# SVG VENUE INITIATIVE WHITE PAPER

## RECOMMENDATIONS FOR SPORTS VENUES:

### Scoreboard Control Room Infrastructure and Operations

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# SECTION B: SCOREBOARD CONTROL ROOM INFRASTRUCTURE AND OPERATIONS

## PURPOSE

The purpose of this section is to define the labor, materials, tools, supervision, coordination, and infrastructure necessary to complete design, construction, and installation of the scoreboard control room for a public-assembly facility.

In terms of physical space, the control room should be divided into two main areas: a machine/equipment room and a control room.

Before construction and layout begins, space required for fire-suppression units MUST be accounted for as they typically will take up more space than anticipated.

The two rooms should be located next to each other to minimize the length of cable runs and also make it easier to move from one room to the other.

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## B1. Machine-Room Design

The machine/equipment room is the primary location for equipment like routing switchers, video servers, graphics engines, and more.

### HVAC

Air-conditioning within the equipment room is very important as the heat load is above and beyond what will be experienced in the rest of the building. Ensure that the amount of air-conditioning exceeds the requirements.

A general recommendation is to have an average of 3.5 BTU/hour per aggregate watt load of each equipment rack. Example: Average Load of 1,500 W per rack = 5,250 BTU/hour per rack.

### SPACE REQUIREMENTS

The size of the machine/equipment room will ideally be no less than 10 feet deep. As each rack is typically 3 feet deep and 6.5 feet high, it is recommended that another 2 or 3 feet of space be available behind the rack and 3 or 4 feet in front of the rack.

The number of racks typically needed for square footage calculations:

- Professional sports facility average about 20 racks.
- Division 1 colleges average around 10 racks for a single venue.
- Smaller schools average around four or five racks.

There should also be unused racks available for future needs. The recommendation is to have one empty rack available for every four racks that contain equipment.

Each rack will require a minimum of two 20-amp circuits.

Provide a minimum of two auxiliary or courtesy power receptacles on the front of each rack.

It is recommended that the ceiling be partially finished for dust control. However, please ensure that the cable trays are below the finished ceiling and easily accessible. Elevated cable trays are also recommended because cabling located beneath a raised floor is difficult to access if there is less than 12 inches of clearance.

## B2. Video-Control-Room Design

Location, ideally, will provide a view of the field or court and be located on the suite level or press level.

If the control-room area has windows, at least a portion of them should be operable so that the production team can open the window and get a better sense of the ambient sound.

Physical space required depends on the number of operators (graphics, technical director, replay, etc.) who will be working in the room. Workspace should be approximately 36 square inches per operator position.

Power requirements for each workstation are a minimum of a duplex outlet with 15 amps to ensure equipment, monitors, and intercom stations remain functional.

Monitor walls should be placed at a distance so that the director and producer can see everything on the screens but still be seated at a comfortable viewing distance.

## B3. External Connectivity

### CAMERA REQUIREMENTS

Primary scoreboard camera locations will usually mirror the M/U (Mobile Broadcast Unit) primary camera locations and requirements in Section A4 of this document.

Cabling infrastructure for scoreboard camera locations should have SMPTE fiber, single-mode fiber, and triax cabling home-runned directly to the scoreboard control room location.

Ideally, a complement of cabling connections from each camera location/broadcast connection panel box throughout the venue would home-run directly to the scoreboard control room location.

### CONTROL ROOM/M/U TRUCK COMPOUND CROSS-CONNECTIVITY

The control room should also be connected to the truck dock via single-mode fiber cable with at least 48 strands. It is recommended that the strand count be double anticipated needs as the cost of having to rewire for more capacity outweighs the cost of initially installing a cable with more strands.

## B4. Studio And Postproduction Facilities

Another consideration, increasingly, is a studio and/or postproduction facility.

### STUDIO REQUIREMENTS

A video-production studio would require at least 12-foot-high ceilings. The ceiling must also be able to support the weight of a 1½-inch-OD-pipe lighting grid and the minimum quantity of 3200K lighting instruments for the desired production.

A studio would require a minimum of 12-16 120-VAC duplex receptacles at grid level with local switching in room.

Ideally, a theatrical dimmer rack and lighting-control panel are used.

Double-wide doors are also recommended for a studio for easy transport of set pieces and equipment. The studio should also be located near an elevator.

### POSTPRODUCTION-FACILITY REQUIREMENTS

Like the machine room, the postproduction facility or edit suite(s) must be located close to the main control room in order to minimize cable runs and allow the equipment to be tied to the main router.