

Division 11 EQUIPMENT

11 66 00 GYMNASIUM ATHLETIC EQUIPMENT & LED INTERIOR SCOREBOARDS | 11 68 00 EXTERIOR SCOREBOARDS

LACCD Design Guidelines and Standards

04.29.2025

SECTIONS INTRODUCTION

Intent

The information presented here is to be used as standards for all projects undertaken within the District; and provides the Design Team and District personnel with a general listing of design criteria for Gymnasium Athletic Equipment and Scoreboards. The minimum criteria for establishment of these standards are quality, maintenance, cost, location, energy efficiency, life cycle costs, and safety. It is not the intent of these standards to insist upon any proprietary products, but merely to serve as a Basis-of-Design. The Design Team is responsible for ensuring the items listed herein are incorporated into the project; and variances from the items listed herein should be coordinated with the District and confirmed in writing.

General Requirements

Review product performance characteristics and expected tolerance thresholds for sunlight or overhead lighting (ambient contrast ratio), thermal performance (heat/solar radiation), humidity, electromagnetic noise, water resistance, and vibration for equipment and scoreboards.

Contractor shall provide a device matrix to record each device as part of the scoreboard system. The District will provide a template that will include information required by District, but will not be limited to: Device type, manufacturer, model number, serial number, MAC address, IP address, cable ID, network switch port, data drop info, default username and password, location, and asset management tag (for field identification). This applies to CFCI, CFOI, OFOI, OFCI equipment as part of the scoreboard system.

Commissioning Requirements

In alignment with ASHRAE/NIBS commissioning practices and District protocols, the following commissioning tasks should be verified for all permanently installed systems:

- Verify that systems and components meet design specifications and functional requirements.
- Functional testing of motors, gym equipment winches, divider curtains, control systems, and all scoreboard components.
- Integration testing to ensure all scoreboards, shot clocks, and
- consoles communicate correctly across wireless and hardwired interfaces.
- Electrical conduit and signal pathways within 3 feet of equipment are to be coordinated with electrical drawings and verified during commissioning.
- Verification of voltage alignment, switch operation, signal accuracy, and proper load performance.
- System-wide demonstration and training, documented with signed O&M manuals and commissioning logs.

Warranty Information and Review

Warranties will be reviewed and maintained throughout the project lifecycle, including documentation, reporting, and follow-up actions – and coverage includes:

- Provide warranty terms, conditions, and procedures for each piece of equipment, including the warranty period, coverage, and contact information for the manufacturer or supplier.
- Warranty review to ensure that warranties are properly documented and managed.
- Full parts exchange (including radios and electronic components) at no cost to the Owner.
- Toll-free support coordination and live technical support.
- Standard ground shipping included in warranty terms.
- The extended coverage promotes long-term system resilience and reduces lifecycle cost risks.
- Response within five (5) days of notification of warranty issue.

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SECTION 11 66 00

GYMNASIUM ATHLETIC EQUIPMENT & LED INTERIOR SCOREBOARDS

PART 1 GENERAL

A. SUMMARY

1. Scope:

- a. The work under this section includes the furnishing of all labor, material, equipment, supervision and services necessary for the execution and completion of all items necessary to provide complete and functioning Athletics Equipment and Scoreboards, delivery and installation as herein specified.
- b. Provide ten (10) years of no cost parts exchange including standard shipping on electronics parts and radios due to manufacturing defects. Provide toll-free support service coordination; and provide live technical online and phone support during business hours.
- c. All Owner's materials, software, manuals, guides or other supplied information shall be presented in a neat, orderly, and professional manner using binders, folders or other devices as necessary.

2. Section Includes:

- a. **11 66 23 Gymnasium Equipment**
 - Basketball Equipment
 - Volleyball / Badminton Equipment
 - Safety Pads
 - Scoring Console
 - Control Center
 - Shot Clock Timer Display
 - Mat Hoists and Floor Mats
- b. **11 66 43 Single-Sided LED Basketball Scoreboards**
 - Basketball / Volleyball / Badminton / Wrestling Scoreboards
 - LED Matrix Display
- c. **11 66 53 Gymnasium Dividers**
 - Divider Curtains
 - Divider System Accessories

B. RELATED DOCUMENTS

1. **Drawings and general provisions of the Contract, including General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.**
2. **References:**
 - a. Standard for Electric Signs, UL 48
 - b. Federal Communications Commission Regulation Part 15
 - c. National Electric Code

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C. ACTION SUBMITTALS

1. Submit for approval:

- a. Shop drawings and product data to properly illustrate the appearance and function of the proposed Gymnasium Athletic Equipment, and Scoreboards.

2. Product Data:

- a. Submit manufacturer's product illustrations, data and literature that fully describe the scoreboards and accessories proposed for installation. Include assembly, disassembly, and storage instructions for removable equipment.

3. Motors:

- a. Show nameplate data, ratings, characteristics, and mounting arrangements.

4. Shop Drawings:

- a. Submit mechanical and electrical drawings. Include plans, elevations, sections, and attachment details.
- b. Include details of field assembly for removable equipment, connections, installation, mountings, floor inserts, and operational clearances.
- c. Include transport and storage accessories for removable equipment.
- d. Include diagrams for power, signal, and control wiring.

5. Samples for Verification:

- a. For each exposed product and for each item and color specified.

6. Pad Fabric:

- a. Wall padding minimum 3 inches square with specified treatments applied. Mark face of material.

7. Gymnasium Dividers

8. Upon completion – Scoreboards vendor shall provide three (3) sets of equipment manuals and warranty documents for all equipment.

D. INFORMATIONAL SUBMITTALS

1. Gymnasium Equipment Coordination Drawings:

- a. Court layout plans, reflected ceiling plans, and other details, drawn to scale, and coordinated with ceiling-suspended gymnasium equipment, floor inserts, game lines, and markers applied to finished flooring, and coordinated with each other, using input from installers of the items involved:
 - Structural members to which overhead-supported gymnasium equipment will be attached.
 - Suspended ceiling components, if any.
 - Items supported from building structure above the courts, including the following:
 - Luminaires
 - Air outlets and inlets
 - Speakers
 - Sprinklers
 - Smoke detectors
 - Acoustical treatments or panels
 - Access panels
 - Setting Drawings: For embedded items and cutouts required in other work
 - Qualification Data: For Installer
 - Product Certificates: For each type of gymnasium equipment
 - Field quality-control reports
 - Sample Warranty: For special warranty

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E. CLOSEOUT SUBMITTALS

1. Operation and Maintenance Data:

- a. For gymnasium equipment and scoreboards to include in operation and maintenance manuals.
- b. Quality assurance.

2. Gymnasium Equipment Installer Qualifications:

- a. Fabricator of products, or an entity that employs installers and supervisors who are trained and approved by manufacturer.
- b. For indoor use only.

3. Source Limitations:

- a. Obtain each type of scoring equipment and electronic displays through one source from a single manufacturer.
- b. ETL listed to UL 48
- c. NEC compliant
- d. FCC compliant

F. WARRANTY

1. Gymnasium Equipment Special Warranty: Manufacturer agrees to repair or replace components that fail in materials or workmanship within specified warranty period.

2. Failures include, but are not limited to, the following:

- a. Basketball backboard failures, including glass breakage.
- b. Faulty operation of basketball backstops.

3. Warranty Period: Ten (10) years from date of Substantial Completion.

4. Scoreboard Warranty:

- a. Provide ten (10) years of no cost parts exchange including standard shipping on electronics parts and radios due to manufacturing defects.
- b. Provide toll-free service coordination.
- c. Provide technical online and phone support during Daktronics business hours.

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PART 2 PRODUCTS

A. PERFORMANCE REQUIREMENTS

1. Seismic Performance:

- a. Basketball backstops and anchors shall withstand the effects of earthquake motions determined according to ASCE/SEI 7 and California Building Code.

2. VOC limits for adhesives, sealants, fillers, primers, and coatings.

- a. Comply with the most stringent limited specified in pertinent Division 01 Sections and tested and determined compliant per the referenced standards for each material type.

3. Sustainability Performance Requirements:

- a. For all permanently installed products and materials related to the work of this Section, provide products and materials that meet the Project's performance criteria as outlined in pertinent Division 01 Sections.
- b. Provide products with the maximum possible amount of post-consumer and pre-consumer recycled content.
- c. Provide products extracted and manufactured within 100 miles of the project site wherever possible.
- d. Provide Type III Environmental Product Declaration disclosure documentation wherever available.
- e. Provide material ingredient transparency documentation wherever available.

B. BASKETBALL EQUIPMENT

1. Basketball Scoreboards:

- a. Daktronics, Inc., 201 Daktronics Drive, P.O. Box 5128, Brookings, South Dakota 57006-5128, (888) 325-8766, www.daktronics.com or approved equal.

2. Basketball Equipment:

- a. Jaypro Sports, LLC, 976 Hartford Turnpike, Waterford, CT 06385, (800) 243-0533, www.jayprosports.com or approved equal.
- b. Manufacturers of equivalent products submitted and approved in accordance with Division 01 Substitution Procedures.

3. Source Limitations:

- a. Obtain from single source from single manufacturer.

4. Protruding fasteners or exposed bolt heads on front face of backboards are not permitted.

5. Connections: Manufacturer's standard connections or connections recommended in writing by manufacturer and complying with Section 05 50 00 "Metal Fabrications" of size and type required to transfer loads to building structure.

6. Backstops:

- a. Basis-of-Design Product: Model J849-FFFB Forward Fold / Front Braced Backstop by Jaypro Sports.
- b. Folding Type: Manufacturer's standard assembly for backstop, with hardware and fittings to permit folding.
- c. Framing: Steel pipe, tubing, and shapes designed to minimize vibration during play.
 - Finish: Manufacturer's standard polyester powder-coat finish.

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7. Backstop Safety Device:

- a. Designed to limit free fall if support cable, chains, pulleys, fittings, winch, or related components fail; with mechanical automatic reset, load capacity as recommended by manufacturer for backstop specified; and one per folding backstop.
- b. Basis-of-Design Product: Model SBAL-30 Aut-O-Loc 2™ Safety Strap by Jaypro Sports.
- c. Retractor Device: Manufacturer's standard device designed to retract both support and safety cables, chains, and straps away from play of the basketball when backstop is in playing position; one per folding backstop.

8. Backstop Electric Operator:

- a. Provide operating machine of size and capacity recommended in writing by manufacturer for equipment specified, with electric motor and factory-prewired motor controls, starter, gear-reduction unit, and remote controls. Coordinate wiring requirements and electrical characteristics with building electrical system.
- b. Basis-of-Design Product: Model SBBW-4 Electric Positioning Winch by Jaypro Sports.
 - Electrical Components, Devices, and Accessories:
 - Listed and labeled according to NFPA 70, by a qualified testing agency, and marked for intended location and application.
 - Operator Type: Cable drum with grooved drum and cable tension device to automatically take up cable slack and retain cable in grooves.
 - Operator Mounting: As indicated.
 - Motor Electrical Characteristics:
 - Horsepower: As recommended by backstop manufacturer for backstop specified
 - Voltage: 115 V ac, single phase, 60 hertz.
 - Remote-Control Station(s): NEMA ICS 6, Type 1 enclosure for recessed or flush mounting and momentary-contact, three-position, switch-operated control with up, down, and off functions.
 - Group Key Switch Control Stations: One switch per each backstop.
 - Keys: Provide two sets of dual keys per station.
 - Switches, Ganged: Single faceplate with multiple switch cutouts as indicated on Drawings.
 - Limit Switches: Adjustable switches at each backstop, interlocked with motor controls and set to automatically stop backstop at fully retracted and fully lowered positions.
- c. Warranty: Manufacturer standard ten (10) year replacement warranty on all defects in material and workmanship. Any winch without this warranty does not meet these specifications and should not be considered equal.

9. Basketball Backboards:

- a. Shape and Size: Rectangular, 72 by 42 inches width by height, with rounded corners.
- b. Glass: Minimum 1/2-inch thick, transparent tempered glass according to ASTM C1048 Kind FT (fully tempered) and with impact-testing requirements in 16 CFR 1201 Category II or ANSI Z97.1 Class A for safety glazing. Provide glass and framing system manufactured according to FIBA Level 1 or Level 2 requirement that glass does not split off if broken.
- c. Frame: Provide glass with impact-absorbing resilient rubber or PVC gasket around perimeter in a fully welded, brushed-natural-finish, extruded-aluminum frame, with steel subframe, reinforcement, bracing, and mounting slots for mounting backboard frame to backstop.
- d. Direct Mount: Designed for mounting backboard frame to center mast of backstop, to maximize stress relief on backboard frame and glass.
- e. Rim-Restraining Device: According to NCAA and NFHS rules and designed to ensure that basket remains attached if glass backboard breaks.
- f. Target Area and Border Markings: Permanently etched in white color, marked in pattern and stripe width according to referenced standard rules.

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- g. Goal-Mounting Assembly: Compatible with goal, backboard, and backstop; with manufacturer's standard hole pattern for goal attachment.
- h. Glass Backboard Goal-Mounting Assembly: Goal support framing and reinforcement designed to transmit load from goal to backstop and to minimize stresses on glass backboard.
- i. Electric Height Adjuster: Model SEHA – Steel Electric Height Adjuster (10' to 8') by Jaypro Sports.

10. Basketball Goals:

- a. Basket ring complete with flanges, braces, attachment plate, and evenly spaced loops welded around underside of ring.
- b. Single-Rim Basket Ring Competition Goal: Materials, dimensions, and fabrication complying with referenced standard rules.
- c. Type: Pressure-release design with manufacturer's standard breakaway mechanism and rebound characteristics identical to those of fixed, non-movable ring.
- d. Pressure-Release Characteristics: Positive-lock movable breakaway design, with manufacturer's standard mechanism, including preset pressure release, set to release between 181- and 231-lb load, and automatic reset. Provide movable ring with rebound characteristics identical to those of fixed, non-movable ring.
- e. Field Adjustment: Provide ring that is field adjustable for rebound elasticity without being removed from the backboard.
- f. Net Attachment: Tube tie for attaching net to ring.
- g. Finish: Polyester powder-coat finish.

11. Basketball Nets:

- a. 12-loop-mesh net, between 15 and 18 inches long, sized to fit ring diameter.
- b. Competition Cord: Antiwhip, made from white nylon cord, minimum 120-gm thread and maximum 144-gm thread.

12. Backboard Safety Pads:

- a. Designed for backboard thickness and extending continuously along bottom and up sides of backboard and over backstop as required by referenced standard rules.

C. VOLLEYBALL EQUIPMENT

1. **Manufacturer – Basis-of-Design:** Jaypro Sports, LLC, 976 Hartford Turnpike, Waterford, CT 06385, (800) 243-0533, www.jayprosports.com or approved equal.
2. **Volleyball Ground Sleeves: Permanently placed floor inserts with heavy-duty cast brass finish and spring-loaded cover with lock, distributed as a pair:**
 - a. Basis-of-Design Product: Model PVB-75S Volleyball Ground Sleeve by Jaypro Sports.
 - Cover Plate Size: 7.5 inch outside diameter.
 - Ground Sleeve Size: 3.625 inch inside diameter X 10 inches deep.
3. **Volleyball Net System: System consisting of two uprights, one winch, one Flex Net, upright padding, and two antennae:**
 - a. Basis-of-Design Product: Model PVB-5000 3-1/2 inch Featherlite Collegiate Volleyball System by Jaypro Sports.
 - b. Complies with NFHS, NCAA, and USVBA regulations.

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- c. Uprights:
 - Two (2) uprights per system consisting of two-piece telescoping uprights providing 16 individual net height setting, from 6 feet 6 inches to 8 feet 2 inches, by means of an attached positive lock stopping pin.
 - Lower section of upright constructed of a 3-1/2 inch O.D. x 0.300-inch wall aluminum tube with a molded composite foot to protect the finished floor during transportation, storage, and installation of standards. Upper section of upright constructed of a 2-7/8-inch O.D. x 0.203-inch wall aluminum tube with a 4-1/2-inch diameter pulley wheel to accommodate the net tensioning straps.
 - Height Markers: Clearly marked at regulation play heights for girls/women and boys/men.
- 4. **Upright Padding: 2-inch-thick X 72-inch-high virgin polyurethane foam covered by a heavy duty 14 oz. polyester reinforced vinyl sewn into place:**
 - a. A 1-1/2-inch-wide vinyl and Velcro flap, sewn onto one pad, securely fastens to the edge of the other in attaching the pad snugly around standard. All sewing shall be of a lock stitch type, running stitch style of sewing shall not be considered equal. Velcro flap attachment shall be positioned to allow net cord or strap access to standards. Pad exceeds NFHS, NCAA and USVBA specifications for safety.
 - b. Color: As selected by Architect
- 5. **Winch: Tensioning winch with an internal worm gear construction with an effective 10:1 turn ratio to eliminate snap-back and completely enclosed with a welded steel cover:**
 - a. Provide winch with manufacturer's standard folding handle.
 - b. Nylon Strap: 1-1/2 inch wide, high tensile strength (7,700 lb.) with sewn snap buckle for completed cable-less design.
 - c. Winch is located on outside of post for added player safety. Anchor strap shall be adjustable and winch strap shall be long enough to readily adapt to varying sleeve installation widths.
- 6. **Volleyball Net: 32 feet long X 39 inches high; one per pair of paired uprights; and as follows:**
 - a. Top cable-less binding of 32 ft. 6 inches. A 2 inch, 10,000 lbs. tensile strength, white binding shall surround entire perimeter of net body.
 - b. High tensile strength hardened steel delta rings are attached to Net to allow connection to upright leader straps or cables.
 - c. Nylon Mesh: #21 black thread knotted nylon, 4-inch square mesh.
 - d. Dowels: Minimum 1/2-inch diameter EMT steel tubing. Provide two dowels per net threaded through each side hem sleeve for straightening net side edges.
- 7. **Net-Tensioning System: Designed to adjust and hold tension of net. 2-inch Velcro tensioning strap and metal buckle at bottom of net on each end:**
 - a. Cover each buckle with an attached, yet removable, Velcro strap for player safety. Volleyball nets with cables for tensioning are not considered equal.
- 8. **Net Antennas:**
 - a. Manufacturer's standard 72 inches long red and white antennae with clamp attachment.
 - b. Provide two antennas per net.
 - c. Clamps: Designed to secure antenna to top and bottom of net.
- 9. **Factory Assembly: Provide uprights with locking pin, pulley wheel, upper section, and lower section fully assembled.**
- 10. **System Finish:**
 - a. Uprights: Manufacturer's standard factory-applied black powder coat finish.

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11. Volleyball Net System Accessories:

- a. Judges' stands: manufacturer's standard adjustable-height units designed to be freestanding, folding for storage with wheels for transporting.
 - Basis-of-Design Product: Model VRS-6000 folding referee stand by Jaypro Sports, with vinyl padded platform.
 - Capacity: 250 lbs.
 - Referees stand ladder and main leg padding: model VRS-60p folding referee stand padding by Jaypro Sports. Color to match upright stand padding, as selected by architect.
- b. Net keeper and net storage bags:
 - Net keeper Basis-of-Design product: model VNK22 double net keeper by Jaypro Sports.
 - Color: manufacturer's standard blue powder coated finish.
 - Net storage bags Basis-of-Design product: model VNKbag net keeper storage bag by Jaypro Sports. Provide one (1) bag for each volleyball net.
 - Color: Red
- c. Volleyball equipment carrier: manufacturer's standard rolling unit with swivel wheels, with capacity to transport up to four (4) volleyball uprights, as well as nets, pads, and other equipment.
 - Basis-of-Design Product: Model EC-500 standard volleyball equipment carrier by Jaypro Sports.
- d. Wall storage rack: manufacturer's standard unit designed for mounting on walls and for storing post standards in vertical position, with retaining arms, fittings for padlock, and mounting hardware; number of units as required to provide storage for specified equipment.

D. BADMINTON EQUIPMENT

1. **Manufacturer – Basis-of-Design: Jaypro Sports, LLC, 976 Hartford Turnpike, Waterford, CT 06385, (800) 243-0533, www.jayprosports.com or approved equal:**
 - a. Source limitations: obtain from single source from single manufacturer.
2. **Badminton ground sleeve: permanently placed floor inserts with heavy-duty cast brass finish and spring-loaded cover with lock, distributed as a pair:**
 - a. Basis-of-Design Product: Model BSO-2G badminton ground sleeve by Jaypro Sports.
 - Cover plate size: 7.5 inch outside diameter.
 - Ground sleeve size: 2.375 inch inside diameter x 10 inches deep.
3. **Badminton Net System: System consisting of two uprights and one fixed-height net:**
 - a. Basis-of-Design Product: Model BSO-PKG 3-1/2 Badminton System Package by Jaypro Sports.
 - b. Uprights: Paired badminton uprights, designed for easy removal from permanently placed floor inserts.
 - Model BSO-2U Aluminum Uprights by Jaypro Sports.
 - Size: 2.375 inch outside diameter X 61 inches tall.
 - Finish: Manufacturer's standard factory-applied, polyester powder-coat finish.
 - Color: White
 - c. Net: Competition badminton net, 21 feet long X 30 inches high with 0.125 inches thick X 28 feet long nylon top cord; one per pair of paired uprights; and as follows:
 - Net to comply with requirements set forth by all governing bodies for Badminton.
 - Netting to be 210/12 knotless nylon.
 - Manufacturer provided 1.5-inch white top band and 0.75-inch black side and bottom tapes.
 - Manufacturer provided grommets and control cords at all corners to help position the net.
 - Net Height Setting: By fixed rope cleat for official net height: 5 feet 1 inches net height for Badminton.

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4. Wall Storage Rack:

- a. Manufacturer's standard unit designed for mounting on walls and for storing post standards in vertical position, with retaining arms, fittings for padlock, and mounting hardware; number of units as required to provide storage for specified equipment.

5. Storage Cart:

- a. Manufacturer's standard wheeled unit designed for transporting and storing badminton equipment and passing through 36-inch wide door openings. Fabricate welded-steel tubing units with heavy-duty casters, including no fewer than two swivel casters. Fabricate wheels from materials that do not damage or mark floors; number of units as required to provide transport and storage for specified equipment.

E. SAFETY PADS

1. Source Limitations: Obtain from single source from single manufacturer.

2. Surface-Burning Characteristics:

- a. Comply with ASTM E84; and testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
- b. Flame-Spread Index: 25 or less.
- c. Smoke-Developed Index: 50 or less.

3. Pad Coverings:

- a. Provide safety pad fabric covering that is fabricated from puncture- and tear-resistant, PVC-coated polyester or nylon-reinforced PVC fabric, minimum 14-oz./sq. yd.; and treated with fungicide for mildew resistance; with surface-burning characteristics indicated.

4. Wall, Corner and Column Safety Pads:

- a. Padded wall wainscot panels designed to be attached in a continuous row; each panel section consisting of fill laminated to backer board, with visible surfaces fully covered by seamless fabric covering, free of sag and wrinkles and firmly attached to back of backer board.

5. Backer Board:

- a. Minimum 3/8-inch thick fire-retardant-treated plywood by pressure process according to AWP A U1, Use Category UCFA Fire Retardant Interior.
- b. Fire-Resistive Fill: Multiple-impact-resistant foam minimum 2-inch thick, fire-resistive neoprene, 6.0-lb/cu. ft. density.
- c. Size: Each panel section as indicated on Drawings.
- d. Installation Method: as indicated on Drawings, if none are shown, provide manufacturer standard type.
- e. Fabric Covering Color(s): As selected by Architect from manufacturer's full range for two color(s).
- f. Graphics: Custom graphics as indicated on Drawings.
- g. Cutout Trim: Manufacturer's standard flanged cutout trim kits for fitting pads around switches, receptacles, and other obstructions.

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F. SOUND REINFORCEMENT SYSTEM

1. **Manufacturer – Basis-of-Design: Daktronics, Inc., 201 Daktronics Drive, P.O. Box 5128, Brookings, South Dakota 57006-5128, (888) 325-8766, www.daktronics.com or approved equal:**
 - a. Manufacturers of equivalent products submitted and approved in accordance with Division 01 Substitution Procedures.
 - b. Source limitations: Obtain from single source from single manufacturer.
2. **Basis-of-Design Product: Model SSN-250 speaker cluster system by Daktronics, Inc.**

G. STATISTICS DISPLAY

1. **Manufacturer – Basis-of-Design: Daktronics, Inc., 201 Daktronics Drive, P.O. Box 5128, Brookings, South Dakota 57006-5128, (888) 325-8766, www.daktronics.com or approved equal:**
 - a. Basis-of-Design Product: Model SD-2101 five-player led statistics display by Daktronics, Inc.
 - b. Manufacturers of equivalent products submitted and approved in accordance with Division 01 Substitution Procedures.
 - c. Source limitations: Obtain from single source from single manufacturer.
2. **General Product Information:**
 - a. Player number (PLYR) number to 99, player fouls (FLS) to 9 and player points (pts) to 99 for five (5) players. Displays sold in pairs for tracking statistics of both teams.
 - b. Dimensions (single display): 72 inches high x 42 inches wide x 6 inches deep.
 - c. Base weight (single display): 80 lbs – options may increase weight.
 - d. Base power requirement: 110 w – options may increase wattage.
 - e. Color: as selected by architect from manufacturer's standard color selections.
3. **Construction:**
 - a. All-aluminum construction.
 - b. Scoreboard back, face, and perimeter: 0.063 inches thick.
 - c. Cabinet withstands high-velocity impact from air-filled sports balls without the need for protective screens.
4. **Digits:**
 - a. Led color: [amber PLYR digits with red FLS and pts digits] [all white digits].
 - b. All digits: 7 inches high.
 - c. Seven bar segments per digit.
 - d. Panaview® (PV) digit technology – discrete LEDS protrude through the scoreboard face.
5. **Captions:**
 - a. Vinyl applied directly to scoreboard face.
 - b. All captions: 4 inches high.
 - c. Color: standard white or choose from manufacturer's vinyl color selections.
6. **Border Striping:**
 - a. Vinyl striping applied around the scoreboard face.
 - b. Color: standard white or choose from manufacturer's vinyl color selections.
7. **Power Cord:**
 - a. Cord is 11 feet long.
 - b. Cord plugs into a standard grounded outlet.

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8. Led Statistics Display Quality Assurance:

- a. ETL listed to UL 48.
- b. NEC compliant.
- c. FCC compliant.

H. SCORING CONSOLE

1. **Manufacturer – Basis-of-Design:** Daktronics, Inc., 201 Daktronics Drive, P.O. Box 5128, Brookings, South Dakota 57006-5128, (888) 325-8766, www.daktronics.com or approved equal.
2. **Basis-of-Design Product:** Model All Sport 5000 Controller by Daktronics, Inc.
3. **Controller:**
 - a. Scores multiple sports using changeable keyboard inserts.
 - b. Controls multiple scoreboards, stats displays and shot clocks, including other All Sport 5000 controlled displays currently owned by customer.
 - c. Recalls clock, score, and period information if power is lost.
 - d. Runs Time of Day and Segment Timer modes.
4. **Console Includes:**
 - a. Rugged aluminum enclosure to house electronics.
 - b. Sealed membrane water-resistant keyboard.
 - c. 32-character backlit LCD to verify entries and recall information currently displayed.
 - d. Power cord that plugs into a standard grounded outlet; 6 watts maximum.
 - e. Control cable to connect to the control receptacle junction box (wired system only).
 - f. Hand-held switch for main clock start/stop and horn.
5. **Accessory Equipment:**
 - a. GHz spread spectrum radio system with frequency hopping technology and 64 non-interfering channels; system includes a transmitter installed inside the console and a receiver installed inside the scoreboard(s).
6. **Hard Carrying Case.**

I. EQUIPMENT CONTROLLER

1. **Manufacturer – Basis-of-Design:** Jaypro Sports, LLC, 976 Hartford Turnpike, Waterford, CT 06385, (800) 243-0533, www.jayprosports.com or approved equal.
2. **Source Limitations:** Obtain from single source from single manufacturer.
3. **Programmable, touch screen equipment controller allowing single and/or grouped operation of up to 8 gymnasium equipment components and/or up to 16 auxiliary components such as scoreboards, lights, fans, etc.:**
 - a. Basis-of-Design Product: Model MEC2 – Master Equipment Controller 2 by Jaypro Sports.
4. **Construction:**
 - a. 5-inch projected capacitive glass touch screen with a flush-mounted bezel.
 - b. Touch screen mounted into a standard 6-13/16 inches wide X 4-1/2 inches high X 2-1/2 inches deep electrical box (Garvin GB-2122) or approved equal.
 - c. Standard 12 VDC power supply and main relay board. Main relay panels consists of two banks of 8 (16 total) 30-amp relays capable of operating 8 momentary-controlled devices (0-230VAC or 0-30VDC) and/or up to 16 auxiliary components. The system requires only one 120VAC circuit, rated at minimum 15 amps for individual operation. The MEC2 also allows simultaneous grouped

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operation of gymnasium components up to eight (8) gymnasium components. Groups will operate in an "ALL UP" or "ALL DOWN" manner for gymnasium equipment or "ALL ON" or "ALL OFF" for auxiliary components. Up to 20 groups per system can be programmed into the MEC2. For grouped operation of momentary-controlled devices, a dedicated 15-amp service is required for each device (e.g. to operate groups of up to 8 basketball backstop winches, provide 8x 15A circuits or 4x 30A circuits).

5. **Controller with tiered access levels that can be reprogrammed at any time to prevent unauthorized use:**
 - a. User level access shall have the ability to operate individual components or pre-defined groups.
 - b. Administrative level access shall have the ability to define all field configurable settings, change passwords, define groups, and operate individual or grouped components.
 - c. System shall incorporate username and password security settings to prevent unauthorized use, with up to 50 unique programmable logins.
6. **Locate Equipment Controller touch screens with clear, unobstructed view of all controlled equipment:**
 - a. For larger facilities where significant distance between touch screens is anticipated, provide an additional 12 VDC power supply for each additional touch screen.
7. **Main relay board is expandable, with maximum capability of operating 256 gymnasium equipment devices and/or up to 512 auxiliary devices.**
8. **Key switch controller is not approved as equal. Any operator that does not allow multiple touch screens is not approved as equal. Any operator that is not projected capacitive such as tri-color LED is not approved as equal. Any system that does not offer grouped operation is not approved as equal.**

J. BASKETBALL SHOT CLOCK

1. **Manufacturer – Basis-of-Design: Daktronics, Inc., 201 Daktronics Drive, P.O. Box 5128, Brookings, South Dakota 57006-5128, (888) 325-8766, www.daktronics.com or approved equal.**
2. **Single-Sided LED basketball game clock and shot clock timer with hand-held start / stop / reset switch included:**
 - a. Basis-of-Design Product: Model BB-2115 Basketball Shot Clock / Game Time by Daktronics, Inc.
 - b. ETL-listed, tested to standards, and CE-labeled, and for interior use only.
 - c. Compatible with Controller All Sport 5000 by Daktronics, Inc.
 - d. Displays game time to 99:59 and shot times up to 99 seconds. Count down from any preset time between 0 and 99 seconds.
 - e. During last minute of game period, game time is displayed to 1/10 of a second.
 - f. Game clock digits are 7 inches high. Shot clock digits are 13 inches high.
 - g. Power (120 VAC): 50 Watts (0.5 Amp)
 - h. Unrated Weight: 30 lbs
 - i. Dimensions: 28 inches high X 29 inches wide X 6 inches deep.
3. **Digit Color:**
 - a. Game Clock Digits: Amber or White
 - b. Shot Clock Digits: Red
4. **Shot Clock Color: As selected by Architect from Manufacturer's standard range.**

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K. MAT HOISTS AND FLOOR MATS

1. **Manufacturer – Basis-of-Design: NGE, Inc., 302 North Erickson, Roland, IA 50236, (515) 388-4118, www.mathoist.com or approved equal:**
 - a. Manufacturers of equivalent products submitted and approved in accordance with Division 01 Substitution Procedures.
 - b. Source Limitations: Obtain from single source from single manufacturer.
2. **Mat Storage System: Stores two (2) 45 feet X 45 feet gymnasium mats as one piece or in sections in a 40-foot-long one-piece sling:**
 - a. Basis-of-Design Product: Mat Hoist Model 1000 Wrestling Mat Storage System by NGE, Inc.

L. INDOOR SCOREBOARD

1. **Daktronics BB-2155 single-sided basketball scoreboard displays period time to 99:59, HOME and GUEST scores to 199, PERIOD to nine, team FLS (Fouls) to 19, PLYR (Player) number to 99, player FOUL to nine, T.O.L. (Time Outs Left) to nine and indicates possession and bonus. During the last minute of the period, scoreboard displays time to 1/10 of a second:**
 - a. Electronic captions automatically change when volleyball and wrestling modes are selected.
 - b. Scoreboard can also score any sport requiring a clock, score and period function.
2. **General Information:**
 - a. Dimensions: 6'-0" high, 10'-0" wide, 0'-6" deep.
 - b. Base weight: 275 lbs. – options may increase weight.
 - c. Base power requirement: 270 W – options may increase wattage.
 - d. Color: choose from manufacturer's standard paint selections.
3. **Construction:**
 - a. All-aluminum construction.
 - b. Scoreboard back, face, and perimeter: 0.063" thick.
 - c. Cabinet withstands high-velocity impact from air-filled sports balls without the need for protective screens.
4. **Digits & Indicators:**
 - a. LED color: TBD.
 - b. Clock and score digits: 13" high
 - c. PERIOD, FLS, PLYR/FOUL and T.O.L. digits: 10" high.
 - d. Bonus indicators: 4" high.
 - e. Possession arrows: 3" high.
 - f. Seven bar segments per digit.
 - g. PanaView® (PV) digit technology – discrete LEDs protrude through the scoreboard face.
5. **Electronic Captions:**
 - a. FLS and PLYR/FOUL captions: 6" high.
 - b. Color: amber LEDs.
6. **Captions:**
 - a. Vinyl applied directly to scoreboard face.
 - b. HOME and GUEST captions: 6 inches high.
 - c. PERIOD, FOULS/SCORE, PLAYER/FOUL/MATCH and T.O.L. captions: 3 inches high.
 - d. Color: standard white or choose from manufacturer's vinyl color selections.

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7. Border Striping:

- a. Vinyl striping applied around the clock and scoreboard face.
- b. Color: standard white or choose from manufacturer's vinyl color selections.

8. Horn:

- a. Vibrating horn mounted inside the scoreboard cabinet behind the face.
- b. Sounds automatically when period clock counts down to zero.
- c. Sounds manually as directed by operator.

9. Power Cord:

- a. Cord is 11' long.
- b. Cord plugs into a standard grounded outlet.

10. Accessory Equipment:

- a. Two 6" high Programmable Team Name Message Centers (TNMCs) in place of vinyl HOME and GUEST captions.
 - SD-2102 Stat Panels (Pair).
- b. Electronic Captions.
 - BB-2115 Shot Clocks (Pair).
 - Configured for hardwire communication.

M. INDOOR LED DIGITAL SCREEN DISPLAY

1. Manufacturer – Basis-of-Design: Daktronics, Inc., 201 Daktronics Drive, P.O. Box 5128, Brookings, South Dakota 57006-5128, (888) 325-8766, www.daktronics.com or approved equal:

- a. Manufacturers of equivalent products submitted and approved in accordance with Division 01 Substitution Procedures.
- b. Source Limitations: Obtain from single source from single manufacturer.

2. LED Matrix Display: Display capable of showing live and recorded video clips, real-time scores/stats, animations, graphics, and text messages:

- a. Basis-of-Design Product: Model LVN-2010 3.9MM Indoor Live Video Display by Daktronics, Inc.
- b. General Display Information:
 - Cabinet Dimensions: 5.19 feet high X 10.11 feet wide X 6.0625 inches deep.
 - Matrix Size: 384 X 768
 - Weight: 303 lbs
 - Power Requirements: 3084 W – options may increase wattage.

3. Cabinet Paint Color: Black

4. Construction:

- a. Aluminum and steel.
- b. Service Access: Front

5. Display Capabilities:

- a. Color Capacity: 16 bit (281 trillion colors).
- b. LED Refresh Rate: 3840 Hz as defined by the number of times per second the LED image is repainted in intensity.
- c. Display has signal redundancy allowing for signal path both forward and backwards through panels allowing for loss of only 1 panel vs. rows or blocks of multiple panels in case of failure.

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6. Viewing Characteristics:

- a. Calibrated Intensity: 1500 nits
- b. Brightness Control: 256 levels (manual, scheduled or automatic).
- c. Suggested Viewing Angle: 140° horizontal and +60°/-80° vertical.

7. Pixel Characteristics:

- a. Each pixel consists of one RGB 3-in-1 surface-mount device LED.
- b. Pixel spacing measurement must be measured from the center points of neighboring physical pixels, rather than neighboring physical and virtual pixels.

8. LED Module Characteristics:

- a. Module rated for indoor use only.
- b. Module with anti-reflective paint or coating applied to display face. Black state across all modules shall exhibit a Delta E color variation of no more than 0.4.
- c. Module with manufacturer standard horizontal louvers running between LEDs or pixels.
- d. Provide removable module installed from the front of the display.
- e. Removal or installation of modules does not require removal or installation of screws.

9. Video Processing:

- a. Video Frame Rate: 50/60 frames per second.
- b. Graphic Frame Rate: 30 frames per second.
- c. Processing Architecture: 22 bit (distributed).
- d. System Architecture: 100% digital.
- e. Video Enhancement: Color space conversion, adjustable gamma correction, proprietary sharpening technology and enhancement algorithms for optimal picture quality.

10. LED Quality:

- a. Quality Control: Sorted by intensity and color wavelength.
- b. LED Lifetime: 100,000 hours of operation as defined by time at which display intensity has decreased to 50 percent of the original intensity.
- c. Calibration:
 - Pixel-to-pixel and module-to-module optical color calibration performed at the factory before on-site installation. Provide manufacturer standard easy-to-use calibration software that allows individual modules and pixels to be independently adjusted while in the display.
 - If modules should need replacement during the life of the display, provide calibration software matching newer modules' brightness levels to older modules' levels to preserve picture quality and maintain a uniform display appearance.

11. Display Interface:

- a. Provide full-color video display capable of interfacing with and displaying real-time data from the control system without the need for a duplicate or redundant input.

12. LED Matrix Display Quality Assurance:

- a. ETL listed to UL Standards 48 and 1433.
- b. CE compliant.
- c. FCC compliant.
- d. Installed per NEC.

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N. GYMNASIUM DIVIDERS

1. **11 66 53 Gymnasium Dividers**
2. **VOC limits for adhesives, sealants, fillers, primers, and coatings. Comply with the most stringent limit specified in pertinent Division 01 Sections and tested and determined compliant per the referenced standards for each material type.**
3. **Sustainability Performance Requirements:**
 - a. For all permanently installed products and materials related to the work of this section, provide products and materials that meet the project's performance criteria as outlined in pertinent division 01 sections.
 - b. Provide products with the maximum possible amount of post-consumer and pre-consumer recycled content.
 - c. Provide products extracted and manufactured within 100 miles of the project site wherever possible.
 - d. Provide type iii environmental product declaration disclosure documentation wherever available.
 - e. Provide material ingredient transparency documentation wherever available.
4. **Top-Roll Divider Systems:**
 - a. Manufacturers:
 - Basis-of-Design: Draper
 - Mid-roll gymnasium divider curtain.
5. **Divider-Curtain System: electrically operated, mid-roll drive pipe, and as follows:**
 - a. Outer edge hems: double turned and welded.
 - b. Supports and fittings: corrosion-resistant steel clamps and hangers.
 - c. Drive pipe and curtain battens: steel pipe or tubing.
6. **Electric Operators:**
 - a. Provide factory-assembled electric operation system of size and capacity recommended in writing and provided by gymnasium divider manufacturer for gymnasium dividers specified, with electric motors and factory-prewired motor controls, control devices, and accessories required for proper operation.
 - b. Include wiring from control stations to motors and between synchronizer and dual motors for long curtains. Coordinate operator wiring requirements and electrical characteristics with building electrical system.
7. **Electrical Components, Devices, and Accessories:**
 - a. Listed and labeled according to NFPA 70, by a qualified testing agency, and marked for intended location and application.
8. **Motor Electrical Characteristics:**
 - a. Horsepower: Horsepower as recommended by manufacturer for type of unit specified.
 - b. Voltage: 115 VAC, single phase, 60 hertz
9. **Limit Switches:**
 - a. Adjustable switches at each divider curtain, interlocked with motor controls and set to automatically stop divider curtain at fully extended and fully retracted positions.
10. **Control System:**
 - a. Key-Switch Operation: NEMA ICS 6, Type 1 enclosure, momentary-contact, three-position switch-operated control with up, down, and off functions.
 - b. Keys: Provide two key(s) per station.

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O. DIVIDER CURTAINS

1. Upper Curtain, Mesh:

- a. Woven mesh of polyester yarn coated with vinyl, weighing not less than 8 oz./sq. yd.
- b. Mesh Color: As selected by Architect from full range of industry colors and color densities.

2. Lower Curtain, Solid:

- a. Woven polyester fabric coated with vinyl 8 oz./sq. yd., 10-foot height above floor.
- b. Fabric Color: As selected by Architect from full range of industry colors and color densities.

3. Hems:

- a. Folded and electronically welded.

4. Seams:

- a. Electronically welded.

5. Overall Curtain Height:

- a. Floor to ceiling, within installation clearances required.

6. Bottom of Curtain:

- a. Approximately 2 inches above finished floor.

7. Divider-Curtain Flame-Resistance Rating:

- a. Passes NFPA 701 Test 2, meets California Health and Safety Code Section 13115 Large- and Small-Scale Test, Fed. Std. 191A, CPAI-84, NFPA 701, BIFMA F-1-78, MSHA-155.

P. DIVIDER SYSTEM ACCESSORIES

1. Safety Lock:

- a. Locks drive system when speed exceeds manufacturer's recommended speed.

2. Audible Motion Alarm:

- b. Provide alarm with intermittent warning tone when curtain is raised or lowered.
- c. Fittings required to suspend a No. 2080 15/16" diameter top tube from the roof structure, when the curtain is parallel or at a right-angle to the roof structure.

Q. SUPPORT MATERIALS AND FASTENERS

1. Support Chain and Fittings:

- a. For chains used for overhead lifting, provide Grade 80, heat-treated alloy-steel chains, according to ASTM A391/A391M, with commercial-quality, hot-dip galvanized or zinc-plated steel connectors and hangers.

2. General-Purpose Chain:

- a. For chains not used for overhead lifting, provide carbon steel chain, according to ASTM A413/A413M, Grade 30 proof coil chain or higher grade recommended by gymnasium divider manufacturer.
- b. Provide coating type, chain size, number, and installation method according to manufacturer's written instructions.

3. Anchors, Fasteners, Fittings, and Hardware:

- a. Manufacturer's standard corrosion-resistant or non-corrodible units; concealed.

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PART 3 EXECUTION

A. EXAMINATION

1. **Verify critical dimensions.**
2. **Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for court layout, alignment of mounting substrates, installation tolerances, operational clearances, accurate locations of connections to building electrical system, and other conditions affecting performance of the Work.**
3. **Examine supporting structure, sub-grades, subfloors, and footings below finished floor.**
4. **Examine wall assemblies, where reinforced to receive anchors and fasteners, to verify that locations of concealed reinforcements are clearly marked. Locate reinforcements and mark locations.**
5. **Proceed with installation only after unsatisfactory conditions have been corrected:**
 - a. Verify that mounting surface is ready to receive scoreboard.
 - b. Verify that placement of conduit and junction boxes are as specified and indicated in plans and shop drawings.

B. INSTALLATION GENERAL

1. **Comply with manufacturer's written installation instructions and competition rules for each type of gymnasium equipment.**
2. **Install gymnasium equipment after other finishing operations, including painting, have been completed unless otherwise indicated.**
3. **Permanently Placed Gymnasium Equipment and Components:**
 - a. Install rigid, level, plumb, square, and true; anchored securely to supporting structure; positioned at locations and elevations indicated; in proper relationship to adjacent construction; and aligned with court layout.
4. **Operating Gymnasium Equipment:**
 - a. Verify clearances for movable components of gymnasium equipment throughout entire range of operation and for access to operating components.
5. **Anchoring to In-Place Construction:**
 - a. Use anchors and fasteners where necessary to secure built-in and permanently placed gymnasium equipment to structural support and to properly transfer load to in-place construction.
6. **Connections:**
 - a. Connect electric operators to building electrical system. Power conduit, power conductors, and signal conduit to within 3' of displays will be installed by customer.
 - b. Control wiring and labor to install will be the responsibility of the contractor assigned to the display equipment.
 - c. Power conduit, signal conduit, and all electrical connections from within 3' of displays will be the responsibility of the contractor assigned to the display equipment.
7. **Mount scoreboards and interior displays to wall in location detailed and in accordance with manufacturer's instructions; and Unit to be plumb and level.**

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C. INSTALLATION OF SAFETY PADS

1. **Mount with bottom edge at 4 inches above finished floor.**
2. **Cutout Trim:**
 - a. Limit cuts in face of padding so that cuts are securely and fully concealed behind trim-kit flange.

D. INDOOR SCOREBOARDS, INTERIOR DISPLAYS, AND STATISTICS DISPLAYS

1. **Examination:**
 - a. Verify that mounting surface is ready to receive scoreboard.
 - b. Verify that placement of conduit and junction boxes are as specified and indicated in plans and shop drawings.
2. **Installation:**
 - a. Power conduit, power conductors, and signal conduit to within 3' of displays will be installed by the electrical contractor.
 - b. Signal raceways, conduit and boxes to be provided by the electrical contractor.
 - c. Control wiring and labor to install will be the responsibility of the contractor assigned to the display equipment.
 - d. Power conduit, signal conduit, and all electrical connections from within 3' of displays will be the responsibility of the contractor assigned to the display equipment.
 - e. Display vender to terminate signal wire of controller and conduit to display.
 - f. Mount scoreboards and interior displays to wall in location detailed and in accordance with manufacturer's instructions. Unit to be plumb and level.
3. **Installation—Control Center:**
 - a. Provide boxes, cover plates and jacks as required to meet control specification requirements. Control cables to control panels shall be concealed.
 - b. Test the operation of the scoreboard, controller and all control jacks; leave control unit in carrying case and other loose items with owner's designated representative.
 - c. Conduct operator training on the scoreboard/controller operation.
 - d. Manufacturer to provide all required signal conversion hardware to allow for direct wire control of electronic display.

E. SHOT CLOCK INSTALLATION – ONE POLE BACKSTOP MOUNTING

1. **Install radio receivers for wireless radio control before mounting shot clocks.**
2. **Measure the diameter of the backstop support pole to determine the correct size U-bolts needed to secure steel angles to the pole:**
 - a. Provide 40-inch minimum lengths steel angles per manufacturer requirements.
3. **Mount Shot Clocks to Backstop pole at competition regulation heights and in accordance with manufacturer's instructions:**
 - a. Unit to be plumb and level.

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F. ADJUSTING

1. Adjust movable components of gymnasium equipment to operate safely, smoothly, easily, and quietly; free from binding, warp, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range; and lubricate as recommended in writing by manufacturer.

G. DEMONSTRATION

1. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain gymnasium equipment.

-END OF SECTION 11 66 00-

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SECTION 11 68 00

LED EXTERIOR SCOREBOARDS

PART 1 GENERAL

A. SUMMARY

1. Scope:

- a. The work under this section includes the furnishing of all labor, material, equipment, supervision and services necessary for the execution and completion of all items necessary to provide complete and functioning Scoreboards, delivery and installation as herein specified.
- b. Provide ten (10) years of no cost parts exchange including standard shipping on electronics parts and radios due to manufacturing defects. Provide toll-free support service coordination; and provide live technical online and phone support during business hours.
- c. All Owner's materials, software, manuals, guides or other supplied information shall be presented in a neat, orderly, and professional manner using binders, folders or other devices as necessary.
- d. Coordinate with DSA for List of Approved Pre-Checked (PC) Designs.

2. Section Includes:

- a. **11 68 43 Exterior Scoreboards**
 - Baseball / Softball / Football / Soccer Scoreboards and Scoring Consoles

3. References:

- a. Standard for Electric Signs, UL 48
- b. Federal Communications Commission Regulation Part 15
- c. National Electric Code

B. SUBMITTALS

1. Product Data:

- a. Submit manufacturer's product illustrations, data and literature that fully describe the scoreboards and accessories proposed for installation.

2. Shop Drawings:

- a. Submit mechanical and electrical drawings.

3. Maintenance Data:

- a. Submit manufacturer's installation, operation, and maintenance manuals.

C. DELIVERY, STORAGE, AND HANDLING

1. Product delivered on site.

2. Scoreboard and equipment to be housed in a clean, dry environment.

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D. PROJECT CONDITIONS

1. Environmental Limitations:

- a. Do not install scoreboard equipment until mounting structure is secure, and concrete has ample time to cure.

2. Field Measurements:

- a. Verify position and elevation of structure and its layout for scoreboard equipment.
- b. Verify dimensions by field measurements.

3. Verify mounting structure is capable of supporting the scoreboard's weight and windload in addition to the auxiliary equipment.

4. Installation may proceed within acceptable weather conditions.

E. QUALITY ASSURANCE

1. For outdoor use

2. Source Limitations:

- a. Obtain each type of scoring or related equipment through one source from a single manufacturer.
- b. ETL listed to UL 48
- c. NEC compliant
- d. FCC compliant

F. WARRANTY

1. Provide ten (10) years of no cost parts exchange including standard shipping on electronics parts and radios due to manufacturing defects.
2. Provide live toll-free service coordination.
3. Provide technical online and phone support during Daktronics business hours.

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PART 2.1 PRODUCT

A. BASEBALL & SOFTBALL

1. Daktronics, Inc., 201 Daktronics Drive, P.O. Box 5128, Brookings, SD 57006-5128.

2. PRODUCT

- a. Daktronics BA-2026 single-sided baseball scoreboard displays HOME and GUEST team scores for up to 10 innings, total RUNS and HITS to 99 and ERR (errors) to nine for each team, AT BAT to 99, BALL to three, STRIKE to two, OUT to two, and H/E (hit or error) with field position number for the error. Scoreboard can show TIME or PITCH COUNT instead of AT BAT, as well as AT BAT or PITCH COUNT in place of H/E. PITCH COUNT displays up to 199.
- b. Single-sided LED baseball scoreboard.

3. SCOREBOARD

- a. General information:
 - Dimensions: 9'-4" high, 36'-0" wide, 0'-8" deep.
 - Base weight: 1680 lbs. with vinyl captions – options may increase weight.
 - Base power requirement: 510 W (red/amber digits), 1110 W (white digits) with vinyl captions – options may increase wattage.
 - Color: choose from manufacturer's standard paint selections.
- b. Construction:
 - Alcoa aluminum alloy 5052 for excellent corrosion resistance.
 - Scoreboard back, face, and perimeter: 0.063" thick.
 - Scoreboard top and bottom: 0.125" thick.
 - Digits:
 - LED color: TBD
 - AT BAT, BALL, STRIKE, OUT, and H/E digits: 24" high
 - Inning scores, RUNS, HITS, and ERR digits: 18" high
 - Seven bar segments per digit
 - PanaView® LED digit technology
 - All digits are sealed front and back with weather-tight silicone gel
- c. Captions:
 - Vinyl applied directly to scoreboard face:
 - HOME and GUEST captions: 15" high
 - AT BAT, BALL, STRIKE, OUT, and H/E captions: 12" high
 - Inning numbers, RUNS, HITS, and ERR captions: 10" high
 - Color: standard white or choose from manufacturer's vinyl color selections
 - Border Striping:
 - Vinyl striping applied around the scoreboard face
 - Color: standard white or choose from manufacturer's vinyl color selections
- d. Accessory Equipment:
 - Vinyl striping applied around the BALL, STRIKE, and OUT digits.
 - Two Programmable Team Name Message Centers (TNMCs) in place of vinyl HOME and GUEST captions – add 120 lb and 100 W (230 W for white).

4. SCORING CONSOLE

- a. Console is an All Sport® 5000 controller.
- b. Scores multiple sports using changeable keyboard inserts.
- c. Controls multiple scoreboards and displays, including other All Sport 5000 controlled displays currently owned by customer.
- d. Recalls clock, score, and period information if power is lost.

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- e. Runs Time of Day and Segment Timer modes.
- f. Console includes:
 - Rugged aluminum enclosure to house electronics.
 - Sealed membrane water-resistant keyboard.
 - 32-character LCD to verify entries and recall information currently displayed.
 - Power cord that plugs into a standard grounded outlet; 6 watts max.
 - Control cable to connect to the control receptacle junction box (wired system only).
 - Hand-held switch for main clock start/stop and horn.
- g. Accessory Equipment:
 - Hard carrying case.
 - TI-2041 – Pace of game clocks (Pair).

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PART 2.2 PRODUCT

A. FOOTBALL & SOCCER

1. Daktronics, Inc., 201 Daktronics Drive, P.O. Box 5128, Brookings, SD 57006-5128.

2. PRODUCT

- a. Daktronics FB-2025 single-sided football/track scoreboard displays period time to 99:59, HOME and GUEST scores to 99, DOWN/TO GO/BALL ON/QTR (Quarter) information, and T.O.L. (Time Outs Left) to nine. Track running time displays to 99:59.9, while lead split and finish times display to 99:59.99. Arrows indicate possession. Scoreboard comes standard with track captions on changeable panels. During the last minute of the period, the clock displays time to 1/10 of a second.

3. SCOREBOARD

- a. General information:
 - Dimensions: 8'-0" high, 32'-0" wide, 0'-8" deep.
 - Base weight: 960 lbs. with vinyl captions – options may increase weight.
 - Base power requirement: 340 W (red/amber digits), 710 W (white digits) with vinyl captions – options may increase wattage.
 - Color: Choose from manufacturer's standard paint selections.
- b. Construction:
 - Alcoa aluminum alloy 5052 for excellent corrosion resistance.
 - Scoreboard back, face, and perimeter: 0.063" thick.
 - Scoreboard top and bottom: 0.125" thick.
- c. Digits & Indicators:
 - LED Color: TBD
 - Clock Digits: 30" high.
 - HOME, GUEST, DOWN, TO GO, BALL ON, and QTR digits: 24" high.
 - T.O.L. Digits: 18" high.
 - Seven bar segments per digit.
 - PanaView® LED digit technology.
 - All digits and indicators are sealed front and back with weather-tight silicone gel.
- d. Captions:
 - Vinyl applied directly to scoreboard face; track captions are on changeable panels:
 - HOME and GUEST captions: 15" high
 - DOWN, TO GO, BALL ON, QTR, T.O.L., and track captions: 12" high
 - Color: standard white or choose from manufacturer's vinyl color selections
 - Border Striping:
 - Vinyl striping applied around the scoreboard face and clock digits
 - Color: standard white or choose from manufacturer's vinyl color selections
- e. Accessory Equipment
 - Two programmable Team Name Message Centers (TNMCs) in place of vinyl HOME and GUESTS captions – add 120 lbs. and 100 W (230 W for white):
 - [Electronic Captions in place of vinyl DOWN/TO GO/BALL ON/QTR/T.O.L. captions – add 240 lbs. and 210 W (480 for white)]
 - Two 43.25" high, 32.125" wide vinyl logo/sponsor areas on display face.
 - Horn

4. SCORING CONSOLE

- a. Console is an All Sport® 5000 controller.
- b. Scores multiple sports using changeable keyboard inserts.
- c. Controls multiple scoreboards and displays, including other All Sport 5000 controlled displays currently owned by customer.

Division 11 EQUIPMENT

11 66 00 GYMNASIUM ATHLETIC EQUIPMENT & LED INTERIOR SCOREBOARDS | 11 68 00 EXTERIOR SCOREBOARDS

LACCD Design Guidelines and Standards

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- d. Recalls clock, score, and period information if power is lost.
- e. Console capable of automatically calculating and displaying DOWN & TO GO for each play.
- f. Runs Time of Day and Segment Timer modes.
- g. Console includes:
 - Rugged aluminum enclosure to house electronics.
 - Sealed membrane water-resistant keyboard.
 - 32-character LCD to verify entries and recall information currently displayed.
 - Power cord that plugs into a standard grounded outlet; 6 watts max.
 - Control cable to connect to the control receptacle junction box (wired system only).
 - Hand-held switch for main clock start/stop and horn.
- h. Accessory Equipment:
 - Hard carrying case.

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PART 3 EXECUTION

A. EXAMINATION

1. Verify that mounting structure is ready to receive scoreboard.
2. Verify that placement of conduit and junction boxes are as specified and indicated in plans and shop drawings.
3. Verify concrete has cured adequately according to specifications.

B. INSTALLATION

1. All power and control cables to scoreboards and displays will be routed in conduit.
2. Power to the scoreboards/displays as well as raceways shown on electrical plans by the Electrical Contractor. Scoreboard control wiring including conduit will be the responsibility of the contractor assigned the scoreboard equipment.
3. Install scoreboards and exterior displays to beams in location detailed and in accordance with manufacturer's instructions.
4. Verify unit is plumb and level.

C. INSTALLATION—CONTROL CENTER

1. Provide boxes, cover plates and jacks in locations per plans.
2. Test connect control unit to all jacks and check for proper operation of control unit, scoreboard and all features. Leave control unit in carrying case and other loose accessories with owner's designated representative.
3. Verify earth ground does not exceed 15 ohms.

-END OF SECTION 11 68 00-