

INVITATION FOR BIDS

BLEACHERS AND RELATED PRODUCTS BID #22-374

HUSSEY GYM SEATS SPECIFICATIONS

SEATING CAPACITIES & SIGHTLINE CALCULATIONS:

1. Forward fold bleachers, Reverse fold
2. Friction power
3. Seating Spacing- 22", 24", 26", 30", 32", 33"
4. Rise- 10", 10 - 1/4", 11- 1/2", 11 5/8", 16"
5. Footrest aisles w/intermediate aisle steps.
6. Non – removable center hand rails/not to exceed the front edge of bleacher when stored.
7. Panelam decking / poly coated plywood is not acceptable.
8. All painted surfaces to be epoxy powder paint.
9. Hinged first aisle step/ must be stored within the closed bleacher.
10. Recoverable ADA seating with guardrails on row above.
11. Bleacher system must have a UL listing.
12. UBC 97 or UBC 94 compliant

Your price should be in strict compliance with the attached specification. If it is not please note by attaching addendum stating reasons.

SECTION 12760 - TELESCOPING GYM SEATS SPECIFICATIONS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: Telescoping Platform 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.
 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.
- B. Related Sections:
 1. Gym and or Athletic Flooring finishes for adequate floor & wall construction for operation of Telescoping Platform Seats. Flooring shall be level and rear wall plumb within 1/8" [3mm] in 8'-0 [2438mm]. Maximum Platform force on the floor, of a 19'6" [5944] section, shall be a static point load of less than 300 psi [2.48 N/mm²].
 2. Division 16 Type Electrical sections for electrical wiring and connections for electrically operated Telescoping Platform Seats.

- C. Alternates: This section specifies alternates for Telescoping Gym Seat products. Refer to Part 2 products for alternate products, and to Division 1 Alternates sections and other bid documents, if any, for alternate requirements.

1.02 REFERENCES

- A. National Fire Protection Association (NFPA)
 - 1. NFPA 102 Standard for Assembly Seating, Tents and Membrane Structures.
- B. American Welding society (AWS):
 - 1. AWS D1.1 Structural Welding Code - Steel.
 - 2. AWS D1.3 Structural Welding Code - Sheet Steel.
- C. American Institute of Steel Construction (AISC):
 - 1. AISC - Design of Hot Rolled Steel Structural Members.
- D. American National Standards Institute (ANSI).
- E. American Iron & Steel Institute (AISI):
 - 1. AISI - Design Cold Formed Steel Structural Members.
- F. Aluminum Association (AA):
 - 1. AA - Aluminum Structures, Construction Manual Series.
- G. American Society for Testing Materials (ASTM):
 - 1. ASTM - Standard Specification for Properties of Materials.
- H. National Forest Products Association (NFoPA):
 - 1. NFOPA - National Design Specification for Wood Construction.
- I. Southern Pine Inspection Bureau (SPIB):
 - 1. SPIB - Standard Grading Rules for Southern Pine.
- J. National Bureau of Standards/Products Standard (NBS/PS):
 - 1. PS1 - Construction and Industrial Plywood.
- K. 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 Platform 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 Platform seat unit.
 - 1. Design Loads: Comply with NFPA 102, 1992 Edition, Chapter 5 for design loads.
- B. Manufacturer's System Design Criteria:
 - 1. Platform seat assembly; Design to support and resist, in addition to it's 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. per linear foot [32.53 N/m] of row.
 - d. Perpendicular sway load of 10 lbs. per linear foot [13.56 N-m] of row.
 - 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.

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 Platform 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 offered color finishes.
- E. Manufacturer Qualifications: Certification of insurance coverage and manufacturing experience of manufacturer, and copy of a telescopic load test observed by a qualified independent testing laboratory, and certified by a registered professional structural engineer verifying the integrity of the manufacturer's geometry design and base structural assumptions.
- F. Installer Qualifications: Installer qualifications indicating capability, experience, and manufacturer acceptance.
- G. 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.
- H. Operating/Maintenance Manuals: Provide to Owner maintenance manuals. Demonstrate operating procedures, recommended maintenance and inspection program.
- I. Warranty: Manufacturers standard warranty documents.

1.05 QUALITY ASSURANCE

- A. Seating Layout: Comply with current NFPA 102 Standard for Assembly seating, Tents, and Membrane Structures, and specifically with Folding and Telescopic Seating, 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:
 - \$500,000.00 (US) Each Accident
 - \$500,000.00 (US) Disease - Policy Limit
 - \$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 twenty years of experience manufacturing telescoping Platform seats.
- E. Installer Qualifications: Engage experienced Installer who has specialized in installation of telescoping Platform seat types similar to types required for this project and who is acceptable to, or certified by, telescoping Platform 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 Platforms 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 Platforms. 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 that 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

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.
 3. Product: Hussey Telescopic Platform Seat System
 - a. **MAXAM-Plus** Series Telescopic Platform Seats, adjustable row spacing in either 30 inches [762], 32 inches [813] or 33 inches [838].
 - b. Aisle Type: foot level aisles, front steps, and intermediate aisle steps.
 - c. Seat Type: Metro chairs
 - 1) Metro Chairs color finish: **SELECT**: manufacturers 3 standard; 6 select stock colors; and 16 select colors
 - d. Rail Type: Self-storing rail, removable end rails, front railings, rear rails, aisle hand rails
 - e. Operation: electrical power or manual
 - 1) Electrical Power System: Integral power with pendant control, motion monitor, limit switches, portable tractor
 - e. Platform Type: wall attached, portable, freestanding, recessed, reverse-fold.
 - g. Chair Operation:
 - i. 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.
 - 1) Chair Dimensions
 - 2) Seat up envelope: 14 1/2"
 - 3) Seat down envelope: 21 1/2"
 - 4) Seat height: 16 1/2"
 - 5) Armrest height: 25 1/4"
 - 6) Back height: 31 3/4"
 - j. Chair Construction: upholstered seat, padded back)
 4. Product Description/Criteria:
 - a. Bank Length: _____
 - b. Aisle Widths: _____
 - c. Number of Tiers: _____
 - d. Row Spacing(s): _____
 - e. Row Rise: _____
 - f. Open Dimension: _____
 - g. Closed Dimension: _____
 - h. Overall Unit Height: _____
 - i. Net Capacity: _____ per seat (18-22" [483-559] for Metro Chairs.)
 5. Miscellaneous Product Accessories:., seat numbers, row letters,
 6. Special Applications: N/A
 7. Handicap Seating Provisions: Provide first tier handicap cutouts per requirements of (ADA) Americans with Disability Act located as indicated.
 8. Special Seating graphics: Provide contrasting or matching seat top or seat base colors to create graphic pattern 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.

2.03 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:

2.04 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 Plastic: 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.

2.05 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. Each CPI unit 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 decking 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. Nosing and Rear Riser: Continuous roll formed galvanized steel members.
 3. Attachment: Through-Bolted fore/aft to deck stabilizers, and frame cantilevers.
 4. Decking: 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

crossbands, 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 Plus, 28 ½" [724].

5. Deck End Overhang: Not to exceed frame support by more than 5'-7" [1702].

2.06 SEATING FABRICATION

COORDINATE BELOW PARAGRAPHS WITH SEAT SELECTION

- A. Plastic Seat System – Courtside Collection XC10 (10"):
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.
 1. 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.

Courtside XC10 Seat Module

- ✓ XC10 – 10" Comfort Profile
 - ✓ 10" wide continuous comfort curve style bench seat
 - ✓ Ergonomically contoured forward "waterfall" edge for enhanced spectator comfort and minimization of sensitive pressure point area, regardless of leg positioning.
 - ✓ Fore & Aft contoured seat surface for uniform support and minimize high pressure points under the buttocks.
 - ✓ Seat height ranges from deck to t/o seat range from 16-1/8" to 18-1/8"
 - ✓ 21-1/2" clear foot space area, regardless of leg positioning.
2. Integrally molded end caps at aisle end locations for clean finished appearance.
 3. Optional: Custom color graphic logo design application for end cap insert.
 4. Integrally molded recess pockets to accept seat number and row letters.
 5. 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.
 6. Seat Attachment: Each plastic seat module 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 the seat module on the nose beam.

2.07 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 surfaces to receive a sealer coat with use surfaces to receive high gloss clear urethane finish.
- C. Railings: Steel railings shall be finished with powder-coated semi - gloss black or optional 15 standard colors to match MVP seat color.
- D. Poolside/ 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.

2.08 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 or Free-spinning nuts in combination with lock washers.

2.09 ELECTRICAL OPERATION

- A. Integral Power: Furnish and install Hussey PF(1/2/3/4), an integral automatic electro-mechanical powered frame propulsion system, to open and close telescopic seating. Integral Power and Control System shall be Underwriters Laboratories, Inc. (UL) approved and listed.
 1. Operation shall be with a removable pendant control unit which plugs into seating bank for operator management of stop, start, forward, and reverse control of the power operation.
 2. Each Powered Frame unit 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. Reducers shall be fitted with 3 phase induction motors which will provide an average operating speed of (46/25) f.p.m [.23/ .12 M/s].
 3. Operating Loads: Each Powered Frame provides (220 / 550) lbs pull force [978 / 2446 N] which equals approximately (28 / 35) psi [.192 / .241 N/mm²] lateral force on the floor.
- B. Economy Integral Power: Furnish and install Hussey PFe, an integral automatic electro-mechanical powered frame propulsion system to open and close smaller telescopic seating sections up to 8 rows. Integral Power and Control System shall be Underwriters Laboratories, Inc. (UL) approved and listed
 1. Operation shall be with a removable pendant control unit which plugs into seating bank for operator management of stop, start, forward, and reverse control of the power operation.
 2. Each Powered Frame unit 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. Reducers shall be fitted with single phase induction motors which will provide an average operating speed of 25 f.p.m [12 M/s].
 3. Operating Loads: Each Powered Frame provides 280 lbs pull force [1245N] which equals approximately (30) psi [.206 N/mm²] lateral force on the floor.
 4. Limit Switches: Furnish and install both open and closed limit switches for the integral power system. The limit switches will automatically stop integral power operation when seating has reached the fully extended or closed position.

- C. 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.
1. Electrical: Seating Manufacturer shall provide all wiring within seating bank including pendant control.
 - a. Each unit for PF(1/2/3/4) is power operated by a 1/2 horsepower, 1725 R.P.M., 208 Volts, 50/60 Hz., three phase 1.25 service factor motor. This motor draws a full load current of 2.2 amperes. Power supply required shall be 120/208 volts three phase 5 wire plus ground service with 20 amps. Motors, housing, and wiring shall be installed and grounded in complete accord with the National Electrical Code.
 - b. Each unit for PFe is power operated by a 1/4 horsepower, 1725 R.P.M., 117 Volts, 60 Hz., single phase 1.1 service factor motor. This motor draws a full load current of 4.2 amperes. Power supply required shall be 120 volts single phase 2 wire plus ground service with 20 amps. Motors, housing, and wiring shall be installed and grounded in complete accord with the National Electrical Code
 - c. The electrical contractor shall provide required power source with no greater than 4% voltage drop at the seatings' junction box. The electrical contractor shall perform all wiring connections in junction box that are attached to or a part of the building.

ACCESSORIES

ED NOTE: SELECT BELOW ACCESSORIES AS REQUIRED

- A. 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.
- B. 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
- C. 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.
- D. Non-Slip Tread: Provide at front edge of each aisle locations an adhesive-backed abrasive non-slip tread surface.
- E. Foot Level Aisles: Provide deck level full width vertical aisles located as indicated.
- F. 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 non-skid on surface. Quantity and location as indicated.

- G. Intermediate Aisle Handrails: Provide single pedestal mount handrails 34" [864] high with terminating mid rail. Handrails shall be attached to the socket and shall rotate 90° for easy storage in socket. Aisle handrails that are detached from the socket for storage are unacceptable.
- H. 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.
- I. Scorer's Table: Provide one 8' [2438] x 15" [4572] scorer's table. Table top shall be tan high pressure laminate on 5/8" [16] balance veneer core with edge molding. Integral perimeter frame to include tubular folding steel legs permanently attached to top with screws

PART 3 - EXECUTION

3.01 EXAMINATION

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

3.02 INSTALLATION

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

3.03 ADJUSTMENT AND CLEANING

- A. Adjustment: After installation completion, test and adjust each telescoping Platform seats assembly to operate in compliance with manufacturer's operations manual.
- B. Cleaning: Clean installed telescoping Platform seats on both exposed and semi-exposed surfaces. Touch-up finishes to restore 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 Platform seats are without damage or deterioration at time of substantial completion.

END OF SECTION

INVITATION FOR BIDS

**BLEACHERS AND RELATED PRODUCTS
BID #21-374**

INTERKAL GYMNASIUM BLEACHERS

SEATING CAPACITIES & SIGHTLINE CALCULATIONS:

1. Forward fold bleachers, Reverse fold
2. Friction power
3. Seating Spacing- 22", 24", 26", 30", 32", 33"
4. Rise- 10", 10 - 1/4", 11- 1/2", 11 5/8", 16"
5. Footrest aisles w/intermediate aisle steps.
6. Non – removable center hand rails/not to exceed the front edge of bleacher when stored.
7. Panelam decking / poly coated plywood is not acceptable.
8. All painted surfaces to be epoxy powder paint.
9. Hinged first aisle step/ must be stored within the closed bleacher.
10. Recoverable ADA seating with guardrails on row above.
11. Bleacher system must have a UL listing.
12. UBC 97 or UBC 94 compliant

Your price should be in strict compliance with the attached specification. If it is not please note by attaching addendum stating reasons.

SECTION 12760

1. Part I General

1.1 Work:

- A. Telescoping gymnasium bleachers.

1.2 Related Work:

- A. Electrical
- B. Gymnasium flooring

1.3 References:

Applicable building codes _____ Edition Year _____

1.4 Description of the System

- A. The bleacher system shall be comprised of multiple tiered, closed deck seating rows operating in a telescopic manner, incorporating

the most economical quantity of sections while still complying with all loading requirements.

- B. The first moving row shall be secured with friction or mechanical locks. Other rows shall be mechanically locked, operable only upon unlocking and cycling the first row, quantity to be determined by Interkal engineering.
- C. Each bleacher row shall be comprised of risers, seat and deck components, and a complete set of supportive columns and braces.
- D. The telescopic bleacher shall incorporate a locking system permitting the use of one, several, or all rows, each locked in the extended position.

1.5 Quality Assurance

A. Qualifications

1. Manufacturing: Manufacturer shall be regularly engaged in the design and manufacturing of telescopic seating for not less than twenty years.
2. Engineering: It will be mandatory that each bidder submit with their bid an affidavit signed by a Registered Professional Engineer stating that the product to be supplied has been tested by an independent testing facility and meets all applicable code requirements.

B. Deviations: It will be the responsibility of the bidder to furnish with their bid, a list clarifying any deviations from the specifications, written or implied. Those bidders not submitting a list of deviations will be presumed to have bid as specified.

C. Guarantees:

1. One-Year Guarantee: The manufacturer shall guarantee all work performed under these specifications to be free from defects for a period of one year.

D. Product Improvements: Seating provided shall incorporate manufacturer's design improvements and materials current at time of shipment.

1.6 Submittals:

- A. Submit manufacturer's installation instructions and descriptive literature in accordance with Section 01300.

- B. Manufacturer's operating and maintenance manuals in accordance with Section 01700.

1.7 Design Criteria

- A. Telescopic bleacher design and fabrication shall conform to (specify applicable code by year and ADA requirements)
- B. Telescopic gymnasium seating will be designed to support a vertical live load of 100 PSF, but not less than 120 PLF on both seat boards and footboards. Seating shall also be designed to carry a horizontal sway force of 24 PLF parallel to the seating and 10 PLF perpendicular to the seating.
- C. Steel components shall be cold-formed from appropriate width strip stock conforming to ASTM A570 - Grade C 30KSI, ASTM A653-Grade 33 and 50, ASTM A500 - Grade B 46 KSI as applicable.
- D. Lumber components are kiln dried, finger jointed, edge glued southern pine of grade "B & B Finish" manufactured to the current SPIB glued-laminated standards for southern pine.
- E. Plywood deck boards shall be fabricated from Douglas Fir Premium Underlayment with exterior glue, 5 ply minimum, solid crossband directly under face ply, species Group 1 and manufactured in accordance with PS-1-95.

2. PART 2 PRODUCTS

2.1 Manufacturer

- A. Telescopic seating as manufactured by Interkal, Kalamazoo, Michigan, is the standard of quality required and specified herein.

2.2 Materials

- A. **Model:** Interkal, closed deck telescopic bleachers
- B. **Type:** (Select one)
 - Wall attached
 - Recessed
 - Mobile
 - Free Standing
 - Reverse Fold

C. Quantity:

1. Provide _____ banks of _____ attached _____ rows high.

D. ADA (Available options)

1. **Notchouts:** Provide a 36" wide wheel chair space as shown on the plans and as required to meet local code jurisdiction compliance with ADA. (Specify one row or two row deep).
2. **Truncations:** Provide a full section truncation with all necessary front rails, closure panels, and portable step assemblies at aisles as required to meet local jurisdiction compliance with ADA. (Specify one row or two row deep).

E. Dimensions:

1. Rise per row (Select one)- 10 -1/4", 11-1/2", 16"
2. Row to row spacing (Select one) - 22", 24", 26", 30", 32", 33"

F. Propulsion (Select One)

1. **Manual Operation-** Furnish one pair of operating handles to attach under the first row kick board for manual operation.
2. **Friction Power-** Furnish Interkal friction power, integral automatic electro-mechanical propulsion system to open and close telescopic seating system. Operation shall assure full visual control of the seating bank. The Wide Track System incorporates two friction drive roller assemblies as an integral part of both first row vertical column assemblies. Each section of bleacher shall have a power system that shall consist of two vertical column roller assemblies which shall include two 6" diameter by 2 1/2" wide cast drive wheels for a minimum of four friction roller contact points per section of bleacher. Each roller shall have a specially formulated 45-durometer rubber covering to grip the floor as the units roll in and out. The two friction drive roller assemblies shall be installed a minimum of 7-feet apart per section. The two friction roller assemblies are linked together by a continuous drive shaft driven by a 1/2 H.P. 208V, 3-phase motor that shall enable the rollers to work simultaneously, resulting in a more efficient operation with allowance for minor variations in the floor surface. All floor friction power systems shall be controlled by a dual directional, removable walk along pendant which plugs into the front of the first row to give the operator proper position for visual control. The pendant control voltage shall be 24 VAC @ less than 50 MA for the safety of all operating personnel. **The entire power system shall be U.L. Recognized.** A 208/220 volt 3-phase

power source, including conduit, wiring, and safety disconnect must be provided by others. The electrical contractor shall perform the connections to the seating equipment at the safety disconnect. Motors, housing, and wiring shall be installed by certified personnel.

3. **Nonfriction:** Gymnasium seating will be power operated. Limit switches will regulate the extended and closed positions. Movement will be reversible from any position. The power system will lock the units in any desired position. The power supply shall be (1.5HP for 8" drums or 2HP for 16" drums) 208-220 or 440 volts, 3 phase 60 cycle. A junction box must be provided for each bank of power to be located as per the manufacturer's instructions. The electrical contractor shall furnish and install conduit, wiring and junction box. Motor starter, limit switches and key control switch to be provided by manufacturer. Rigid pusher linkages will maintain alignment of the bank during operation. The linkages will be attached to drive reels placed at pre-determined locations at the rear of the bank. Power systems employing friction on the floor will not be acceptable.

2.3 Accessories (Select applicable items)

A. Foot Level Aisles: Provide footrest level aisles at locations and sizes as shown on plans and approved shop drawings.

1. Center Aisle: Provide a permanently attached self-storing aisle rail, which is designed to eliminate all labor associated with set up and storage of the aisle rails.
2. Intermediate Steps: Provide manufacturers standard intermediate step as necessary per applicable code.

B. Last Row Closure

1. Rear Closure Board: Provide and install a properly supported, flush mounted board between the last row of the bleacher and the wall.

C. Wheelchair Seating: (Available options)

1. Notchouts: Provide manufacturers standard permanent handicap notchout (36" wide) located as shown on architectural plans. Notchouts must be located at section joints only to avoid interference with understructure. Fascia panels shall have manufacturers standard polydeck finish to match deck board surface. Available in one row or two row deep, (select one).
2. Recoverable Notchouts: Provide manufacturers standard recoverable handicap notchout (36" wide) located as shown on

architectural drawings. Notchouts to be one row or two row deep, (select one).

3. Recoverable Truncations: Provide full section recoverable handicap seating as shown on architectural drawings. Include portable step assemblies at affected aisle locations. Recoverable truncations to be one row or two row deep, (select one).

D. Front Railing (if required): Provide rigid 36" high, fixed tubular steel rail with vertical intermediate members to fill design criteria. Rail to be mounted full width at all two row deep ADA wheelchair accommodations. Finish shall be a polyester powder coat. Front rails are to be designed to comply with all applicable codes and remain consistent with all other rails not allow clearance of a 4" sphere.

E. End Railing: (Select One)

1. Self-Storing End Rails: Provide steel self-storing 42" high self-storing end guard rails with tubular supports and vertical intermediate members to comply with all code requirements. Rails shall be fitted to each exposed bank end from third row and above with all steel to steel connections. Finish shall be a polyester powder coat.
2. Removable End Rails: Provide steel removable 42" high end guard rails with tubular supports and vertical intermediate members to comply with all code requirements. Rails shall be fitted to each exposed bank end from third row and shall fully enclose all openings down to the deck level. Finish shall be a polyester powder coat.

F. Operation

1. **Pendant Control:** Provide pendant control style operation for the bleachers. Extension and retraction shall be accomplished by use of the pendant control plugged into a single receptacle. The receptacle shall be mounted at the first row.

G. Numbering: Provide seat numbers and row letters for sculpture seat modules. Sequence to be determined by architect or owner.

H. Back Panels: (For reverse fold and mobile units) Provide the manufacturers standard polydeck finish to match deck board surface. Back panels will be provided a maximum of 8' high.

I. Back Rails: (For reverse fold and mobile units) Provide the manufacturers standard back rails with vertical intermediate members to eliminate ladder effect and comply to all applicable building codes. Back rails are to be designed to not allow clearance of a 4" sphere.

- J. Vinyl-End Curtains:** Provide manufacturers standard vinyl end curtains to close off under the bleacher units in the extended position. Curtain color is to be selected from manufacturers standard offering.
- K. End Panels:** Provide manufacturers standard end panels to close off the opening between end rails and the wall when the bleachers are stacked. (Not available with vinyl end curtains)

2.4 FABRICATION

- A. Continuous Wheel Channel:** Wheel channels shall consist of a one piece formed steel channel welded to the base of a vertical column. Wheel channels accommodate 8 to 12 wheels per row for maximum weight distribution and operating ease. The number of wheels increase as the number of rows increase.
- B. Wheels:** 3-1/2" diameter with 1-1/8" non-marring soft rubber face with rounded edges designed to protect wood or synthetic floor. Provide 1/2" diameter axle for all wheels
- C. Columns:** Electrically welded closed rectangular steel tube, 2" x 3" minimum size, 14 gauge steel fitted with a rear welded gusset at the wheel channel.
- D. Row Interlocks:** Join each row structure front to rear by means of two (2) interacting steel connections, plus automatic gravity row locks where Engineering determines they are required.
 - 1. Lower: Lower track guides shall be an external superslide rod to guarantee positive engagement of vertical supports without binding and assures smooth operation over uneven floor conditions.
 - 2. Upper: Upper track guides shall completely interlock adjacent understructure support. A welded stop to ensure correct extension of bleacher unit on deck support. Use of bolt and nut stops are not acceptable, due to risk of loosening.
- E. Diagonal Braces:** Structural formed steel truss fitted to rows 4 and beyond. Bracing shall be attached to the rear riser at optimum locations to insure structural integrity. Bracing will be designed and shaped to support a minimum load of 1000(lbs) of both compression and tension forces created when the bleacher is loaded.
- F. Deck Supports:** Shall be of structural steel, 11 gauge spaced not greater than 60" on center for maximum deck stiffness.

1. **Rollers:** Every deck support not attached to a vertical post will have an integral nylon roller to avoid steel to steel friction points for more efficient operation.
- G. Decking:** All deck boards shall consist of 19/32" nominal Douglas Fir CC grade plywood with exterior glue and solid crossbands. An extruded aluminum "H" connector shall be placed between plywood panels. Exposed wear surfaces shall be finished with a layer of high Density polyethylene plastic .025 - .030 thick, Light Gray in color, complimentary to the seat option. Deck finishes, such as clear coat, requiring more than simple touch up to restore it to a new appearance after wear occurs are unacceptable.
- H. Welds:** All welds shall be made at the factory by welders that are AWS certified on the equipment and process used.
- I. Nose Beam:** Shall be one-piece 13-gauge galvanized steel. 13-gauge steel is utilized for the necessary structural integrity to accommodate section lengths up to 26'
- J. Rear Riser:** Shall be one piece formed 14-gauge, grade 50, galvanized steel, with a continuous access joint to fully encapsulate footrest panel for ease of cleaning and additional structural support. 14-gauge roll formed steel is utilized for the necessary structural integrity to accommodate section lengths up to 26'.
- K. Splice Plates:** (For Friction or Non-Friction power only) Each section joint shall be tied together with two structural steel members per row, employing a minimum of four steel to steel through bolt connections at the nose beam and a minimum of eight steel to steel through bolt connections at the lower steel rear riser. Gauge of splice plates to match the gauge of the nose beam and rear riser. Splice plates employing steel to plywood deck board attachments will not be acceptable. Gauge of splice plates to match the gauge of the nose beam and rear riser. In order to minimize deflections and keep rows in alignment during operation, splice connections shall transfer both axial loads (tension/compression) and bending.
- L. Fasteners:** All structural connections shall be made with S.A.E. grade 5 or better stress rated bolts. The use of self-tapping bolts is not acceptable.
- M. Finish:**
1. Steel Understructure abraded, cleaned and finished with russet brown water base acrylic paint. Steel risers and nose beams finished with corrosion resistant silver gray matte finish with galvanized alloy plating.

2. Zinc plated (optional for high humidity areas).

2.5 Seat Options (Select One)

A. SculptureSeat Modules:

1. 18-inch wide one-piece individual seating modules shall be constructed of high-density polyethylene. Provide in 10" or 12" deep, (select one).
2. Each module shall have two longitudinal and five transverse internal ribs to provide additional structural integrity and resistance to impact.
3. Each module shall have a full ½" interlock to the adjacent module both around the perimeter and along the internal ribs to eliminate pinching hazards and assures proper alignment.
4. A steel-to-steel attachment of each module to a minimum 14 gauge galvanized steel nosebeam shall be provided for maximum rigidity. All such mounting hardware shall be concealed.
5. End caps shall be provided at the ends of each bank (section, if manual) of seating as well as at each aisle.
6. Each module shall have a recessed area for optional seat numbering.
7. Select from manufacturers 15 standard solid colors.

B. Wood:

Seats and front risers shall be 1" nominal thickness x 10" nominal depth, kiln dried, finger-joined and edge glued, Southern Yellow Pine Grade "B and Better" in conformance with S.P.I.B. Glued Lumber Standards. Solid wood boards which are more subject to cracking, checking, warping, cupping, and bowing than are laminated boards or mixed lumber species are unacceptable. All boards to be smooth sanded and sealed with a moisture resistant urethane followed by a second coat of high gloss urethane.

1. Part 3 Execution

1.1 Inspection:

- A. Verify that areas to receive telescopic bleachers are free from impediments interfering with installation.
- B. Do not begin work until building conditions are satisfactory.

1.2 Installation:

- A. Install telescopic bleachers in accordance with manufacturer's instructions and approved submittal drawings.
- B. Adjust bleachers for smooth and proper operation.
- C. Clean bleachers and remove all debris from gymnasium resulting from installation.

**INVITATION FOR BIDS BLEACHERS
AND RELATED PRODUCTS
BID #21-374**

IRWIN TELESCOPIC SEATING

Gymnasium Seating Specifications

SEATING CAPACITIES & SIGHTLINE CALCULATIONS:

1. Forward fold bleachers, Reverse fold
2. Friction power
3. Seating Spacing- 22", 24", 26", 30", 32", 33"
4. Rise- 10", 10 - ¼", 11- ½", 11 5/8", 16"
5. Footrest aisles w/intermediate aisle steps.
6. Non – removable center hand rails/not to exceed the front edge of bleacher when stored.
7. Panelam decking / poly coated plywood is not acceptable.
8. All painted surfaces to be epoxy powder paint.
9. Hinged first aisle step/ must be stored within the closed bleacher.
10. Recoverable ADA seating with guardrails on row above.
11. Bleacher system must have a UL listing.
12. UBC 97 or UBC 94 compliant

Your price should be in strict compliance with the attached specification. If it is not please note by attaching addendum stating reasons.

1.1 WORK INCLUDED

- A. Manufacture, deliver and install Telescopic Seating Systems in accordance with applicable codes, the following specifications, and approved drawings.

1.2 RELATED WORK BY OTHERS

- A. Adequate floor levelness and strength for operation of telescopic seating.
- B. Adequate wall strength for attachment and operation of wall attached telescopic seating.
- C. Electrical wiring within the building as required for power operated telescopic seating.

1.3 SYSTEM DESCRIPTION

- A. Telescopic seating system shall be multiple tiered seating rows comprised of seat and deck components, risers, and supportive understructure.
- B. Telescopic seating shall be operable on the telescopic principle, stacking vertically in minimum floor area when not in use.
- C. The first moving row, on manual sections, shall be secured with release lever. All other rows shall be mechanically locked, operable only upon unlocking and cycling of first row. Power sections shall be secured with mechanical locks as well as the power system, operable upon activating the pendant control.

1.4 QUALITY ASSURANCE

- A. DESIGN LOAD CRITERIA (STRUCTURAL):
 - 1. International Building Code Standard: Comply with requirements of IBC / ICC 300, "Standard for Bleachers, Folding and Telescopic Seating and Grandstands Assembly Seating, except where other requirements are indicated by the architect/owner.
 - 2. Seating layout design shall be in compliance with IBC / ICC 300 Code, Chapter 4.
- B. Manufacturer: Company specializing in telescopic seating with a minimum of 25 years experience in manufacturing telescopic seating.
- C. Quality Standards: Manufacturer to be I.S.O. 9001:2000 certified.
- D. Engineer Qualifications: Manufacturer to employ a registered, licensed Professional Engineer to certify that the equipment to be supplied meets or exceeds the design criteria of this specification.
- E. Installation: Shall be handled directly by the manufacturer or by a factory certified installation subcontractor.
- F. Product Liability: Certification of insurance coverage of not less than \$5,000,000.
- G. Welding Processes: To be performed by certified professional welding operators in accordance with American Welding Society, (AWS), D1.1 "Structural Welding Code-Steel."
- H. Product Improvements: Equipment provided shall incorporate manufacturer's design improvements and materials current at time of shipment, provided that such improvements and materials are consistent with the intent of these specifications

1.5 Submittals

A. BID SUBMITTALS

1. Manufacturer's descriptive literature and specifications
2. List of deviations from specification, if any.
3. Certification of Insurance.
4. I.S.O. Certification.

B. JOB SUBMITTALS

1. Shop Drawings showing all equipment to be furnished with details of accessories to be supplied including necessary electrical service to be provided by others. All electrical submittals must include U.L. listing number.
2. Samples of material and color finish as requested by Architect.
3. Warranty, operation and maintenance instructions to the owner upon completion.

1.6 Design Criteria

- A. Telescopic seating shall be designed to support, in addition to its own weight, and the weight of added accessories, a uniformly distributed live load of not less than 100 lbs. per sq. ft. (4.8 kN per sq. m.) of gross horizontal projection.
 1. Seat boards and footrest shall be designed for a live load of not less than 120 lbs. per linear foot (1.751 kN per linear m).
 2. A sway force applied to seats shall be 24lbs. per linear ft. (350 N per linear m.) parallel to the seats and 10 lbs. per linear ft. (146 N per linear m.) perpendicular to the seats. Sway forces shall not be considered simultaneously applied.
- B. Railings, posts and sockets designed to withstand the following forces applied separately:
 1. Handrails shall be designed and constructed for:
 - a. A concentrated load of 200 lbs. (890 N) applied at any point and in any direction.
 - b. A uniform load of 50 lbs. per ft. (730 N/m) applied in any direction.The concentrated and uniform loading conditions shall not be required to be applied simultaneously.
 2. Guards shall be designed and constructed for:
 - a. A concentrated load of 200 lbs. (890 N/m) applied at any point and in any direction along the top railing member and;
 - b. A uniform load of 50 lbs. per ft. (730 N/m) applied horizontally at the required guardrail height and simultaneous uniform load of 100 lbs. per ft. (1460 N/m) applied vertically downward at the top of the guardrail. The concentrated and uniform loading conditions shall not be required to be applied simultaneously.
 - c. American Institute of Steel Construction (AISC), American Iron and Steel Institute (AISI) and Aluminum Association (AA) design criteria shall be the basis for calculation of member sizes and connections.
 - d. Wood members shall be designed in accordance with National Forest Products Association, (NFOPA), and National Design Specification for Wood Construction.

1.7 WARRANTY

- A. The manufacturer shall warrant all work performed under these specifications to be free of defects for a period of one year.
- B. Any materials found to be defective within this period will be replaced at no cost to the owner. This warranty shall not include replacements required by Acts of God, war, vandalism, flood, fire, calamity or deliberate abuse or misuse of the equipment.

2.1 ACCEPTABLE MANUFACTURERS

- A. All seating shall be the Irwin Model 4500 as manufactured by Irwin Telescopic Seating Company, Altamont, IL 62411 or equal, subject to prior approval and strict compliance with these specifications.

2.2 MATERIALS

A. Seating Area:

Groups Feet _____ Inches Long, __ Rows High (Wall and Floor Attached), (Recessed), (Movable), (Forward Fold), (Manually or Electrically Operated).

B. Dimensions:

- 1. Overall height: Feet Inches
- 2. Open depth: _____ Feet _____ Inches
- 3. Closed depth: _____ Feet _____ Inches
- 4. Row Spacing:
- 5. Rise per row: _____

C. Accessories: (Select)

1. Aisles shall be footrest level inches wide to provide aisles.
Aisles at the footrest level shall have non-slip treads on the top front edge.
2. Intermediate aisle steps shall be provided. Steps are permanently attached closed design. Steps shall be designed to eliminate any possible toe catch between the top of the intermediate step and the bottom of the nose beam per ADA or other applicable codes. Front step shall be hinged for storage on first row deck without the need for removal.
3. Aisle handrails. (Select a, b or c)
 - a. Smart Rail aisle handrails shall be provided. Aisle railings shall quickly and easily rotate 90 degrees to the locked position and store parallel to the front of the aisle. Railings that require removal from the pocket or the use of tools for storage will not be acceptable. Aisle railings shall also be capable of remaining in the use position during operation, eliminating any rail setup or takedown time. Aisle railings shall be an individual rail design, located on every other row starting at row two (2). Railing to be constructed of 1 1/2" 11 ga. round steel tubing, finished in a textured powder coated epoxy. For safety, railings designed without a full return of the handrail will not be acceptable. Smart rail can only be used on 22"-26" spacing.
 - b. Removable aisle handrails shall be provided. Aisle railings shall be an individual rail design, located on every other row starting at row two (2). Railing to be constructed of 1 1/2" 11 ga. round steel tubing, finished in a textured powder coated epoxy. Aisle rails spanning several rows, or rails made from square tubing will not be acceptable. For safety, rail pockets that protrude beyond the face of the bleacher while in the closed position or railings with blunt, non-turned ends will not be allowed.
 - c. Non-removable folding aisle handrails shall be provided. Aisle railings shall be permanently attached to the mounting pocket and allow railings to pivot and fold within the deck without the need for removal. Aisle railing shall be an individual rail design, located on every other row starting at row two (2). Railing to be constructed of 1 1/2" 11 ga. round steel tubing, finished in a textured powder coated epoxy. Aisle rails that require removal, rails made of square tubing or rail systems spanning several rows will not be acceptable. For safety, rail or rail pockets that protrude beyond the face of the bleacher while in the closed position or railings with blunt, non-turned ends will not be allowed.
4. Wheel Chair Seating Areas. (Select a or b)
 - a. Permanent wheel chair spaces shall be provided at the section joint location or section length as shown on plans. Permanent notches to have a Panelam closure panel to eliminate any open areas under the system. Closure panels to support row two eliminating damage to the understructure or the need for front railings.

- b. Recoverable wheel chair spaces shall be provided at the section joint location or section length as shown on plans. An integral support on row two shall be provided to eliminate structural damage to the understructure during the operation and use of the system. Recoverable seating areas do not require front railings for support.
- 5. End rails. (Select a or b)
 - a. End rails of the self-storing type, finished with textured epoxy powder-coated black enamel, shall be provided at the open ends of the group. End rails shall start at row three and meet all national building codes. Railings with flexible uprights that can be expanded beyond the 4" sphere are not acceptable.
 - b. End rails of the vertical, removable type, finished with textured epoxy powder-coated black enamel, shall be provided at the open ends of the seating areas. Each area the rails are intended to be used shall be equipped with permanent slide-out pockets allowing the rails to be securely attached. End rails shall start at row three and meet all national building codes. Railings with flexible uprights that can be expanded beyond the 4" sphere are not acceptable.
- 6. End panels of plywood and supports shall be provided to enclose the open ends of the group in the closed position. End panels shall enclose the space between the wall and the back of the self-storing end rails. Finish to match deck panels.
- 7. Vinyl end curtain closures.
 - a. Vinyl end curtains shall be provided to limit unauthorized access to the underside of the telescopic system. Curtain to be one piece design shaped to follow the angles of the unit in the open position, and constructed of a sturdy vinyl material with sewn-in grommets for attachment. Color to be selected from manufacturer's standard selection.
- 8. Scorer's table shall be 8' x 15" wide of wood grain high pressure laminate. Scorer's table shall be relocatable to any row of any section without the use of mounting sockets.
- 9. Seat level rear filler panels used to close openings between top row seat and wall. Closure panel to match panelam deck surface.
- 10. Folding Back Supports (U.S. Patent #7,267,403) shall be permanently attached to each seating position and shall fold forward and store on the seat. Each individual back support is easily raised into the use position by the patron, and will close automatically with the operation of the bleacher system. Each back support shall be blow-molded, double walled, impact resistant polyethylene plastic in a textured finish. Colors to be coordinated with the plastic seat module or as selected by architect/owner. Each back support shall have one location on the front side for a seat donor tag, and one location on the back for a seat number tag. The folding back support requires a minimum of 26" row spacing and 12" rise.

11. Fold-Down Backrests shall be permanently attached behind each seating row (except the last row) and shall fold and store on the deck without the need for removal. All backrest support brackets shall be finished in a texture powder coated epoxy. Backrest boards shall be 3/4" thick x 5" high clear yellow pine graded "B & better" and finished with clear polyurethane on all sides. Fold-down backrest requires a minimum of 31" row spacing.
12. Portable operator handle with tug frames for use in assisting manually operated bleachers shall be supplied. "T" frame handle to allow two operators to open and close bleacher sections from a standing position.
13. Full width back panels for portable, forward fold or free standing units shall be provided. Panels shall extend to 8' above the floor with a sturdy vinyl curtain material extending to the underneath side of the last row seat. Finish to match deck panels. Curtains to be selected from manufacturer's standard colors. Plywood shall be supported along the front and back edge for maximum rigidity. An "H" type aluminum splice beam shall be provided between all panels. Plywood with clear or painted finish is unacceptable.
14. Rear rails, 42" high for portable and forward fold units with tubular supports to fill design criteria, shall be provided. Rails to be mounted behind the rear seat and extend the full length of the seating section. Railings to be finished in textured powder coated epoxy.
15. Transport systems for portable units. (Select a or b)
 - a. Integral Airlift System: Provide each portable seating section with a minimum of 2 self-contained integral airlift units. Each lift unit to be constructed from heavy gauge steel designed to support the overall weight, as well as the forces applied in relocating the seating unit. Each seating section shall be equipped with a minimum of 4 swiveling Tri-Caster assemblies (12 individual caster wheels). The total number and type of caster to be determined by the manufacturer based on the overall weight and flooring surface. To reduce the effort needed to relocate the seating unit and allow greater mobility, each caster assemble shall be attached to a caster plate that swivels independently of the tri-casters by means of high quality ball bearings. Each seating section shall be equipped with quick disconnect air valves at both ends of section for ease of operation. Supply one 1-1/2 HP 125 PSI portable air compressor with tank. Architect/owner to coordinate the compatibility of the portable seating and floor surface with the flooring manufacturer.
 - b. Portable Dollies: Provide a pair of mobile hydraulic lift dollies suitable for the transport of portable seating. Each lift dolly to be constructed from heavy gauge steel designed to support the overall weight, as well as the forces applied in relocating the seating unit. Each seating section shall be equipped with a minimum of 4 swiveling Tri-Caster assemblies (12

individual caster wheels). The total number and type of caster to be determined by the manufacturer based on the overall weight and flooring surface. To reduce the effort needed to relocate the seating unit and allow greater mobility, each caster assemble shall be attached to a caster plate that swivels independently of the tri-casters by means of high quality ball bearings. Architect/owner to coordinate the compatibility of the portable seating and flooring surface. Architect/Owner to coordinate the compatibility between seating unit and floor surface with the flooring manufacturer.

2.3 FABRICATION

A. Understructure System:

1. Steel supports and rolling frames shall be constructed of formed steel shapes of the size and shape necessary to support the design loads. All support bracing shall begin at Row 2 and be of diagonal or "knee" type for rigidity. Diagonal bracing to be a "U" shaped formed steel channel. Angle iron or "X" type bracing is unacceptable.
2. Wheels shall not be less than 4" diameter x 1" non-marring soft rubber face to protect wood or synthetic floor surfaces. Each operating row shall have a minimum of 8 wheels.
3. Each fully skirted wheel channel shall be continuously in contact with adjacent channels by nylon guides, to eliminate metal-to-metal contact, and non-binding Quadra-Link guide rods to provide alignment when opening and closing. Lubrication shall not be required either at time of installation or periodically.
4. Each cantilever arm shall be triple-formed 10-gauge steel, securely welded to the post assembly and contain non-binding Quadra-Link interlocks with each row post assembly. Does not require lubrication at time of installation or periodically.
5. Vertical columns shall be high tensile steel structural tube to meet design criteria. Minimum column size to be 1 1/2" by 3" 11-gauge structural tube.
6. Deck supports shall be bolted to both the rear beam and the nose with locking hardware.

B. Seat Systems:

(Select 1, 2 or 3)

1. Plastic Seat Modules

- a. Shall each be 18" long, one piece, with scuff resistant textured surface 10" deep and contoured seat surface with vertical front. (12" deep also available on 24" or deeper spacing)
- b. Shall be blow-molded, double-walled, high density, impact resistant, UV stabilized, linear polyethylene available in 12 bright standard colors, as selected by architect/owner. Custom colors available as an option.
- c. Each module to be bracket supported with concealed mounting hardware attachment for rigidity.
- d. Modules shall allow a full 26 1/4" unobstructed area for foot room comfort and cleaning. Modules with external ribs or multiple piece modules are not acceptable.
- e. Each module has two recessed areas for seat number locations. Number plates are optional.

2. Seats shall be 4/4" nominal thickness by 10" nominal depth, kiln dried, finger jointed, solid or edge glued Southern Pine Grade "C and better" upgraded to "B and better" to conform with Southern Pine Inspection Bureau, (SPIB), Grading Rules. Seat boards shall be continuously supported along the-front edge. Riser boards shall be an actual dimension of 8" wide by 3/4" thick, finger jointed, solid or edge glued Southern Pine Grade "C and better" upgraded to "B and better" in conformity with SPIB Grading Rules.
3. Seats shall be 5/4" nominal thickness by 11" actual depth (10" depth on 22" spacing) finger jointed, solid or edge glued Southern Pine Grade "C and better" upgraded to "B and better." Riser boards shall be an actual dimension of 8" wide by 3/4" thick, finger jointed, or edge glued solid Southern Pine Grade "C and better" upgraded to "B and better" in conformity with SPIB Grading Rules.
4. Wood seats and riser boards to be machine and hand sanded and finished with a moisture repellent sealer coat on all surfaces. Finish to be UV cured, water based polyurethane with a high gloss clear coat.

C. Deck System:

1. Decking: Panelam decking shall have a 0.030 (30 thousandths) high density polyethylene overlay, permanently bonded to structural western fir plywood in strict compliance with U.S. Product Standard PS 195. Finish thickness to be 5/8". Polyethylene finish to be textured grey or beige. Plywood shall be supported along the front and back edge for maximum rigidity. An "H" type aluminum splice beam shall be provided between all decks. Plywood with clear or painted finish is unacceptable. Decking shall be through-bolted to steel supports with locking hardware. Decking attached by the use of self-tapping fasteners or retained by friction only is unacceptable.
2. Nosing: Nosing with panelam decks shall be one piece, formed, 14-gauge steel with a minimum G-60 pre-galvanized finish.
3. Rear Risers: Rear riser shall be a minimum 14-gauge formed steel with a minimum G-60 pre-galvanized finish.
4. Formed Steel Deck Support Members: Support members shall be a minimum of 10-gauge formed steel and connect the front nosing and rear riser members. These shall provide support for the decking, throughout its length, and at intermediate locations to limit deflection. Deck supports to have maximum spacing of 60" up to 26" row spacing, and 40" up to 33" row spacing.

D. Finish

1. For rust resistance in standard or high humidity conditions all painted surfaces shall be finished in textured Epoxy Powder Coated Semi-Gloss Black.

2.4 PROPULSION SYSTEM (Select A, B or C)

- A. **MANUAL:** For manually operated bleachers, individual sections containing a series of tiered rows shall be manually opened and closed. Each tiered row shall have mechanical locks to keep rows fully extended when in the open position. Row locks shall automatically release upon operation of release lever in the front skirt panel. Hinging of the lower skirt board is not acceptable.
- B. **FRICTION POWER:** The entire group shall open and close, by the friction drive system, as a complete unit. The manufacturer will determine the number of power units required based on the group length and number of rows involved.

1. Each power unit shall use two large 6" diameter by 9 1/2" long tube with non-marring 112" thick rubber covering to grip floor for opening and closing.
 2. The power units shall develop tractive forces adequate to operate bleachers under normal conditions but inadequate to operate should significant obstacles be encountered.
- C. NON-FRICTION POWER SYSTEM (Patent#6,199,325): The entire group shall open and close by non-friction drive system, as a complete unit. The manufacturer shall determine the number of power units required based on the group length and number of rows involved. The drive mechanism uses a series of non-slip pusher link mechanisms, ensuring straight-line operation. All internal components, including full open and closed mechanical limit controls, shall be completely shrouded for safety. Non-friction drive system is limited to 25' of operating distance only. Friction to the floor systems are not acceptable.
- D. Manufacturer shall provide all wiring from power source within bleacher seating including pendant control. Removable pendant control shall be hand held with forward and reverse button, plugging into a single receptacle. Electrical contractor shall provide 120V single phase or 208/230V, 5 wire 3-phase, 60HZ power source (please specify) behind each group of seating. Amperage to be as specified by seating manufacturer depending on the number of power units required. For wall-attached installations, power source to terminate in a surface mounted junction box above floor. For reverse units; power source to terminate in a junction box, flush mounted under first seating row in center of group. Electrical contractor shall perform the connections to the seating equipment at the junction box. All electrical parts and wiring shall be installed in complete accord with the National Electric Code. All systems shall be designed to comply with U.L. (U.L. Listing #E168517)

3.1 REVIEWS AND APPROVALS

- A. Shop drawings shall be approved and job site field measurements taken prior to installation and telescopic gym seating shall be installed in conformance therewith.

3.2 INSTALLATION

- A. The installation of the telescopic gym seating will be handled directly by the manufacturer or by a factory authorized installation subcontractor qualified to perform the installation function.

3.3 PROTECTION

- A. The manufacturer's representative shall transmit instructions in both operation and maintenance to the owner.
- B. Maintenance and operation of the telescopic gym seating shall be the responsibility of the owner or his duly authorized representative, and shall include the following:
 1. During operation of the telescopic gym seating, the opening and closing 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 telescopic gym seating.
 3. An annual inspection and required maintenance of all telescopic gym seating shall be performed to assure safe conditions. At least bi-annually, the inspection shall be performed by a Professional Engineer or factory service personnel.
- C. Irwin Telescopic Seating Company constantly strives to improve its product and manufacturing methods; therefore, it reserves the right to make changes without notice which, in the opinion of Irwin Telescopic Seating Company, shall improve the product.

INVITATION FOR BIDS

BLEACHERS AND RELATED PRODUCTS BID #21-374

*KODIAK SEATING SYSTEMS

SEATING CAPACITIES & SIGHTLINE CALCULATIONS:

1. Forward fold bleachers, Reverse fold
2. Friction power
3. Seating Spacing- 22", 24", 26", 30", 32", 33"
4. Rise- 10", 10 - 1/4", 11- 1/2", 11 5/8", 16"
5. Footrest aisles w/intermediate aisle steps.
6. Non – removable center hand rails/not to exceed the front edge of bleacher when stored.
7. Panelam decking / poly coated plywood is not acceptable.
8. All painted surfaces to be epoxy powder paint.
9. Hinged first aisle step/ must be stored within the closed bleacher.
10. Recoverable ADA seating with guardrails on row above.
11. Bleacher system must have a UL listing.
12. UBC 97 or UBC 94 compliant

Your price should be in strict compliance with the attached specification. If it is not please note by attaching addendum stating reasons.

Specifications

SECTION 12760 - TELESCOPING GYM SEATS **PART 1 GENERAL**

SUMMARY

- A. Bleacher System shall be Kodiak Series 2400 Bleachers as manufactured by Kodiak Industries Ltd., Winnipeg, Manitoba, in accordance with applicable codes, the following specifications, and approved drawings.
- B. Related Sections
1. Division 16 Electrical sections for electrical wiring and connections for electrically operated telescoping Gym Seats.

REFERENCES

- A. National Fire Protection Association (NFPA)
1. NFPA 102 Standard for Assembly Seating, Tents and Membrane Structures.
- B. American Welding society (AWS):
1. AWS D1.1 Structural Welding Code - Steel.
 2. AWS D1.3 Structural Welding Code - Sheet Steel.

- C. Americans with Disability Act (ADA)
1. ADA - Standards for Accessible Design.

MANUFACTURER'S SYSTEM ENGINEERING DESCRIPTION

- A. Structural Performance: Engineer, fabricate and install telescopic gym seat to the following structural loads without exceeding allowable design working stresses of materials involved, including anchors and connection. Apply each load to produce maximum stress in each respective component of each gym seat unit.
1. Design Loads: Comply with NFPA 102, 1992 Edition, Chapter 5 for design loads.
- B. Design Criteria:
1. Bleachers shall be designed at minimum to withstand the following loads and forces in addition to their own weight:
 - a) Seat and footboards shall be designed to withstand a vertical live load of 120 lbs. per lineal foot (178 kg / m)
 - b) Platforms shall be designed to withstand a vertical live load of 100 lbs. per square foot (488 kg / sq.m)
 - c) Each row shall withstand a horizontal side sway force of 24 lbs. per lineal foot (37.5 kg / meter)
 - d) End and back rails shall withstand an outward force of 50 lbs. per lineal foot at the top rail (74.4 kg / m)

SUBMITTALS

- A. 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.
- B. Samples: Seat materials and color finish as selected by Architect from manufacturers standard color finishes.
- C. Warranty: Manufacturers standard warranty documents.

QUALITY ASSURANCE

- A. NFPA Standard: Comply with current NFPA 102 Standard for Assembly seating, Tents, and Membrane Structures, and specifically with Chapter 5 Folding and Telescopic Seating, 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. Manufacturer Qualifications: Manufacturer who has MINIMUM twenty years of experience manufacturing telescoping gym seats.
- D. Installer Qualifications: Engage experienced Installer who has specialized in installation of telescoping gym types similar to types required for this project and who is acceptable to, or certified by, telescoping gym seat manufacturer.

WARRANTY

A. One (1) year Guarantee: The entire installation will be guaranteed against faulty materials and workmanship for a period of one (1) year. This guarantee excludes any parts determined to have been subject to accident, abuse, misuse or neglect.

PART 2 - PRODUCTS **MANUFACTURERS**

Manufacturer: Kodiak Industries Ltd

615 Kernaghan Avenue, Winnipeg, MB, Canada, R2C 5G8

Telephone: (204) 224-3221; Fax: (204) 224-1577

Website: <http://www.kodiakgym.coM>,

SUPPLY AND INSTALL

A. Seating Area:

_____ Groups _____ Feet Long _____ Rows High

Select: (Wall Attached / Floor Attached / Portable / Recessed / Reverse Fold.

Note: For all other configurations, contact Kodiak)

Select: (Manually Operated / Electrically Operated)

B. Dimensions:

1. Rise per row: (Select: 9-5/8" / 10-1/4" / 11-5/8" / 16". Note: For special rises contact Kodiak)

2. Row spacing: (Select: 22" / 24" / 26" / 30" / 32" / 33". Note: For special row spacings contact Kodiak)

3. Closed dimension: _____

4. Extended dimension: _____

C. Accessories (select from the following):

1. Aisles shall be footrest level _____" wide, or as per code. Aisles at the footrest level shall have non-slip treads on the top front edge.

2. End rails, Kodiak self-storing "insta-rails" shall be provided at the open ends of the group. All end rails must be designed to integrate with the decking and understructure. Rails shall meet all national codes. All rails shall be made from 1" OD cold rolled 14 gauge round.

3. Non-removable folding aisle handrails shall be provided. Aisle railings shall be permanently attached to the mounting pocket and allow railings to pivot and fold sideways and down for storage. Aisle railing shall be an individual rail design, located on every other row starting at row two (2). Railings to be constructed of 1.5" round stainless steel tubing. Aisle rails that require removal are not acceptable.

4. Provided One (1) Scorer's Table

5. ADA truncations required as recommended by manufacturer and as per ADA

6. Removable Folding End Rails (if required)
7. Back Rails (for reverse fold or portable)
8. Front Rails (if required)
9. End Panels (to the 8' level)
10. Back Panels (for reverse fold or portable)
11. Rear Filler Board (at seat height)

UNDERSTRUCTURE FABRICATION

- A. All bleacher wheels shall be a minimum 4" in diameter with 1 1/4" soft, non-marring face for floor protection.
- B. Each row shall be outfitted with a minimum of eight (8) of the above wheels.
- C. Bleacher uprights shall be made of square and rectangular tubing. All bleacher leg tubing to be minimum 1.5" x 3" rectangular hollow structural tube (MINIMUM 125 wall). Tubing will be manufactured to B.W.G. specifications using S.A. E. 1010 steel. Structural "C" formed steel is not acceptable.
- D. All wheel channels to be 11 gauge steel.
- E. All bleacher slide arms to be 10 gauge steel.
- F. All bracing to be angle iron starting at row two as follows:
 - Rows 2 – 4 1 1/8" x 1.5" x 1.5"
 - Rows 5 – 8 1 1/8" x 2" x 2"
 - Rows 9 – 14 3/16" x 3" x 3"
 - Rows 15+ 1/4" x 3.5" x 3.5"Flat bar or formed steel bracing is not acceptable.
- G. Travel distance of each row shall be determined by the steel horizontal members under each row (or deck) and also by the mechanical trip-locks at the bottom of each upright. All row-locks must be a minimum 1/4" steel.
- H. Platform decks shall be manufactured using 3/4" Fir or Southern Yellow pine Plywood or Panelam decking (Specify). Note: 5/8" decking is not acceptable.
- I. Plywood deck shall be supported over full length by rear and front channel. In addition, front and back supports will be supplied as required. Rear and front channels shall be 16 gauge galvanized steel.
- J. All hardware shall be plated and stress rated.

BLEACHER FINISH

- A. All steel framing shall be finished with a Saddle Brown or Flat Black.
- B. Rear and front channels shall be galvanized.
- C. CSM seats to be high-density structural foam polyethylene, 10" deep x 18" long or 12" deep x 18" long (specify) in choice of manufacturer's 12 standard solid colors (Note: custom colors available). Each module shall interlock to the adjacent module both around the perimeter and along the internal ribs to eliminate pinching hazards and assure proper alignment. A steel-to-steel attachment of each module to a galvanized steel nose-beam shall be provided for maximum rigidity. All seat module brackets must be double through-bolted into the deck structure. Single through-bolting is not acceptable.
- D. Vinyl on Steel (V.O.S.) seat and riser boards shall be one-piece formed, using 16 gauge sheet metal with a MINIMUM 10 mill vinyl laminate. Less than 10 Mill is not acceptable.

- E. All wood seat and riser boards shall be 5/4" or 4/4" (specify) Southern Yellow Pine. Boards shall be double sanded and receive two (2) coats of clear lacquer.
- F. Plywood foot-boards shall be finished with two (2) coats of industrial enamel No. 2416-4. Latex semi-gloss paint designed to meet environmental requirements.

ELECTRICAL OPERATION

A. Posi-Drive" Propulsion System:

1. The entire system shall open and close by the Kodiak "Posi-Drive" system. All Motors to be 1/2 HP instant reversing automatic reset 120 / 208 / 240 VAC. All tractor frames to be made from 7 gauge steel. All axle shafts to be 1" steel. All wheels to be vulcanized rubber. All drive chains and sprockets to be #50. All speed reducers to be Helical Drive. All tractors in the system must be mounted "free floating" to the first row of the bleacher with Heavy duty hinges and grade 5 hardened steel through-bolts (for up to 11 rows) or 2 only 1" steel motor mount rods (12 rows plus), with steel bar weight harnesses set over the tractors according to duty. Number of tractors and added weight to be determined by requirements based on number of rows and type of seating. "Frictionless" systems and systems not independently operating under their own weight and requiring weight transfer from the bleacher system itself are not acceptable.
2. Manufacturer shall provide all wiring from power source within the bleacher systems including pendant control. Power requirement to be determined by seating manufacturer depending on the number of power units required. Power source to terminate in surface mounted junction box above the floor. Electrical contractor shall perform all connections to the seating equipment at the junction box.

PART 3 – EXECUTION

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: 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, lubricate, 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 to restore damage or soiled surfaces.