

**Hill-Rom**

Enhancing Outcomes for Patients and Their Caregivers.™

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This MANU-SPEC® utilizes the Construction Specifications Institute (CSI) *Project Resource Manual* (PRM), including *MasterFormat*™, *SectionFormat*™ and *PageFormat*™. A MANU-SPEC is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets []; delete optional text in final copy of specification. Specifier Notes precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate product model numbers, styles and types are used in Specifier Notes and in the specification text Article titled "Acceptable Material." Metric conversion, where used, is soft metric conversion.

This MANU-SPEC specifies a hospital headwall system, Elements™ Headwall System, as manufactured by Hill-Rom Co. Revise MANU-SPEC section number and title below to suit project requirements, specification practices and section content. Refer to CSI *MasterFormat* for other section numbers and titles.

SECTION 10 25 13

PATIENT BED SERVICE WALLS

PART 1 GENERAL

1.01 SUMMARY

Specifier Note: Revise Paragraph below to suit project requirements. Add section numbers and titles per CSI *MasterFormat* and specifier's practice.

A. Related Requirements:

Specifier Note: Include in this Paragraph only those sections and documents that directly affect the work of this section. If a reader of this section could reasonably expect to find a product or component specified in this section, but it is actually specified elsewhere, then the related section number(s) should be listed in the Subparagraph below. Do not include Division 00 documents or Division 01 sections since it is assumed that all technical sections are related to all project Division 00 documents and Division 01 sections to some degree. Refer to other documents with caution since referencing them may cause them to be considered part of the Contract.

1. Section [____], gas connections.
2. Section [____], electrical connections.
3. Section [____].

Specifier Note: Paragraph below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain References Paragraph when specifying products and installation by an industry reference standard. List retained standard(s) referenced in this section alphabetically. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Contract Conditions Section 01 42 00 - References may establish the edition date of standards. This Paragraph does not require compliance with standard(s), but is simply a listing of all references used in this section. Only include here standards that are referenced in the body of the specification in PARTS 1, 2 and/or 3. Do not include references to building codes at any level.

1.02 REFERENCES

A. Reference Standards:

1. American National Standards Institute (ANSI)/Underwriters Laboratories (UL):
 - a. ANSI/UL 514A Metallic Outlet Boxes.
2. American Society of Mechanical Engineers (ASME):

- a. ASME B16.22 Wrought Copper and Copper Alloy Solder Joint Pressure Fittings.
- 3. ASTM International (ASTM):
 - a. ASTM E90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
 - b. ASTM E413 Classification for Rating Sound Transmission.
- 4. Compressed Gas Association (CGA):
 - a. CGA-G-4.1 Cleaning Equipment for Oxygen Service.
 - b. CGA V-5 Diameter Index Safety System (Noninterchangeable Low Pressure Connections for Medical Gas Applications).
- 5. National Fire Protection Association (NFPA):
 - a. NFPA 70 National Electrical Code (NEC).
 - b. NFPA 99 Health Care Facilities.
- 6. Underwriters Laboratories, Inc. (UL):
 - a. UL 1047 Isolated Power Systems Equipment.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Coordinate work of this Section with work of other trades for proper time and sequence in order to avoid construction delays. Comply with Section [01 31 00 - Project Management and Coordination].

Specifier Note: Add additional text to specify unusual or detailed coordination requirements affecting the work results of this Section.

- 1. [_____].
- B. Preinstallation Meetings: Conduct preinstallation meeting [1 week] prior to commencing [work of this Section] [and] [on-site installations] to verify project requirements, substrate conditions and coordination with other building subtrades, and to review manufacturer's installation instructions and manufacturer's warranty requirements. Comply with Section [01 31 19 - Project Meetings].

Specifier Note: Add additional text to describe requirements for meetings in order to coordinate products and techniques and to sequence related work for sensitive and complex items.

- 1. [_____].
- C. Sequencing: Sequence work of this section in accordance with Section [01 12 16 - Work Sequence] [and manufacturer's written recommendations for sequencing construction operations].

Specifier Note: Specify all text as needed to describe the particular sequence of events required to coordinate work that must be performed in sequence with, or at the same time as, work in another section.

- 1. [_____].
- D. Scheduling: Schedule work of this Section in accordance with Section [01 32 13 - Scheduling of Work].

Specifier Note: Specify additional text to include requirements for coordinating work that requires unusual scheduling with work of other sections.

- 1. [_____].

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Contract Conditions and Section 01 33 00 - Submittal Procedures.

1.04 ACTION SUBMITTALS

- A. General: Submit listed submittals in accordance with Contract Conditions and Section [01 33 00 - Submittal Procedures].
- B. Product Data: Submit specified products as follows:

1. Manufacturer's product data, including manufacturer's SPEC-DATA product sheet.
2. Manufacturer's installation instructions.
3. Catalog pages illustrating products to be incorporated into project.
- C. Shop Drawings: Indicate information on shop drawings as follows:
 1. Elevation of service wall(s) showing ceiling height, layout of service and access panels, cabinetry, locations of utility outlets and locations of accessories.
 2. Rough-in locations and dimensions.
 3. Mounting details for framing, utility piping and wiring, service and access panels and accessories.
 4. Piping and wiring diagrams for utilities.
 5. [_____].

Specifier Note: Samples are full-size actual products intended to illustrate the products to be incorporated into the project. Sample submittals are commonly necessary for such characteristics as colors, textures and other appearance issues.

- D. Samples: Submit as follows:
 1. Example: [Full size] [___ inches x ___ inches (___ x ___ mm)] samples of [_____].

Specifier Note: Use the following Paragraph when high value samples are submitted.

2. [Owner] [Architect] [Consultant] [_____] will return all samples to manufacturer for recycling.

1.05 INFORMATION SUBMITTALS

- A. Manufacturer's Instructions: Submit manufacturer's storage and installation instructions.
- B. Source Quality Control: Submit documentation verifying that components and materials specified in this Section are from single manufacturer.

Specifier Note: Coordinate with Field Quality Control in PART 3. When manufacturer's services are specified during construction operations to verify installation, include following Paragraph for the submittal of instructions and reports. If no field inspections are required, delete the following Paragraph.

- C. Manufacturer's Reports: Manufacturer's field reports specified.
- D. Qualification Statements:
 1. Submit letter of verification for Manufacturer's Qualifications.
 2. Submit letter of verification for Installer's Qualifications.

1.06 CLOSEOUT SUBMITTALS

- A. General: Submit listed submittals in accordance with Contract Conditions and Section [01 33 00 - Submittal Procedures].
- B. Operation and Maintenance Data:
 1. Submit operation and maintenance data for installed products in accordance with Section [01 78 23 - Operation and Maintenance Data]. Include:
 - a. Manufacturer's instructions detailing maintenance requirements.
 - b. Parts catalog showing complete list of available parts.
 - c. Replacement parts with cuts and identifying numbers.

Specifier Note: Edit or expand list of operation and maintenance data submittal inclusions to suit project requirements.

1.07 QUALITY ASSURANCE

- A. Qualifications:
 1. Manufacturer:
 - a. Having [5] years experience manufacturing components similar to or exceeding requirements of project.

- b. Having sufficient capacity to produce and deliver required materials without causing delay in work.
 - c. Capable of providing field service representation during construction.
2. Installer: [Acceptable to the manufacturer, experienced in performing work of this section and having specialized in installation of work similar to that required for this project] [Acceptable to manufacturer].

Specifier Note: If a mock-up is required, retain Paragraph below.

- B. Mock-up: Construct mock-up where [indicated] [directed] by [Owner] [Architect] [Consultant] in accordance with Section [01 43 00 - Quality Assurance].

Specifier Note: Insert statement below indicating general description of mock-up.

- 1. Construct showing [_____] work.
- 2. Dimensions and Process: Construct to [___ feet x ___ feet (___ x ___ m)] using proposed procedures, colors, textures, finishes and quality of work.
- 3. Purpose: To judge quality of work, substrate preparation, operation of equipment and material application.
- 4. Locate where [directed] [indicated].
- 5. Do not proceed with work prior to receipt of written acceptance of mock-up.
- 6. When accepted, mock-up will demonstrate minimum standard of quality required for this work. [Approved mock-up may [not] remain part of finished work.] [Remove mock-up and dispose of materials when no longer required and when directed by [Owner] [Architect] [Consultant].

1.08 DELIVERY, STORAGE & HANDLING

- A. Delivery and Acceptance Requirements:
- 1. Deliver material in accordance with Section [01 61 00 - Common Product Requirements] and in accordance with manufacturer's written instructions.
 - 2. Deliver materials in manufacturer' original packaging with identification labels intact and in sizes to suit project.
- B. Storage and Handling Requirements:
- 1. Store materials protected from exposure to harmful weather conditions and at temperatures recommended by manufacturer.
- C. Packaging Waste Management:

Specifier Note: The disposal of packaging waste into landfill sites demonstrates an inefficient use of natural resources and consumes valuable landfill space. Specifying appropriate packaging and construction waste management and disposal procedures may contribute to points required for USGBC's LEED® construction project certification.

Specifier Note: Include the following Subparagraphs to specify information that will provide direction to the Contractor for the disposal of construction waste materials using environmentally responsible methodology other than landfill resources.

- 1. Separate waste materials for [reuse] [and] [recycling] in accordance with Section [01 74 19 - Construction Waste Management and Disposal].

Specifier Note: USGBC's LEED certification includes credits for the diversion of construction waste from landfill. Diversion can be tracked by either weight or volume but must be consistent for all materials. Manufacturer may reclaim packaging and delivery materials for recycling.

- 2. Remove packaging materials from site and dispose of at appropriate recycling facilities.
- 3. Collect and separate for disposal [paper] [plastic] [polystyrene] [corrugated cardboard] packaging material [in appropriate onsite bins] for recycling.
- 4. Fold metal and plastic banding, flatten and place in designated area for recycling.

Specifier Note: Add additional Subparagraphs to include pallets, crates, padding and other packing materials typically associated with the specified products.

5. Remove:
 - a. Pallets from site.
 - b. [_____].

PART 2 PRODUCTS

Specifier Note: Retain Article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal," "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

2.01 PATIENT BED SERVICE WALLS

A. Manufacturer: Hill-Rom Co.

1. Contact: 1069 SR 46 East, Batesville, IN 47006; Telephone: (812) 934-7777; Fax: (812) 934-8189; E-mail: us.customerservice@hill-rom.com; website: www.hill-rom/usa/AP_Elements.htm.

Specifier Note: Substitution procedures must either be in the Contract Conditions or in Section 01 25 00 - Substitution Procedures. Do not include substitution procedures here.

2. Single Source Responsibility: Provide components and materials specified in this section from a single manufacturer.
3. Substitution Limitations:
 - a. Substitutions: [In accordance with [Contract Conditions] [Section 01 25 00 - Substitution Procedures]] [No substitutions permitted].

Specifier Note: Include an overall description of the system, assembly, product or material. Include required properties or characteristics that do not obviously belong under other titles. Examples: Configuration, size and color.

B. Description:

Specifier Note: Paragraph below should list obligations for compliance with specific code requirements particular to this section. General statements to comply with a particular code are typically addressed in Contract Conditions and Section 01 41 00 - Regulatory Requirements. Repetitive statements should be avoided.

1. Regulatory Requirements:
 - a. In accordance with Section [01 41 00 - Regulatory Requirements].
 - b. Comply with NFPA 70 and 99.
 - c. [_____].
2. Compatibility:
 - a. Ensure components and materials are compatible with specified accessories and adjacent materials.
- C. Elements™ Headwall System:
 1. Frame Assembly: 16 gauge roll formed galvanized steel channels.

Specifier Note: Select sizes and color(s) for service panels and access panels below.

2. Service Panels: 16 gauge steel with [high pressure laminate (HPL)] [art glass] finish.
 - a. Width: [16 inches (406 mm)] [24 inches (610 mm)] [32 inches (813 mm)] [As indicated on drawings].
 - b. Height: [6 inches (152 mm)] [12 inches (305)] [18 inches (457)] [24 inches (610 mm)] [30 inches (762)] [36 inches (914 mm)] [As indicated on drawings].
 - c. Color: [_____] [As selected from manufacturer's standards].
3. Access Panels: Edge banded particle board with high pressure laminate (HPL) finish on front and back.
 - a. Width: [16 inches (406 mm)] [24 inches (610 mm)] [32 inches (813 mm)] [48 inches (1219 mm)] [As indicated on drawings].

- b. Height: [6 inches (152 mm)] [12 inches (305 mm)] [18 inches (457 mm)] [24 inches (610 mm)] [30 inches (762 mm)] [36 inches (914 mm)] [42 inches (1067 mm)] [As indicated on drawings].
- c. Color: [_____] [As selected from manufacturer's standards].

Specifier Note: Retain below if cabinet casework is included in service wall design.

- 4. Cabinet Casework: Constructed of panels finished with high pressure laminate (HPL).

Specifier Note: It is assumed that cabinet type and size will be indicated on drawings; if not on drawings, indicate cabinet type(s), size(s) and color(s) and coordinate with drawings.

- a. Cabinet Type: [_____].
- b. Size: [_____].
- c. Color: [_____] [As selected from manufacturer's standards].
- 5. Gas Manifold: Machined aluminum block with D.I.S.S. (Diameter Indexed Safety System) gas specific check valves.
- 6. Junction Box: To provide normal and critical power (standard and isolated), as well as low-voltage power.

Specifier Note: Performance characteristics are usually stated with some form of evaluation or verification. Performance usually, but not universally, applies to systems and assemblies. Performance criteria can include structural, safety, fire resistance, vapor retardancy, acoustical, thermal, operational capacity and durability.

D. Performance Criteria:

- 1. Metallic Outlet Boxes: Comply with ANSI/UL 514A.
- 2. Copper Joint Pressure Fittings: Comply with ASME B16.22.
- 3. Cleaning Equipment for Oxygen Service: Comply with CGA-G-4.1.
- 4. Diameter Index Safety System: Comply with CGA V-5.
- 5. Isolated Power Systems Equipment: Comply with UL 1047.

Specifier Note: Refer to manufacturer's SPEC-DATA product sheet for selection of appropriate STC.

- 6. Sound Transmission Class, ASTM E413: [40] [45] [46] STC.

2.02 ACCESSORIES

Specifier Note: Refer to manufacturer's accessory catalog and design and planning guide and retain required accessories below. Coordinate with the drawings.

- A. Patient Light: Provide read, indirect and safety shut-off options.
- B. Monitor Mount: Provide a maximum 80 lb (36 kg) safe working load.
- C. Accessory Rail: Designed for mounting additional accessories.
- D. Bumper Strips: Protective horizontal or vertical strips for beds with traction equipment.
- E. Bottle Slides.

Specifier Note: Refer to manufacturer's design and planning guide catalog and retain required accessories below. Coordinate with the drawings.

- F. Workflow Modules:
 - 1. Glove Module:

Specifier Note: Retain below if dimensions are not specified on the drawings.

- a. Dimensions: [16 inches (406 mm) x 24 inches (610 mm)] [24 inches (610 mm) x 18 inches (457 mm)] [32 inches (813 mm) x 18 inches (457 mm)].

2. Sphyg Module:

Specifier Note: Retain below if dimensions are not specified on the drawings.

- a. Dimensions: [16 inches (406 mm) x 24 inches (610 mm)] [24 inches (610 mm) x 18 inches (457 mm)] [32 inches (813 mm) x 18 inches (457 mm)].

3. Sharps Module:

Specifier Note: Retain below if dimensions are not specified on the drawings.

- a. Dimensions: [24 inches (610 mm) x 24 inches (610 mm)] [24 inches (610 mm) x 30 inches (457 mm)] [32 inches (813 mm) x 24 inches (610 mm)] [32 inches (813 mm) x 30 inches (457 mm)].

4. Glove/gel Combination:

Specifier Note: Retain below if dimensions are not specified on the drawings.

- a. Dimensions: [24 inches (610 mm) x 24 inches (610 mm)] [32 inches (813 mm) x 24 inches (610 mm)].

5. Glove/BP Cuff Combination:

Specifier Note: Retain below if dimensions are not specified on the drawings.

- a. Dimensions: [24 inches (610 mm) x 24 inches (610 mm)] [32 inches (813 mm) x 24 inches (610 mm)].

6. Glove/Ambu bag combination:

Specifier Note: Retain below if dimensions are not specified on the drawings.

- a. Dimensions: [24 inches (610 mm) x 24 inches (610 mm)] [32 inches (813 mm) x 24 inches (610 mm)].

7. Other: [_____].

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions: Verify that conditions of substrates and service rough-ins previously installed under other sections or contracts are acceptable for product installation in accordance with manufacturer's instructions prior to patient bed service wall installation.
 - 1. Inform [Owner] [Architect] [Consultant] of unacceptable conditions immediately upon discovery.
 - 2. Proceed with installation only after unacceptable conditions have been remedied [and after receipt of written approval from [Owner] [Architect] [Consultant]].

3.02 PREPARATION

Specifier Note: In-wall option cannot be a load-bearing wall.

- A. Ensure structure or substrate is adequate to support patient bed service wall.
- B. Surface Preparation: Prepare surface in accordance with manufacturer's written recommendations and coordinate with Section [01 71 00 - Examination and Preparation].

Specifier Note: Specify preparatory work, such as selective removal of existing work, required prior to execution of new work. Specify requirements for exposure or removal of existing assemblies, components, products or materials.

C. Demolition/Removal:

- 1. [_____].

3.03 INSTALLATION

- A. Coordinate installation of components in accordance with Section [01 73 19 - Installation] and with manufacturer's instructions.
- B. Coordinate headwall system work with work of other trades for proper time and sequence in order to avoid construction

delays.

- C. Ensure accuracy of vertical and horizontal alignment between frame assemblies.
- D. Install patient bed service walls plumb and level.
- E. Accurately fit, align, securely fasten and install free from distortion or defects.

3.04 FIELD QUALITY CONTROL

Specifier Note: Specify requirements if manufacturers are to provide field quality control with onsite personnel for instruction or supervision of product installation, application, erection or construction. Manufacturer's field reports are included under PART 1, Submittals.

A. Manufacturer Services:

Specifier Note: Use the following Subparagraphs only when manufacturer's field services are provided and are required to verify the quality of the installed components. Establish the number and duration of periodic site visits required by manufacturer and specify below. Consult manufacturer for services required. Delete if field services are not required.

1. Coordinate manufacturer's services with Section [01 45 00 - Quality Control]. Have manufacturer review work involved in handling, installation/application, protection and cleaning of product[s], and submit written reports in acceptable format to verify compliance of work with Contract.
2. Manufacturer's Field Services: Provide manufacturer's field services consisting of product use recommendations and periodic site visits for product installation inspection in accordance with manufacturer's instructions.
3. Schedule site visits to review work at stages listed:
 - a. After delivery and storage of products, and when preparatory work on which work of this Section depends is complete, but before installation begins.
 - b. [Twice] during progress of work at [25%] and [60%] complete.
 - c. Upon completion of work, after cleaning is carried out.
4. Obtain reports within [3] days of review and submit immediately to [Owner] [Architect] [Consultant].

Specifier Note: Specify final actions required to prepare installed products to perform properly. Only include the following Article when installation includes control settings or movable parts.

3.05 ADJUSTING

- A. Adjust components and systems for correct function and operation in accordance with manufacturer's written instructions. Coordinate with Section [01 75 00 - Starting and Adjusting].

3.06 CLEANING

- A. Perform cleanup in accordance with Section [01 74 00 - Cleaning and Waste Management] and Section [01 74 13 - Progress Cleaning].
- B. Upon completion, remove surplus materials, rubbish, tools and equipment in accordance with Section [01 74 23 - Final Cleaning].

Specifier Note: Specify special measures needed to minimize waste, collect recyclable waste and dispose of or recycle field-generated construction waste created during demolition, construction or final cleaning.

C. Waste Management:

1. Coordinate recycling of waste materials with Section [01 74 19 - Construction Waste Management and Disposal].
2. Collect recyclable waste and dispose of or recycle field generated construction waste created during demolition, construction or final cleaning.
3. Remove recycling containers and bins from site.
4. [_____].

3.07 PROTECTION

- A. Protect installed product from damage during construction in accordance with Section [01 76 00 - Protecting Installed

Construction].

- B. Repair damage to adjacent materials caused by hospital headwall system installation.
- C. [_____].

Specifier Note: Specify provisions for maintenance services as applicable to critical systems, equipment and landscaping. Service agreements, if not paid in advance, should be separate from the construction agreement in order to avoid delay of final payment and to avoid holding the contract open for extended periods.

3.08 MAINTENANCE

- A. Coordinate maintenance requirements with Section [01 78 00 - Closeout Submittals] [01 93 13 - Facility Maintenance Procedures] [and] [00 78 23 - Operation and Maintenance Data].
- B. [_____].

END OF SECTION