STAR Control Room Consoles Specification

Brookhaven National Laboratory
Physics Department
STAR Operations Group
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Revision Record

Rev. No.	Date	Page	Subject	ECN

Specification for STAR Control Room Consoles

1. **General**

The following specification pertains to the design, fabrication, and installation of modular electronic equipment enclosures, referred to as consoles, for CRT-based operator workstation environments. This specification along with attachment “A” defines the layout and manner in which the consoles and related accessory items must be constructed.

1.1. The consoles must accommodate a variety of computer, communication, display, and operator interface devices. The design of the consoles should also satisfy the functional, ergonomic, and aesthetic requirements of the operational working environment.

1.2. The consoles must be of modular design, facilitating future equipment retrofits, and full reconfigurations without major modification to structure or exterior elements.

1.3. The consoles shall be ergonomically designed for operator comfort and suitable for housing and mounting personal computers, 21” CRT’s, 19 inch rack mount equipment, video monitors, PLC’s, Distributed Control Systems, and other items required in a control room environment.

1.4. The console system shall be of a design that minimizes the amount of dust and contaminates entering into the modular console system.

2. **Scope**

The console manufacturer must fabricate, deliver, and install at Brookhaven National Laboratory a console system, as per this specification and attachment “A”, consisting of:

2.1. Console sub-structure

2.2. Enclosure panels (Including work surface elements)

2.3. Equipment mounting kits:

2.3.1. CRT Displays

2.3.2. PC Processors

2.3.3. 2nd tier keyboard trays

2.4. Operator convenience kits

2.4.1. Binder storage compartments

2.4.2. Telephone mounting shelves

2.5. Console accessory items:

2.5.1. Task Lighting

2.5.2. Ventilation fans with minimal background noise

2.5.3. Power distribution surge protectors

2.5.4. Internal cable management system

2.5.5. Mobile storage pedestals

2.6. Shift Leaders Desk

2.6.1. As shown in Attachment “A”

2.7. Supply detailed CADD drawings of console and equipment layouts for coordination of site measurements, architectural, mechanical, and electrical project elements.

2.8. Supply a pre-production review, to include a drawing submittal and component listing, complete with samples of selected finish materials. This submittal must be reviewed by the buyer for verification of console configuration, equipment layout, and exterior finish selections, prior to commencing with production.

3. Construction

The console system must be constructed of an internal steel and/or aluminum support structure. The frame will incorporate levelers to properly align the console modules across the floor of the control room. The structural frame must support the exterior panel elements and the various equipment mounting kits and accessories along with personnel operator loading.

3.1. A base frame constructed of steel and/or aluminum, multiformed structure. This base frame shall be suitable, for electronic and process control cabinetry deployed worldwide.

3.2. Various means should be employed to mount equipment, including ball bearing pullout CPU trays, solid floor panels with conduit entries, side mounted sub-panels, movable equipment shelves, and EIA rails for rack mounting equipment.

3.3. To assure alignment of the complete system, levelers should be provided at each console corner.

3.4. All panels should feature smoothly dressed beveled corners to both enhance appearance and avoid square corners that could cause injury.

3.5. The base module constitutes a desk structure for supporting the work surface and the upper tier modules. The standard base unit shall consist of front-hinged doors and rear access panels. The work surface height shall be approx. 29" from the bottom of the console frame to the top of the work surface to insure maximum operator comfort while using a standard computer keyboard.

3.6. The manufacturer shall provide the following:

3.6.1. Pull out equipment trays with full extension 100 lbs. rated slides with clearance for standard tower

3.6.2. Sub-panels for the mounting of electrical panel components on the front, rear, or either side.

3.6.3. Drawer pedestals

3.6.4. Adjustable shelves and bottom shelves

3.6.5. The monitor tiers shall be constructed with retractable front monitor doors.

3.6.6. The monitor tier housings shall be interchangeable between the 1st and 2nd tier.

3.6.7. A separate (removable) task light module shall be mounted to the top of the 1st tier. The task light illuminates the work surface for the operator. The overall height of the console with the task light should be approx. 54 inches.

3.6.8. Monitor enclosures shall include glass with an anti-glare coating to minimize screen glare for the operator.

3.6.9. The monitor enclosure shall accommodate a monitor size up to 21 inches and allow easy removal of the monitor from the FRONT without the use of special tools. The housing shall employ an adjustable monitor tray to allow the monitor to be properly positioned within the housing.

3.6.10. The front retractable monitor door should accommodate EIA mounting rails, storage compartments, fixed panels, or a full width panel to mount control components.

3.6.11. Each console module work surface shall be rated to withstand a distributed load of 500-lbs. Work surfaces shall utilize a bull nose design on the front edge. The console manufacturer shall offer options for surface laminates and console colors prior to construction.

3.6.12. All materials used in the console construction should be self-extinguishing and/or flame retardant.

4. Shipping

4.1. The vendor must be responsible for packing the components in a manner that will ensure undamaged and complete arrival at the buyer destination via dedicated air-ride transport.

4.2. All containers are to have their contents listed on the outside of the packaging, for quick reference at destination.

4.3. Vendor will contact buyer 7 working days in advance of delivery.

4.4. All containers and equipment shall be offloaded at destination site by the vendor.

5. Installation

5.1. Both parties prior to shipping must agree to the date of site installation by vendor.

5.2. Onsite installation should be completed in 3 days.

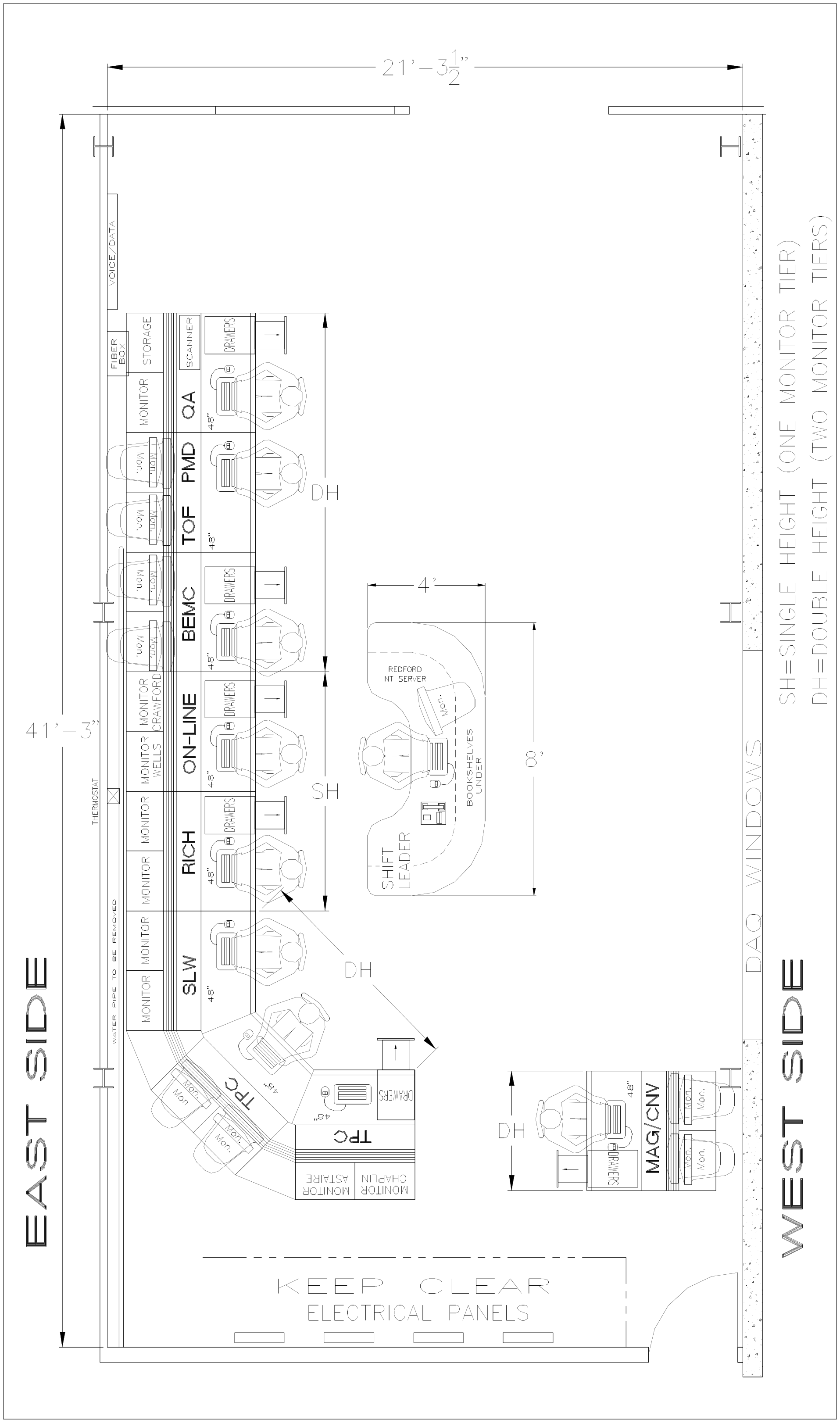
6. Payment Schedule:

The following is the proposed payment schedule.

6.1. First payment is 25% upon issuances of contract.

6.2. Second payment is 25% upon completion of fabrication.

6.3. Final payment is 50% upon completion and buyer approval.



Attachment "A"