate electrical wiring and connections.
 2. Graphics Layout Drawings: Indicate pattern of contrasting or matching seat colors
- D. Samples: Seat materials and color finish as selected by Architect from manufacturers standard offered color finishes.
- E. Environmental Data Package: Provide project specific environmental data work sheet with project header and LEED calculations completed based on actual project weight and project price. Environmental Data Package required to be submitted with formal submittal package prior to project award.
 1. Regional Manufacturing
 - a. Provide manufacturing location and distant to project site by product material type as required. [straight-line travel as a bird flies as per USGBC]
 2. Recycled Content:
 - a. Provide Packaging Material Listing & Recycled Content by Material Type; [Total % Recycled Content, Total % Pre Consumer and % Post Consumer]
 - b. Provide Product Material Listing & Recycled Content by Material Type; [Total % Recycled Content, Total % Pre Consumer and % Post Consumer]

3. Indoor Environmental Quality
 - a. Provide documentation that the specified product passes ANSI/BIFMA X7.1-2007 Standard for Formaldehyde and TVOC Emissions of Low-emitting Office Furniture Systems and Seating
 - b. Provide documentation that the specified product solid core ply-form or engineered fiber panels are manufactured with resins which are free of added urea-formaldehyde.
 4. Product Life Cycle – Deconstruction & Reclaiming Opportunity
 - a. Provide listing of product materials which can be recycled at the end of the product life cycle and re-enter the recycled or reuse material stream.
- F. Manufacturer Qualifications: Certification of insurance coverage and manufacturing experience of manufacturer.
- G. Installer Qualifications: Installer qualifications indicating capability, experience, and official Certification Card issued by manufacturer of telescopic seating.
- H. Engineer Qualifications: Certification by a professional engineer registered in the state of manufacturer that the equipment to be supplied meets or exceeds the design criteria of this specification.
- I. Operating/Maintenance Manuals: Provide to Owner maintenance manuals. Demonstrate operating procedures, recommended maintenance and inspection program.
- J. Warranty: Manufacturers standard warranty documents.

1.05 QUALITY ASSURANCE

EDITORS NOTE:

BELOW STANDARD MAY BE MORE STRINGENT THAN APPLICABLE BUILDING CODE REQUIREMENTS. COORDINATE WITH LOCAL BUILDING CODE REQUIREMENTS FOR TELESCOPIC SEATS.

- A. Seating Layout: Comply with ICCB 300 -2012 Standard for Bleachers, Folding Telescopic Seating and Grandstands, except where additional requirements are indicated or imposed by authorities having jurisdiction.
- B. Welding Standards & Qualification: Comply with AWS D1.1 Structural Welding Code - Steel and AWS D1.3 Structural Welding Code - Sheet Steel.
- C. Insurance Qualifications: Mandatory that each bidder submit with his bid an insurance certificate from the manufacturer evidencing the following insurance coverage:
 1. Workers Compensation - including Employers Liability with the following limits:
 - a. \$500,000.00 (US) Each Accident
 - b. \$500,000.00 (US) Disease - Policy Limit
 - c. \$500,000.00 (US) Disease - Each Employee
 2. Commercial General Liability - including premises/ operations, independent contractors and products completed operations liability. Limits of liability shall not be less than \$5,000,000.00 (US).
- D. Manufacturer Qualifications: Manufacturer who has a minimum of 40 years of experience manufacturing telescoping gym seats and can demonstrate continual design enhancement and 25-year minimum product life-cycle support of telescopic seating.

- E. Installer Qualifications: Engage experienced Installer who has specialized in installation of telescoping gym seat types similar to types required for this project and who carries an official Certification Card issued by telescoping gym seat manufacturer.
- F. Engineer Qualifications: Engage licensed professional engineer experienced in providing engineering services of the kind indicated that have resulted in the successful installation of telescoping bleachers similar in material, design, fabrication, and extent to those types indicated for this project.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver telescopic platforms in manufacturers packaging clearly labeled with manufacturer name and content.
- B. Handle seating equipment in a manner to prevent damage.
- C. Deliver the seating at a scheduled time for installation that will not interfere with other trades operating in the building.

1.07 PROJECT CONDITIONS

- A. Field Measurements: Coordinate actual dimensions of construction affecting telescoping bleachers installation by accurate field measurements before fabrication. Show recorded measurements on final shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid delay of Work.

1.08 WARRANTY

- A. Manufacturer's Product Warranty: Submit manufacturer's standard warranty form for telescoping bleachers. This warranty is in addition to, and not a limitation of other rights Owner may have under Contract Documents.
 - 1. Warranty Period: Five years from Date of Acceptance.
 - 2. Beneficiary: Issue warranty in legal name of project Owner.
 - 3. Warranty Acceptance: Owner is sole authority who will determine acceptance of warranty documents.

1.09 MAINTENANCE AND OPERATION

- A. Instructions: Both operation and maintenance shall be transmitted to the Owner by the manufacturer of the seating or his representative.
- B. Service: Maintenance and operation of the seating system shall be the responsibility of the Owner or his duly authorized representative, and shall include the following:
 - 1. Operation of the Seating System shall be supervised by responsible personnel who will assure that the operation is in accordance with the manufacturer's instructions.
 - 2. Only attachments specifically approved by the manufacturer for the specific installation shall be attached to the seating.
 - 3. An annual inspection and required maintenance of each seating system shall be performed to assure safe conditions. At least biannually the inspection shall be performed by a professional engineer or factory qualified service personnel.

PART 2 – PRODUCTS

EDITORS NOTE:
MANUFACTURER DOES NOT RECOMMEND THE USE OF PHRASES "OR EQUAL" / "OR APPROVED

EQUAL” BECAUSE OF DIFFERING INTERPRETATIONS BETWEEN CONTRACTING PARTIES. CONSIDER UTILIZING “ALTERNATE” METHOD OF SPECIFYING PRODUCTS FOR LISTING ALTERNATE MANUFACTURERS AND PRODUCTS. (SEE ARTICLE 2.02 HERE IN).

2.01 MANUFACTURERS

- A. Manufacturer: Hussey Seating Company, U.S.A.
1. Address: North Berwick, Maine, 03906
 2. Telephone: (207) 676-2271; Fax: (207) 676-9690

EDITORS NOTE:

ADD BELOW SELECTIONS FROM MANUFACTURER'S LITERATURE AND COORDINATE SELECTIONS WITH DRAWINGS.

3. Product: MAXAM+ Telescopic Platform System by Hussey Seating Company

EDITORS NOTE: SELECT BELOW MODEL TYPE.

- a. MAXAM+ Series Telescopic Platform Seats, adjustable row spacing in either 30 inches [762], 32 inches [813] or 33 inches [838].
- b. MAXAM+ Series Telescopic Platform Seats, adjustable rise **SELECT**: Rise Spacing: 9 5/8" [244], 11 5/8" [295] or 16" [406] or Custom Rise 9 5/8" [244] min. – 16" [406] max. row rise at any dimensional increments. Variable/ Combination Rise solutions also available upon request. Consult your Hussey Representative for engineering details.
- c. Aisle Type: **SELECT**: foot level aisles, front steps, intermediate aisle steps.
 - (1) Seat Type: **SELECT**: Wood bench with or without folding polymer backrests, CourtSide XC10 or CourtSide XCS12, with or without CourtSide XT (Spacer) , CourtSide CB (Contoured Backrest), or Metro chairs Seat color finish: **SELECT**: manufacturers 15 standard for Courtside Collection
 - (a) CourtSide Seat color finish: **SELECT**: manufacturers 15 standard colors.
 - (b) Metro Chairs color finish: **SELECT**: manufacturers 19 standard colors.
 - (c) (See Personalization and Creativity under Accessories section)
 - d. Rail Type: **SELECT**: Self-storing end rail, removable end rails, front railings, rear rails, store-in-place aisle hand rails, folding aisle hand rails.
 - (1) Rail color finish: **SELECT**: Standard black or 15 standard colors to match Courtside Collection or 15 standard colors to match Metro Chairs. (See Personalization and Creativity under Accessories section).
 - e. Operation: **SELECT**: Electric or Manual
 - (1) Electrical Power System: **SELECT**: Integral power with pendant Control or wireless controller, motion monitor, limit switches, key switches, portable power-assist tractor
 - f. Portable-MAXAM Dolly System: : **SELECT**: Integral Dolly or Portable Dolly
 - g. Platform Type **SELECT**:
 - (1) Wall Attached Telescoping Platform
 - (2) Recessed Telescoping Platform
 - (3) Floor-Attached (Freestanding) Telescoping Platform
 - (4) Portable/Movable Telescoping Platform
 - (5) Reverse Fold Telescoping Platform
 - (6) Traveling Telescopic Platform Seating Unit
 - h. Chair Operation: **SELECT**: Manual or Semi Automate

EDITORS NOTE: SELECT CHAIR OPERATION TYPE BELOW.

- (1) Manual Operation with foot-assist: Chairs shall be ganged in group(s) of two to four, manually raised and lowered with foot-assist. Armrests shall be manually flipped-down during raising of chairs.
- (2) Semi-Automatic Operation: Rows of chairs shall be manually raised or lowered as one unit with spring-counter-balance to offset weight. Semi-Automatic operation will require

depressing a foot pedal to activate the unlocking system to lower each row of spring--counter-balanced chairs. Unlocking shall be performed from an aisle.

- i. Chair Dimensions
 - (1) Seat up envelope: 15 1/8" [384]
 - (2) Seat down envelope: 21 1/2" [546]
 - (3) Seat height: 17 5/8" [448]
 - (4) Armrest height: 25 1/4" [641]
 - (5) Back height: 31 3/4" [806]
- j. Chair Construction:
 - SELECT:** polymer seat, upholstered seat, fully enveloped seat
 - SELECT:** polymer back, upholstered back

4. Product Description/Criteria

- a. Bank Length:
- b. Aisle Widths:
- c. Number of Tiers:
- d. Row Spacing(s):
- e. Open Dimension:
- f. Closed Dimension:
- g. Overall Unit Height:
- h. Net Capacity; per seat (18" [457] for CourtSide Collection 18-22" [457-559] for Metro Chairs.)
- i. Maximum Net Capacity; (w/FlexRow Fully Recovered):

5. Miscellaneous Product Accessories: **SELECT:** operating handles, front panels, end panels, rear panels, ventilating grills, scorer's table, top seat filler, rear seats for reverse fold units, seat number's, row letters, end curtains, aisle closure curtains, Top-row--Basketball deflector curtains.

6. Special Applications: **SELECT:** tapered sections, truncated units, high humidity finish, elevated-front and rear cross aisles, portable access stairs, programming supports, extended rear deck filler, rear wall column cutouts.

7. Handicap Seating Provisions: **SELECT:** Provide first tier modular recoverable Flex-rows, handicap first-tier fixed end-section cutouts, full-section truncations per requirements of (ADA) Americans with Disability Act located as indicated.

B. Other Acceptable Manufacturers: Will be considered if in compliance with these specifications. Deviations must be submitted with bid in order that a fair and proper evaluation be made. Those bidders not submitting a list of deviations will be presumed to have bid as specified.

EDITORS NOTE:

COORDINATE BELOW ARTICLE WITH RELATED DIVISION 1 SECTION FOR ALTERNATES, AND BID DOCUMENTS AND BID FORMS FOR BID TYPE PROJECTS

2.02 ALTERNATES

- A. Base Bid:
 - 1. Base Bid Product:
 - 2. Base Bid Product Accessories:
- B. Alternate No. ____: In lieu of providing base bid product, provide the following:
 - 1. Alternate Product:
 - 2. Alternate Product Accessories:

- C. Alternate No. ____: In lieu of providing base bid product, provide the following:
1. Alternate Product:
 2. Alternate Product Accessories:

EDITORS NOTE:
BELOW ARTICLE FOR GENERIC / REFERENCE SPECIFICATION.

2.03 MATERIALS

- A. Lumber: ANSI/Voluntary Product 20, B & B Southern Pine
- B. Plywood: ANSI/Voluntary Product PS1, APA A-C Exterior Grade.
- C. Structural Steel Shapes, Plates and Bars: ASTM A 36.
- D. Uncoated Steel Strip (Non-Structural Components): ASTM A569, Commercial Quality, Hot-Rolled Strip.
- E. Uncoated Steel Strip (Structural Components): ASTM A570 Grade 33, 40, 45, or 50, Structural Quality, Hot-Rolled Strip.
- F. Uncoated Steel Strip (Structural Components): ASTM A607 Grade 45 or 50, High-Strength, Low Alloy, Hot-Rolled Strip.
- G. Galvanized Steel Strip: ASTM A653 Grade 40, zinc coated by the hot-dip process, structural quality.
- H. Structural Tubing: ASTM A500 Grade B, cold-formed.
- I. Polyethylene Polymer: ASTM D 1248, Type III, Class B; molded, color-pigmented, textured, impact-resistant, structural formulation; in color indicated or, if not otherwise indicated, as selected by Architect from manufacturer's standard colors.
- J. Fasteners: Vibration-proof, of size and material standard with manufacturer.

2.04 UNDERSTRUCTURE FABRICATION

- A. Frame System:
 1. Wheels: Not less than 5" [127] diameter by 1 1/4" [32] with non-marring soft rubber face to protect wood and synthetic floor surfaces, with molded-in sintered iron oil-impregnated bushings to fit 3/8" [10] diameter axles secured with E-type snap rings.
 2. Lower Track: Continuous Positive Interglide System interlocks each adjacent CPI unit using an integral, continuous, anti-drift feature and through-bolted guide at front to prevent separation and misalignment. CPI units at end sections of powered banks and manual sections shall contain a Low Profile Posi-Lock LX to lock each row in open position and allow unlocking automatically. Provide adjustable stops to allow field adjustment of row spacings.
 3. Slant Columns: High tensile steel, tubular shape.
 4. Sway Bracing: High tensile steel members through-bolted to columns.
 5. Deck Stabilizer: High tensile steel member through-bolted to nose and riser at three locations per section. Interlocks with adjacent stabilizer on upper tier using low-friction nylon roller to prevent separation and misalignment. Incorporates multiple stops to allow field adjustment of row spacings.
 6. Deck Support: Securely captures front and rear edge of decking at rear edge of nose beam and lower edge of riser beam for entire length of section.
- B. Deck System:
 1. Section Lengths: Each bank shall contain sections not to exceed 19'-5" [5944] in length with a minimum of two supporting frames per row, each section.

2. Nose beam and Rear Riser beam: Nose beam shall be continuously roll-formed closed tubular shape of ASTM A653 grade 40, Riser beam shall be continuously roll-formed of ASTM A653 grade 40. Nose and Riser beam shall be designed with no steel edges exposed to spectator after product assembly.
3. Attachment: Through-Bolted fore/aft to deck stabilizers, and frame cantilevers.
4. Deck End Overhang: Not to exceed frame support by more than 5'-11" [1804].

EDITORS NOTE: SELECT DECKING OPTION

5. Decking Option
 - a. Extruded Aluminum Decking: 5/8" [16], 6063-T6 grade, clear anodized oriented from front of deck to rear of deck (nose beam to riser beam). Adjacent pieces shall be locked together with snap interlocking feature from front to rear of deck. Longest unsupported span: MAXAM+, 28 ½" [724].
 - b. Poly Deck: Shall be a high-density polyethylene overlay panel fabricated with a skid-resistant textured top surface of 100% moisture barrier bonded to a plywood substrate with an exterior glue. Panel thickness shall be 3/4" [19] with top polyethylene surface colored weathered gray.
 - c. Classic Wood Deck: 3/4" [19], AC grade clear-top-coated tongue and groove Southern Yellow Pine; or BC grade polyethylene-top-coated tongue and groove Douglas Fir plywood; both of interior type with exterior glue, 5-ply, all plies with plugged cross-bands, produced in accordance with National Bureau of Standards PS-1-97. Plywood shall be cut and installed with top, center and bottom ply grain-oriented from front of deck to rear of deck (nose beam to riser beam). Adjacent pieces shall be locked together with tongue and groove joint from front to rear of deck. Longest unsupported span: MAXAM+, 28 ½" [724].
 - d. Carpeted Decks: Provide at decks and steps double tufted, anti-static, solid and crush resistant 100% polypropylene pile with high-density foam backing carpet. Mount to Classic Wood deck as substrate. Carpet color to be of manufacturer's standard selection.

2.05 SEAT FABRICATION

A. Classic Wood Seat System:

1. Seats and Front Riser: 4/4" nominal thickness kiln dried, end finger joined only and/or solid Southern Pine Grade "B & B" in conformity with the Southern Pine Inspection Bureau (SPIB) Grading Rules. Mixed lumber species, edge glued strips, or plugs are unacceptable.
2. Seats: Bench seat posture pitched to the rear for spectator comfort. Seats and front risers shall have full-radiused comfort shaped edges.
3. Seat Supports: Seat supports shall be through-bolted to seats, front risers, and noses and shall be provided in sufficient number to limit unsupported length of bench seat to 3'-0" [914].

B. Polymer Seat System – Courtside Collection XC10 (10") or XCS12 (12"):

Hussey Courtside Collection Series embodies the latest leading edge innovations in linear telescopic seating modules. Courtside seats utilize a harmonious blend of advanced ergonomic principals, architecturally appealing design, safety, value and performance.

Seat Modules: 18" [457] long assembled, gas assisted injection-molded, high density, 100% recyclable HDPE (high density polyethylene) modules in monochromatic colors providing, dual textured scuff resistant 10" [254] or 12" [305] wide seat surface with ½" [13] minimum interlock on seat and face. Unit structural tested to 600 lbs occupant load.

1. CourtSide XC10 Seat Module

- a. XC10 – 10" [254] Comfort Profile
 - (1) 10" [254] depth continuous comfort curve style bench seat module

- (2) Ergonomically contoured forward “waterfall” edge for enhanced spectator comfort and minimization of sensitive pressure point area, regardless of leg positioning.
- (3) Fore & Aft contoured seat surface for uniform support and minimize high pressure points under the buttocks.
- (4) Seat height ranges from deck to t/o seat range from 16-1/8” [410] to 18-1/8” [460]
- (5) 21-1/8” [537] clear foot space area, regardless of leg positioning.
- b. Integrally molded end caps at aisle end locations for clean finished appearance.
- c. Custom color graphic logo design application for end cap insert. **(See Personalization and Creativity under Accessories section)**
- d. Integrally molded recess pockets to accept seat number and row letters.
- e. Integrally molded rear closure panel at back of seat to allow for “continuous clean sweep” of debris at deck level and minimized visibility of structural ribbing.
- f. Seat Attachment: Each polymer seat module shall be securely anchored by a 12 ga steel clamp bracket that provides steel-to-steel, through bolted attachment to the front nose beam of the bleacher. Attachment eliminates fore / aft movement of the seat module on the nose beam.

2. CourtSide XCS12 Seat Module

- a. XCS12 – 12” [305] Comfort Profile
 - (1) Individual ergonomically contoured seat module
 - (2) Compound contoured seats with fore/aft and horizontally contoured curves provide a “scalloped” surface area for maximum spectator comfort. Forward edge “waterfall” for enhanced spectator comfort and minimization of sensitive pressure point area, regardless of leg positioning.
 - (3) Fore & Aft contoured seat surface for uniform support and minimize high pressure points under the buttocks.
 - (4) Seat height ranges from deck to t/o seat range from 16-1/8” [410] to 18-1/8” [460]
 - (5) 21-1/8” [537] clear foot space area.
- b. Bold contoured design lines for maximum architectural appeal and application with modern or traditional facility spaces.
- c. Integrally molded end caps at aisle end locations for clean finished appearance.
- d. Optional: Custom color graphic logo design application for end cap insert. **(See Personalization and Creativity under Accessories section)**
- e. Integrally molded recess pockets to accept seat number and row letters.
- f. Integrally molded rear closure panel at back of seat to allow for “continuous clean sweep” of debris at deck level and minimized visibility of structural ribbing.
- g. Seat Attachment: Each polymer seat module shall be securely anchored by a 12 ga steel clamp bracket that provides steel-to-steel, through bolted attachment to the front nose beam of the bleacher. Attachment eliminates fore / aft movement of the seat module on the nose beam.

EDITORS NOTE: SELECT CHAIR CONSTRUCTION TYPE BELOW.

C. Metro Telescopic Platform Chair System

- 1. Chair System: Beam-mounted design, consisting of chairs independently mounted and armrests independently mounted to transverse beam. Top of support arms shall be designed to capture and secure the beam in place. Support arms articulate from manual assist or semi-automatic operating mechanism.
- 2. Seat Support:
 - a. Each of the independent seat hinges shall be fitted with up and down stops as well as double acting; self-centering, preloaded coiled seat return springs with silencers.
 - b. Chairs must be designed with two independent return springs which position seat pan in 3/4 fold position with 100 percent (100%) fold position available for added aisle passage. Seat action shall be dampened for a constant velocity return and no final oscillations to the rest position.
 - c. Hinges, seat support, return springs, and stops shall be enveloped and concealed by the seat and back shells. Seat shall have the ability to achieve a full fold position when rearward pressure is

applied. Superior comfort shall be derived through careful ergonomic engineering.

3. Polymer Seats / Backs: (**SELECT:** seats, backs, or seats and backs)
 - a. Shall each be textured one-piece gas-assist injection molded pigmented polypropylene shells.
 - b. Shall be internal structured with peripheral gas channels. The gas channels shall support, resist, and transmit design loads to the aluminum in the plastic chair beam.
 - c. Back must extend below seat to afford chair occupant protection from rear and eliminate any pinching hazard.
 - d. Backs should be rigidly attached to the chair beam and show no evidence of articulation.
4. Upholstered Seats / Backs: (**SELECT:** seats, backs, or seats and backs)
 - a. Each seat and back shall be textured one-piece gas-assist injection molded pigmented polypropylene shells.
 - b. Upholstery shall be a complete self-retaining unit, welded to the seat and back surfaces using a hot plate welding technique.
 - c. Each unitized upholstery panel shall be comprised of medium density virgin urethane foam on a precision injection molded polypropylene backer. The fabric cover shall be tensioned over and neatly enclose both foam and backer.
 - d. Each seat and back shall be internal structured with peripheral gas channel frame. The frames shall support, resist, and transmit design loads to the aluminum chair beam.
 - e. Seat foam cushion shall be not less than 1 1/2" thick; back foam cushion shall not be less than 1" thick.
 - f. Seat "covers" shall be of a three-piece construction, without welts, taut, and securely retained.
 - g. Tailoring shall evidence a superior level of design, workmanship and fit.
 - h. Seat (bottom) closure shall be textured plastic with front and sides turned 180 degrees to regain and protect cover. Pan materials, texture, and color shall match chair back; non-matching seat pan/back construction materials and finishes are not acceptable.

EDITORS NOTE: SELECT SEAT COVER OPTION. Standard Bottom Cover: Seat shell/bottom shall be constructed of polypropylene plastic to provide a durable yet aesthetic design. The cover shall protect the mechanical parts of the lifting hinge and upholstered cover. The shell / bottom shall compliment the overall design of the chair.

EDITORS NOTE: SELECT SEAT COVER OPTION. Fully Enveloped Bottom Cover: Seat shell/bottom cover shall be constructed of polypropylene plastic covered with the specified upholstery laminated with foam for distinctive styling. Tailoring shall display a superior level of design workmanship and fit. Seams shall be straight, continuous and neat, without unsightly puckering.

5. Armrests: Shall be of injection-molded, leather textured polypropylene secured to polypropylene armrest base with concealed fasteners. Armrest standard to be of powder-coated cast aluminum grade AA 380 and independently secured to mounting beam.
6. Chair Beam: Shall be constructed of extruded aluminum with polymer end caps and serve as the focal attachment and shall in turn transmit all forces to the beam support.
7. Beam support: Shall be cast steel support arms. Closed seam steel tube standards are unacceptable. Top of support arms shall be designed to capture and secure the beam in place. Support arms articulate from manual assist or semi-automatic operating mechanism.

2.06 SHOP FINISHES

- A. Understructure: For rust resistance, steel understructure shall be finished on all surfaces with black "Dura-Coat" enamel. Understructure finish shall contain a silicone additive to improve scratch resistance of finish.
- B. Wear Surfaces: Surface subject to normal wear by spectators shall have a finish that does not wear to show different color underneath:
 1. Steel nosing and rear risers shall be pre-galvanized with a minimum spangle of G-60 zinc plating.

2. Decking shall have use-surfaces to receive both a sealer coat and wear-resistant high gloss clear urethane finish. Optional decking to have 0.030" laminated polyethylene wear surface.

EDITORS NOTE: SELECT BELOW FINISHES FOR EACH SEAT MODEL TYPE.

3. Classic wood seats and fascia shall be triple sanded and receive a sealer coat with use surfaces to receive high gloss clear urethane finish.
 4. Injection Molded Courtside seats shall be per manufacturer standard 15 colors.
- C. Railings: Steel railings shall be finished with powder-coated semi - gloss black or optional 15 standard colors to match polymer seat color.
- D. Chair Components
1. FINISH FOR Steel / Aluminum Components: (Indoor) Material shall be pre-treated in an iron phosphate wash system prior to finish application. Finish shall be a specially blended polyester T.G.I.C./Epoxy powder coating with a minimum dry film thickness of 1.5 mils [0.038 mm].
 2. Injection molded polypropylene or nylon: Shall be pigmented, in one of manufacturers standard colors and have a textured surface.
 3. Fabric: Upholstery material shall be one of manufacturers standard grade fabric offerings.
 4. Color: Shall be per manufacturer's standards. Seating Contractor shall submit color samples for owner's approval prior to manufacture.
- E. High Humidity finish: Above shop finishes shall include following modifications:
1. Understructure: All frames and other structural components shall be hot-dip galvanized per ASTM A103
 2. All top-side rails shall be e-coated prior to powder paint coating
 3. All hardware to be zinc-plated
 4. All posi-locks and other steel wear surfaces to be electroless-nickel plated
 5. Decking to be polyethylene-laminated plywood

2.07 FASTENINGS

- A. Welds: Performed by welders certified by AWS standards for the process employed.
- B. Structural Connections: Secured by structural bolts with prevailing torque lock nuts, free-spinning nuts in combination with lock washers, or Riv-nuts in combination with lock washers.

2.08 ELECTRICAL OPERATION

EDITORS NOTE: CONSULT HUSSEY APPLICATION ENGINEERING FOR DETERMINING BELOW POWER SUPPLY AND WIRE SIZE FOR RUN LENGTHS REQUIRED OR IF POWERING BLEACHERS EXCEEDING TWENTY TIERS.

A. Integral Power

1. Default operation shall be with a removable pendant control unit which plugs into seating bank for tethered operator management of stop, start, forward, and reverse control of the power operation. Other modes of operation are optional.

EDITORS NOTE: SELECT ONE VERSION FOR EACH BANK.

2. **PF1/2/3/4:** Furnish and install Hussey PF(1/2/3/4), an integral automatic electro mechanical powered frame propulsion system, to open and close telescopic seating.
 - a. Electrical - Seating Manufacturer shall provide all wiring within seating bank, including pendant control. Motors, housing, and wiring shall be installed and grounded in complete accord with the National Electrical Code. The electrical contractor shall perform all connections at and upstream of the equipment specified herein, and ensure that supplied voltage drops no more than 4% below

nominal where power connects thereto. To prevent 3rd party control of the system, power is made available to the Remote Control Receiver for a limited time by a Radio Frequency Identification (RFID) system that requires activation by the operator. Once the power system is activated, an audio beep and visual light is active to notify the user that the system is energized and ready for operation. The wireless remote shall be used by trained authorized operators to open and close the system with continuous pressure applied to the desired button.

- b. Each unit for PF(1/2/3/4) is driven by a 1/2 horsepower, 1725 RPM motor.
 - (1) 208V 3 Phase:
 - (a) This 1.25 Service Factor motor runs on 208V at 60 Hz and draws a full load current of 2.2 amperes. The required power supply shall be 3 asynchronous phases of 120 Volts each, plus neutral plus ground, each with 20 Amp capacity.
 - (b) This system shall be UL Listed in its entirety (motors, circuit protection, motor controls, user interface, enclosures, conductors and connectors all evaluated and approved for correct sizing and compatibility under maximum rated load on the motors) under UL Product Category FHJU, titled Electrical Drive and Controls for Folding and Telescopic Seating.
 - (2) 115V 1 Phase
 - (a) This 1.25 Service Factor motor runs on 115V at 50 or 60 Hz and draws a full load current of 6.2 amperes. The required power supply shall be a single phase of 115 Volts, plus neutral plus ground, each with current capacity per the following schedule:
 - (i) 15 Amps when 1 or 2 motors on the power supply
 - (ii) 30 Amps when 3 or 4 motors on the power supply
 - (iii) 40 Amps when 5 motors on the power supply
 - (b) This system shall consist of UL Listed or Recognized components throughout (motors, circuit protection, motor controls, user interface, enclosures, conductors and connectors, all correctly sized and compatible under maximum rated load on the motors).
 - (3) 230V 1 Phase
 - (a) This 1.25 Service Factor motor runs on 230V at 50 or 60 Hz and draws a full load current of 3.4 amperes. The required power supply shall be two phases of 115 Volts, plus neutral plus ground, each with current capacity per the following schedule:
 - (i) 15 Amps when 1 or 2 motors on the power supply
 - (ii) 20 Amps when 3 or 4 motors on the power supply
 - (iii) 30 Amps when 5 motors on the power supply
 - (b) This system shall consist of UL Listed or Recognized components throughout (motors, circuit protection, motor controls, user interface, enclosures, conductors and connectors, all correctly sized and compatible under maximum rated load on the motors).
 - (4) Each pair of Powered Frames shall consist of output shaft gear reducer with 6" [152] diameter x 4" [102] wide wheels covered with non marring 1/2" [13] thick composite rubber, and operate the bleacher as follows:
 - (a) PF1 – Pulls at 46 feet / min [16.8 meters / min] with ½ Hp through 60:1 speed reduction to 2 drive wheels. Max pull approx 261 lbs [1161 N];
 - (b) PF2 – Pulls at 46 feet / min [16.8 meters / min] with ½ Hp through 60:1 speed reduction to 4 drive wheels. Max pull approx 261 lbs [1161 N];
 - (c) PF3 – Pulls at 25 feet / min [9.3 meters / min] with ½ Hp through 111:1 speed reduction to 4 drive wheels. Max pull approx 478 lbs [2126 N];
 - (d) PF4 – Pulls at 25 feet / min [9.3 meters / min] with 1 Hp through 111:1 speed reduction to 4 drive wheels. Max pull approx 956 lbs [4253 N];

3. **PFe** : Furnish and install Hussey PFe, an integral automatic electro mechanical powered frame propulsion system to open and close smaller telescopic seating sections up to 6 rows.
 - a. Electrical
 - (1) Seating Manufacturer shall provide all wiring within seating bank, including pendant control. Motors, housing, and wiring shall be installed and grounded in complete accord with the National Electrical Code. The electrical contractor shall perform all connections at and upstream of the equipment specified herein, and ensure that supplied voltage drops no more than 4% below nominal where power connects thereto.
 - (2) Each unit for PFe is driven by a 1/4 horsepower, 1725 RPM, 117 Volts, 60 Hz., single phase 1.1 service factor motor, drawing a full load current of 4.2 amperes. Power supply required shall be 120 volts single phase plus neutral plus ground service, each with 20 amp capacity.
 - b. Mechanical
 - (1) Each pair of Powered Frames shall be driven through a gearmotor with dual output shaft, 6" [152] diameter x 4" [102] wide wheels covered with non marring 1/2" [13] thick composite rubber, and pull the bleacher with approx 280 lbs [1161 N] at 25 feet / min [16.8 meters / min].
4. **Options**
 - a. Plug & Play Power
 - (1) The Plug & Play option enables safe cord and plug connection of the power system to the power supply, eliminates the need for a separate disconnect, and eliminates lockout tagout procedures at the bleacher. Electrical contractor shall provide and install the disconnect-rated receptacle and associated parts specified by the manufacturer. Manufacturer shall specify facility preparations for, and furnish and install a cord-and-plug connected power system. This option is available only with 208V 3 Phase.
 - b. Limit Switches
 - (1) Limit switches will automatically stop integral power operation when seating has reached the fully extended or closed position. Manufacturer shall furnish and install both open and closed limit switches for the integral power system. Power operation shall utilize a combination of contactors and limit switches to insure the wiring is not energized except during operation. Straight wired electric system is not allowed.
 - c. Remote Control
 - (1) The Remote Control option :
 - (a) Enables un-tethered operator management of stop, start, forward, and reverse control of the power system.
 - (b) Grants and confirms access only to an authorized controller, denying operation by spurious signals;
 - (2) Terminates access shortly after completed operation, requiring re-approval to resume operation.
 - (3) Manufacturer shall provide and install Access Control Unit and Remote Controller, and shall provide Remote Control Transmitters.
 - d. Key Switch Control
 - (1) Manufacturer shall furnish parts and instructions for installing a key-operated controller on the fixed structure of the facility.
 - e. Portable Power Assist
 - (1) Portable Power Assist is a walk-behind, self-contained portable electro-mechanical power unit enabling operator management of stop, start, forward, and reverse control of a bleacher. Multiple bleachers may be operated independently by attaching to / detaching from one bleacher and moving to another. None of the above described options are available with Portable Power Assist.
 - (2) Manufacturer to furnish and install two attachments for Portable Power Assist on every applicable section of bleacher and one Portable Power Assist unit per facility. Portable Power

Assist shall have a 100' long heavy duty cord and be cord and plug connected to a 120V 20 amp outlet convenient to the bleachers to be operated.

- (3) Tractor unit shall be fitted with rugged operating handle with convenient switches controlling forward / reverse separate from spring loaded on / off switch. Power drive unit shall consist of a gearmotor with dual output shafts and 6" [152] diameter wheels covered with non-marring 1/2" [13] thick molded polyurethane. Average operating speed shall be 35 feet / min [12.8 meters / min] with pulling capacity of PF3 (see above).

2.09 TRANSPORT SYSTEMS

EDITORS NOTE: SELECT BELOW SYSTEMS, ONE PER APPLICATION

- A. Integral Mechanical Dollies: Provide one pair of machine-screw-jack dollies (per section) for transport of movable telescopic sections. Each dolly shall be fitted with 6--6 inch, 360 degree swiveling "kingpinless" casters to insure ease of telescopic section movement. Wheel treads shall be molded polyurethane bonded to cast iron with roller bearing hubs. Dollies are integral to each section and shall be operated by a cordless drill through access holes in either the front or rear of the section. Dollies shall be designed to engage front and rear structural steel lift beams.
- B. Portable Hydraulic Dollies: Provide one pair of portable hydraulic dollies suitable for transport of movable telescopic sections. Each dolly shall be fitted with sufficient quantity of 360 degree swiveling ball race caster to insure ease of movement. Wheel treads shall be molded polyurethane bonded to cast steel with roller bearing hubs. Dollies shall be inserted manually beneath the front of first telescoping row with seating completely closed. Dollies shall be designed to engage front lift plates and rear structural steel lift beams.

2.10 ACCESSORIES | STANDARD TELESCOPIC GYMSEAT ACCESSORIES

- A. Access Panels (Hatchway): Provide access to unit at 4th or 5th tier.
- B. Operating Handles: Provide and install manual operating handles constructed of 3/4" [19] OD steel tubing. Handles to engage pull-bar installed at the first tier.
- C. Flex-Row: Provide first row modular recoverable seating units to be utilized by persons in wheelchairs and able-bodied persons. Each Flex-Row unit shall have an unlock handle for easy deployment if wheelchair or team seating access is needed. Unlock handle shall lock the bleacher seats into position when fully opened.
 1. Provide a black full-surround steel skirting with no more than 3/4" floor clearance for safety and improved aesthetics.
 2. Provide a black injection molded end cap for the nose beam for safety and improved aesthetics..
 3. Provide a mechanical positive lock when the Flex-Row system is in the open and used position.
 4. Flex-Row modular units are designed to achieve multi-use front row seating to accommodate team seating, ADA requirements and facility specific requirements. Flex-Row units are available in modular units from 2 to 7 seats wide as well as full section widths.
- D. Permanent Handicap Cut-Outs: Provide first tier permanent handicap cutouts per requirements of Americans with Disability Act (ADA) located as indicated. Provide a full width front closure panel at handicap cutout, extending from underside of second tier to within 1 1/2" [38] of finished floor.
- E. Provide a removable belt barrier with or without signage for the rear of each recoverable Flex-Row module to assist with seating identification.
- F. Front Aisle Steps: Provide at each vertical aisle location front aisle step. Front steps shall engage with front row to prevent accidental separation or movement. Steps shall be fitted with four non-skid rubber feet each 1/2" [13] in diameter. Blow molded end caps shall have full radius on all four edges. Quantity and location as indicated. **SELECT:** Aluminum or Steel Aisle Steps.

- G. Non-Slip Tread: Provide at front edge of each aisle location an adhesive-backed abrasive non-slip tread surface.
- H. Foot Level Aisles: Provide deck level full width vertical aisles located as indicated.
- I. Intermediate Aisle Steps: Intermediate aisle steps shall be of boxed fully enclosed type construction. Blow molded end caps shall have full radius on all four edges. Step shall have adhesive-backed abrasive non-slip tread surface. Quantity and location as indicated. **SELECT:** Aluminum or Steel Aisle Steps.
- J. Intermediate Aisle Handrails: Provide single pedestal mount handrails 34" [864] high with terminating mid rail. Handrails shall be attached to the socket and shall lift and rotate 90° for easy storage in socket. Aisle handrails that are detached from the socket for storage are unacceptable.
- K. Intermediate Folding Aisle Handrails: Provide single pedestal mount handrails 34" [864] high with terminating mid rail. Handrail to be permanently mounted to a rotating socket for rail storage on the intermediate aisle step.
- L. Front Panel: Provide front closure panels for truncated sections, permanent end cutouts or elevated front aisles. Panels shall extend vertically from underside of front row to within 1 1/2" [38] of floor. Paneling to be 5/8" [16] Southern Pine Plywood or grey Polydeck attached to a steel framework.
- M. End Panel: Provide closure end panels for closed stack position at each exposed bank end. End panels shall be constructed of 5/8" [16] Southern pine plywood or grey Polydeck.
- N. Rear Panel: Provide required seating units with full width rear closure panels. Panels shall extend vertically full height or up to 8'-0" [2438] high to within 1 1/2" [38] of floor. Paneling to be 5/8" [16] Southern Pine Plywood or grey Polydeck attached to a steel framework. Rear panels cannot extend above 8'-0" [2438] on portable sections.
- O. Front Rail: Provide not less than 30" [762] high above deck, steel rails with tubular supports and intermediate members designed with 4" [102] sphere passage requirements. Rails to be located at each required seating location.
- P. Self-Storing End Rails: Provide steel self-storing 42" [1066] high above seat, end rail with tubular supports and intermediate members designed with 4" [102] sphere passage requirements.
- Q. Scorer's Table: **SELECT:** one 8' [2438] x 18" [457.2] x 30" [762] scorer's table or one 6' [1829] x 18" [457.2] x 30" [762]. Table top shall be Gray textured blow molded polymer 2" [51] in thickness with eased edges for reduced pressure points and improved ergonomics. The Integral 16 Ga. cantilevered comfort C-style leg design provides ample clear space and stability during use and folds for ease of storage on the seating deck. The structure is finished in a speckled gray. The table is portable and may be used on any seating row or flat floor surface.
- R. Modular Video Platforms: **SELECT:** Semi Permanent 4' [1219] x 4' [1219], 4' [1219] x 8' [2438] or Portable 4' [1219] x 4' [1219] Sections w/Safety rails and Step.

- S. Top Seat Flush Filler: Provide at top seat level a flush filler board mounted between top seat and rear wall. Flush filler board shall be constructed of 4/4" nominal thickness Southern pine Grade "B & B" clear urethane finished.

EDITORS NOTE: BELOW SEAT NUMBERS AND ROW LETTERS ARE TO BE USED ON POLYMER MVP SEATS

- T. Seat Numbers: Provide each polymer seat module with a 1 3/4" x 1 1/4" [45 x 32] oval etched Lexan plate. Easy to read black numerals will be on the plate fitted in a vandal resistant recess.
- U. Row Letters: Provide at each row end of polymer seat a 1 3/4" x 1 1/4" [45 x 32] oval etched Lexan plate with black numerals. Plates to be fitted flush in vandal resistant end cap recess.
- V. Classic Wood Folding Backrests: Gym seating shall include 1" X 5" [25 x 127] (nominal size) grade "B & B" southern pine clear urethane finished wood backrests mounted on folding steel supports. Backrests shall manual fold into foot-well for storage.
- W. CourtSide CB (Contoured Back Rest): Gym seating shall include 18" [457] (nominal size) compound contoured polymer backrests mounted on folding steel supports. Polymer backs shall be one-piece double wall blow molded pigmented polyethylene shells. Backrests shall manual fold into footwell for storage.
- X. Portable and Convertible Table and Bench Seats: Provide transportable wheeled 8' [2438] seating unit convertible from either a scorer's table with integral bench seat to a bench seat with integral backrest.
- Y. Poly Deck: Decking panel to be a 0.030" [1] thick high-density polyethylene overlay panel fabricated with a skid-resistant textured top surface permanently bonded to a Western Fir plywood substrate meeting the requirements of NBS PS-1-97. Panel thickness shall be 5/8" [16] with tongue and grooved edge joints and top polyethylene surface of textured gray color.
- Z. Full Section Permanent Truncation: Provide Full Section Permanent Truncation as indicated. Provide rigid 38" [965] high above truncated deck front rails with tubular supports attached to the front of the permanent truncation. Provide full height front closure panel from underside of truncated row to within 1 1/2" [38] from finished floor.
- AA. Full Section Recoverable Truncation: Provide a combination programming support and front rail as required to support full section recoverable truncation with remaining lower rows stored beneath. Support/front rail to extend 38" [965] above deck and be designed to sustain live load of first seating row being programmed.
- BB. Safety Accessories: Provide the following safety features:
1. Coin Round or Roll all edges of exposed metal on top and underneath Bleacher to eliminate sharp edges. Provide safety ease edges, coined edges, or rounded edges for the bleacher understructure components as follows. Diagonal or X braces and deck support or deck stabilizers. Systems provided with sharp edges or corners, to be rounded off in the field and field painted.
 2. Provide polymer end cap on nose metal at Bank ends to close off edges to prevent spectator injury.
 3. Provide polymer end cap on back of deck supports on 1st 7 Rows to prevent spectator injury.
 4. On 1st Row, provide front and side skirt boards anywhere there is an exposed end to prevent players/balls from sliding underneath the 1st Row.
 5. Provide metal cover over motor chains and wheels to protect chains from debris and provide a safety switch that if cover is taken off the power system will not work.
 6. Provide metal end deck cover on each row to cover exposed edge of plywood at the ends of the bleachers.
 7. Powered frames systems without a metal protective housing, covering drive chain and drive wheels are not permitted under this specification.
- CC. Portable Access Stairs: Provide portable stair units with hand rails. Stair understructure shall be steel with plywood treads and steel risers. Stairs shall be fitted with not less than four (4) full swiveling industrial

wheels. Retractable truck lock (friction pads) shall be provided to prevent movement during use.

- DD. Transitional Top Steps: Provide at each vertical aisle location top transition steps (last row of telescopic gym seats to level above). Steps shall be of boxed fully enclosed type with construction materials and finish coordinated with that of intermediate aisle steps. **SELECT:** Aluminum or Steel Aisle Steps.
- EE. Extended Rear Deck Filler: Provide at rear deck level an extended rear deck filler mounted between rear wall building columns. Select extended rear deck filler from (12) twelve standard sizes to meet site conditions.
- FF. Rear Wall Column Cutouts: Provide custom bleacher cutouts at rear wall building columns. Top row(s) to be cutout and scribe fitted to meet wall column conditions
- GG. Cross Aisles: Provide continuous top cross aisle or elevated front cross aisle per plan of seating. Construction material and finish to match telescopic seating.
- HH. Strip Aisle Lights: To be (2) 6" [152] long x 5/16" [8] square strip aisle lights with housing mounted in each intermediate aisle step. Strip aisle lights will operate from 24 volts requiring a transformer system. Electrical components to be UL approved and should be installed by an electrician.
- II. Rubber Gap Closures: Operating clearance gaps between sections shall be covered with removable thresholds. The thresholds shall be extruded rubber, retained by an oversize self-centering spline.
- JJ. Steel Gap Closures: Operating clearance gaps between sections shall be covered with aluminum thresholds. The thresholds shall be extruded aluminum and retained by a painted, hinged connector.
- KK. End Curtains: Furnish, deliver and install closure curtain panels at each exposed deck end in accordance with the drawings. **(See Personalization and Creativity under Accessories section).**

EDITORS NOTE: BELOW ACCESSORIES ARE FOR METRO CHAIR

- LL. Armrests, Injection Molded Polymer: Armrests shall be of injection molded, leather textured polypropylene. Armrest to be secured to standard with concealed fasteners.
- MM. Armrests, Stained Hardwood: Armrests shall be solid hardwood without defects. All edges shall be eased for comfort. Armrest finish shall consist of a single coat of waterbase stain; followed by a sealer coat, scuff sanding, and a waterbase clear topcoat. Stain shall be selected from manufacturers' standard offerings. Armrest to be secured to standard with concealed fasteners.
- NN. Armrests, Painted Hardwood: Armrests shall be solid hardwood without defects. All edges shall be eased for comfort. Armrest finish shall consist of two coats of waterbase paint with scuff sanding between coats, followed by a waterbase clear topcoat. Paint shall be selected from manufacturers' standard offerings. Armrest to be secured to standard with concealed fasteners.
- OO. Armrests, Upholstered: Armrests shall be tempered hardboard core with polyurethane foam padding and covered with matching upholstery fabric. Armrest to be secured to standard with concealed fasteners.
- PP. Armrest, Polymer Cupholder: Armrest shall be of injection molded, leather textured glass filled nylon base with polypropylene armrest cap.
- QQ. Armrest, Hardwood Polymer Cupholder: Armrest shall be of injection molded, leather textured glass filled nylon base with a solid hardwood insert to match other chairs in venue.

RR. Armrest, Upholstered Polymer Cupholder: Armrest shall be of injection molded, leather textured glass filled nylon base with an upholstered insert to match other chairs in venue.

SS. Armrest, ADA Easy Access: Armrest shall hinge on end standards to allow equal access for disabled patrons. Swing-up end arms shall be provided for one percent of fixed seating capacity to meet the Americans with Disabilities Act (ADA). Each accessible chair shall include the universal handicap symbol on the end aisle standard for clear identification.

TT. Chair Numbers: Black text with gray background on a 23/32" x 2 7/32" [18.5mm x 56.5mm] elliptical Lexan plate. Plate fitted in a vandal resistant recess located in rear of armrest and secured with adhesive.

UU. ECOGLO Chair Numbers: Black text with pale green background on a 23/32" x 2 7/32" [18.5mm x 56.5mm] elliptical Aluminum plate with photo luminous coating. Plate fitted in vandal resistant recess located in front edge of seat pan and secured with adhesive.

VV. Row Letters: Black text with gray background on a 23/32" x 2 7/32" [18.5mm x 56.5mm] elliptical Lexan plate. Plate fitted in a vandal resistant recess located in rear of armrest and secured with adhesive.

WW. ECOGLO Row Letters: Black text with pale green background on a 23/32" x 2 7/32" [18.5mm x 56.5mm] elliptical Aluminum plate with photo luminous coating. Plate fitted in a vandal resistant recess located in rear of armrest and secured with adhesive

XX. Donor Plate: 7/8" x 3" [22mm x 76mm] oval shaped Brass plate. Plate fitted in a vandal resistant recess located in the front of armrest and secured with adhesive.

YY. Graphic Logo: Logo to be 1 3/4" [44mm] circle and manufactured of 0.5mm thick vinyl. Logo secured to the beam end cap with self-adhesive backing. **(See Personalization and Creativity under Accessories section)**

ZZ. Removable Chairs: Provide chairs to be floor mounted and ganged in groups of one, two, or three chair units for easy removal. Chair standards shall be mounted to a painted steel skid base plates. Skid base with chairs shall be easily removed from the concrete floor by means of flush mounted internally threaded expansion anchors positioned under each leg of the skid. When removed, the anchor holes are filled with flat head bolts to provide a flat surface and prevent dirt and debris from entering.

AAA. CAL TB133 & British Standard Crib 5 Fire Barrier: Fire barrier is included, under upholstery fabric, for conformance to California Technical Bulletin 133 & British Standard Crib 5.

BBB. T2 Folding Laptop Tablet Arm: Tablet Arm to be 20" x 15" [508mm x 380mm] square with rounded corners. Top and bottom surfaces to be high pressure laminate over solid core plywood. Tablet arm to fold down with seat row and store within users' chair beneath the seat

2.11 ACCESSORIES | PERSONALIZATION and CREATIVITY ACCESSORIES and SOLUTIONS

- A. The Xtreme Graphic Logo is comprised of decorative artwork and/or text that has been permanently bonded to the front vertical surface of the bleacher seat modules. The artwork is “tiled”, a process whereby a single large graphic is segmented and applied in separate parts to individual seat modules, which, when viewed together as a whole become a unified piece of artwork, similar to a mosaic. The graphics are printed as full color CMYK pigmented resin and adhesive layer onto a 100UM polyester clear glossy release film (transfer sheet). The application process uses a combination of heat and pressure to activate the adhesive and permanently bond the resin to the HDPE seat module. Once applied, the graphic cannot be removed from the seat module without damaging or destroying the seat module surface. Customer must provide vector-based digital artwork, and approved layout indicating tiled application to individual seat modules to be provided with bid.
- B. CourtSide Graphic Logo
1. Decorative graphic logo that is applied to the integrally molded end cap recess area of the CourtSide 10 XC or 12XCS seat module.
 2. Logo is approximately 4.7” [119] (h) x 3.5” [89] (w) w/full color CMYK vector art output on FujiFlex crystal archive printing material. (FujiFlex Specs. Available)
 3. Color logo is laminated with a 5-mil Hard Guard Matte laminate (Specs. Available)
 4. Laminated logo is bonded to a Flex-Con L – 606 laminating adhesive layer (Specs. Available)
 5. Logo is trimmed to a precise custom cut shape with two mounting holes.

[Click here for CourtSide Graphic Logo Image:](#)

- C. StepSign Graphic Logo
1. Decorative graphic logos or text based graphic that are applied to the vertical surface of the front and intermediate aisle steps.
 2. Graphics are printed on 5mil Polyester White Glossy Film.
 3. Logo live area will vary based on bleacher riser height / step height and aisle step width specified on the project w/full color CMYK vector art output on laminated poly printing material. (FLEXmount Specs. Available upon request)
 4. Full Color logo is laminated with a 5-mil Hard Guard Matte laminate (Specs. Available)
 5. Laminated logo is bonded to a Flex-Con L – 606 laminating adhesive layer (Specs. Available)
 6. Laminated Graphic Panels are applied to the step surfaces as identified on the graphic proof.

[Click here for StepSign Graphic Logo Image:](#)

- D. CourtSign Graphic Logo
1. Decorative graphic logos or text based graphic that are applied to the vertical surface of the front skirt board.
 2. Graphics are printed on 5mil Polyester White Glossy Film.
 3. Logo live area will vary based on bleacher skirt board layout and section lengths specified on the project w/full color CMYK vector art output on laminated poly printing material. (FLEXmount Specs. Available upon request.
 4. Full Color logo is laminated with a 5-mil Hard Guard Matte laminate (Specs. Available)
 5. Laminated logo is bonded to a Flex-Con L – 606 laminating adhesive layer (Specs. Available)
 6. Laminated Graphic Panels are applied to the skirt panel locations as identified on the graphic proof.

[Click here for CourtSign Graphic Logo Image:](#)

- E. Clarin by Hussey Seating Portable Folding Chairs
1. Portable logo folding chairs for courtside seating, VIP seating sections, locker rooms, ADA seating, and more. Many models available.
 2. Printed or embroidered logo(s) on seat back, double back, seat, gusset and more.

[Click here for Clarin Portable Chair Images:](#)

F. CourtSide XT (Seat Spacer)

1. Courtside XT Spacers are mounted between CourtSide XC10 or XCS12 seat modules.
2. Courtside XT Spacers provide additional 4-1/2" of clear space space between Courtside seats.
3. CourtSide XT Spacers can be selected with an integral tray or 3" cupholder for enhanced spectator features.
4. CourtSide XT Spacer Attachment: Each polymer spacer shall be securely anchored by a 12 ga steel clamp bracket that provides a steel-to-steel, through bolted attachment to the front nose beam of the bleacher. Attachment eliminates fore / aft movement of spacer on the nose beam.
5. Unit structural tested to 600 lbs static load in the center of the XT top surface.

[Click here for CourtSide XT Spacer Image:](#)

G. Full Bleed Graphic Vinyl End Closure Curtain

1. Provide closure curtains fabricated of vinyl-coated 14oz Polyester fabric on open ends of telescopic seating. Curtains to be permanently attached to wall or rear closure panel and secured to individual rows of seating. Curtain to open with seating unit into taught secure configuration and fold automatically as seating unit closes.
2. Curtain to have high resolution "full bleed" graphic logo or photograph located across entire visible surface area of the end curtain.

[Click here for Full Bleed End Closure Image:](#)

H. Custom Signature Logo

1. Factory or Dealer designed logo that incorporates school letters or graphical representation of school logo across the front of the bleachers.
2. Logo is visible when the bleachers are in the stored position.
3. Select up to three colors for maximum color contrast and creativity.

[Click here for Signature Logo Image:](#)

I. Colored Safety Rail Systems

1. Choose from 15 Standard colors.
2. Durable powder coated finish.
3. Add color on to Center Aisle Handrails, Self-Storing or Removable End Rails, Front Rails.

[Click here for Colored Safety Rail Image:](#)

J. Media Platforms | Portable or Semi-Permanent

1. Portable: 4' [1219] x 4' [1219] portable sections that can be located anywhere on the bleacher system. Portable sections can be ganged together to create larger video platform.
2. Semi-Permanent: 4' [1219] x 4' [1219] or 4' [1219] -8' [2438] wall attached sections that remain in place while bleacher is in the stored position. Semi-Permanent sections can be ganged together to create larger media platform.
3. Portable media platforms come with optional storage cart for easy transportation and setup.
4. Panelam (polydeck) finish.
5. Safety rails and steps (when required) are included.

[Click here for Media Platform Image:](#)

- K. Extended 1st Row Integrated Team Seating
 - 1. Row 1(one) to be 30", 32" or 33" row spacing for integrated seat and scorers seating.
 - a. Courtside 10 XC or 12 XC polymer seat modules
 - b. Courtside Spacer modules to be located between each seat module.
 - c. Each Courtside seat module to have accompanying Contoured Folding backrest.
 - d. Choose platform deck finish of UV clear coat or Panelam (polydeck) finish.

[Click here for Extended Integrated Team Seating Image:](#)

- L. Metro Beam Logo
 - 1. Decorative graphic logo to be located in a raised rim recess at end of extruded aluminum beam.
 - 2. Color logo is laminated with a 5-mil Hard Guard Matte laminate (Specs. Available)
 - 3. Laminated logo is bonded to a Flex-Con L – 606 laminating adhesive layer (Specs. Available)

[Click here for Metro Beam Logo Image:](#)

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions: Verify area to receive telescoping gym seats are free of impediments interfering with installation and condition of installation substrates are acceptable to receive telescoping gym seats in accordance with telescoping gym seats manufacturer's recommendations. Do not commence installation until conditions are satisfactory.

3.02 INSTALLATION

- A. Manufacturer's Recommendations: Comply with telescoping gym seats manufacturer's recommendations for product installation requirements.
- B. General: Manufacturer's Certified Installers to install telescoping gym seats in accordance with manufacturer's installation instructions and final shop drawings. Provide accessories, anchors, fasteners, inserts and other items for installation of telescoping gym seats and for permanent attachment to adjoining construction.

3.03 ADJUSTMENT AND CLEANING

- A. Adjustment: After installation completion, test and adjust each telescoping gym seats assembly to operate in compliance with manufacturer's operations manual.
- B. Cleaning: Clean installed telescoping gym seats on both exposed and semi-exposed surfaces. Touch-up finishes restoring damage or soiled surfaces.

3.04 PROTECTION

- A. General: Provide final protection and maintain conditions, in a manner acceptable to manufacturer and installer to ensure telescoping gym seats are without damage or deterioration at time of substantial completion.

END OF SECTION