

**SECTION 11 68 43**  
**EXTERIOR ELECTRONIC SCOREBOARD AND SEGMENT TIMING (SHOT CLOCK)**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Exterior Electronic Scoreboard
- B. Segment Timing (Shot Clock)

**1.02 DESCRIPTION OF WORK**

- A. The Contractor shall furnish all labor, materials and equipment necessary to install, adjust, field test and place in satisfactory operation the exterior electronic scoreboard and segment timers shown on the Contract Drawings and specified herein.
- B. The exterior scoreboard and segment timers shall be designed for exterior installation with weatherproof housing and optical isolation interface to reduce potential damage from electrical storms.
  - 1. Under this item of work the Contractor shall install exterior scoreboard and segment timers required to complete the work of this Contract in accordance with the Plans, Specifications and directions of the Authority.
- C. All work performed under this Section shall be done by one who possesses a Master Electrician's License issued by the City of New York pursuant to title B of Chapter 30 of the Administrative Code. All electrical installations for this work shall be performed under the supervision of a Licensed Electrician. All work shall be performed in accordance with applicable New York City Codes and must be appropriately inspected.

**1.03 RELATED REQUIREMENTS**

- A. Section 03 30 00 - Cast-in-Place Concrete, Control Joints and Reinforcing: Footings for exterior scoreboard.
- B. Section 31 22 00 - Grading: Shaping subgrade to specified grade levels; removal of excess soil and rocks.

**1.04 REFERENCE STANDARDS**

**1.05 DEFINITIONS**

**1.06 SUBMITTALS**

- A. See Section 01 33 00 – Submittal Procedures, for submittal procedures.
- B. Proposals for Substitutions: submit shop drawings with proposed modifications clearly identified and sufficient information to determine compliance with specified criteria.
- C. Product Data: For all manufactured equipment, provide manufacturer's product data showing materials of construction, compliance with specified standards, installation procedures, safety limitations, and the number of users permitted.
- D. Shop Drawings: Detailed scale drawings showing exterior electronic scoreboard layout.
  - 1. Show locations and dimensions of footings.
  - 2. Show steel column locations, dimensions and size based on wind zone, exposure and other variables specified in manufacturer's installation documents.
  - 3. Clearly identify mounting elevations in relation to a fixed survey point on site.
  - 4. Show locations of underground utilities, storm drainage system and irrigation system.
  - 5. Show locations of related construction such as walkways and roadways, fences, site furnishings, and plantings.
- E. Maintenance Data: Provide manufacturer's recommended maintenance instructions and list of replaceable parts for each equipment item, with address and phone number of source of supply.
- F. Manufacturer's Field Report.

- G. Warranty: Submit manufacturer warranty and ensure that forms have been completed in NYCHA's name and registered with manufacturer.
- H. Guarantee
  - 1. Guarantee to cover defects in materials and workmanship.
  - 2. 5 years parts and factory labor guarantee for scoreboards, and accessories from invoice date.
  - 3. 2 years parts and factory labor guarantee for wireless controls and receivers from invoice date.
  - 4. Lifetime telephone support.

### **1.07 QUALITY ASSURANCE**

- A. An authorized representative of the exterior scoreboard manufacturer and segment timers must inspect and approve the completed equipment installation.
  - 1. The exterior scoreboard and segment timers will not be accepted by the exterior scoreboard manufacturer or the New York City Housing Authority until both are satisfied with the installation. No additional compensation shall be granted for any corrective work.

### **1.08 SERVICES OF THE MANUFACTURER'S REPRESENTATIVE**

- A. The Contractor shall provide the services of a qualified manufacturer's representative who shall inspect and approve the completed exterior scoreboard installation.
- B. The on-site time required for the manufacturer's representative to achieve a successful installation shall be at the expense of the Contractor. The manufacturer's representative shall sign in and out of the office of the Resident Engineer and provide written verification of the areas he has approved on each day he is at the project.

## **PART 2 PRODUCTS**

### **2.01 EXTERIOR SCOREBOARD - GENERAL**

- A. Design Assumptions: Because the safety of the exterior scoreboard depends on strict conformance to the design criteria, this information is provided for Contractor's information.
- B. Mount all equipment on concrete footings, unless otherwise indicated.
  - 1. Provide supports as required by the Scoreboard Manufacturer to mount equipment at proper height above finish and sub-grades to allow installation of sufficient depth. Supports shall be painted BLACK as per Exterior Painting specifications for steel/metal components.

### **2.02 EXTERIOR SCOREBOARD- NEVCO**

- A. Scoreboard shall be type: Exterior, electronic, multi-sport scoreboard with integral horn and LED displays for time, scores and period; Model 3650.
  - 1. Size: 10 feet long x 4 feet high x 8 inches deep.
  - 2. Approximate weight: 130 pounds.
  - 3. White on black captions, 8 inches high: "MIN", "SEC", "HOME", "GUESTS" & "PERIOD".
  - 4. High intensity amber LED displays with 14 inch high digits: Time in minutes and seconds separated by colon, scores and period.
  - 5. Power requirement: 120/240 volts, 0.7/0.35 amps.
  - 6. Scoreboard wind loading shall be Exposure B for a 120 mph wind zone.
  - 7. Scoreboard height from grade to bottom of lowest display component shall be 10 feet, unless otherwise indicated on the drawings.
- B. Exterior Electronic Scoreboard and Segment Timing (Shot Clock) shall be as provided by:
  - 1. Nevco, Inc., 301 East Harris Avenue, Greenville, Illinois 62246; Telephone 800-851-4040; [www.nevco.com](http://www.nevco.com) or an equal product.
- C. Finish shall be acrylic polyurethane paint, No. 76 – Print Black.
- D. Control Center. Type: Wired or Wireless, microprocessor based operator's control center designed to operate different models of scoreboard by interchange of keyboard overlay; Model

MPC as manufactured by Nevco Inc. Type: Handheld wireless, basic, AA battery operated, sport specific, control center with receiver unit mounted at scoreboard; Model MPCX as manufactured by Nevco Inc.

- E. Score board shall have a Protective Net sized to fit.
- F. The Contractor shall provide TWO portable Segment Timing Accessories (shot clocks) as shown on the Contract Drawings and give them to the Development's Manager.
- G. Segment Timer shall be type: Exterior, segment timing accessory with LED displays for time; Model SEG-14, or an equal product.
  - 1. Size: 22 inches x 21 inches x 8 inches.
  - 2. Approximate weight: 16 pounds.
  - 3. High intensity amber LED displays with 14 inch high digits.
  - 4. Lithium Ion Battery powered. 6+ hours of operation.
  - 5. Portable handheld controller.

### **2.03 EXTERIOR SCOREBOARD- ELECTRO-MECH**

- A. Scoreboard shall be type: Exterior, electronic, multi-sport scoreboard with integral horn and LED displays for time, scores and period; Model LX7230, or an equal product.
  - 1. Size: 9 feet long x 3 feet high
  - 2. Approximate weight: 90 pounds.
  - 3. White on black captions, 5 inches high: "HOME", "GUESTS" & "PERIOD".
  - 4. High intensity amber LED displays with 11 inch high digits: Time in minutes and seconds separated by colon, scores and period.
  - 5. Power requirement: 120 VAC, 1.1amps.
  - 6. Scoreboard wind loading shall be Exposure B for a 120 mph wind zone.
  - 7. Scoreboard height from grade to bottom of lowest display component shall be 10 feet, unless otherwise indicated on the drawings.
- B. Exterior Electronic Scoreboard shall be as provided by:
  - 1. Electro-Mech Scoreboard Company, 72 Industrial Boulevard, Wrightsville, GA 31096, phone 800.445.7846.
- C. Finish shall be acrylic polyurethane paint, Matte Black.
- D. Control Center. Type: Wired or Wireless, microprocessor based operator's control center designed to operate different models of scoreboard by interchange of keyboard overlay; Model MP – Series Scoreboard Control Console as manufactured by Electro-Mech Scoreboard Company. Type: Handheld wireless, basic, AA battery operated, sport specific, control center with receiver unit mounted at scoreboard; Model MP – Series Scoreboard Control Console as manufactured by Electro-Mech Scoreboard Company or an equal product.
- E. A standard grounded exterior power receptacle shall be included as part of the installation of the Electro-Mech Scoreboard.

## **PART 3 EXECUTION**

### **3.01 LAYING OUT THE WORK**

- A. Stake the location of exterior electronic scoreboard , hard surfaces, walls, fences, and structures, and planting locations.

### **3.02 EXAMINATION**

- A. Verify that exterior scoreboard footings have been installed in proper locations and at proper elevations.
- B. Verify location of underground utilities and facilities in the area of the exterior electronic scoreboard. Damage to underground utilities and facilities will be repaired at Contractor's expense.

### **3.03 INSTALLATION**

- A. The Contractor shall be responsible for providing the Authority Inspector with manufacturer's drawings and instructions that outline proper installation procedures. No installation is to take place without the Authority Inspector's review of the necessary manufacturer's information.
- B. Contractor shall form footings for standards in accordance with manufacturer's instructions. He shall also be responsible for co-ordination of delivery of standards. All barriers preventing access of delivery trucks shall be removed and replaced after delivery and installation of standards.
- C. Install scoreboards and accessories in accordance with manufacturer's instructions and approved installation drawings.
- D. Before installation, field test scoreboards and accessories for operating functions. Ensure that scoreboards accurately perform all operations. Correct deficiencies.
- E. Verify exact scoreboard and control center quantities and junction box locations with Architect.
- F. Coordinate requirements for electrical power, concrete, steel erection, auxiliary framing and supports, suspension cables, and other components to be provided under other Specification Sections to ensure adequate provisions are made for complete, functional installation of scoreboards.
- G. Coordinate scoreboard electrical requirements to ensure proper power source, conduit, wiring, and boxes are provided. Prior to installation, verify type and location of power supply.
- H. Rigidly mount scoreboards and accessories level and plumb with brackets and fasteners.
- I. Clean exposed surfaces.
- J. Protect scoreboards and finishes from other construction operations.

### **3.04 FIELD QUALITY CONTROL**

- A. NYCHA or NYCHA's representative will inspect exterior scoreboard after installation to verify that the equipment meets specified design safety requirements.
- B. Repair or replace rejected work until compliance is achieved.

### **3.05 CLEANING**

- A. Restore adjacent existing areas that have been damaged from the construction.
- B. Clean exterior electronic scoreboard of construction materials, dirt, stains, filings, and blemishes due to shipment or installation and remove all shipping labels. Clean in accordance with manufacturer's instructions, using cleaning agents as recommended by manufacturer.
- C. Clean basketball area of excess construction materials, debris, and waste.
- D. Remove excess and waste material and dispose of off-site in accordance with requirements of authorities having jurisdiction.

**END OF SECTION 11 68 43**