

INVITATION FOR BIDS
AUDITORIUM SEATING EQUIPMENT AND SUPPLIES
BID #21-373

Seating Specification Irwin Seating Company

Model: 4.12.56.8 Citation

Part 1: General Specifications

- 1.01 Scope:**
Deliver and install fixed upholstered chairs with upholstered seat and back, and aisle and center standards, all as specified, floor mounted, with self-lifting seat which raises automatically to a uniform 3/4 fold position.
- 1.02 ADA:**
Comply with ADA (Americans with Disabilities Act) Rules and Regulations.
- 1.03 Sizes:**
Varying lateral sizes of backs shall be used in accordance with approved seating plans, with standards in each row spaced laterally so that the end standards shall be in alignment from first to last row whether aisles are of constant or converging width.
- 1.04 Shop Drawings:**
Submit a complete seating plan developed from the contract drawings, showing all chairs, sizes, and aisle widths. Assume complete responsibility for the accuracy of all chair measurements shown on the seating plan.
- 1.05 Examination & Acceptance of Work in Place:**
Examine work in place on which seating work is dependent. Defects which may influence satisfactory completion and performance of seating work shall be corrected in accordance with the requirements of the applicable section of work prior to commencement of seating work.
- 1.06 Field Measurements:**
Take field measurements to verify or supplement dimensions indicated. Be responsible for accurate fit of work.
- 1.07 Materials and Workmanship:**
- a. Provide new materials of types specified.
 - b. Turn over all work to the owner in undamaged condition.
 - c. Provide workmanship of the best quality by craftsmen skilled in their respective trades.
- 1.08 Fire Performance Characteristics of Upholstered Seating:**
Chairs provided shall have been certified as meeting the flammability requirements of California Technical Bulletin No. 133, Flammability Test Procedure for Seating

Furniture for Use in Public Occupancies, developed by the California Bureau of Home Furnishings and Thermal Insulation.

1.09 Quality Assurance:

To assure high and satisfactory quality, design, color and operation of products, reference has been made to brand names; however, it is not intended to limit competition and items of brands that are equal will be given full consideration.

Base Specification: Specified Irwin Seating Company	Fixed Chair Irwin Seating 4.12.56.8 Citation
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1.10 Responsibility of Bidder:

The bidder must provide the following with his bid:

Bidder shall submit a list of five (5) seating projects of similar size which have been in service for 5 years or longer. Projects submitted shall incorporate chairs with seats, backs and standards consistent with those offered on this project.

1.11 Delivery:

Deliver the seating at a proper time for installation that will not interfere with other trades operating in the building. Bid seating for installation and completion as directed by owner after that date.

1.12 Warranty:

- a. Provide a manufacturer's warranty covering the material and workmanship for a period of one year from date of final acceptance.
- b. Repair or replace any part which becomes defective during the warranty period, except where the product has been subject to accident, alterations, abuse, misuse or neglect.

Part 2: Material Specifications

2.01 Steel:

Steel shall be the primary structural material for chair support systems, including aisle and center standards, and back component attachment. Steel structural components shall be die-formed according to modern manufacturing methods, and assembled by means of state-of-the-art MIG welding processes. All steel shall have smooth surfaces and be of sufficient gauge thickness and designed to withstand strains of normal use.

2.02 Wood:

All plywood shall be hardwood, hot press laminated using high frequency processes. Interior plies shall be Class 3 or better. All exposed, solid northern grown maple shall be clear and selected by color. Medium Density Fiberboard shall be resin bonded of wood particles, 5/8" minimum thickness, 45 lb./cu. ft. density.

2.03 Plastic Components:

- a. Injection molded structural plastic shall be one-piece, high impact resistant, 25% glass-filled polypropylene with built-in ultra-violet light inhibitors to retard fading.
- b. Injection molded decorative plastic shall be one-piece, high impact, linear polyethylene with built-in ultra-violet light inhibitors to retard fading.
- c. Plastic laminate shall be minimum 0.030 inch thickness, composed of a core of

kraft papers impregnated with phenolic resins, a decorative surface sheet, and overlay sheet containing melamine. Layers are fused together under pressures in excess of 1000 PSI, and temperatures over 275 degrees. Plastic laminate shall meet or exceed performance standards as established by N.E.M.A.

- d. Plastic shall have a maximum burn rate of 1" per minute when tested in accordance with ASTM D635, or Department of Transportation Motor Vehicle Safety Standard No. 302.

2.04 Padding Material:

Seat and back padding material shall be of new (prime manufacture) polyurethane foam. Padding material shall comply with the flammability requirements outlined in the California Technical Information Bulletin #117, Resilient Cellular Materials, Section A & D, dated February 1975, when tested in accordance with Federal Test Method Standard 191, Method 5903.2.

2.05 Fabric:

A specification for upholstered chairs is expected to contain a description of upholstery fabric required; otherwise the seating contractor must base a bid on their own choice. A wide variety of upholstery materials are available from a multitude of sources. Designer has great discretion in the fabric to be used. It is recommended that auditorium chair upholstery fabrics offer resistance to abrasion, stretch, seam failure when sewn, crocking, and allow finished chairs to have a reasonable cost. Further, it is required that fabric shall meet Class 1 flammability requirements of the U.S. Department of Commerce Commercial Standard 191-53 per Bulletin #117 (California Code).

2.06 Finish:

a. Metal Parts:

All exposed metal parts shall be powder coated with a hybrid thermosetting powder coat finish. The powder coat finish shall be applied by electrostatic means to a thickness of 2 - 5 mils, and shall provide a durable coating having a 2H Pencil hardness. Prior to powder coating, metal parts shall be treated with a three-stage bonderization process for superior finish adhesion, and after coating shall be oven baked to cause proper flow of the epoxy powder to result in a smooth, durable finish. Manufacturer's standard color range shall be used.

b. Wood Parts:

All exposed surfaces shall be stained to color selected and coated with lacquer of sufficient film depth to afford wear resistance of institutional quality and oven baked.

c. Plastic Parts:

Color of plastic shall be selected from manufacturer's standard color range.

d. Hardware:

All assembly hardware shall be rust resistant, black plated.

Part 3: Construction

3.01 Upholstered Chair Backs:

Backs shall be regular rectangular shaped, padded and upholstered on their face, with a one-piece injection molded plastic rear panel, and shall extend to a nominal 32" above finished floor. Structure of the back component shall be provided by a 7/16" thick, 5-ply hardwood inner panel, which shall serve as a foundation for the

upholstery. The face of the back shall be upholstered over a 2 inch thick polyurethane foam pad. The polyfoam pad shall be securely cemented to the plywood inner panel and the upholstery fabric shall be securely fastened to the hardwood inner panel by means of upholstery staples to facilitate ease of re-upholstering. The outer panel shall be injection molded HDPE plastic, high impact-resistant, with textured outer surface, formed to enclose the edges of the inner upholstery panel at the top and both sides of the back, and shall be not less than 26" in length, extending below the seat level to protect the seat cushion. There shall be no exposed screws above the armrests. Back wings for attaching the back to the standards shall be not less than 14 gauge (.0747") steel, secured to the inner panel by through-bolting via four (4) machine screws and threaded steel washers. Back wings shall provide for 16 degree, 20 degree, or 24 degree pitch of back.

3.02 Upholstered Self-Lifting Seat:

Seats shall be upholstered on their face with serpentine spring cushions supported by a structural, injection molded polypropylene foundation, and shall be quietly and automatically self-lifting to a 3/4 fold position when unoccupied. Seats shall be certified through routine testing during manufacturing to pass seat cycle oscillation, ASTM Designation F851-87 Test Method for Self-Rising Seat Mechanism, and 600 lb. static load to front of seat.

- a. The seat cushion shall have a base structure of five serpentine springs spanning a structural, injection molded, glass-filled polypropylene frame. Serpentine arch springs spanning the frame shall be isolated from the polyurethane foam cushion by a tough, durable, non-woven, non-vegetable chafing barrier integrally molded with the cushion. The seat cushion shall have an extended front, high resilient polyurethane foam pad, molded to the contour of the springs on the bottom and providing a flat surface on the top of the cushion with a crisp, waterfall leading edge. Height of the cushion at the front edge shall be consistent at approximately 3-1/2" above the foundation. The specified fabric, carefully tailored, shall be of panel-side construction, secured around the perimeter of the cushion frame by means of a drawstring and staples. The seat cushion assembly shall be securely locked to the seat foundation, preventing unauthorized removal; but facilitating convenient removal by trained maintenance personnel.
- b. Seat foundation shall be 25% glass-filled, injection molded polypropylene, strengthened by deep internal ribs and gussets, completely enclosing the self-lifting hinge mechanism, and providing an attractive, decorative bottom surface for the seat. Bolted attachment of the seat component to the chair structure shall be concealed by a color-coordinated plastic cap to present a finished, refined appearance. Bottom decorative surface shall be textured matching other plastic components in color.
- c. When unoccupied, the seat shall quietly and automatically rise to a 3/4 fold position, and upon a slight rearward pressure, shall achieve full-fold, allowing the patron additional passing room. The seat shall rotate on two, molded, structural, glass-filled nylon hinge rods in internally molded channels with integral downstops for exceptional strength. Seat-lift shall be accomplished by compression springs and lubricated plastic cams, providing quiet gentle seat uplift. Downstops and upstops shall be non-metallic, eliminating plangent noise and providing quiet operation.

3.03 Standards:

- a. Aisle standards shall be of modern pedestal design with the rectangular decorator panels approximately 11-1/2" x 17-1/2" with radiused bottom corners. Aisle panels shall be constructed of medium density fiberboard (MDF), surfaced with plastic

laminate specified and attached to a formed, 14 gauge (0.0747") steel panel that is welded to the column. Structure of the aisle standards shall be provided by 1" x 3" rectangular columns of 14 gauge (.0747) steel. The top of the column shall be provided with two formed steel dovetail lugs for secure attachment of the armrests. Brackets for seat attachment shall be 7 gauge (.1875") buttressed steel welded on the inside of the standard.

- b. Center standards shall be of welded steel, modern pedestal design, fabricated of 14 gauge (.0747") steel to a 1" x 3" rectangular column. Brackets for seat support shall be 7 gauge (.1875") steel for superior strength, formed with an integral support buttress, and wing plates for mounting backs shall be 14 ga. (.0747") steel; both MIG-welded to the pedestal column to form a coherent unit. The top of the column shall be provided with two formed steel dovetails for secure attachment of the armrests.
- c. Floor mounted standards shall be provided with a formed 14 gauge (.0747) steel foot welded to the bottom of the rectangular column. This weldment shall be at all critical stress areas 360 degrees around the column, and concealed on the inside so as not to detract from clean appearance of the column. The foot dimension shall be 8" x 2-3/4" to provide maximum bearing surface to the floor. The standard shall be fabricated to be compatible with the floor incline, and to maintain proper seat and back height and angle.

3.04 Armrests:

Armrests shall be provided for each center standard and aisle standard, and shall be injection molded semi-rigid polypropylene plastic. Armrests shall be a comfortable 3" minimum width, and shall extend beyond the support apparatus sufficiently to provide a 3-1/2" diameter receptacle drink containers. Cup receptacle shall be sized to receive and support a concession cup or drink container of standard sizes, as well as having an "X" bottom to contain parallel-sided containers. Armrests shall be solidly attached to steel standards by means of through bolts secured to steel threaded washers in such a way as to conceal all fastening from normal view, and prevent unauthorized removal.

3.05 Handicapped Access Aisle Standards:

Aisle standards designated on the contract drawings shall be designed to allow an individual to transfer from a wheelchair to the theatre chair. The aisle standard support column shall be inclined toward the rear by approximately 16 degrees, and shall be equipped with an armrest capable of lifting to a position parallel with the chair back, opening sideways access to the seat. Aisle standards so equipped shall be provided with a label, displaying an easily recognizable "handicapped" symbol. Decorative requirements of aisle standards are waived for the handicapped access standards.

Part 4: Execution

4.01 Scope of Work:

The installation shall be performed by the successful bidder, under the direction of a capable installation superintendent, in a manner satisfactory to the architect, and the job turned over to the owner with all chairs complete and ready to use.

4.02 Method of Installation:

The seating plan shall be reproduced on the floor, all dimensions checked against the plan and necessary adjustments made in the layout for all discrepancies.

Chairs shall be attached by means of an approved style of wedge-type, zinc plated

expansion anchors installed strictly according to the manufacturers' instructions. Floor mount chairs shall be attached with 1/4" expansion anchors by not less than 2-1/4" long. There shall be two (2) bolts per standard.

4.03

Cleaning:

Remove all debris caused by this work from the premises.