11480 GYMNASIUM PHYSICAL EDUCATION EQUIPMENT

****

SPECIFIER:
CSI MasterFormat 2004 number 11 66 23

****

PART 1 GENERAL

1.1 SUMMARY

A. Related Sections:

1. 03300 - Concrete.
2. 09561 - Hardwood Strip Flooring System.
3. Division 15 - Mechanical.
4. Division 16 - Electrical.

1.2 SUBMITTALS

A. Shop drawings shall indicate the model number, type of material, gauges or thickness of metal, finishes and details of construction, and attachment. Provide layout of gymnasium showing location dimensions for each piece of equipment.

B. Submit warranties as specified.

1.3 PROJECT CONDITIONS

A. Loose items of equipment shall be turned over to M-DCPS after unpacking or uncrating, and checking for proper type, material, size, and fit of each accessory. Obtain receipt from M-DCPS for items turned over. No claim may be made for items turned over to the Board without obtaining a receipt.

1.4 COORDINATION

A. Coordinate with Divisions 15 and 16 for installation of the physical education equipment and with the A/E for locations.

1.5 WARRANTY

A. Provide manufacturer’s standard warranty on sports and physical education equipment including accessories, materials, and quality of construction.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Physical Education Equipment:

1. Jaypro Sports, Inc., Waterford, CT.
2. American Athletic, Inc., Jefferson, IA.

3. Institutional Products, Inc., Indianapolis, IN.
4. Performance Sports Systems, Pendleton, IN
5. Porter Athletic Equipment Company, Broadview, IL

2.2 EQUIPMENT:

A. Model numbers specified on this document are based on Jaypro Sports, Inc. and shall be used as the Basis of Design (BOD).

1. Use of catalog numbers and specific requirements are not intended to preclude use of equivalent products by other listed acceptable manufacturers but are given for purpose of establishing a standard of design and quality for materials, construction, and installation.
2. Minor differences in construction and products are recognized to exist and may be acceptable to the A/E.

B. Equipment shall be provided complete according to manufacturer's standard catalog description and specifications for the numbers indicated in the schedule. Equipment that is to be permanently installed shall be complete and ready for use.

C. Materials and finishes shall be non-corrosive in the type and quality of finish noted or as a part of the manufacturer's printed description or specifications.

2.3 COMPONENTS

A. Ceiling Suspended Forward Fold Backstops:

****

SPECIFIER: Select one of the following paragraphs, either rear brace or front brace backstop to suit project conditions. The rear brace backstop is the preferred selection if adjacent construction, clearances, and roofing conditions allow its use.

****

1. Model [No. 817-FFRB "Single Drop" ceiling suspended, forward fold, rear brace backstop as manufactured by Jaypro Sports, Inc. Rear brace shall be 2-3/8" O.D. steel tubing and shall be attached to drop frame by a sliding collar mechanism for ease and confidence in operation] or [Model No. 849-FFFB "Single Drop" ceiling suspended, forward fold, front brace backstop], as manufactured by Jaypro Sports, Inc. Front brace assembly shall have a fully adjustable folding knee joint allowing for exact playing position and maintenance free operation.

a. Vertical front drop frame assembly "Single Drop" shall consist of main center mast of 6-5/8" O.D., heavy wall, structural steel tube with diagonal side sway braces of 2-3/8" O.D., structural pipe.
b. Sway braces shall attach to the mast no higher than 18 inches above the backboard for maximum rigidity.
c. Mast and sway braces shall be fully welded for ceiling heights up to 40 feet.
d. Backstop shall be braced to the front and shall fold forward.
e. Goal shall mount directly through backboard and into a heavy structural steel weldment and clamped to the vertical 6-5/8" O.D. center mast.
f. Goal and backboard mounting design shall comply with NCAA, NFSHSA, and FIBA regulations.
g. The all-welded "Single Drop" design shall be suspended from custom adjustable hangers with bronze bushings.

h. Backstop shall be supported from 3-1/2” O.D. pipe anchored to roof framing members by means of heavy formed steel support fittings. Superstructure pipes shall be reinforced with special bridging or bracing when truss centers exceed spans of 14 feet. Each attachment clamp shall be capable of supporting a static load of at least 10,000 lbs with no deflection.

i. All metal parts shall have one coat of primer and be painted with one coat of white semi-gloss enamel. All metal parts shall be packaged for protection during shipment from manufacturer. Color options shall be black, red, blue, dark blue, dark green, gray, and yellow and selected by A/E.

A. Rectangular Glass Backboards:

1. Model No. GRAFR-42 rectangular glass backboard by Jaypro Sports Inc., with Model No. MBBP-6 bolt-on edge padding with 8-year warranty, color as selected by A/E.
2. Backboard shall be 42 inches high by 72 inches wide.
3. Backboard shall be manufactured from 1/2" tempered glass set in heavy extruded aluminum framing and cushioned by shock absorbing vinyl. Official border and target area shall be fired into the glass.
4. Goal mounting structure shall be a heavy, welded, formed steel assembly and directly attached to the lower horizontal frame member.
5. Backboard shall be protected by a limited, lifetime warranty against breakage when used on a Jaypro "single drop" direct attach support system with a Jaypro goal. The board shall meet NCAA, FIBA, and NFSHSA specifications.

B. Basketball Goal:

1. Model No. GBA-342 breakaway goal by Jaypro Sports, Inc.
2. Goal shall be fabricated from 5/8" diameter cold drawn alloy steel round formed to an 18 inch inside diameter ring. Inside of ring shall be positioned 6 inches from face of backboard by heavy, formed steel hinged type housing with removable cover to conceal mounting bolts and entire shock absorption mechanism of goal, and also protect against finger entrapment.
3. Goal shall be designed to absorb shock loads due to slam dunking or hanging on the rim. Shock absorption feature shall be provided by means of a special offset hinge arrangement rim and back plate mounting housing and a concealed molded rubber shock absorber.
4. Function of goal shall meet the NCAA, FIBA, and NFSHSA specification on moveable rims, which states, "A moveable basket ring shall have rebound characteristics identical to those of a non-moveable ring." Goal shall be set at factory for proper flex and rebound requirements.
5. Goal shall be finished in a durable, electrostatic powder coated official orange finish.
6. Goal shall be furnished complete with a heavy-duty, white, anti-whip nylon net and mounting hardware.

C. Electric Winch:

1. Model No. TW-2000 electric Tork-Winch by Jaypro Sports, Inc.
2. The backstop-positioning winch shall be a definite purpose electric winch designed for basketball backstop positioning. The winch shall be a worm gear type designed to hold the backstop at any position during operation. The winch shall be driven by a 24 in-lb (3/4 HP equivalent) direct drive, instant reversing, 115-volt, single-phase electric

torque motor with thermal overload protection manufactured to NEMA specifications. The winch shall have a 3-wire control system pulling at a speed of 11 feet per minute.
3. The double worm reduction gear winch shall require no oil and no V-belts or chains.
4. The winch shall have a uni-directional worm brake, together with the inherently self-locking Teflon/carbon composite worm drive.
5. The drum shall be grooved for a 1/4" x 7 x 19 galvanized aircraft cable. Drum shall allow 25 feet of travel on one layer, and 40 feet on two layers. Drum shall be supplied with a pressure roller, with torsion spring tensioning to ensure that the cable tracking in the grooves.
6. Wiring of all electrical components shall be according to local area codes and according to manufacturer's instructions. Conduit, wiring, junction boxes, and components not specified shall be furnished and installed by others according to Division 16.
7. The winch shall use a flush mounted, single key to both raise and lower a backstop. Key switch shall be located so that the backstop are in full view of the operator.
8. Winch shall have a five-year replacement warranty for all product defects. Winches using 1/2 HP motors, V-belts, chains, multiple key switches and that require additional lubrication and maintenance are not accepted.

D. Master Equipment Controller:

1. Model No. MEC-99 MEC Pad "Master Equipment Controller" by Jaypro Sports.
2. The MEC Pad is operated by a four-digit security code and is fully programmable by the user to change the security code at any time to operate gymnasium components including basketball backstops, electric height adjusters, lights, scoreboards, and PA systems. Provide relay boxes as needed for additional gym components.
3. There shall be no more than 12 volts of direct current allowed at the touch pad. Any switching mechanism requiring keys or having line voltage of 110 at the switch is not accepted. The MEC Pad shall be located so that components are in full view of the operator.
4. Provide one-year warranty from Substantial Completion for workmanship and material.

E. Backstop Auto Lock, Safety Strap:

1. Model No. SBAL-30 safety strap by Jaypro Sports, Waterford, CT.
2. Provide one for each backstop.
3. Lock shall be inertia sensitive to automatically lock a basketball backstop in position at any time in storage or during the raising or lowering cycle due to a sudden surge of speed created by a possible malfunction of the hoisting apparatus, such as the winch, cable, pulleys, support fittings, etc.
4. Safety strap shall incorporate a 2-inch-wide nylon belt rated at a 6,000-pound breaking strength. The entire unit to be tested to withstand a 1,500-pound free fall load and rated at 1000 pounds. Strap shall extend a maximum of 35'-0" and shall be automatically retracted and stored on a reel equipped with a special negator type constant force spring. Operation and locking action of strap shall be by integral cast components activated by centrifugal force to lock a basketball backstop before the unit travels 12 inches of free fall. Unit shall incorporate a fully automatic reset requiring no poles, ropes, levers, or buttons.
5. Unit shall be furnished with a universal mounting bracket to fit on any size pipe mounted either parallel or at right angles to unit. Belt shall be supplied with a special be connection bracket for ease of securing directly to the basketball backstop.

F. Basketball Backstop Height Adjuster:

1. Height adjuster shall be manufactured of extruded, high strength alloy aluminum and shall be anodized to eliminate paint chipping during use. Height adjuster shall be screw driven as to raise and lower the goal height from 8' to 10' off the finished floor. Screw drive shall be a 3/4" Acme thread rod secured in two bronze bushings. Height adjuster shall be operated from the floor by a hand crank (included with height adjuster).

G. Volleyball Floor Plate/sleeves:

1. Model No. PVB-50S volleyball floor sleeves by Jaypro Sports, Inc.
2. Bronze cover plate assembly with cam lock shall be 7-1/4" O.D. The cover plate assembly includes a removable access cover, attached to the mounting ring by a chain to prevent misplacement.
3. Sleeve shall be 3-1/2" I.D. aluminum extending 10" into concrete footing. The cover plate assembly is made of solid bronze and the unit is provided as an assembled unit with a 1-inch gap between the sleeve and cover plate assembly to allow for any "floating" of the playing surface.

H. Volleyball Standards:

1. Model No. PVB-70U Powerlite International standards by Jaypro Sports, Inc. Provide No. PVB-700CLS center standards as may be required for adjacent court layouts. Refer to the Drawings for configuration of court layouts.
2. One pair of standards includes a net tensioning winch and standards of 3-1/2" O.D., high strength, lightweight extruded aluminum. Standards shall be fitted with a molded bottom cap to protect the gymnasium floor. Standards are pre-assembled, two-piece telescoping uprights and provide infinitely adjustable net height settings between 6'-0" to 8"-2" by means of an internal worm gear design. Tensioning winch shall have an internal worm gear construction with an effective 10:1 turn ratio to eliminate snap back and shall be completely enclosed with a cast aluminum cover. The winch shall be furnished with a removable handle to discourage unauthorized use. The winch shall have 1-3/4" wide high tensile strength (9000#) nylon strap with sewn snap buckle for complete cable-less design. Standards to meet NCAA, NFSHSA, and USVBA specifications. B/1. One pair of standards includes a net tensioning winch and standards of 3-1/2" O.D., high strength, lightweight extruded aluminum. Standards shall be fitted with a molded bottom cap to protect the gymnasium floor. Standards are pre-assembled, two-piece telescoping uprights with a pin stop height adjustment providing 16 different net heights between 6'-6" and 8'-2". Tensioning winch shall have an internal worm gear construction with an effective 10:1 turn ratio to eliminate snap back and shall be completely enclosed with a cast aluminum cover. The winch shall be furnished with a removable handle to discourage unauthorized use. The winch shall have 1-3/4" wide high tensile strength (9000#) nylon strap with sewn snap buckle for complete cable-less design. Standards to meet NCAA, NFSHSA, and USVBA specifications.

I. Standard Protective Pads:

1. Model No. PVB-60P volleyball standard protective pads by Jaypro Sports, Inc. Provide Model No. PVB-130C for center standards as may be required.

2. Pads shall be 72 inch high and fabricated from 2-inch-thick polyurethane foam covered with 14 oz. Vinyl coated nylon. Each pad shall be tailored to easily fold around upright and fastened by Velcro flaps, covering winch and net tensioning hardware. Front side of pad shall be furnished with an opening for attaching and tensioning bottom strap from net. Color to be selected by architect from 13 standard colors. Standards pads to meet NCAA, NFSHSA, and USVBA specifications.

J. Volleyball Net:

1. Model No. PVBN-6 Competition volleyball net by Jaypro Sports, Inc.
2. Net shall be 32 feet in length, 39 inches wide with #21 black nylon mesh measuring approximately 4" by 4" square. The net shall have a 2-inch white double thickness binding on all 4 sides. The end sleeves shall be capable of accepting a completely enclosed 1/2" steel dowel. The net shall meet NCAA, NFSHSA, and USVBA specifications.

K. Net Antenna:

1. Model No. VBA-75 antenna by Jaypro Sports, Inc.
2. Antennae are secured firmly to the top and bottom of the net by rubber clamps that eliminate the possibility of the antennae dislodging from the net.

PART 2 EXECUTION

2.1 PREPARATION

A. Make necessary arrangements to provide scaffolding to perform the work in this section. Damage to floors, walls, equipment, and the like shall be corrected at the expense of the Contractor under this Section.

2.2 INSTALLATION

A. Install equipment according to manufacturer's printed instructions, drawings, and specifications, and approved shop drawings.

B. Loose equipment shall be removed from packaging or crating, cleaned, and tested for proper operation before turning over to M-DCPS. Removable items shall be set in the various required positions to be checked for proper fit for floor inserts.

2.3 DEMONSTRATION

A. Work under this section shall include demonstrating the proper use and operation of equipment to M-DCPS as may be required.

END OF SECTION