

# Surgical and Endovascular Services Design Guide

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VA



U.S. Department of Veterans Affairs

## TABLE OF CONTENTS

1.0	GENERAL	Page
1.1.	Foreword	1-1
1.2.	Acknowledgements	1-3
1.3.	Introduction	1-5
1.4.	VA Policies/Standards, and Industry Codes/Standards	1-5
1.5.	Abbreviations	1-7
2.0	NARRATIVE	
2.1.	General	2-1
2.1.1.	Clinical and Operational Summary	2-1
2.1.2.	VA Trends in Surgical and Interventional Service	2-32
2.1.3.	The Technological Future of Surgery	2-35
2.2.	Technical Considerations	2-37
2.2.1.	VA Policies/Directives/Handbooks, Codes, and Standards	2-37
2.2.2.	Architectural	2-39
2.2.3.	Interior Design	2-41
2.2.4.	Heating, Ventilation and Air Conditioning Systems (HVAC)	2-42
2.2.5.	Plumbing Systems	2-46
2.2.6.	Medical Gas and Vacuum Systems	2-47
2.2.7.	Lighting and Power Systems	2-49
2.2.8.	Telecommunications and Special Telecommunication	
2.2.9.	Systems, Monitoring, and Signaling Systems	2-51
2.2.10.	Fire Protection and Life Safety	2-55
3.0	FUNCTIONAL DIAGRAMS	
3.1.	General	3-1
3.2.	The Surgical Suite	3-7
3.3.	Clean Core	3-16
4.0	DESIGN STANDARD PLATES – FLOOR PLANS, REFLECTED CEILING PLANS, ROOM DATA SHEET, EQUIPMENT LIST & GENERAL NOTES	
4.1.	General	4-1
4.2.	Patient Bay, Pre-Operative Holding /Phase II Recovery (RRPR1)	4-5
4.3.	Patient Room, Pre-Operative Holding /Phase II Recovery (RRPR2)	4-16
4.4.	Clean Workroom, Anesthesia (ANCW2)	4-27
4.5.	Operating Room, General (ORGS1)	4-34
4.6.	Operating Room, Orthopedic (OROS1)	4-50
4.7.	Operating Room, Urology / Cystoscopy (ORCS1)	4-66
4.8.	Operating Room, Cardiothoracic (ORCT1)	4-82
4.9.	Pump Room, Cardiothoracic / Hybrid OR (ORHL1)	4-100
4.10.	Operating Room, Neurosurgical (ORNS1)	4-109
4.11.	Operating Room, Robotics (ORRB1)	4-126



4.12.	Operating Room, Transplant (ORTR1)	4-141
4.13.	Operating Room, Monoplane Hybrid (ORHY1)	4-158
4.14.	Operating Room, Biplane Hybrid (ORHY2)	4-175
4.15.	Control Room, Hybrid OR (ORHC1)	4-193
4.16.	Cardiac Catheterization Laboratory (XCCE1)	4-201
4.17.	Procedure Room, Electrophysiology (XCEP1)	4-218
4.18.	Transesophageal Echocardiograph (TEE) Procedure Room (TRTE1)	4-236
4.19.	Decontamination, TEE Probe (TRTE2) Storage, Clean TEE Probe (TRTE3)	4-249
4.20.	RESCINDED	4-258
4.21.	Patient Bay, PACU / Phase I Recovery (RRBP1)	4-266
4.22.	Airborne Infection Isolation (AII), Patient Room	
4.23.	PACU / Phase I Recovery (RRIR1)	4-275
4.24.	Laboratory, Frozen Section (LBUL1)	4-289
4.25.	Utility Room, Surgical Soiled (USCL7)	4-299
4.26.	Operating Room, Hybrid or Robotic (ORHY3)	4-307
5.0	APPENDIX	
5.1.	Site Tours	5-1
5.1.1.	Elmhurst Memorial Hospital, Elmhurst, Illinois	5-2
5.1.2.	Advocate Sherman Hospital, Elgin, Illinois	5-5
5.1.3.	Center for Care and Discovery, Chicago, Illinois	5-11
5.1.4.	Rush University Medical Center, Chicago, Illinois	5-21
5.1.5.	Edward Hines, Jr. VA Hospital, Hines, Illinois	5-27
5.2.	Hines Interventional Suite	5-32
	Surgical and Endovascular Requirements for Operative and Interventional Procedures	5-34
	Surgical and Endovascular Procedure Room Checklist	5-34



## 1.0 GENERAL

### 1.1. Foreword

The material contained in the Surgical and Endovascular Services Design Guide is the culmination of a partnering effort within the Department of Veterans Affairs by the Veterans Health Administration and the Office of Construction and Facilities Management – Office of Facilities Planning (003C2). The goal of this Design Guide is to facilitate the design process and to ensure the quality of VA facilities while controlling construction and operating costs.

Disclaimer: Products and materials indicated are for illustrations, they are not endorsement for any specific product. This document is intended to be used as the standard for design, and to supplement current VA construction standards and other VA criteria in planning surgical and endovascular space. Designers shall use this Design Guide as closely as possible to its context and intent. Use of this Design Guide does not preclude the need for a functional and physical design parameter for each specific project. It is the responsibility of the Project Architect and the Project Engineer to develop a complete and accurate project design that best meets the users' needs and applicable code requirements.

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### 1.3. Introduction

The Surgical and Endovascular Services Design Guide was developed as a design tool to assist VA clinical, contracting, planning, construction and engineering staff to better understand the design process, and to better enhance their collaboration with the design team throughout the planning and design phases of a specific project.

This Design Guide is not intended to be project-specific. It addresses the general space and equipment planning, as well as functional and technical requirements of the Surgical and Endovascular Suite. While this document incorporates strategies to address adaptability, it is not possible to foresee all future requirements. It is important to note that the Section 4 – Design Guide Templates presents generic graphic representations illustrating space, equipment and related engineered system needs. They are not intended to limit design opportunities and adaptations.

The A/E design team shall read, understand and be familiar with the most current editions of the applicable VA and applicable industry's codes and standards. Codes and standards shown in this document shall be adhered to. VA design and construction standards may be accessed at the Office of Construction and Facilities Management's Technical Information Library (TIL) ([www.cfm.va.gov/TIL](http://www.cfm.va.gov/TIL)).

Use of this Design Guide does not supersede the project A/E's responsibilities to develop a complete and accurate design that meets the users' needs and appropriate code requirements within the budget and schedule constraints. A/E shall confirm and verify actual dimensions, weights, and utility requirements of equipment with manufacturers.

### 1.4. VA Policies/Standards, and Industry Codes/Standards

- VA Policies/Standards:
  1. Master Construction Specifications PG 18-1
  2. Design and Construction Procedures PG 18-3 (refer to Topic 1 for the list of Codes, Standards, and Executive Orders)
  3. Standard Details PG 18-4
  4. Equipment Guide List PG 18-5
  5. Seismic Design Requirements H 18-8
  6. Refer to the following PG 18-9 Space Planning Criteria Chapters that also may require space in Surgical Services:
    - Chapter 102 (Intensive Care Nursing Units)
    - Chapter 285 (Supply Processing Services)
  7. Various Design Manuals PG 18-10 and technical criteria pertaining to Architectural, HVAC, Plumbing, and Electrical
  8. Barrier-Free Design Standard PG 18-13
  9. Room Finishes, Door, and Hardware Schedule PG 18-14
  10. VHA Handbook 1102.01

11. Consensus Information from various VA medical centers
  12. VHA Directive 2010-018 Facility Infrastructure Requirements to Perform Standard, Intermediate, or Complex Surgical Procedures
- Industry Codes/ Standards
    1. AORN Guidelines for Perioperative Practice
    2. American College of Surgeons Guidelines
    3. American College of Anesthesiologists (ASA)
    4. American College of Radiology
    5. Society of Interventional Radiology
    6. ANSI/AAMI/IEC 80601-2-77, Medical electrical equipment -- Part 2-77: Particular requirements for the basic safety and essential performance of robotically assisted surgical equipment.
    7. ANSI/AAMI/IEC 80601-2-78, Medical electrical equipment -- Part 2-78: Particular requirements for the basic safety and essential performance of medical robots for rehabilitation, assessment, compensation or alleviation.
  - The Healthcare Insurance Portability and Accountability Act of 1996 (HIPAA) protects an individual's rights to audible as well as visual privacy. This is especially the case with respect to protection of each individual's medical records, private information and communications. The law protects all conversations between patients and admission interviewers, caregivers, nurses, physicians and families. ARRA passed by U.S. government in 2009 enacts special provisions and legal enforcement tools for patient privacy, protection and security. Office of Civil Rights (OCR) monitors HIPAA security rule compliance based on ARRA provisions. Current penalties that can be implied by OCR for non-compliance with HIPAA are divided in four categories: (i) without knowledge; (ii) based on reasonable cause; (iii) willful neglect and (iv) willful neglect, not corrected. Penalties differ per violation versus maximum penalty according to these four categories and vary between \$100 and up to \$1,500,000.
  - Disaster Planning: Situations can arise in which it may not be feasible to evacuate patients for extended periods of time. In those cases, emergency electrical power will be required to maintain seamless equipment operation, heating, ventilating and vertical transportation systems, and life safety systems. This is especially important to keep the patient population reasonably comfortable and safe. This Design Guide recommends that the project consider planning for this contingency in order to care for the veteran population especially when the facility is located in an area where a high probability of threat exists from natural disasters such as hurricanes and earthquakes.

## 1.5. Abbreviations

A, MA	Air, Medical Air
ABA	Architectural Barriers Act
ADA	Americans with Disabilities Act
AFF	Above Finished Floor
AR	As Required
ASC	Ambulatory Surgery Center
AT	Acoustical Ceiling Tile
AT (SP)	Acoustical Ceiling Tile (with Sprayed Plastic Finish)
BC	Base Cabinet
C	Degree Celsius
CC	Contractor Furnished, Contractor Installed
CFM	Cubic Feet per Minute
VA-CFM	Office of Construction & Facilities Management
CLG	Ceiling
CO2	Carbon Dioxide
CP	Carpet (without cushion broadloom)
CRS	Corrosion Resisting Steel (SS)
CT	Ceramic Tile
DG	Design Guide
DS	Door Switch
EES	Essential Electrical System
EMER	Emergency
F	Degrees Fahrenheit
FC	Foot-candle
FD	Floor Drain
FIXT	Fixture
FLUOR	Fluorescent
FMS	Facilities Management Service
GFI	Ground Fault Circuit Interrupter
GWB	Gypsum Wallboard
HAC	Housekeeping Aids Closet
HIPAA	Health Insurance Portability and Accountability Act of 1996
HVAC	Heating, Ventilating and Air Conditioning
HP	Horsepower
HR	Hour
IPS	Isolation Power System
IUSS	Immediate Use Steam Sterilization
JSN	Joint Services Number
kW	Kilowatt
LED	Light Emitting Diode
LB	Pound/Pounds
LLTS	Lockers, Lounges, Toilets & Showers
MATV	Master Antenna Television

MCS	Master Construction Specifications
MID	Motion Intrusion Detection
MTD	Mounted
NFPA	National Fire Protection Association
NSF	Net Square Feet
NSM	Net Square Meters
O	Oxygen
OCFM	Office of Construction & Facilities Management
OIT	Office of Information & Technology
OR	Operating Room
PACS	Picture Archiving and Communication System
PACU	Post Anesthesia Care Unit
PH	Phase
PFD	Program for Design
PSDM	Physical Security Design Manual
RB	Resilient Base
RCP	Reflected Ceiling Plan
RES	Resinous Flooring
RF	Radio Frequency
RPS	Radio Paging System
RSF	Resilient Sheet Flooring
SC	High Build Glazed Coating (Special Coating)
SD	Standard Detail
SF	Square Feet, Square Foot
SOPC	Satellite Outpatient Clinic
SP	Special Faced
STC	Sound Transmission Class
TAVR	Transcatheter Aortic Valve Replacement
TEE	Transesophageal Echocardiography
UPS	Uninterruptible Power Supply
V	Volts
V, MV	Medical Vacuum
VA	Department of Veterans Affairs
VACO	Veterans Affairs Central Office
VAMC	Veterans Affairs Medical Center
VC	VA Furnished, Contractor Installed
VHA	Veterans Health Administration
VISN	Veterans Integrated Health Network
VTEL	Video Teleconferencing
VV	VA Furnished, VA Installed
W	Watts
WSF	Welded Seam Sheet Flooring

## 2.0 NARRATIVE

### 2.1. General

#### 2.1.1. Clinical and Operational Summary

##### **Surgical Complexity Categories**

It is Veterans Health Administration (VHA) policy that each VA medical facility with an inpatient Surgical Program have a surgical complexity designation, which is based upon the facility infrastructure, and that the scheduled (non- emergent) surgical procedures performed are not to exceed the infrastructure capabilities of the facility unless an emergency condition arises. A facility infrastructure refers to all aspects of surgical services: diagnostic evaluation; consultation; surgeon and operating room clinical staffing; operating room staffing, instruments, equipment, radiology and anesthesia services; post anesthesia care unit; intensive care unit; patient ward; sterile processing service and logistics (SPS); and other surgery-related support services related to a surgical procedure. Refer to VHA Directive 2010-018 Facility Infrastructure Requirements to Perform Standard, Intermediate, or Complex Surgical Procedures for definitions of complexity designations.

The complexity designations are as follows:

1. Standard Surgical Complexity
2. Intermediate Surgical Complexity
3. Complex Surgical Complexity

Surgical procedures occurring in an Ambulatory Surgical Center (ASC) program are assigned a complexity designation of either Basic or Advanced. Every effort must be made to select appropriate patients who are suitable to have their procedure performed in an ASC. Patients must be discharged from the ASC according to an established protocol, or must be transferred to a facility with 24-hour observation and inpatient surgical services.

Surgical procedures are classified by complexity, which is available both in the Surgical Complexity Matrix (SCM) and the Ambulatory Surgical Complexity Matrix (ASCM) and in a web-based tool, the Current Procedural Terminology (CPT) Look-Up.

##### **General Description, Function and Concepts**

Most VAMCs are affiliated with major medical, nursing and allied health universities, colleges, and schools. As part of the education, medical residents, nursing and allied health students are trained in VAMCs. For this



reason, additional space is required in the Surgical Operating and Endovascular Procedure rooms. Additionally, staff support areas need to be expanded to accommodate faculty and students. Moreover, process of teaching and learning may cause surgical procedures to be longer. This additional space and time must be taken into consideration when determining the size and number of surgery and endovascular support spaces for a teaching VAMC.

### **Surgical Department**

The Surgical Department is comprised of all functional areas required for patient surgical services. It includes the Surgical and Endovascular Procedure Suites, Pre-procedure Assessment, Pre-Operative Holding, Post Anesthesia Care Unit (PACU), and Phase II Recovery.

Recently there has been a shift toward one integrated interventional platform consolidating surgical and invasive cardiovascular services directly adjacent to each other. By utilizing the same aseptic environment this concept maximizes efficiency by sharing resources, and promotes quality outcomes and patient safety. The Surgical and Endovascular Services Design Guide includes templates for new Cardiac Catheterization, Electrophysiology, Vascular Surgery, and Interventional Radiology Procedure Rooms, and Transesophageal Echocardiograph (TEE) Rooms, which will be collocated with Surgical Services and share the same semi-restricted area and adjacent support spaces.

This Design Guide Standard is intended for facilities of the following acuity levels: Ambulatory, Standard, Intermediate, and Complex Centers. The net square feet (NSF) that is indicated within the design plate templates and the SEPS Chapter 286 Surgical and Endovascular Services (<https://www.cfm.va.gov/til/space/spChapter286.pdf>) space planning criteria are to be followed in design intent and spirit to the greatest extent possible.

### **The Surgical Suite**

The Surgical and Integrated Suite is a group of spaces consisting of the individual operating rooms in which surgery is performed, plus all the required support areas. There are three designated areas for the OR:

1. The unrestricted area where traffic is not limited,
2. The semi-restricted area where traffic is limited to authorized staff and patients and,
3. The restricted area.

These support areas include the Clean Core, a semi-restricted corridor and the following spaces:

1. Control and Communication Area; Patient Holding/ Prep



2. Staff Lockers and Lounge, Toilets and Showers (LLTS) including the Auto-Valet scrub suit dispensing machines
3. Anesthesia Workroom
4. Scrub Areas for the staff
5. Blood Gas Analysis Laboratory
6. Immediate Sterilization serving a pod of Operating Rooms \*\*
7. Equipment Storage Space
8. Connection to the sterile processing service and logistics (SPS) - usually via mechanical cart lifts or elevators
9. Medical Gas Storage Area
10. Dedicated Housekeeping Aides Closets (HAC) for the semi-restricted area.
11. Appropriate Administrative Areas, including Charge Nurse Office, and Surgical and Anesthesia Offices as required for supervision
12. Other support areas as deemed appropriate.

\*\* As a safety priority SPS adheres to is upholding the goal of "0" percent use of Immediate Use Steam Sterilization (IUSS). IUSS describes steam sterilization cycles in which unwrapped medical instruments are subjected to an abbreviated steam exposure time and then used promptly after cycle completion. The ability to maintain adequate par levels of all sterile processing supplies help facilitate the decreased need for IUSS sterilization.

**The Surgical Suite:** The perioperative journey, clinical staff, the patient and support staff.

**Components of Surgical Services Team:** The surgical services team consists of following components:

1. Sterile team: it includes:
  - Surgeon
  - First assistant (RN or PA)
  - Surgical technologist (scrub)
2. Unsterile team: it includes:
  - Anesthesia: MD/CRNA/PA
  - Circulator
  - Environmental Services
  - Sterile Processing <sup>1,2</sup>

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<sup>1</sup> *Operating room orientation manual [Internet]. (Cited 2014 Jan 5). Available from <https://www.utmb.edu/surgery/clerks/ormanual.htm>*

<sup>2</sup> *Osman C. Asepsis and aseptic practices in the operating room. [Internet]. [Last updated 2000 Jul 1; Cited 2014 Jan 6]. Available from <http://www.infectioncontroltoday.com/articles/2000/07/asepsis-and-aseptic-practices-in-the-operating-ro.aspx>*



**Surgical Staff:** The staff typically moves from the staff lockers/lounge through the semi-restricted corridor to the Scrub Stations and then into the individual Operating Rooms, with exit through the semi-restricted corridor. Possible exceptions to this flow are the “circulators,” who retrieve supplies and equipment from the clean core, and the supervising anesthesia staff, who are permitted to move from Operating Room to Operating Room via the clean core.

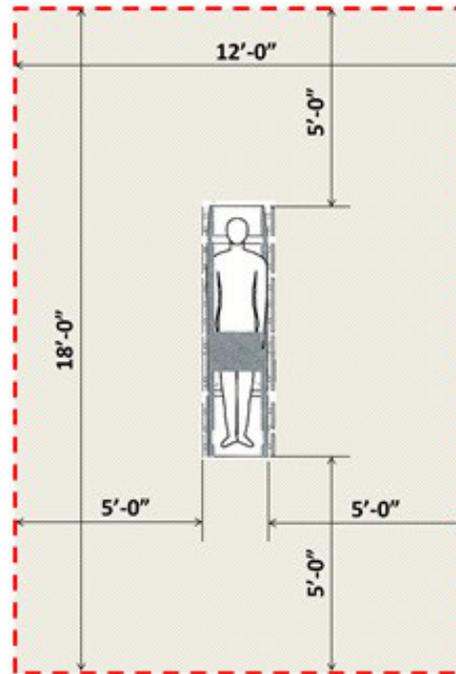
**Patient:** The Patient checks in and changes into a gown in the pre-procedure area. They are then visited by members of the surgical team, who will start an intravenous (IV) line, review the procedure and answer any questions the patient may have. They are then brought into the operating room on a gurney and transferred to the operating table. While the patient is awake during this process, the anesthesiologist may have given the patient a drug to help them relax. Once situated on the operating table, the anesthesiologist will give the patient drugs through their IV and a breathing mask to induce anesthesia. When the patient is asleep the surgical procedure begins. Once the surgery is complete the patient is moved to the post-anesthesia care unit (PACU) until the effects of the anesthesia wear off. Outpatients will go to the Phase 2 recovery area, where a designated family member can come and visit with the patient while they become more alert and are discharged to go home. Inpatients will be transferred to a patient ward until they are discharged.

**Linens:** Linens are brought into the Surgical Operating Rooms and Endovascular Procedure Rooms by way of the semi-restricted corridor. Soiled linen is bagged and removed from each Surgical Operating Room and Endovascular Procedure Room via the semi-restricted corridor.

### **The “Sterile Field”**

In general, the term “sterile field” is used to describe the sterile zone in the Operating and or Endovascular Procedure Room is approximately five feet around the perimeter of the surgical table, which includes the space surrounding the site of the patient’s incision. The term “sterile” indicates that no undesirable microorganisms are present. The hands of the scrub team are gloved and everything that enters this field must be sterile. The operating table, the surgical instrument table, and special equipment to be used in the sterile field are cleaned prior to each case. Imaging equipment, surgical microscopes, and other items that are difficult to clean are draped in sterilized plastic to maintain asepsis. The sterile field is showered by either a laminar flow array or a combination of laminar diffusers surrounded and encapsulated by an air curtain.





**Note:** The example shown is for a General OR, the sterile field supporting Complex OR procedures may be larger as there may be more procedural support equipment brought into the sterile field.

The anesthesiologist and nurse anesthetist remain outside of the sterile field and are typically separated from the sterile field by a sterile drape.

### Maintaining Asepsis (Sterility)

Regarding asepsis, there are three areas of concern (to minimize the number of pathogens present) within the Surgical and Interventional Suite are:

- The “sterile field” itself as described above. Only fully scrubbed staff (known as the “scrub team”) is permitted in this area in the center of each Operating and/or Endovascular Procedure Room.
- Within the Operating and/or Endovascular Procedure Room, both the scrub team as well as the additional staff that are not in the sterile field must abide by strict rules established by the Medical Center. Semi-restricted areas, including spaces such as the pre-operative and patient holding areas, PACU, instrument workroom, non-sterile supply storage, staff lockers/lounges/toilets/showers, control desk, and surgery administration offices.

### Internal Operating Room Circulation

It is critical to plan an Operating Room in such a way that a high level of sterile technique can be achieved.

The circulating nurse typically addressed as “the circulator” places the packs on the instrument table from the side of the instrument table away



from the sterile field. The scrub nurse removes the sterile instruments and places them on the surgical instrument table prior to the procedure. Consideration should be given that with some specialty surgical procedures, the surgical instrument table is positioned toward the foot of the operating table, but always within the sterile field. A single instrument table may be up to 8.0 feet (2440 mm) in length, or there could be more than one instrument table. Once the procedure starts, the scrub nurse constantly draws from this source to supply the surgeons during the operation. The circulator also assists the surgeon with devices used in the sterile field such as lasers.

No one walks between the operating room table and the OR instrument table, except those in sterile garb who have thoroughly scrubbed. When portable imaging equipment is used, space for these items must be considered. Surgical microscopes or video monitors on carts and other large pieces of equipment (including robotics) may also be needed in an Operating Room, and space for them must be considered.

**The Surgical Team** in a teaching VAMC is typically comprised of the following members:

**Surgeon:** The surgeon is a Medical Doctor who is board certified as a Surgeon and acts as surgical team leader to direct and supervise all aspects of a surgery. The responsible surgeon's eligibility to perform a surgical procedure is based upon that surgeon's education, training, experience, and demonstrated proficiency. Surgeons are expected to study and evaluate new procedures and to become knowledgeable of and proficient with advances that are appropriate. Technical skill alone is not sufficient to qualify a surgeon to perform new procedures. Procedural skills should be acquired within the context of in-depth knowledge about the disease to be treated. Qualification of a surgeon as a specialist carries the commitment and responsibility to conduct a surgical practice that conforms to his/her defined specialty. The appropriate surgical specialty board recognized by the American Board of Medical Specialties (ABMS) or the Royal College of Physicians and Surgeons of Canada (RCPSC) determines a surgeon's scope of practice.

**Assistant Surgeon:** A Medical Doctor who acts as assistant surgeon and may be one of the following medical professionals:

- Another surgeon
- A licensed physician assistant
- A registered nurse first assistant
- A surgical resident
- A medical student



**“Assistant-in-Surgery”:** Clinical professionals such as nurses, operating room technicians, or other specially trained professionals, whose services are included in the primary surgeon’s. The surgical assistant provides intraoperative functions that help the surgeon carry out a safe operation, such as exposure, hemostasis, and closure. In addition to intraoperative duties, the surgical assistant also performs preoperative and postoperative duties to better facilitate proper patient care, such as positioning of the patient, catheter placement, dressings, and patient transfer. The surgical assistant who has appropriate training also performs under surgeon supervision other procedures including but not limited to: vein and graft harvesting, and graft and implant preparation.

**Second Assisting Technologist:** The second assisting surgical technologist assists the surgeon and/or surgical assistant during the operative procedure by carrying out technical tasks other than cutting, clamping, and suturing of tissue. This role is distinct from that of the first assistant and may, in some circumstances, be performed at the same time as the scrub role.

**Anesthesia Staff:** Anesthesia is administered by the anesthesia staff, which can include anesthesiologists, anesthesia assistants, anesthesia residents, anesthesia technicians, and certified registered nurse anesthetists (CRNAs). One or more anesthesia staff may be assigned to each Operating Room. It is the responsibility of the anesthesia staff to consult with the patient before surgery and identify family/friends that will speak to the surgeon after the procedure, to administer the anesthetic agent before and during surgery, and to monitor the patient’s vital signs. Anesthesia staff remain with the patient during the entire surgical procedure. Following the surgery, the patient remains under the care of the anesthesia staff and the assigned recovery room nurse until the patient has met the discharge criteria.

**Interventional Radiologist:** A trained physician who specializes in minimally invasive treatments across all specialties. The interventionalist utilizes imaging equipment to advance catheters into the patient’s artery and/or vein to treat the source of disease internally (known as a closed procedure). In an interventional case there may be a team of interventional staff consisting of the interventional radiologist, a radiology circulating nurse and a radiology scrub person.

**Interventional Cardiologist:** An interventional cardiologist is a specialized interventional radiologist who specializes in treating a range of heart and vascular conditions through a process called catheterization.

**Structural Cardiologist:** An interventional cardiologist with specific training in diagnosing and treating cardiovascular disease as well as congenital (present at birth) and structural heart conditions through catheter-based



procedures, such as angioplasty, and stenting utilizing TAVR and Mitral Valve interventions.

***Electrophysiologist:*** An Electrophysiologist is a cardiologist who treats heart arrhythmias and other heart rhythm disorders. These can include irregular heartbeats, including instances where the heart beats too quickly (tachycardia), and when the heart beats too slowly (bradycardia). Electrophysiologists are dedicated to the study of the heart's electrical system, and how to diagnose and treat heart arrhythmias.

***Vascular Surgeon:*** A vascular surgeon is a surgical subspecialty that focuses on diseases of the vascular system, or arteries, veins and lymphatic circulation, are managed by open surgery or closed minimally-invasive catheter procedures, including surgical reconstruction. This specialty evolved from general and cardiac surgery as well as minimally invasive techniques pioneered by interventional radiologists.

***Nursing and Clinical Support Staff:***

Every major surgical procedure performed in the Operating Room is staffed by at least one registered nurse and scrub personnel.

- ***Surgical Scrub:*** The surgical scrub, together with the first assistant to the surgeon, is the main support person for the operating surgeon. He/she has an understanding of the procedure being performed and anticipates the needs of the surgeon. The scrub personnel are responsible for the sterile supplies and instruments and for handing them to the surgeon. He/she has the necessary knowledge and ability to ensure quality patient care during the operative procedure and is constantly on vigil for maintenance of the sterile field. More complicated surgical procedures may require the presence of two scrub personnel, one assisting the surgeon at the operating room table and one responsible for the instruments at the instrument table.
- ***Circulating Nurse:*** The circulating nurse, known as the circulator, does not function within the sterile field, but performs many of the required tasks outside the sterile field. This person also acts as the “non-sterile” hands of the surgeons and scrub person, bringing required supplies, instruments and equipment into the Operating Room, maintaining surgical records in the Operating Room, etc. Although the surgeon performing the operation has the ultimate responsibility for the care of the patient in the Operating Room, it is the circulator who is responsible for maintenance of sterile conditions and is in charge of personnel. This person is the primary advocate ensuring that correct surgery is performed by confirming proper patient identification and surgical site(s), confirming that a



history and physical is on the patient chart, and confirming that a signed surgical consent is present. The circulator also enters safety measures into the computer, records time out, and assures that the proper prosthetics, if required, are available.

- **Surgical Technologist:** Surgical Technologists and/or Nursing Assistant: This individual has received special training in sterile technique and in assisting in the Operating Room. If appropriately trained, this individual may perform the same duties as a scrub person.
- **Perfusionist:** A perfusionist is a specialized healthcare professional who uses the heart-lung machine during cardiac surgery and other surgeries that require cardiopulmonary bypass to manage the patient's physiological status. In cardiovascular surgery, the patient's blood may have to bypass the heart to allow the surgeon to perform the required surgical procedure. The blood supply bypasses the heart and circulates through a heart-lung machine (which is both a mechanical pump and artificial lung) after which it is returned to the patient as oxygenated and purified blood. The perfusionist, who oversees this process, works in the Operating Room, usually at the side of the operating table, but well outside the sterile field area. The heart/lung machine must be connected to both a water supply and the electrical supply. Two perfusionists may be required for each cardiovascular operation, in the event that a cell-saver (auto-transfusion) device is used.
- **Charge Nurse:** The charge nurse supervises all activities that occur within the individual Operating Rooms. The charge nurse is also available to temporarily replace the scrub nurse during long operations. The office of the charge nurse may be located within the clean core.
- **Nurse Manager:** The nurse manager (also known as the perioperative nurse manager) is the administrative supervisor of the entire Operating Room Suite. The nurse manager is responsible for maintaining the scheduling of patients for operations, as well as purchasing and maintaining supplies and equipment for use in the Operating Room Suite. The office of the nurse manager is located inside the Surgical Suite.
- **Surgical Pathologist:** The surgical pathologist does not function within the clean core area or within the individual Operating Rooms, though accessed from the semi-restricted corridor. Tissue specimens removed from a patient are sent to the surgical pathologist, who prepares and examines the tissue in a frozen section laboratory within the surgical suite. The pathologist then electronically communicates his/her findings to the surgeon.



- **Consultant:** Should the operating surgeon desire a consultation for a patient under anesthesia or during the operation, he/she may request that a consultant come to the Operating Room to examine the patient. In most instances, the individual consulted is an internist or cardiologist. This individual usually does not work within the sterile field but examines the physiologic data regarding the patient and presents his advice regarding additional appropriate treatment.
- **EEG Technician:** The EEG Technician is an individual who operates the electroencephalograph in the Neurosurgery Operating Room to record the brain waves of the patient. Usually this monitoring is required only in patients undergoing brain surgery. This individual operates the EEG machine outside of the sterile field.
- **Imaging Technician:** The imaging technician is in charge of taking digital images when needed within the Surgical Suite. The images are digital and can be viewed on monitors mounted on booms in the sterile field as well as large wall-mounted monitors.
- **Patient Transport Staff:** The patient transport staff is responsible for transporting patients to the Surgical Suite from other parts of the hospital. When a patient is very heavy, the patient transport staff might assist in transferring the patient from the transporting gurney to the operating room table. The patient transport staff also helps in moving equipment in and out of the Operating Room before the patient is brought into the room.
- **Visitors / Technical Support:** In most hospitals affiliated with a Medical School, visitors may be invited into the Operating Room to view a specific type of operative procedure. Technical support personnel may be invited into the Operating Room to consult on the use of specialized equipment. In all cases, the patient must have given prior consent to the presence of these non-surgical staff in order to maintain patient privacy and follow HIPAA regulations. These individuals must be appropriately attired. They also wear head covering and shoe covers, but not necessary gloves, since they do not work within the sterile field. It is the circulator's responsibility to monitor the visitors and technical support personnel activities.
- **Biomedical Equipment Support Specialist:** The Biomedical Equipment Support Specialist utilizes extensive knowledge in the safe and effective application of healthcare technology and serves as a senior level healthcare technology specialist in the Surgical Suite. They provide support of the devices/systems utilized during procedures and analyze/ remediate any performance deficiencies.



- **Housekeeping Staff** (*Operating and Endovascular Procedure Rooms*): Specially trained housekeeping staff is assigned to decontaminate and sterilize the Operating Rooms and equipment after each procedure. They work out of a dedicated housekeeping closet accessed from the semi- restricted corridor. A dedicated housekeeping closet is required in the semi-restricted area, which will support cleaning of all of the operating rooms, the Clean Core, as well as the balance of the semi-restricted area.

### Space Planning and Design

The following is an overview of basic planning criteria, which are desirable as standards for Surgical OR's and Endovascular Procedure Rooms. For further detailed information, refer to VA Technical Information Library (TIL), Space Planning Criteria for VA Facilities SEPS (PG 18-9) <https://www.cfm.va.gov/til/space/spChapter286.pdf>

**Size of Operating Rooms:** While the minimum size of operating rooms is covered in this document, there are other dimensions, such as width and depth of the room shall be at least 20'-0" (6,096 mm), ceiling height and plenum space above, must be taken into consideration in the design of an operating room and/or endovascular procedure room. In renovation projects there may not be sufficient space to accommodate new Operating Rooms due to size and existing space geometry. Written concurrence from the VA National Director of Surgical Surgery must be obtained before proceeding further in the design process for renovation projects. Recessed wall storage cabinets, if requested, should be in addition to the square footage required for each Operating Room and/or endovascular procedure room. These cabinets are typically used for storage of frequently used supplies only. When a substantial number of storage cabinets in each Operating Room is needed by local surgical staff, space in the clean core reserved for exchange carts with sterile supplies on them can be reduced.

**Scrub Sink Area:** The Scrub Sink Area is an alcove located in the semi-restricted area at or between entrances to a single surgical operating room or between the entrances at two adjacent surgical operating rooms and/or endovascular procedure rooms. It is acceptable for one Scrub Sink Area to be shared between two Operating Rooms; however, when Operating Rooms are laid out in a same-handed arrangement, it is advisable to provide a separate scrub sink alcove for each OR and/or Endovascular Procedure Room.





*Triple scrub sink configuration shown, vision lights into surgical OR are optional.*

The scrub alcove is stocked with a variety of types and sizes of sterile gloves, sterile gown packs, antimicrobial cleansing solutions and sterile nail brushes/ sponges with a nail pick. These brushes are pre-packed, for single use only and some may already be impregnated with an antimicrobial solution. Scrub brushes may be placed in dispensers next to sinks.

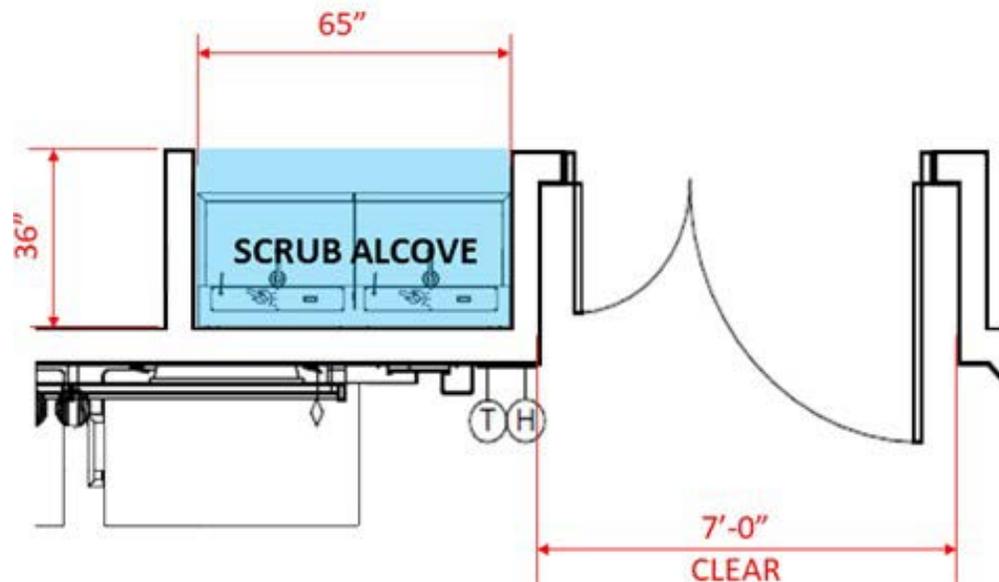
Sinks are provided with hot and cold water and tap controls must be adjusted for water temperature flow before starting to scrub. Running water is preferred because it easily rinses away suds containing bacteria. Containers for antimicrobial solutions are placed between each set of taps and care should be taken not to contaminate hands when dispensing solution. The pump dispenser must be changed each time an empty bottle is replaced with a new one. The standard solutions such as Povidone Iodine or Chlorhexidine (triclosan), or acceptable equivalent may be available for those practitioners who are sensitive to the standard solutions.

Surrounding finish surfaces of scrub sink alcove area surrounds shall be waterproof (consider hard surfacing) as spray water is common when washing hands and arms as part of the scrubbing in process.

**Scrub Station Alcove Plan** that follows indicates a two station sink, and should a three-station sink be requested, the size of the alcove should be adjusted to accommodate the sink to contain water splashing.



## SEMI-RESTRICTED CORRIDOR



*Double scrub sink configuration shown at entry to Surgical Operating Room and Endovascular Procedure Rooms*

**Gurney Storage:** Surgical patients are brought into the Operating Room on a gurney or on a combination gurney/recovery room bed. In some cases, such as ophthalmic surgery, a recovery bed or gurney is used instead of a standard operating table for the procedure. Normally, the patient is transferred to the operating table in the room and the gurney is removed from the OR. An alcove is provided directly outside the Operating Room in the semi-restricted corridor where the vehicle is parked during the procedure. After surgery the patient is placed back on the gurney and moved to the Recovery Patient Area. The patient may be transferred to a hospital bed at this point. There are occasions when a patient is transferred directly from the Operating Room onto a hospital bed and taken directly to the Surgical Intensive Care Unit (SICU). The gurney alcove outside each OR should be large enough to accommodate a standard hospital bed in its maximum configuration with IV poles, etc. attached. For this reason, the alcove should measure 4 ft. (1200 mm) wide by 10 ft. (3040 mm) long.

**Imaging Equipment:** Portable radiographic and fluoroscopic (R&F) imaging devices such as C-Arms and O-Arms are commonly associated with Uro- Cysto and orthopedic procedures as these devices typically have low emission rates and appropriate evaluation of gross anatomic structures and dense objects such as orthopedic transplants. Low emission cannot achieve image quality requirements associated with the visualization of fine vascular details and stent placement. The expanded role of R&F imaging for vascular indications was made possible through C-arms capable of



delivering much higher x-ray. However, their use predicated that they be fixed / dedicated to the procedure room as access to higher input power was required to produce higher x-ray, including radiation protection of the procedure room which is not required for portable low emission devices.

Dedicated C-arms initially became popular in the interventional cardiac and interventional radiology arenas as a diagnostic tool to assess flow restricting disease, map the electrical pathway of the heart, and to provide image guidance for the execution of interventions. These early procedure rooms were known as “Cath Labs” and did not possess the attributes of an operating room (OR) environment; laminar flow, higher level sterile practices, and the ability to support open surgery.

More recently, through the growth of minimally invasive surgery on patients with risks requiring a surgical safety net including endograft placement, and the inception of valve replacements, a specialized interventional / surgical environment was established. The result was the cardiovascular hybrid operating room.

When imaging equipment is used (fixed or mobile) in a traditional operating room and/or hybrid operating room, staff are required to wear lead aprons and work from behind leaded glass shields. When not in use in the operating rooms, portable imaging equipment is usually stored in alcoves in the semi- restricted corridor so it can be efficiently moved in and out of the operating room. The level of use of mobile imaging equipment and other factors will be analyzed by the physicist, who will determine the need for fixed shielding in the room.

**Sterile Supplies:** Sterile supplies are typically retrieved from the clean core by the circulator. A selection of sterile supplies may also be stored within the Operating Room.

Supplies may be bar-coded or may utilize radio-frequency identification (RFID) chips. Both systems are designed to monitor use of supplies and to allow computerized reorder to maintain the appropriate inventory. In addition, scanning the bar code (or tracking supplies with RFID chips) provides a more complete system for charging for supplies used during a surgical procedure. It also expedites the removal of stored items in the Operating Room when their shelf life has expired.

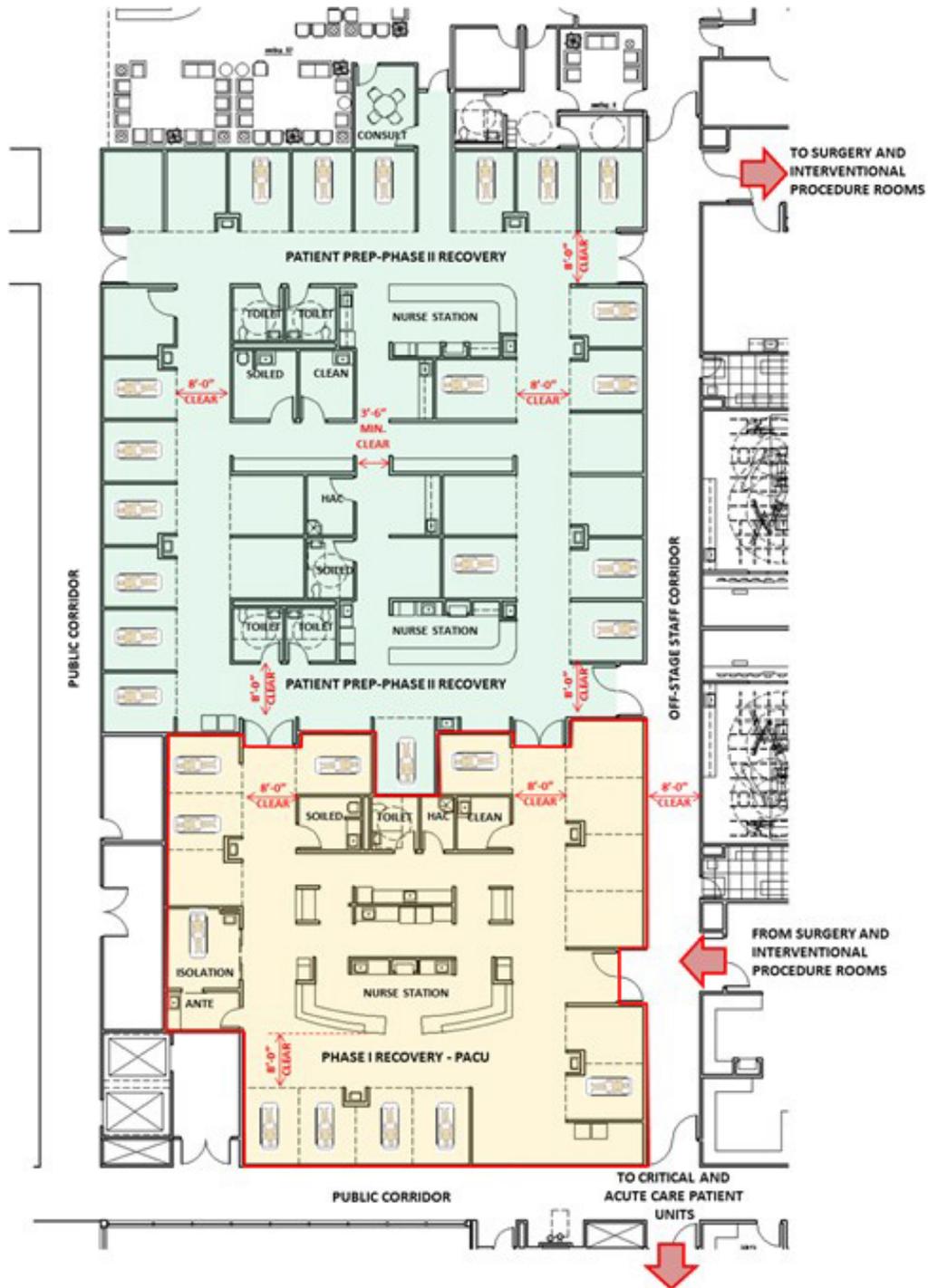
**Case Carts:** Case carts are used to bring sterile materials and instruments from SPS to the Operating Room. A typical case cart contains specific items required for each specific case, including all required surgical instruments and other supplies. It is advisable for the planner to confer with nursing staff as to the size of their case carts as each hospital is different. Note that more complex procedures may require several case carts. Clean case carts are typically staged in the Clean Core outside of the Operating Room prior to a



procedure to optimize turnover time. Some case carts may remain in the Operating Room during the procedure and be used as back tables. After the surgical procedure is completed, these case carts are returned via the semi-restricted corridor to the “soiled” side of SPS on another dedicated soiled cart lift room or dedicated soiled elevator. In the event that SPS is not located below the Surgical Suite, an alternative traffic pattern for the case carts must be established that isolates clean and soiled case cart traffic. Dedicated elevators are to be sized to accommodate a set number of case carts in the elevator cab.



**Phase I Recovery - Patient Prep - Phase II Recovery Diagram**



**Pre-Operative Holding / Phase II Recovery:** The inpatient or outpatient is brought into the Pre-Operative Holding Area prior to the surgical procedure. Last minute consultations with the patient by the staff take place here. Shunts for IV solutions may be inserted here. To comply with HIPAA



requirements, patient areas must provide acoustical and visual privacy at all times.

The Phase II Recovery Patient Area is utilized for recovery of the patient after Phase I Recovery (PACU) and also for ambulatory surgery patients who may come directly from the surgical OR if they have been anesthetized under mild **MAC sedation\*** where recovery is fairly quick. The Prep Area should be co-located with the Phase II Recovery Room to provide maximum flexibility for the patient room assignment. Since most surgical procedures start in the morning, the Prep Area can occupy under-utilized Phase II Recovery Space in the morning however, the same area can be utilized for Phase II recovery in the afternoon.

*\*MAC Sedation: Also known as monitored anesthesia care or conscious sedation, MAC anesthesia is a type of sedation where the patient remains aware of their surroundings and stays calm. The anesthesiologist administers it through an IV into the skin and muscle around the area on which surgery will be performed.*

**Phase I (PACU) Recovery:** During Phase I care, the focus is on the patient's recovery from anesthesia and the return to baseline vital signs. Consideration is given to the procedure, anesthesia care, patient comorbidities, and the patient's physical status to recognize, minimize and manage any issues or complications. Phase I includes, but is not limited to, applying PACU scoring criteria on admission and each vital signs assessment, managing respiratory and hemodynamic changes, monitoring the effects of the procedure (e.g., bleeding, circulation), and providing necessary analgesia and antiemetics. While monitoring requirements are facility-specific, they are also based on the patient's condition. According to ASPAN, they recommend assessing and documenting vital signs at least every 15 minutes during the first hour and then every 30 minutes until discharge from Phase I PACU care. After which, the patient is then transitioned to Phase II, the inpatient setting, or the intensive care unit (ICU) for continued care.

**Patient Induction/Preparation Room:** For most procedures, anesthesia is given in the induction room located next to the operating room. In many cases induction may be performed in the pre-operative Phase II area. "Induction" is the start of anesthesia and usually takes less than five (5) minutes to perform. The patient induction room is used by the anesthesiologist to initiate anesthesia and to observe the patient prior to the start of a procedure. It allows for parallel processing of the patient and the Operating Room. Typical tasks in this area include nerve blocks and the placement of intravenous (IV) lines. From here the patient is transferred to the Operating Room.



**Corridors:**

In general, corridors utilized for transporting patients as well as surgical support equipment, (x-ray, mobile c-arms and the like) shall be minimum 8'-0" in clear unobstructed width. Staff "back-of-house" corridors can be minimum 3'-6" clear unobstructed width, though 5'-0" clear is recommended.

**Safe Patient Handling in Perioperative and Procedural Settings:** VHA

Directive 1611 section 4. h. (12) requires: that planning, design of phases of new and renovation construction, which includes major, minor, NRM, and station-level equipment projects, must incorporate appropriate and necessary safe patient handling and mobility equipment at all facilities. In general, perioperative and procedural settings must be outfitted with ceiling mounted patient lifting devices capable of safely handling 1,000 lb (454 kg) loads.

**Operating Room Types:**

There are several types of operating rooms depending on the type of surgery being performed. i.e. General, Orthopedic, Neuro, Spine, Urology, Transplant. Cardiac/Thoracic and special operating rooms such as Hybrid OR's.

The purpose of having different types of operating rooms is that different procedures require different equipment and personnel. The staff must have access and enough room to move and navigate the equipment required for each type of surgery.

- 1. General Operating Room:** General surgery operating room is where surgeons focus typically on numerous abdominal contents including esophagus, stomach, small intestine, large intestine, liver, pancreas, gallbladder, appendix, bile ducts, and often the thyroid gland (depending on local referral patterns). Additionally, general surgery operating rooms deal with diseases involving the skin, breast, soft tissue, trauma, peripheral vascular disease including hernias and perform endoscopic procedures such as gastroscopy and colonoscopy.
- 2. Orthopedic Operating Room:** Orthopedic surgery operating room is where surgeons perform numerous types of orthopedic surgeries on patients. Common surgeries may include:
  - **Arthroscopy** - a procedure using special cameras and equipment to visualize, diagnose, and treat problems inside a joint.
  - **Fusion** – a "welding" process by which bones are fused together with bone grafts and internal devices – such as metal rods – to heal into a single solid bone.



- **Internal Fixation** – a method to hold the broken pieces of bone in proper position with metal plates, pins or screws while the bone is healing.
- **Joint replacement (partial, total and revision)** – when an arthritic or damaged joint is removed and replaced with an artificial joint called a prosthesis.
- **Osteotomy** – the correction of bone deformity by cutting and repositioning the bone.
- **Soft Tissue Repair** – the mending of soft tissue, such as torn tendons or ligaments.

A parking location for the mobile C-arm shall be identified outside of the sterile field when it is not in use. Additional equipment, such as splints and traction devices, shall be located in an equipment room located adjacent to or proximal to the orthopedic operating room.

- 3. Urology / Cystoscopy Operating Room:** The “Uro-Cysto” operating room is where surgeons utilize a cystoscope to perform a Cystoscopy (cystourethroscopy) procedure. A cystoscope is a special type endoscope especially designed for urological use to examine the bladder, lower urinary tract, and prostate gland. It can also be used to collect urine samples, perform biopsies, and remove small stones. The purpose of a cystoscopy is to examine the entire bladder lining and take biopsies of any questionable areas additionally x rays may be performed of the kidneys, ureters, and bladder to determine the nature of any urological abnormality. The surgical table, which may be mobile and is specifically utilized for use with imaging equipment (radiolucent), is oriented in the Operating Room in a way that the foot of the table will not face a door. Floor drains shall not be installed in any surgical operating room. If the functional program and workload warrant (1,300 procedures per year per OR), consider a dedicated Cystoscopy Room.
- 4. Cardiothoracic Operating Room:** Cardiothoracic operating room involves the surgical treatment of the heart and the lungs; in some institutions this specialty is split into Cardiac Surgery and Thoracic Surgery. In a typical surgical setup one side of the surgical table is reserved for the perfusionist and the heart-lung machine, while the other side will be occupied by the surgeon.

In cardiothoracic surgery, the patient’s blood may have to bypass the heart to permit the surgeons to perform the required procedure. The blood supply bypasses the heart, circulates through a mechanical pump (called the heart/ lung machine) and then returns oxygenated blood to the patient. The heart lung machine is stored in the Pump Room adjacent to and directly accessible from the Cardiovascular Operating

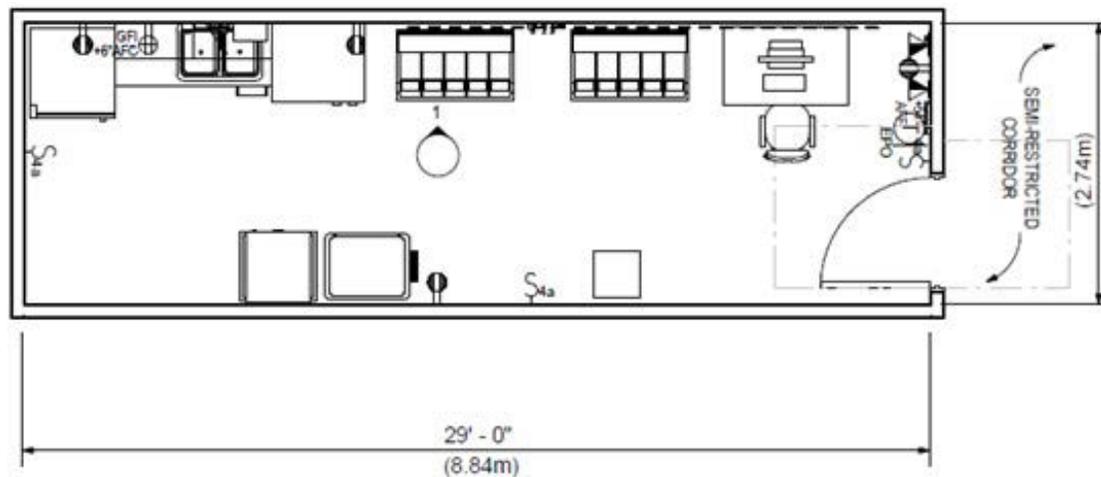


Room. Particular attention should be given to the width of the doorway so the Heart/Lung machine will fit through it.

Accessory supplies required for bypass procedures are also stored in the Pump Room. The room is sufficiently large to allow breakdown, essential cleanup and storage of parts, and to accommodate at least two heart/lung machines, one of which provides backup function in case of mechanical failure of the other machine. Clean bypass machines are transported to the Cardiovascular Operating Room via the Clean Core. Soiled bypass machines are moved from the Cardiovascular Operating Room to the Pump Room where they are cleaned.

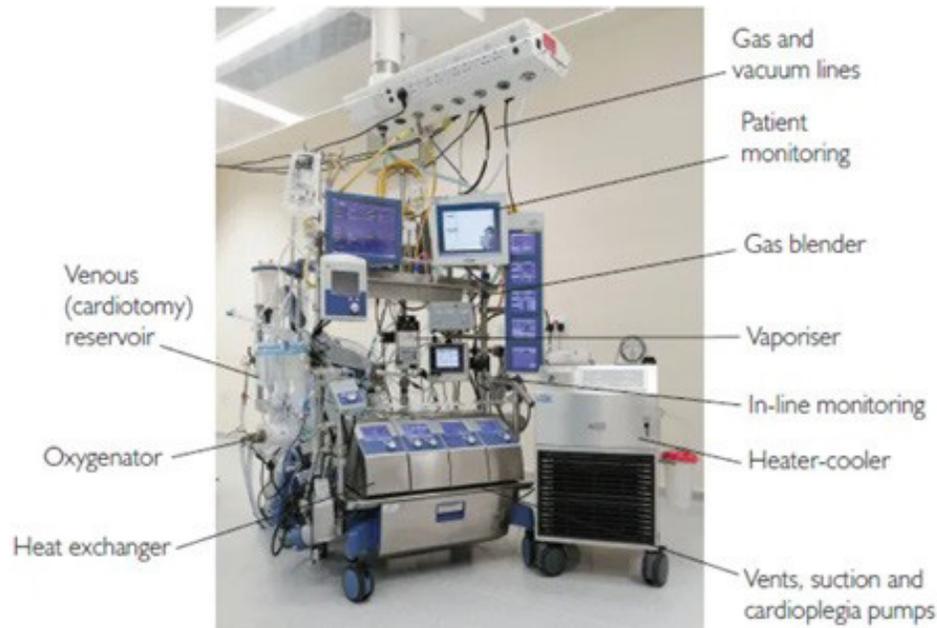
Cardiopulmonary Bypass (CPB) is a technique in which a machine temporarily takes over the function of the heart and lungs during surgery, maintaining the circulation of blood and the oxygen content of the patient's body. The CPB pump itself is often referred to as a heart–lung machine or “the pump”. Cardiopulmonary bypass pumps are operated by perfusionists. CPB is a form of extracorporeal circulation. Extracorporeal membrane oxygenation is generally used for longer-term treatment.

CPB mechanically circulates and oxygenates blood for the body while bypassing the heart and lungs. It uses a heart–lung machine to maintain perfusion to other body organs and tissues while the surgeon works in a bloodless surgical field. The surgeon places a cannula in the right atrium, vena cava, or femoral vein to withdraw blood from the body. Venous blood is removed from the body by the cannula and then filtered, cooled or warmed, and oxygenated before it is returned to the body by a mechanical pump. The cannula used to return oxygenated blood is usually inserted in the ascending aorta, but it may be inserted in the femoral artery, axillary artery, or brachiocephalic artery (among others).



**Floor Plan:** Heart–lung Machine Room or “the pump room”





*Cardiopulmonary Bypass (CPB) Machine*

Accessory supplies required for bypass procedures are also stored in the Pump Room. The room is sufficiently large to allow breakdown, essential cleanup and storage of parts, and to accommodate at least two heart/lung machines, one of which provides backup function in case of mechanical failure of the other machine. Clean bypass machines are transported to the Cardiovascular Operating Room via the Clean Core. Soiled bypass machines are moved from the Cardiovascular Operating Room to the Pump Room where they are cleaned.

The Heart–lung Machine Room or “the pump room” is located adjacent to or proximal to both the cardiothoracic and hybrid operating rooms and is not directly accessible to either room as there is an open source of water within the pump room that may contribute to pathogens entering the OR’s.

5. **Neurosurgical Operating Room:** Neurosurgical operating room is utilized for the treatment of the nervous system, which includes the brain, spinal cord, and peripheral nerves. Current techniques revolve around the use of increasingly smaller openings and microscopes to minimize the post-operative recovery time, while Intraoperative Neurophysiology (ION) monitoring reduces patient risk by better monitoring the functional integrity of neural structures during surgery. Another evolving technology is the use of the navigation systems that allows the surgeon to visualize the anatomy of the patient’s spine and



pinpoint the site of surgical intervention much more precisely with imaging data captured prior to the surgery.<sup>3</sup>

- 6. *Transplant Operating Room:*** Transplant operating room is utilized for complex surgeries involving moving of an organ from one body to another (allografts) or from a donor site to another location inside the body (autografts). While common organ transplants include kidneys, livers, and hearts, tissue transplants, such as cornea or musculoskeletal grafts, are procedures that occur more frequently. The surgical team is typically larger than during a general procedure and additional equipment may be introduced to store and prep a donated organ and provide continuous support. At times the preparation of the organ will start on an instrument table away from the sterile field before the patient is brought into the room. *Note that the sterile field will also be larger therefore special considerations must be made in the design of the HVAC system.*
- 7. *Robotic Surgical Operating Room:*** The robotic surgical operating room is utilized for a type of minimally invasive surgery. “Minimally invasive” means that instead of operating on patients through large incisions, the surgeon uses miniaturized surgical instruments that fit through a series of small incisions. When performing surgery with the surgical robot, miniaturized instruments are mounted on three of the four separate robotic arms, allowing the surgeon maximum range of motion and precision. The fourth arm contains a magnified high-definition 3-D camera that guides the surgeon during the procedure, surgeon controls the robotic instruments and the camera from a console located within the operating room. The robotic equipment that is available today will have to be recalibrated after being moved; it is therefore best left inside the Operating Room at all times. A simulator is available to the surgeon for practicing movement and dexterity of the robotic arms. Depending on facility preference it can be located in a small room inside the semi-restricted area or, alternatively, elsewhere in the Surgical Suite.
- 8. *Hybrid “Universal” Operating Room:*** Hybrid Operating Rooms within VA Hospitals utilize angiographic based imaging equipment that is extremely adaptable, accommodating a vast array of different types of procedures, such as Trans Aortic Valve Replacement (TAVR), Trans Mitral Valve Replacement, Surgical Aortic Valve Replacement (SAVR), Endovascular Aneurysm Repair (EVAR), Electrophysiology (EP) and Transesophageal Echocardiograph (TEE) Studies, Neuro-Thoracic, Orthopedic and Uro-Cysto procedures.

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<sup>3</sup> Motor evoked potential monitoring for spinal cord and brain stem surgery, by Sala F, Lanter P., Bricolo A. *Advanced Tech Stand. Neurosurg* 2004, 29:133-69



Minimum clearances of the room as well as the size of the no-fly zone at the ceiling plane will vary by model/vendor of the imaging equipment. VHA experience demonstrates that 28 ft. (8534 mm) is the minimum clear acceptable dimension that should be planned in the room. The system component room will be accessible from the semi-restricted corridor or the control room. The imaging equipment may also have a maximum distance requirement from the system to the control module as well as required service clearances.

The universal aspect of the hybrid operating room utilizes either a fixed sectional Trendelenburg radiolucent (carbon fiber) surgical table or a fixed “slab type” that is utilized for cardiac catheterization and electrophysiology procedure rooms. The Trendelenburg surgical table can be positioned to accommodate the type position required for the specific surgical procedure being performed.

The perioperative team in a Hybrid OR consists of the following team members:

- Surgical circulating nurse
- Radiology circulating nurse
- Surgical scrub person
- Radiology scrub person
- Surgeon
- Surgical first assistant
- Anesthesia care provider(s)
- Radiology technician
- Interventional radiologist
- Interventional cardiologist
- Perfusionist

There may be additional personnel present depending on the type of procedure.

The orientation of the operating room table to the Control Room window may be determined by the head interventionalist, who may prefer a side (lateral) view or a toe view of the patient. However, most hybrid operating rooms and endovascular procedure rooms are visualized from the control room via “toe-view” though “lateral or side view” is also utilized. The head interventionalist usually determines which view should be utilized though room configuration and geometry may determine the optimum view from the control room.

Contrast injector may be accomplished by three methods: 1) ceiling mounted; 2) mobile floor unit; or 3) an OR table mounted. The preference of contrast injector types is up to the surgical/ interventional staff.



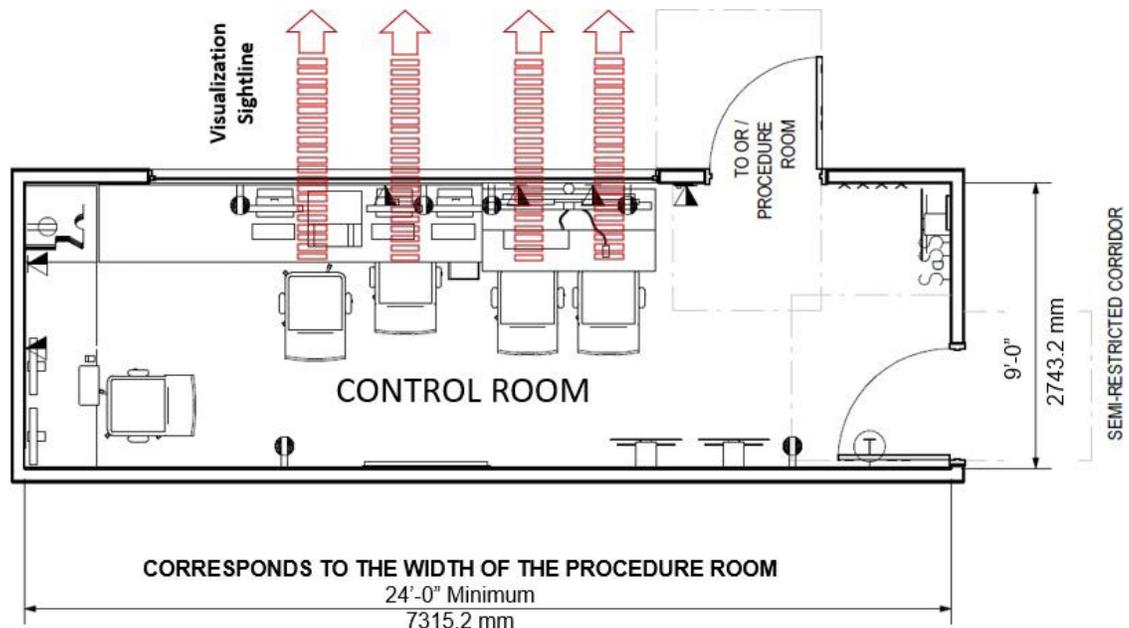
**Control Room:**

- The Control Room is directly accessible from the Hybrid OR as well as from the semi-restricted corridor. The counter at the view window is minimum 2 ft. 6 in. - 762 mm (max 3'-0" - 914 mm) depth to facilitate control modules associated with the imaging equipment as well as charting workstations. Minimum depth of Control Room shall not be less than 9'-0" - 2,438 mm. Width of Control Room shall match that of Procedure Room.
- When planning the Control Room it is strongly recommended to avoid combining endovascular procedure room control rooms! Control rooms should be internal to the endovascular procedure rooms (cardiac catheterization lab, electrophysiology lab, interventional radiology lab, vascular lab and hybrid OR's) and separate from the outside corridor. The best and preferred solution is to have one control room per each endovascular procedure room. This facilitates communication between control room staff and those in the procedure room and is not significantly more expensive than having one control room for two endovascular rooms. The one-to-one ratio reduces potential miscommunication since only one patient is being discussed by one set of personnel. At the same time, the overhearing of patient information is also reduced. A few well-thought-out steps can help minimize endovascular procedure room design challenges.
- The equipment for the Hybrid OR all Endovascular Procedure Rooms may have additional requirements for the placement of the control modules. The Medical Planner shall take into consideration clinical staff requirements when laying out the equipment during the planning of the room.
- **Toe view verse's lateral view:** Both are acceptable, though the toe view is most common. Lateral views typically are the result of geometry where implementing a toe view cannot be accomplished. It is important to understand that the clinical team always presents to the patient the same way regardless of the view from the control room. Consider utilizing multiple cameras in OR's and Endovascular Procedure Rooms so that the Control Room clinical personnel have a clear view of the sterile field and procedural operations to accurately document.



## ENDOVASCULAR PROCEDURE ROOM

(CATHETERIZATION, EP, IR, VASCULAR, HYBRID OR)



**Endovascular Procedure Rooms:** The term endovascular procedure room used in this context is the overarching “umbrella” for several different procedure room types:

- Cardiac Catheterization Procedure Room
- Electrophysiology Procedure Room
- Interventional Radiology Procedure Room
- Vascular Surgery Procedure Room
- Hybrid OR’s

Each of these interventional rooms is performed in similar environments (procedure rooms) which may be interchangeable in some cases where hemodynamic monitoring is required. The components which make up the endovascular suite is consistent: a control room; a procedure room; a systems component room and in some cases an adjacent sterile supply room when an adjacent clean core is unavailable.

**Cardiac Catheterization Procedure Room:** There are three functional spaces which make up a single cardiac catheterization procedure suite into a working unit:

1. Cardiac Catheterization Procedure Room
2. Control Room, and
3. The Imaging Systems Component Room.



Additionally, Cardiac Catheterization rooms must adhere to the same aseptic environment as surgical operating rooms.

Requirements will include spaces for gowning and scrubbing, which enable cardiologists and clinical staff to travel from areas considered “soiled” to the aseptic semi-restricted corridor from which the Cath Lab is accessed. *[Note: The Cardiac Catheterization Procedure Room is considered a sterile environment.]*

The Control Room should be sized adequately to allow staff movement and imaging equipment. However, an overly large control room invites visitors (vendors, other staff, other physicians) who can be a distraction during a case. Visibility of the Cardiac Catheterization Procedure Room as well as the patient is through leaded glazed vision panels and shall accommodate control counters for equipment video and data monitors, hemodynamic monitoring and computers utilized by physicians and clinical technicians to support the procedure type and imaging modality. The Control Room shall have direct access to the Cardiac Catheterization procedure room and accessed directly to the semi-restricted corridor.

The Imaging Systems Component Room (ICR) shall be adjacent to the procedure room as imaging system cable length determines the maximum distance from the imaging gantry to the ICR. The ICR is accessed from the semi-restricted corridor never from the procedure room.

Imaging equipment utilized in the Cardiac Catheterization Procedure Room may consist of monoplane, biplane or robotic configurations. Measures must be made to structurally support the type imaging modality being installed. Imaging equipment may be ceiling mounted, floor mounted or a combination of both with motion and articulation of C-Arm(s) occurring in two or more directions moving in and out of position during procedures.

Although there may be differences among specific facilities, Cardiac Catheterization Laboratories are generally organized so that the patient is presented to the cardiologist with the patient’s head to the cardiologists’ left side providing the cardiologist adequate work area with clear access to the patient and full view of the monitors, which carry real-time video images and data. Common procedures performed in the Cardiac Catheterization Procedure Room are: angioplasty, PCI (percutaneous coronary intervention) angiography, balloon septostomy, and catheter ablation.

The equipment selected will affect the layout of tracks and their supporting structure above the ceiling. Cardiac Catheterization Procedure Room equipment is upgraded every few years so flexibility is important. Although the Guide Plate indicates a ceiling supported imaging modality, specific facilities’ cardiovascular services may seek different assemblages at the time of planning and design. Consider room clearances, both horizontally



and vertically and live loads whether from ceiling-supported equipment or bearing on the floor.

Primary procedural supplies shall be stored in the procedure room when possible. Adequate wall surface area is required to support the appropriate number of storage cabinets. Specific storage requirements for invasive procedure rooms are noted in Guide Plates and Room Data Sheets. Equipment Lists indicate Catheters are not to be reused after use.

***Electrophysiology Procedure Room:*** An electrophysiology study (EP study) is a minimally invasive procedure that tests the electrical conduction system of the heart to assess the electrical activity and conduction pathways of the heart. During an EP study, cardiac arrhythmias are recorded. The study is performed to investigate the cause, location of origin, and best treatment for various abnormal heart rhythms. The electrophysiology procedure room reflects the same organizational features as the cardiac catheterization procedure room.

An electrophysiology study can include a number of invasive and non-invasive recordings of spontaneous electrical activity as well as of cardiac responses to programmed electrical stimulation. These studies are performed to assess arrhythmias and abnormal electrocardiograms, expose symptoms, evaluate risk of developing arrhythmias in the future, and design treatment. Treatment may include antiarrhythmic drug therapy as well as implantation of pacemakers and implantable cardioverter-defibrillators. These procedures are surgical in nature thereby warranting an aseptic environment identical to that found in surgery.

The EP room can accommodate diagnostic studies as well as therapeutic surgical interventions such as cardiac pacemaker and defibrillator implants therefore an EP room must have an aseptic environment identical to surgical operating rooms. EP rooms and their Control Rooms are organized similar to Cardiac Catheterization Procedure Room with regard to clean and dirty paths and a sterile environment within the room. Their organization and most of the equipment, except for specialized electrophysiology equipment, is similar to a Cardiac Catheterization Procedure Room.

***Vascular Surgery Procedure Room:*** The vascular surgery procedure room is utilized for treatment of vascular related diseases that were once performed in traditional surgical OR's to make repairs to the entire vascular tree being responsive to percutaneous interventions. Neither the traditional operating room nor the conventional angiography suite is optimal for both open surgery and endovascular procedures therefore the advent of the vascular surgery hybrid OR. The vascular surgery procedure room reflects the same organizational features as the cardiac catheterization procedure room.



Important issues for the vascular hybrid operating room include quality of the imaging equipment, radiation burden, ease of use of the equipment, need for specially trained personnel, ergonomics, ability to perform both open and percutaneous procedures, sterile environments, as well as quality and efficiency of patient care. The most important feature of working in a dedicated hybrid vascular suite should be the ability to attain best treatment of vascular patients. Whether the interventional radiologist or the vascular surgeon uses the facilities is of less importance.

Establishment of an endovascular operating room suite has the benefit of a sterile environment, and the possibility of performing hybrid procedures and conversions when necessary. Moreover, angiography immediately before treatment gives contemporary anatomical information, and after treatment provides quality control. Consequently, better quality and service can be provided to the individual patient. These changes in the treatment of vascular disease require that a new type of vascular specialist, named 'vascular hybrid surgeon', trained to perform both endovascular and open surgical procedures in this highly complex patient group.<sup>4</sup>

***Interventional Radiology Procedure Room:*** Interventional radiology (IR) procedure room utilizes a set of techniques that allows access to the internal structures of the body through body orifices or very small incisions and guidance with medical imaging. Regardless of the reason for the intervention, the procedure will likely make use of common elements such as a puncture needle (to pass through the skin), guidewires (to guide through structures such as blood vessels or the biliary or urinary systems), a sheath (which slides over the guidewire and hold the path open without injuring it), and catheters (that allow fluids to be pushed through them).<sup>5</sup>

Interventional radiology is typically utilized for both diagnostic and therapeutic interventional procedures and reflects the same organizational features as the cardiac catheterization procedure room.

#### **Configuring Endovascular Procedure Rooms:**

While endovascular procedure rooms may be adjacent, it is not advisable to have a single control room that supports multiple procedure rooms, though the imaging equipment component room for two procedures may be co-located within a single room.

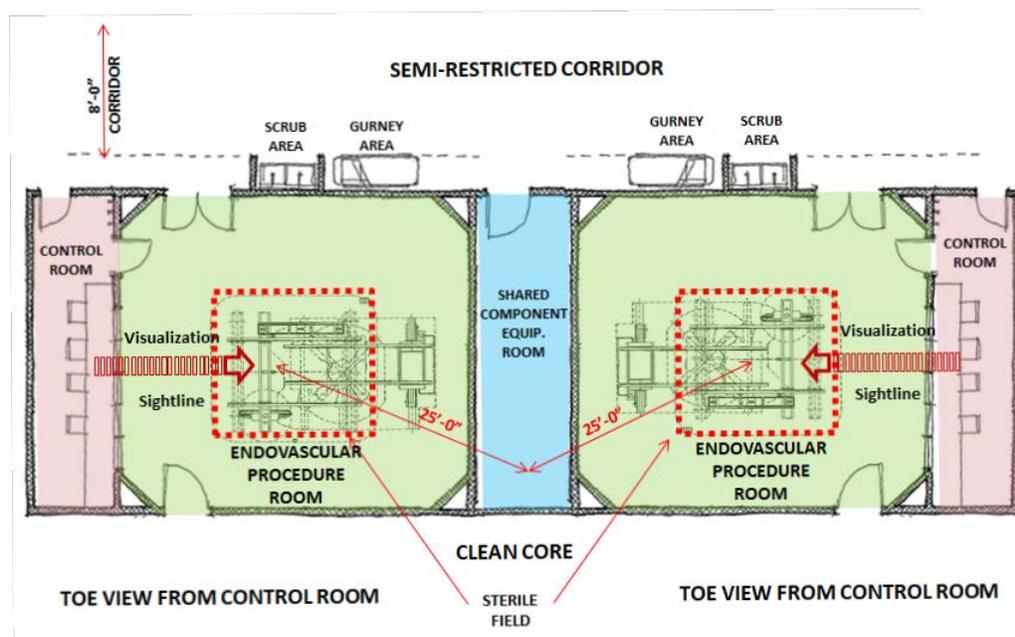
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<sup>4</sup> *The vascular hybrid room-operating room of the future*, by Hudorovic-N, Rogan SA, Lovricevic I, Zovak M, Schmidt S., *Acta Clin Croat.* 2010 Sep, 49(3):289-98

<sup>5</sup> *Taslakian, Befros, Ingber, Ross, Aaltonen, Eric, Horn, Jeremy, Hickey, Ryan (2019-08-30). "Interventional Radiology Suite: A Primer for Trainees". Journal of Clinical Medicine 8 (9). doi:10.3390/jcm8091347. ISSN 2077-0383, PMC 6780384. PMID 31480308*



Example follows:



*Note that this configuration also applies to multiple “Universal” Hybrid OR’s as well as multiple endovascular procedure rooms.*

### Work Flow

Not every patient will follow the same workflow protocol; therefore, several different scenarios have been diagrammed to show possible routes that a patient may take through the surgical department. It is important to note that the major differences stem from the level of acuity of the procedure being performed: in the case of ambulatory surgery the patient will arrive on the day of surgery and be discharged on that same day without interaction with any spaces outside of the surgery department. During an in-house or same day admit surgery, intake and discharge of the patient will occur through other hospital departments. In complex surgical cases, the patient will likely not spend any time in pre and post procedural areas but be transferred directly to the surgical intensive care unit. This serves to minimize patient transfers and ultimately reduce patient risk.

### Functional Adjacencies

The Surgical Suite is situated to prevent non-related traffic through the department. It is divided into three distinct areas, which are defined by the physical activities occurring within the area and staged in a progressive manner to decrease the potential of cross contamination. These areas are the unrestricted area, the semi-restricted area and the restricted area.

The unrestricted area includes the central control point that is established to monitor the movement of patients, staff, and equipment. The semi-restricted



area (“red line”) includes the peripheral support areas of the surgery suite, such as storage areas for clean and sterile supplies, instrument processing areas, scrub sink alcoves, and the corridors leading to the restricted area. Access to this area is restricted and appropriate surgical attire as well as coverings for head/ facial hair is required. The restricted area includes the operating rooms as well as the clean core. Access to this area also requires full surgical scrub attire, foot coverings, head/hair covering, masks, surgical gloves. All other areas in the surgery suite are non-restricted with no specific requirements for attire and covers.

### **Clean Core**

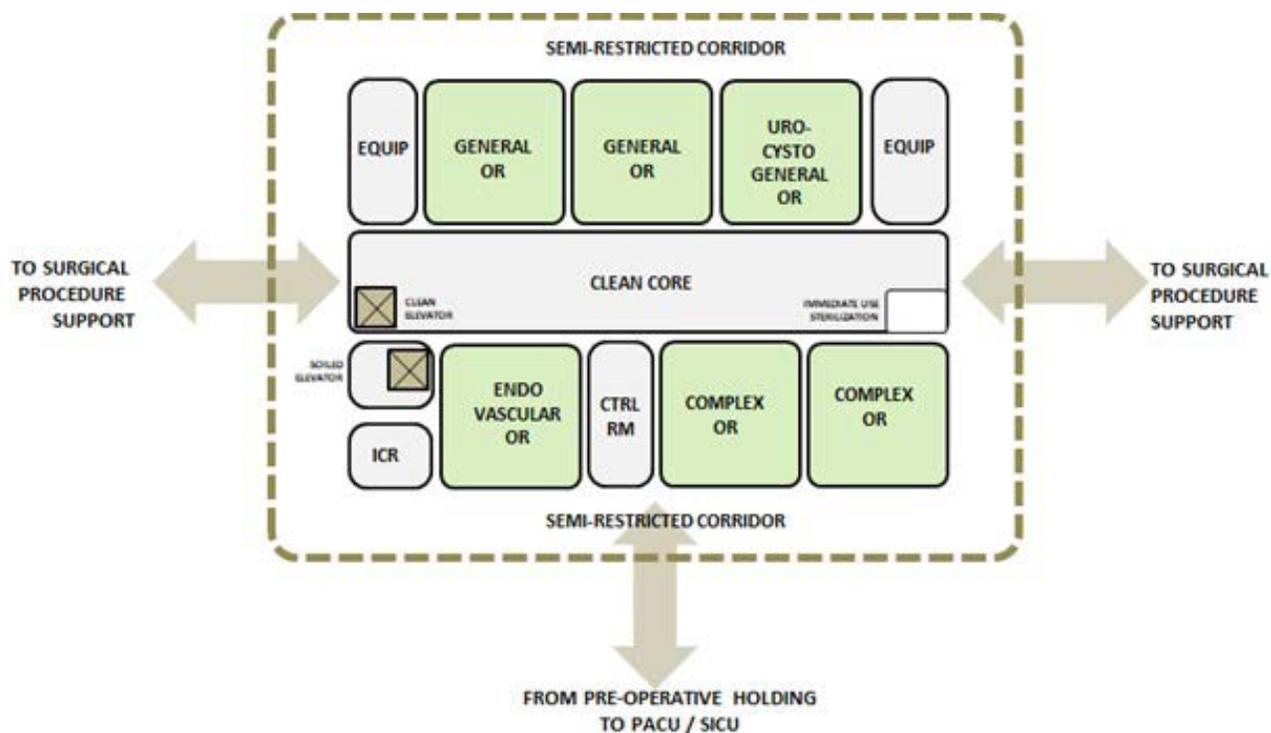
The surgical suite is set up to carefully orchestrate the flow of sterile and soiled goods. A one-way flow of soiled goods out of the operating room and sterile goods into the operating room on a separate, dedicated route is preferred. This is best accomplished by grouping operating rooms around the Clean Core creating a semi-restricted corridor “race-track” configuration.

The clean core should have a minimum width of 21 ft. (2438 mm). This width will allow for 10 ft. (3048 mm) of supply storage in the middle of the space with a 3 ft. (914 mm) wide aisle on each side as well as a 2 ft. 6 in. (762 mm) space for case carts and other equipment, such as refrigerators and blanket warmers.

When the provision of substantial numbers of storage cabinets in each Operating Room is the desire of the local staff, then the space in the clean core reserved for the storage of sterile supplies can be reduced. Case carts are held in a clean staging area until required at the start of the surgical procedure. Many facilities also utilize automated inventory supply units, which store and electronically track usage of supplies.

Example follows:





Sterile supplies are transported to the clean core via dedicated elevators from the clean side of SPS. An optional dedicated stairway may be included if SPS is vertically separated from the clean core by no more than two floors.

Depending on the available space and the type of facility different clean core arrangements can be employed. Generally, it is recommended to keep the quantity of operating rooms around a clean core to 8 or less in number to avoid excessive travel distances. In renovation situations where space is not available to utilize a Clean Core Outer Racetrack concept, one corridor outside the Operating Room may be considered a clean space where sterile supplies are stored. Appropriate staff and materials flow must be followed to maintain the separation of clean and soiled traffic. However, this arrangement should only be considered for a small complement of Operating Rooms.

Appropriate staff and materials flow must be followed to maintain the separation of clean and soiled traffic. However, this arrangement should only be considered for a small complement of Operating Rooms.

### Waste Management

**Medical Waste:** Medical waste is generated in medical exam rooms or in patient rooms where it is bagged, collected and transported using specially designated, closed containers to the soiled utility rooms. The waste is held



there until it is transported via the loading dock to the medical waste handling facility.

**General Waste:** General waste is generated in all spaces and is held in waste containers for collection either in a trash receptacle within the patient room or bulk storage in the soiled utility closet. It is then collected by cart and transported via the loading dock to the waste handling facility.

**Recycling:** Means of sorting, collecting, transporting and disposing of recyclable material should be analyzed by locality and modified to suit local conditions and practices.

Product types used in the building: disposable vs. recycle products should be discussed as it is. An important design consideration in alternatives that impacts physical space for waste disposal volumes.

Refer to the NEPA Interim Guidance for Projects at <https://www.cfm.va.gov/environmental/NEPAGuidance.pdf> for more information regarding recycling requirements.

**Soiled Linen:** Reusable soiled linens are generated in patient rooms, physical therapy gyms, and sometimes the medical exam rooms. They should be collected in carts or hampers in the soiled utility rooms and transported to a soiled linen holding room near the loading dock for pick-up. Medical exam rooms may opt to use disposable paper products in which case, they would be discarded after each use.

**Utensils:** Any medical care washable items incorporated in the plan of care should be transported to the soiled utility room for holding. Items will then be transported to a sterile processing department or service for cleaning and reprocessing.

### 2.1.2. VA Trends in Surgical and Interventional Service

There are a number of trends which directly impact VHA perioperative services. The most prominent considerations are:

- Veteran population development and demands
- Change in Veteran population clinical acuity
- Complexity of provided services
- Change in intraoperative clinical methodologies and techniques
- Physical infrastructure
- Outcomes and productivity
- Interventional cardiology is expanding due to an aging population and growing prevalence of obesity and diabetes.
- The COVID pandemic in 2020 had unpredictable consequences on the presentation and management of patients with ischemic heart disease. Subsequent to these initial responses the impact of the



initial pandemic can be reviewed and responses can be considered. It is clear that there are new opportunities for optimizing patient management pathways and in particular enhanced use of information technology (IT). Changes in attitudes towards health and perceived risk are evident within both the cardiac catheter lab teams and our patient cohorts. Summating both the intellectual and emotional experiences of the pandemic are essential to prepare for either a second wave of COVID 19 or any new pandemic threat in the future.

The Veteran population is projected to decrease between 2014 and 2043 from 22.5 million to 14.5 million veterans<sup>2</sup>. The decline will be primarily attributed to a reduction in number of WWII and Korean Conflict veterans between 2014 and 2030; and Vietnam Era veterans between 2023 and 2043. During the same period of time the female veteran population will grow from 9% to 17%. The above trends will and are already impacting VHA surgical services, which have strong linear and statistically significant relationships to population demand measured in increments of 10,000 unique patients.

[https://www.va.gov/vetdata/docs/Quickfacts/Population\\_slideshow.pdf](https://www.va.gov/vetdata/docs/Quickfacts/Population_slideshow.pdf)

The increase in female veteran population adds significant volume to obstetrics and gynecology services in general and intraoperative procedures in particular, while the 36% reduction in overall veteran population will initially decrease the number of surgical cases. However, the clinical acuity of cases will increase and there will also be growth in case numbers per patient due to age groups impacted and multiple chronic conditions of the 12 million population group that is 60 years and older. The beginning of this trend is already being observed in different Veterans Integrated Service Networks (VISNs) across the country.

The growth in the complexity of the services begins to shift the composition of the surgical suite regarding the mix of general and specialty operating rooms as well as types of services provided. Today, VHA has 136 surgery programs which are subdivided as follows:

- 17 Basic Ambulatory Surgery Centers (ASC)
- 9 Advanced ASC
- 11 Standard
- 31 Intermediate
- 68 Complex

26 of these surgery programs are Ambulatory Surgery Centers and 110 are Inpatient surgery programs.

Intermediate and complex programs prevail today by representing 73% of overall number of programs and covering majority of patients. Specifically,



10 out of 68 complex programs provide services to a population of 80,000 plus uniques each and 46 out 68 complex programs provide services to a population of 50,000 plus uniques each. Although there is no direct correlation between demand and operative complexity designation of the facility there is a tendency for facilities with 50,000 plus uniques to have an Inpatient Complex designation. However, as case complexity grows across the enterprise it will impact intermediate and standard facilities. Currently there is a strong linear statistical relationship between demand and number of operating rooms and staffed hours per week per operating room. In the future, due to the changes described above, this paradigm may have to be revisited to reflect complexity impact in addition to demand. Similarly, complexity may impact further operating room utilization.

Uniques is defined by the VHA Support Service Center (VSSC) and represents the cumulative number of unique patients seen by the facility (division level) during the fiscal year

Specialty operating rooms services provided today include orthopedics, neurosurgery, cardiothoracic, transplants, robotics and endovascular. Endovascular (hybrid) operating rooms most common configurations are monoplane and biplane modalities (either floor or ceiling mounted); they allow for the integration of traditional surgical procedures with skin incisions and interventions, e.g. transcatheter techniques with the puncture of a vessel and represent a combination of surgical equipment with high-end imaging modalities previously utilized in interventional radiology and/or cardiology to angiography type of procedures. Endovascular (hybrid) operating rooms provide services such as:

- a) hybrid therapy for congenital heart disease,
- b) hybrid therapy for valve disease,
- c) coronary artery disease,
- d) heart rhythm disturbances,
- e) endovascular aortic repair (including transcatheter aortic valve replacement (TAVR)),
- f) pacemaker and ICD implantation, and
- g) other interdisciplinary uses.

Endovascular (hybrid) operating rooms benefits are:

- a) they serve as a safety net for complex endovascular procedures,
- b) they provide a multi-disciplinary environment conducive for both minimally invasive and open surgeries,
- c) they allow for intra-operative image guidance and efficacy evaluations,
- d) they provide an environment to perform intraoperative and open procedures (stent and bypass graph) in a single episode of care.



This integration and increase in array of services and complexity of treatments changes the relationships between diagnostic cardiology and perioperative services. As a proactive reflection of this change the space planning criteria and design standards cover cardiac catheterization procedure room; electrophysiology procedure room and transesophageal echocardiography (TEE) room and recommend their complete integration with traditional surgical services by placing them 'behind the red-line' in the semi-restricted area of the healthcare institution.

Considering outcomes and productivity of perioperative services, primary factors to be taken into consideration are operating room utilization rates, lag times, cancellation rates and first time starts. First time on time procedure starts at VHA are on average at a 75% level, with the delay average between 1 and 15 minutes at 15%. Cancellation rates at VHA are lower than the National average (between 1 and 7 percent per service line), while primary cancellation reasons are attributed to patient-related issues and patient health status. Operating room utilization varies between 65% to 75% for intermediate surgeries, 90% to 95% for advanced ASC and 75% to 95% for complex surgeries.

Changes in complexity of surgical services and diagnostic and treatment techniques will have a direct impact on the physical infrastructure of VHA surgery programs, resulting in upgrades in place or expansion of perioperative services when space or infrastructure shortages are present. Government *Freeze the Footprint* policy requirements will have to be taken into consideration in development of future expansion plans.

### 2.1.3. The Technological Future of Surgery

Today only 3% of surgical procedures are performed by robots, although 15% of all operations [used robotic support](#) or assistance in the U.S. in 2020. There's still a long way to go.

#### Virtual Reality (VR)

In April 2016, cancer surgeon Shafi Ahmed [performed an operation](#) using a VR camera in the Royal London hospital. It was a huge step for surgery, and anyone could [participate in it](#), real-time. Ever since, companies like [Osso VR](#), [ImmersiveTouch](#), [OramaVR](#) or [Fundamental VR](#) have used VR as both training or imaging solutions.

VR can elevate the teaching and learning experience in medicine to a whole new level, replacing students peeking over the surgeon's shoulder during an operation. By using VR, surgeons can stream operations, allowing medical students to be in the OR virtually, using their VR goggles. Helping doctors practice procedures or life-saving moves is invaluable.



### **Augmented Reality (AR)**

As there is a lot of confusion around VR and AR, let me clarify: AR differs from VR in two essential features. AR users do not lose touch with reality, while VR puts information into eyesight as fast as possible. These distinctive features have a huge potential in [helping surgeons](#) become more efficient at surgeries. Whether they are conducting a minimally invasive procedure or locating a tumor in the liver, AR healthcare apps can help save lives and treat patients seamlessly.

The first AR-backed spinal fusion surgery took place in 2020 in the U.S., where an FDA-approved AR Guidance system [helped surgeons visualize](#) the 3D spinal anatomy of a patient during surgery – it was just as if doctors had X-ray vision. The team at the Johns Hopkins Hospital praised the tool for accuracy, safety and operating efficiency. Another company, [Proprio](#) supports medical professionals by creating A.I.-supported ultra-precise 3D images.

### **Surgical Robotics**

Surgical robots today have 3D cameras that record operations. The video streams to a computer screen somewhere nearby beyond a plexiglass as the doctor [proceeds with the operation](#).

[Surgical robots are the prodigies of surgery](#). The most commonly known surgical robot is the [da Vinci surgical system](#), and, believe it or not, it was introduced over 20 years ago! It features a magnified 3D high-definition vision system and tiny wristed instruments that bend and rotate far greater than the human hand. With da Vinci, surgeons operate through just a few small incision.

### **Minimally Invasive Surgery (MIS)**

Minimally invasive surgery allows fewer but more precise cuts, fewer incisions, leading to less pain and faster recovery. The medical device start-up Levita aims to refine such procedures with its FDA-approved [Magnetic Surgical System](#) for prostatectomies. This innovative technological platform is utilizing magnetic retraction to grasp and retract the gallbladder during laparoscopic surgery.

[Vicarious Surgical](#), a next-generation surgical robotics company, aims to increase the efficiency of surgical procedures. The Vicarious system has an exceptional reach and the ability to “replicate” all the moves of a surgeon – and more. It creates a single incision just 1.5 cm across that still allows through two robotic arms and a camera.

### **3D Printing and Simulations in Pre-Op Planning and Education**

Complicated and risky surgeries lasting hours need a lot of careful planning. Existing technologies such as 3D printing or various simulation techniques



help a lot in reforming medical practice and learning methods, as well as modelling and planning successfully complex surgical procedures.

Researchers at Penn State University recently repaired skin and bones by [bioprinting during surgery](#) in a rat model. Face and skull injuries are particularly difficult to fix as there are many layers of various tissues. During this operation, Ibrahim T. Ozbolat, Hartz Family Career Development Associate Professor of Engineering Science and Mechanics, Biomedical Engineering and Neurosurgery, Penn State and his team printed both bone and soft tissue. “It took less than 5 minutes for the bioprinter to lay down the bone layer and soft tissue,” the professor explained. They hope to translate this research to human applications.

## 2.2. Technical Considerations

### 2.2.1. VA Policies/ Directives/ Handbooks, Codes, and Standards

VA functions as the Authority Having Jurisdiction (AHJ) for all VA owned and operated facilities and projects and has the responsibility to guard public health and safety through enforcement of its adopted codes.

Planning, design, and construction of all VA Surgical Services facilities must be in accordance with this document and with the latest editions and/or revisions of all VA and industry’s applicable codes and standards. The more stringent code and/or standard are to be applied to VA facilities. Requirements in this Design Standard shall not be construed as authorization or permission to disregard or violate applicable local codes and regulations.

Please refer to the PG-18-3 (Topic 1) for a list of Codes, Standards and Executive orders.

VHA Directive 1043: This Veterans Health Administration (VHA) directive provides policy for implementing the expansion, reduction, or elimination of major clinical services or programs that may change or impact the delivery of care provided to Veterans in existing facilities, including Community Based Outpatient Clinics (CBOC).

#### Local Codes and References

VA is not subject to local imposition of code enforcement procedures, such as drawing reviews, building permits, inspections, fees, etc. Therefore, VA-CFM functions as the Authority Having Jurisdiction (AHJ) for all VA owned and operated facilities and projects. However, VA leased properties typically follow all local city, county and State AHJ’s.



## Other Recommended Reference Standards

**FGI:** This reference standard is commonly used for non-VA owned but operated outpatient facilities and comes under the jurisdiction of the local city, county and State AHJ's. FGI Guidelines for Design and Construction of Hospital and Outpatient Facilities-latest Edition adopted by local city, county and State AHJ's and is published by the Facilities Guidelines Institute.

**HIPAA:** The Healthcare Insurance Portability and Accountability Act of 1996 (HIPAA) protects individual's rights to audible as well as visual privacy. This is especially the case with respect to protection of each individual's medical records, private information and communications. The law protects all conversations between patients and admission interviewers, caregivers, nurses, physicians and families. The American Recovery and Reinvestment Act (ARRA) passed by U.S. government in 2009 enacted special provisions and legal enforcement tools for patient privacy, protection and security. Office of Civil Rights (OCR) monitors HIPAA security rule compliance based on ARRA provisions. Current penalties that can be implied by OCR for non-compliance with HIPAA are divided in four categories:

- a) without knowledge,
- b) based on reasonable cause,
- c) willful neglect, and
- d) willful neglect not corrected.

Penalties differ per violation versus maximum penalty according to these four categories and vary between \$100 and up to \$1,500,000.

**Disaster Planning:** Situations can arise in which it may not be feasible to evacuate patients for extended periods of time. In those cases, emergency power will be required to maintain seamless equipment operation, heating, ventilating and vertical transportation systems, and life safety systems. This Design Standard recommends that the project consider planning for this contingency in order to care for the Veteran population especially when the facility is located in an area where a high probability of threat exists from natural disasters such as hurricanes and earthquakes. Smoke compartments in a hospital allow staff to move patients to a safe area in the case of an emergency while continuing patient care.

Medical staff are trained to respond to fires with the R.A.C.E. method. This acronym stands for rescue, alarm, contain, evacuate, and describes a methodology to take steps towards a quick evacuation of a building while also trying to contain a fire and help people needing assistance to safety.

**AORN Guidelines for Perioperative Practice:** The Guidelines for Perioperative Practice are published by the Association of periOperative



Registered Nurses (AORN), a non-profit association with the mission of promoting safety and optimal operative and other invasive procedure outcomes. It provides definitions and guidelines for aseptic practice, equipment and product safety, patient and worker safety, sterilization and infection.

### 2.2.2. Architectural

**Corridors:** Shall be designed to a minimum of 8 feet clear width to accommodate passage of equipment or beds and two stretchers and/ or wheelchairs within the surgical department. In non-patient areas and outpatient clinical spaces where gurneys are not utilized, corridors may be a minimum of 5 feet in clear width.

**General:** Refer to VA PG-14 Room Finishes, Door, and Hardware Schedule for requirements for ceiling materials in the restricted and semi-restricted areas of the surgical suite.

#### **Ceilings:**

- The finished ceiling height for Surgical Operating Rooms should be a minimum of 10 ft. (3050 mm) above the finished floor and shall be monolithic (gypsum board) and scrubbable. The use or consideration for lay-in ceiling panels, boards, and/or tiles are not acceptable under any circumstances.
- The finished ceiling height for Endovascular Procedure Rooms (hybrid OR's, Catheterization Labs, Interventional Radiology Labs, Electrophysiology Labs and Vascular OR's) should be a minimum of 10 ft. (3050 mm) above the finished floor and shall be monolithic (gypsum board) and scrubbable. The use or consideration for lay-in ceiling panels, boards, and/or tiles are not acceptable under any circumstances.
- The finished ceiling above scrub station alcoves shall be monolithic (gypsum board) and scrubbable. The use or consideration for lay-in ceiling panels, boards, and/or tiles are not acceptable under any circumstances.
- The finished ceiling height for the clean core should be a minimum of 9 ft. (2743.2 mm) above the finished floor and shall be monolithic (gypsum board) and scrubbable. The use or consideration for lay-in ceiling panels, boards, and/or tiles are not acceptable under any circumstances.

**Floors:** Cleansability of the flooring material is of primary importance in the surgical suite, as most areas are at high risk for the spread of infections. Consider the following when choosing a flooring material:



- Ease of maintenance
- Readily cleanable
- Impact by germicidal cleaning solutions (if any)

Flooring in operating rooms shall be resinous poured flooring with integral base seamless and of non-porous material. Special consideration should be given to the area directly below the surgical table, where betadine staining is a common problem. Betadine is an antiseptic frequently used in surgical procedures that leaves a yellowish-brown stain. While some flooring materials will hold up better than others to staining, it is generally recommended to provide colors that will disguise betadine build-up in this area. Also, this area may be of a different color than the rest of the flooring in the room to demarcate the extent of the air curtain at the ceiling above the surgical table.

**Walls:** Due to the large amount of cart and stretcher traffic in the surgical and endovascular suites, consideration shall be given to the durability of walls. It is recommended that walls are fitted with wainscot wall protection extending at least 4'-0" above the finished floor. If budget allowable, consideration may be given to stainless steel wall cladding.

**Door swings:** All doors allowing entry into the surgical OR and/ or endovascular procedure room, including doors from the Control Room to Procedure Room as well as doors from the Clean Core, shall swing into the surgical OR and/or endovascular procedure room to maintain positive pressure.

**Casework:** Modular moveable casework storage systems should be considered for flexibility including the incorporation of typical dimensions for ease of multiple re-use applications, and ease in terminal cleaning of OR and endovascular procedure room floors. Casework systems should be integrated with space planning to avoid corner installations and filler panels.

Countertops for all clinical and clinical support areas should be made of solid impervious resin material (per PG 18-14: Room Finishes, Door & Hardware Schedule) with integral sinks, which offers long-term durability, and resists chipping and staining from medical agents expected to be used in clinical environments. For areas where strong chemicals are used, such as soiled utility rooms, seamless stainless steel counters with integral backsplash should be used. Plastic laminate veneer materials may be used in non-clinical staff and administrative areas.

**Acoustics/Noise Control:** Interior acoustics that support speech intelligibility and provide comfort can be difficult to obtain in an operating room where non-porous materials are mandated for infection control requirements. It is important to find ways to control reverberation and noise build-up in these spaces. The acoustical design of patient spaces shall also



be taken into consideration, in particular the pre-operative and PACU and Phase II recovery areas, in order to minimize patient stress and discomfort. Noise should be minimized by the design of the physical environment and the selection of operational systems and equipment.

Refer to PG 18-3: Topic 11 - Noise Transmission Control and AORN's Position Statement on Managing Distractions and Noise During Perioperative Patient Care for additional information regarding acoustical requirements.

**Doors:** The doors from the semi-restricted corridor into the Operating Room shall be at least 6 ft. (1820 mm) wide and located in such a way as to permit the bed or gurney to move as directly as possible from the corridor to the side of the operating room table. For this reason, these doors are typically located toward the foot of the operating table away from the anesthesia equipment. If lead lining in the walls of the Operating Room is required by a qualified physicist, it is mandatory that the doors into these rooms have automatic door openers. To provide visibility between the semi-restricted corridor and the Operating Room, a narrow view window will be provided in the door. For doors between the Clean Core and the operating rooms, a double acting door, 4 ft. (1170 mm) wide, with a small view window is required. Sliding entry doors to surgical OR's and endovascular procedure rooms are discouraged due to their high maintenance requirements.

For patient rooms and holding bays in Phase I Recovery (PACU) and pre-operative/Phase II Recovery areas, verify with applicable life safety codes that configuring doors to opening into corridors is allowable, consider recessing doors so that door swings do not interfere with corridor traffic. Alternatively, the door(s) can be configured to open into the patient room.

### 2.2.3. Interior Design

**Interior Finishes:** Per the Room Finishes, Door, and Hardware Schedule (PG 18-14), consider the following key factors in the design process, which have an impact on the build environment and the patient experience:

- Maintenance
- Durability
- Life cycle cost
- Therapeutic attributes
- Improved wayfinding

Additionally, designers should specify appropriate materials to maximize infection control. These materials can include but are not limited to vinyl coated fabric wallcoverings, and upholstery fabric with special coatings and moisture resistant backings.



**Wayfinding:** Organizing the department to allow for intuitive wayfinding will help reduce patient stress and is therefore an important design consideration.

Also, it should be noted that some staff members that may be present in the facility do not frequent the department regularly. It is therefore important to consider both off-stage and on-stage routes when designing wayfinding.

#### 2.2.4. Heating, Ventilation, and Air Conditioning Systems (HVAC)

HVAC systems shall be provided to heat, cool, and ventilate individual rooms or areas as required to satisfy design criteria. The HVAC system shall comply with NFPA 72, 90A, 99, and 101, and the current version of Department of Veterans Affairs (VA) HVAC Design Manual, VA Design and Construction Procedures, VA Master Construction Specifications and VA Standard Details, where applicable. The current VA design and construction criteria are available on the [VA Technical Information Library \(TIL\)](#). Deviations from the VA guidelines may be made provided approval is obtained from the VA. Where specific VA requirements are not available or indicated within this document, design criteria from industry standards such as American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), National Fire Protection Association (NFPA), and Department of Energy (DOE), etc. should be submitted to the VA for review and approval.

**Special HVAC design** may be required for orthopedic OR's as "bone grout" temperature and relative humidity criteria is critical, consult with surgeon and surgical clinical nursing staff.

**Life Cycle Analysis:** The HVAC system shall be selected based on an economic life cycle analysis performed as outlined in the current edition of the VA HVAC Design Manual.

**Energy Conservation:** Energy conservation shall be emphasized in all aspects of the building design. The building shall meet the requirements of the current version of the VA Sustainable Design and Energy Reduction Manual, the VA HVAC Design Manual, the VA Electrical Design Manual, and the VA Plumbing Design Manual. These design manual energy standards apply to HVAC systems as well as the building envelope, service water heating, lighting and energy management.

**Exterior Design Conditions:** Exterior summer/winter design conditions and cooling tower wet bulb design temperatures shall be based on the current edition of the VA HVAC Design Manual.

The Architect/Engineer (A/E) may recommend more severe outdoor climatic conditions for review and approval by the VA.



**Interior Design Conditions:** Interior design conditions for each space shall be maintained throughout the year. Interior design conditions for all spaces shall be maintained in accordance with the current version of the VA HVAC Design Manual.

**Supply Air Requirements:**

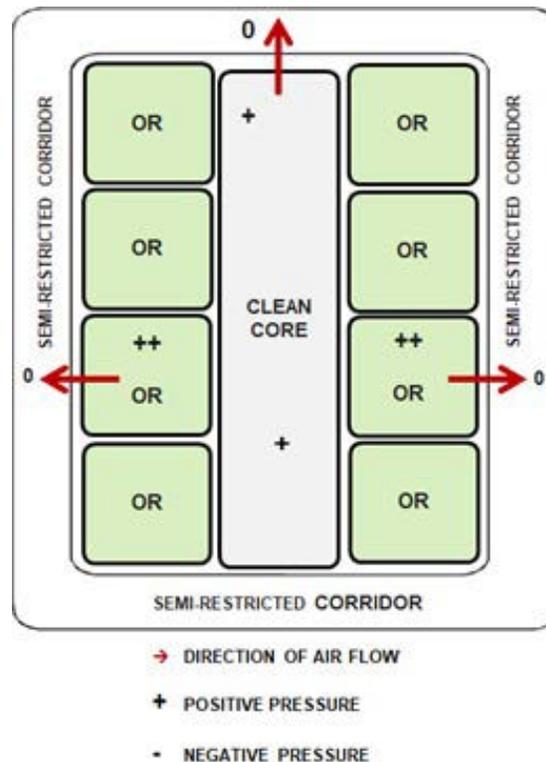


Figure 2.1 – Pressurization Diagram

The supply air volume shall be established to meet the heating and cooling load requirements of the occupied space. The supply volume shall, however, be modified to meet the following:

- a) minimum air change requirements if this air quantity is more than the heating and cooling load requirements,
- b) maintain proper space pressurization relative to room exhaust requirements.

For all air systems the supply air minimum airflows shall follow the current version of the VA [HVAC Design Manual](#).

The current version of the VA HVAC Design Manual describes an air supply distribution system for the general operating rooms. The Manual indicates the minimum requirements for total air changes per hour (ACH) of supply air to be provided at the point of delivery to the room which includes the required minimum ACH of outside air. The supply air system provided is an air curtain system. The system is comprised of two different types of ceiling



diffusers located within the operating room. The area above the patient is provided with a laminar diffuser array sized in accordance with the current version of ASHRAE Standard 170 and provides a slow velocity downward wash of clean supply air over the operating table surgical zone. Combined with this diffuser array is a four-sided linear slot diffuser system using specially designed linear slot diffusers that surrounds the operating table surgical zone. Per the current version of the VA HVAC Design Manual, the linear diffusers discharge a vertical airstream inclined at an outward angle toward the sides of the operating room walls. The purpose of the linear diffusers is to create a high velocity barrier of clean air to keep room contaminant particles which may be recirculating from the perimeter of the room away from the surgical zone. The linear slot diffuser curtain should be sized to deliver the air flow rate per foot per manufacturer recommendations. Flow rates below this quantity may not properly isolate the surgical air zone from contaminants, while air flows above this quantity may increase the possibility of re-entraining particles that have settled on the floor. The percentage of total room supply air to be provided by the slot diffusers and the unidirectional perforated diffusers is referenced in the VA HVAC Design Manual.

***Manifold-Unidirectional Air Delivery:*** Current and future surgical OR's as well as endovascular procedure rooms are utilizing fully integrated unidirectional air flow technology (manifold system) which affords many benefits such as: supporting ceiling suspended equipment consisting of surgical lights, equipment booms, monitors as well as supporting ceiling mounted imaging equipment gantries. The manifold system provides a level stable platform which inhibits the common issue of "drift" found in independent "red iron" supports. Another advantage of the "manifold" is the speed to install during construction

Unlike the general operating rooms, the hybrid operating rooms utilize a single large array of laminar flow diffusers over and beyond the sterile field which provides 100% of the required room supply air. The laminar flow diffuser array is located over the operating table and surrounding area to create a large surgical zone providing a slow-moving blanket of clean air over the patient and surrounding area. The operating rooms are the most positively pressurized spaces in the surgery suite.

***Surgical Suite Air Handling Units:*** Air handling units serving the surgical suite shall be provided with emergency power per requirements of the current version of the VA HVAC Design Manual. Air handling units shall have the capacity for utilizing 100% outside air where required by building code to meet purge requirements.



**Filtration:** Filtration for the Surgical Suite HVAC systems shall be provided in conformance with the current version of the VA HVAC Design Manual.

Operating rooms and surgery support spaces shall follow the current version of the VA HVAC Design Manual unless noted otherwise. The room data sheets provided in the Design Standard Templates chapter of this document refers the user to specific room types shown in the VA HVAC Design Manual unless noted otherwise. The room type referenced in the HVAC Design Manual is found in a table that will provide the needed information for room design temperatures, relative humidity range, room air changes, and space pressure relationships.

It is highly desirable to identify the supply air zone described above by installing an area of flooring material that is a different color from the balance of the room. This area should be located in the Operating Rooms by aligning it with the slot diffusers described above, and for the Hybrid Operating Rooms and Endovascular Procedure Rooms by aligning with the perimeter of the laminar flow diffuser array. This will visually indicate the boundaries of the sterile field.

**Surgical and Endovascular Room Return Air Requirements:** During a surgical and/or interventional procedure, all of the net floor space from the floor surface to a distance 15 in. (380 mm) above is considered contaminated. Therefore, all return grilles must be positioned low on the wall above the floor. Return air for both the general operating rooms and hybrid operating rooms is collected at low wall grilles. There shall be a minimum of four low return air grilles located at each corner of each surgical operating room and/ or endovascular procedure room. The height of the bottom of the return air grilles above the floor is indicated in the VA HVAC Design Manual, typically it is eight (8) inches (203 mm) above the finished floor surface.

**Outdoor Air Requirements:** The HVAC design for surgery support spaces shall provide each space with not less than the minimum recommended quantity of ventilation air indicated in the current version of the VA HVAC Design Manual.

**Exhaust and Return Air Requirements:** The HVAC design for spaces other than operating rooms shall provide return air or exhaust air as required for the spaces to control the transfer of odors and provide proper room pressurization. At a minimum, exhaust air and pressurization should be provided as indicated in the VA HVAC Design Manual.

**Noise Criteria:** The HVAC design shall provide resulting sound levels in occupied spaces not to exceed the levels shown in the current version of the VA HVAC Design Manual.



**Design Features:** HVAC design features such as the use of economizers shall follow the design criteria outlined in the current version of the VA HVAC Design Manual.

**Temperature Control Criteria:** The automatic temperature controls systems and the use of individual temperature controls for operating rooms and specific spaces shall be provided in accordance with the current version of the VA HVAC Design Manual.

**Humidity Criteria:** Humidity levels for the Surgical Suite HVAC systems shall be provided in conformance with the current version of the VA HVAC Design Manual.

### 2.2.5. Plumbing Systems

The plumbing systems shall comply with the current version of Department of Veterans Affairs (VA) Plumbing Design Manual, VA Design and Construction Procedures, VA Master Construction Specifications, and VA Standard Details, where applicable. Deviations from the VA Standards may be made, provided approval is obtained from the VA. Where state or local codes are more stringent than the above requirements, submit criteria to the VA for review and approval.

**Domestic Water:** Domestic water shall be distributed to the plumbing fixtures and equipment. Design of the domestic water system shall follow the VA Plumbing Design Manual. This includes design of water hammer arrestors, domestic booster pump design, and central domestic hot water and recirculating systems.

**Plumbing Fixtures:** Plumbing fixture types (including fixtures required to meet person with disabilities requirements) and fixture flow restrictors (aerators are prohibited) shall be in accordance with the current version of the VA Plumbing Design Manual.

**Sanitary Systems:** Provide sanitary drain connections to plumbing fixtures designed in accordance with the current version of the VA Plumbing Design Manual. Floor drains and floor sinks shall not be installed in aseptic room, spaces, or areas.

Any and all open sources of water including but not limited to sinks, floor drains and floor sinks, shall not be installed in the following areas:

- Surgical Operating Rooms
- Endovascular Procedure Rooms (Cardiac Catheterization, Electrophysiology and Interventional Radiology Labs, and all Vascular and Hybrid ORs)
- All aseptic areas
- Semi-restricted Corridor



- Clean Core
- Clean Utility Rooms

Floor drains and floor sinks may be installed in the following rooms:

- Housekeeping closets (HAC)
- Soiled utility rooms
- Toilets
- Staff toilet showering rooms

**Note:** *Absolutely no drains and/or floor sinks shall be installed within a surgical operating room or endovascular procedure room under any circumstances.*

### 2.2.6. Medical Gas and Medical Vacuum Systems

Medical compressed air, oxygen and medical vacuum systems shall be provided in accordance with the current version of the VA Plumbing Design Manual. Coordinate project specific requirements with the VA. Provide a separate medical gas zone valve box for each operating room in accordance with NFPA 99. Locate this box in the semi-restricted corridor near the door to the operating room it serves. See the current version of the VA Master Construction Specifications for panel description.

In addition to the gases described above other gases such as Nitrogen, Nitrous Oxide, and Carbon Dioxide are provided to the Operating rooms. When Nitrous Oxide is provided, a Waste Anesthesia Gas Disposal system must also be present. Nitrogen control panels are to be provided to the Operating rooms in accordance with the latest version of NFPA 99.

**Types and Use of Medical Gas:** Medical gas systems in hospitals are, in a word, lifesaving. These assemblies supply piped oxygen, nitrous oxide, nitrogen, carbon dioxide, and medical air to hospital areas such as patient rooms, recovery areas, operating rooms, and more. Computerized alarm systems monitor gas flow and alert hospital staff to any anomalies. There are main types of medical gas used in hospital environments.

1. **Oxygen:** Used when patients require supplemental oxygenation due to hypoxemia and hypoxia (insufficient oxygen in the blood). This system consists of a large storage system of liquid oxygen, which is then evaporated into a concentrated oxygen supply. Pressures are kept around 380 kPa or 55 psi. This arrangement is described as a vacuum insulated evaporator or VIE. For medical centers with a low patient capacity, oxygen is supplied by multiple standard cylinders, as opposed to evaporated liquid oxygen.
2. **Nitrous Oxide:** Sometimes called laughing gas, this is used as an analgesic, and as an anesthetic for pre-operative procedures. Nitrous



oxide is delivered to the hospital in standard tanks and is supplied through the medical gas system at around 345 kPa, or 50 psi.

3. **Nitrogen:** Often used to power surgical equipment during various procedures, and to measure a person's response to a simulated aircraft cabin environment in pre-flight lung testing. This is known as hypoxic challenge testing. Nitrogen is also used as a cryogen to freeze and preserve blood, tissue, and other biological specimens, and to freeze and destroy diseased tissue in dermatology and cryosurgery.
4. **Carbon Dioxide:** Used to suspend or inflate various tissues and used in laser surgeries. Most commonly, carbon dioxide is used in abdominal and thoracic surgeries, where the surgeon may need to move various organs to get to one particular area of the body. Carbon dioxide can also be combined with oxygen or air for respiratory simulation and treatment of various respiratory disorders. System pressures are maintained at about 345 kPa, or 50 psi.
5. **Medical Air:** Supplied by a specialized air compressor to patient care areas. Clean outside air is pressurized to around 380 kPa, or 55 psi, and brought inside to the patient. Medical air should never be used as oxygen, and cannot be used for HVAC controls, or to provide power to surgery tools. Medical air is used extensively in the ICU, PICU, and NICU areas, and with pulmonary nebulizers to reduce the risk of excess oxygen in the lungs or other body tissues (known as hyperoxia), during mechanical ventilation or surgical procedures.
6. **Helium/Heliox:** Often used to treat fixed partial upper airway obstructions or increased air resistance to help patients breathe easier. It is also used in liquefied form to help MRI machines reach a superconducting state. This allows the MRI to produce high-resolution body images without exposing the patient to radiation.
7. **Carbon Monoxide:** This gas is used only in very trace amounts as an ingredient in lung diffusion testing. This test helps medical staff to determine how well a patient's lungs are exchanging gases.

In addition to these main gases, there are a number of medical gas mixtures often used for patient diagnostics such as lung function, or for blood-gas analysis. Test gases are also used to calibrate and maintain medical devices that are employed in the delivery of anesthetic gases. Medical gases are also used in a laboratory environment. This is where bacterial cultures may be grown in controlled aerobic or anaerobic incubator atmospheres. Biological cell cultures or tissue growth can be controlled by aerobic conditions that use mixtures rich in oxygen. Conversely, anaerobic conditions are created using mixtures rich in hydrogen or carbon dioxide.



**Waste Anesthetic Gas Disposal (WAGD):** The WAGD system is used to evacuate waste anesthetic gas from the surgical operating room and/or endovascular procedure room to the outside. This can be accomplished in different ways.

The safest method is by use of a dedicated set of vacuum pumps to actively draw the waste anesthesia gas out. Other systems rely on negative pressure in a universal medical vacuum system to remove the gas. The second method has become popular as it allows for a simpler installation requiring fewer lines and pumps.

Ultimately, the purpose of the WAGD system is to ensure that gas is being evacuated outside, without getting trapped in any part of the anesthetic gas system, as gas that lingers in or near the anesthesia system can eventually build up.

***Which System Should Be Used?*** A WAGD system that works using the other medical vacuum lines should be evaluated against the other types of medical gases to be used in a facility. There is some concern over the mixing of gases in these combined gas lines, as well as the occurrence of flash fires when the mixed gases reach the vacuum pump.

However, this is the most cost effective means of disposing of anesthetic gas, because the installation uses only one set of vacuum pumps. If there is no separate WAGD system, the oxygen content of the effluent must be closely monitored. Above all, the vacuum pumps must be compatible with oxygen. Maximizing the safety of the physicians and patients in the OR and/or Endovascular Procedure Room should be the goal.

***Characteristics of an Ideal WAGD System:***

1. The system is active, moves the waste down the line (NFPA uses the term “producer”)
2. This “producer” is oxygen inert (inert meaning unlikely to react with other substances)
3. Operates at a low vacuum level
4. Has a high flow

### **2.2.7. Lighting and Power Systems**

***Lighting:*** The Lighting Design Manual provides A/E guidance for lighting systems such as design parameters and recommended types of luminaires. The A/E has the option of using either fluorescent or LED lighting technology. The A/E shall follow the Reflected Ceiling Plan in Section 4 – Room Templates for the placement of luminaires, if the placement of luminaires meets design criteria of the project. However, the A/E shall be



responsible for the final placement of luminaires as shown on contract drawings. The A/E shall select appropriate number of lamps in each luminaire to render the required illuminance level for each room and task. Normally, number of lamps for luminaires located at the core of surgery room is 6.

Lighting levels in the operating room are also required to fluctuate from high to low in order to accommodate specific tasks. Therefore, the A/E must implement luminaires with dimming capabilities using multi-level switching, dimming arrangements, or both. Normally, luminaires located at the core of the surgery room are designed with multi-level switching arrangement; luminaires located in the peripheral area of the surgery room are designed with dimming capabilities. The A/E shall follow guidance for calculations shown in the Lighting Design Manual - Section 2.11 - Lighting Calculations.

The Illuminating Engineering Society North America (IESNA) Handbook 10th Edition states that need of low-level background lighting using green lamps is a preference of individual surgeons. It is not a required lighting design criteria for surgical and/or endovascular rooms. There is no NAIES standard recommending or requiring green lamp design for surgery rooms at this time. There is no academic and peer reviewed research reports to validate benefits of green lamps at this time. Therefore, dimming arrangements for luminaires is the preferred way over green lamps to provide low level background lighting in the surgery room.

***Power.*** The A/E shall provide electrical design for all electrically operated equipment. The A/E shall confirm electrical requirements of all equipment to provide correct design and load calculations. A/E shall show receptacles or hardwire connections for all electrically operated equipment. The Electrical Engineer shall coordinate with The Architect regarding the physical dimensions of the Isolated Power Systems(s) (IPS) equipment. This information is needed for the construction of the wall to correctly accommodate the IPS equipment.

Refer to the Electrical Design Manual for guidance regarding requirement of Isolated Power System (IPS) in operating rooms. The design and installation of dual IPS panels providing two different output voltages simultaneously using one isolated transformer is prohibited.

Power and ground modules providing a combination of hospital grade receptacles and hospital grade ground jacks shall be provided along the walls.

***Normal Power.*** One IPS on normal power shall be designed and specified for each surgery room. Receptacles on normal power shall be connected to the normal power IPS.



**Emergency Power.** Two IPS systems on the Critical branch of the Essential Electrical System (EES) shall be designed and specified for each surgery room and shall be located at opposite diagonal corners of the surgery room. Line isolation monitoring shall be integral with the IPS. Receptacles on the Critical branch of the EES shall be connected to the closest Critical branch IPS. The IPS shall provide power to receptacles designated for emergency power mounted on the wall or within the articulating columns.

A 208 Volt special outlet shall be provided for the laser surgery equipment. This special outlet shall be connected to a separate Critical branch IPS supplying power to all laser surgery equipment. Normally, IPS supplying power to all laser surgery equipment is located at the closest corridor outside the surgical room.

**Emergency Battery Power.** Emergency battery backup power is required in all surgical and endovascular procedure rooms. Requirements for the Emergency System shall comply with the VA Electrical Design Manual, NFPA 70, 99, and 110.

#### **2.2.8. Telecommunications and Special Telecommunication Systems, Monitoring, and Signaling Systems**

Intercom, telephone and computer systems are all required in the operating rooms. In addition, a “code blue” system is required in the event of a cardiac arrest summoning designated staff to the OR from other areas of the hospital. It is highly desirable for the articulating utility column serving the anesthesia machine to have a telephone mounted on it since the anesthesia staff cannot leave the head of the table. This will allow him/her to summon assistance from the chief anesthesiologist when required or to request a replacement when a break is needed.

**Operating Room Integration:** Originally focused on video routing, OR integration is now defined by a broad set of applications that provide on demand information to physicians, staff and administrators for use in the operating room and beyond. Integration media is used to assist in preparation for and in the performance of a procedure, as well as documentation, performance analytics, and archiving purposes. Additionally, operating room environments can be controlled from a single interface that automatically updates and syncs temperature, lighting, and monitor visual information in a sequence of procedure phase presets. Asset tracking capabilities allow for historical review of movement patterns and equipment utilization, the ability to track button presses, interactions, and inventory counts of certain key assets. The resulting data is amalgamated and analyzed to improve efficiency and optimize resources.



**Virtual Whiteboard Visual Workflow Management Software:** Visual Workflow Management Software is a web-based patient tracking system that utilizes sensors and staff inputs to progressively update and disseminate patient status, room availability and procedure status to physicians, staff and family in real time via mobile devices, pre/post and waiting area status boards, and bedside PCs. HIPAA compliance updates are also posted to a hospital website, which is managed through the OR control room command center.

Software incorporating Real Time Location System (RTLS) technology provides a series of zone and room sensors to track patients as they progress through the unit and their prep, procedure, and recovery. The OR scheduling system is updated in real time with the patient location and status to create a comprehensive view of patient workflows for physicians and staff throughout the perioperative environment. Staff optimization and throughput is improved, workflows streamlined, and dissemination of patient status is enhanced with improved visibility.

These systems incorporate a variety of applications to notify and display information including smart phone and tablet applications, OR and bed side PC's, large format status monitors and electronic staffing boards. Patient arrival to the OR is automatically captured and patient data (allergies, labs, ordered blood products, specimens and more) can be posted to Patient Safety Displays within the system.

The system is controlled and monitored at the OR control desk where a comprehensive view of the entire suite can be relayed with real-time updates for every surgical patient, optimizing clinical staffing, patient throughput, predictability and control. A series of automated text notifications are sent to appropriate staff, minimizing the number of calls and pages required to progress a patient through a procedure.

Physicians, staff, and supervisors can utilize the phone and tablet applications on the move to stay abreast of cancellations, emergency cases, patient flows, OR camera views, and on demand daily and historical performance analytics promoting proactive schedule management. Electronic staffing boards eliminate the need for "grease" boards. Staffing assignments are quickly and conveniently posted for OR rooms, breaks and relief. Large format status monitors provide continuous unit visibility in Pre/Post, control desks and staff break areas. Large format monitors can also be used to communicate patient status to family in waiting areas.

**Patient Safety Display:** Patient Safety Display provides the OR team with real-time, up to date, accurate patient data from disparate hospital sources and helps to optimize patient safety and workflow efficiency for every procedure. The display automatically aggregates surgical case and patient



information from other data systems and displays it on a dedicated screen in the OR, providing automatic access to key information from diverse IT systems - Laboratory, Radiology, Medical Records, Allergies and more. The system can also assist OR staff in safely navigating through Sign In, Time Out and Sign Out requirements for every surgical procedure while encouraging best practices to optimize patient outcomes that can significantly reduce the potential risk of a “never” event.

**Endoscopic Integration:** Operating theaters fully integrated for both endoscopic and open procedure equipment allow increased flexibility in scheduling and OR utilization depending on the scale of the facility and number of procedures. Advantages of endoscopic procedures include a reduction in tissue trauma, leading to less postoperative pain, faster recovery, and improved cosmetic result. Improvements in technique and the collaborative development of endoscopic instruments have improved outcomes and the capability is becoming increasingly preferred by surgeons and patients.

Endoscopic equipment can be integrated into the common sterile interface for operating lights, table positioning, pumps, shavers, insufflators and electrosurgical equipment. Surgeons rely heavily on image quality in endoscopic procedures and calibration between equipment cameras and monitors is vital. Precise performance parameters of endoscopic cameras are built in-to the operating system of the operating room monitor in a concept known as “matched pairs” to optimize color reproduction and ensure accuracy of geometrical scaling.

**Video integration:** Audio and visual connection technology provides high quality real-time communication that can be disseminated in multiple tiers of information sharing, bringing external users inside the operating room. Data from the OR is translated via fiber optic hardware to the in-suite control interface, a switchboard- like device enabling two-way audio and video or image communication from point- to-point within the hospital, ensuring secure communication without using the hospital’s bandwidth. Additional system components can expand the accessible range from within the hospital to offsite institutions and external users on the other side of the world via CODEC or internet streaming.

The same communication can be had between ORs in the same hospital wherever compatible CODECs are used. This feature can be installed in one room or at the in-suite control desk and shared by all. An example of its functionality is an OR in the United States sending pictures and audio in real time to a surgeon in another country who has a compatible CODEC.

A streaming tier can transmit live, one-way audio and video to live broadcast procedures to a conference room or auditorium via a network.



The broadcast can be viewed by smaller groups on desktop, mobile devices and tablets or larger groups with certain third-party streaming devices. The feature is commonly used by teaching hospitals and can be integrated on site in a manner similar to the CODEC and the two are typically collocated for convenient control of external information dissemination.

Cameras used for live viewing and recording allow surgeons to capture any angle and position of procedure with enhanced five axis control capability including image rotation to optimize view orientation, auto focus zoom to capture appropriate level of detail through the progression of a procedure, panning to the left or right, tilting up and down, pivoting freely in a full circle. The cameras have a combination of automated features and manual modes that can be maneuvered through the integration system touch panel or in the surgical field by using button controls on the camera. The focus and brightness adjustment capability can capture true color rendition when calibrated and routed to a high definition monitor recording device, multiple video formats and signal compatibilities are built into the camera for real time capture with no discernible image lag. High end cameras feature up to 2 million effective pixel with 1080 horizontal high definition resolution and up to 120x optical zoom. Various mounts are available for the cameras to locate anywhere in the room including arm mounts that can locate the camera directly over the operating table. Mounts can be located on surgical lights or independently. The mounts and camera utilize anti drift technology similar to that used in operating room lights to ensure the camera does not move out of position once located.

Digital recording systems can capture high definition surgical audio, 1080p video and still images, and annotation during a case. Some recording systems also feature search engines for keyword-based image retrieval, editing software, and built in printing capability that can render pre-scripted images automatically during a case or select images for use afterwards. This functionality can also be tied to third party devices with USB ports and stored on the hospital servers via centrally mapped network drives. Digital recording systems can capture images and video directly from OR cameras as well as be linked to other inputs in other areas of the suite including mobile devices with proper software. Once captured, the information can be made available to any device on the hospital network with software that enables tiered secure access, customizable to hospital and HIPPA compliance policies, for downloads, information sharing with consulting physicians and incorporation into electronic medical records.

It is preferred for these components to be non-proprietary in order to allow for plug and play in the future.



***Pneumatic Tube System:*** A pneumatic tube station should be considered in order to provide an efficient means of delivering medications and labs to and from the surgical suite to the main hospital pharmacy and main lab.

#### **2.2.9. Fire Protection and Life Safety**

***Fire Detection and Sprinkler System:*** Provide fire alarm and detection systems in compliance with NFPA 101 and NFPA 72 as well as VA Fire Protection Design Manual. Coordinate the location of sprinklers with other ceiling systems in accordance with the current version of the VA Master Construction Specifications and VA HVAC and Plumbing Design Manuals.



## 3.0 FUNCTIONAL DIAGRAMS

### 3.1. General:

Not every patient will follow the same workflow protocol; therefore, several different scenarios have been diagrammed in Figures 3.1.1, 3.1.2, 3.1.3, 3.1.4, and 3.1.5 to indicate possible routes that a patient may take through the surgical department.

It is important to note that the major differences stem from the level of acuity of the procedure being performed: in the case of ambulatory surgery, whether within the VAMC hospital or the Community Based Outpatient Clinic (CBOC) the patient will arrive on the day of surgery and be discharged on that same day without interacting with any other spaces outside of the surgery department.

During a hospital-based surgery, intake and discharge of the patient will occur through other hospital departments. Though dependent on the complexity of the surgery, the patient will have been admitted to the hospital pre-assessed then transported to pre-operative holding, sedated and then to surgery. In emergent surgical cases, the patient will likely not spend any time in pre- and post-procedural areas but be transferred directly to the critical care unit. This serves to minimize patient transfers and ultimately reduce patient risk.

Figure 3.1.1 Overall perioperative layout where the entire patient journey is mapped from pre-operative phase then to the intra-operative phase to post-operative phase then to patient discharge. Whether the patient's interventional procedure occurs as an inpatient, elective out-patient, or emergent trauma, either within the hospital, in a stand-alone ambulatory outpatient surgical facility, or as a component of an outpatient community based clinic, the patient's journey is relatively the same.

Figures 3.1.2, 3.1.3, 3.1.4, and 3.1.5 are more specific to how the patient presents for a surgical or endovascular procedure.

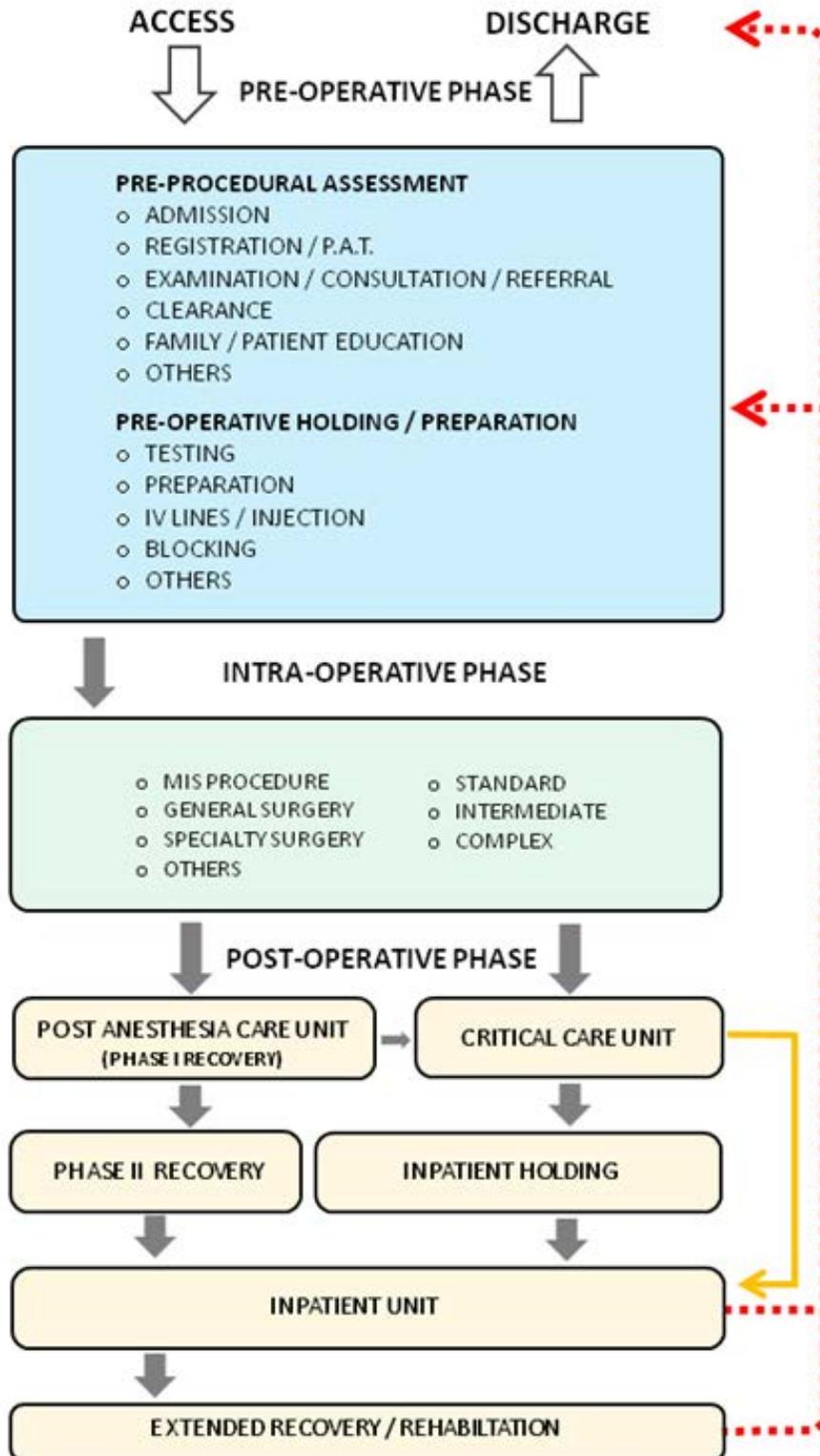


Figure 3.1.1 Overall Diagram: Peri-Operative Services

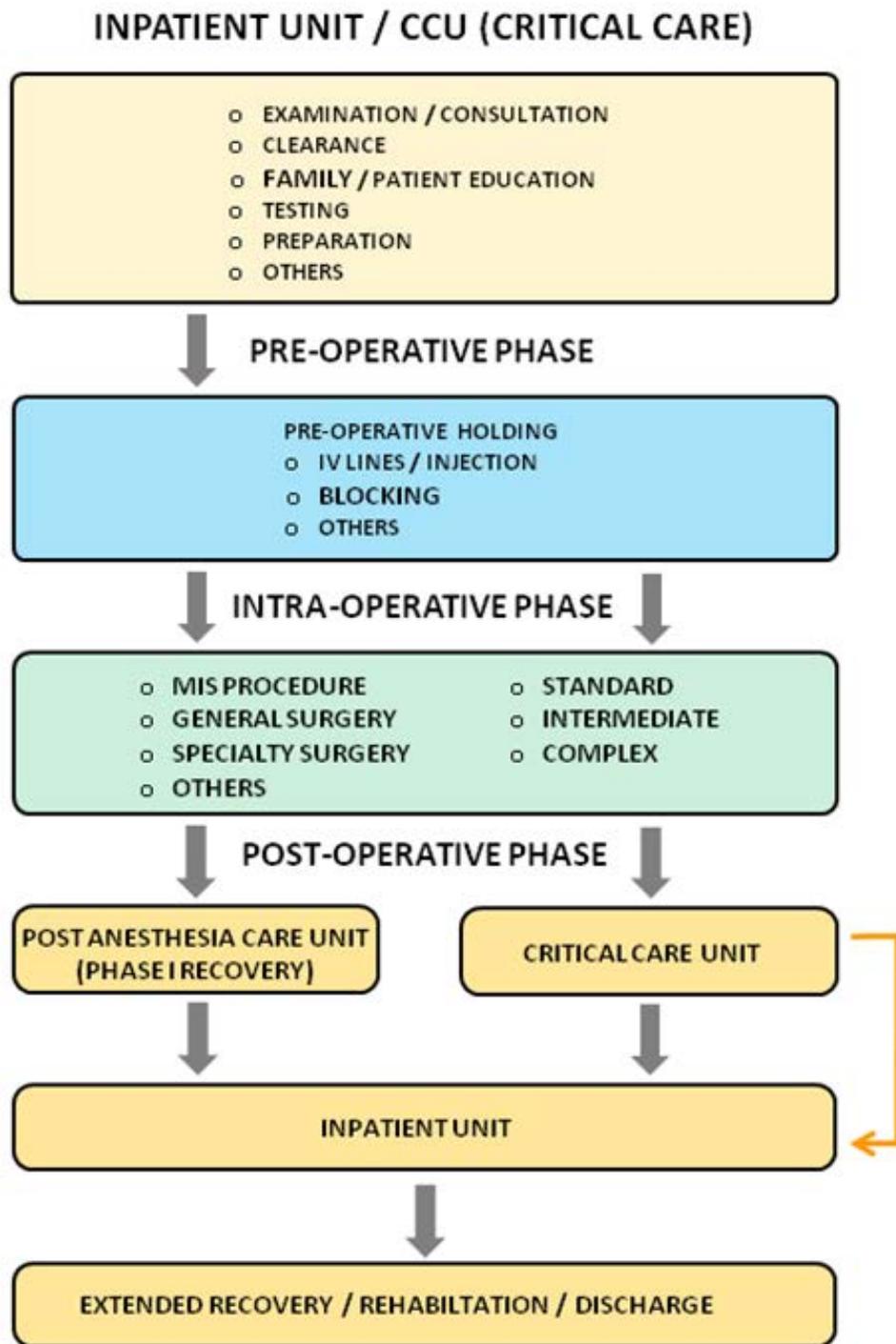
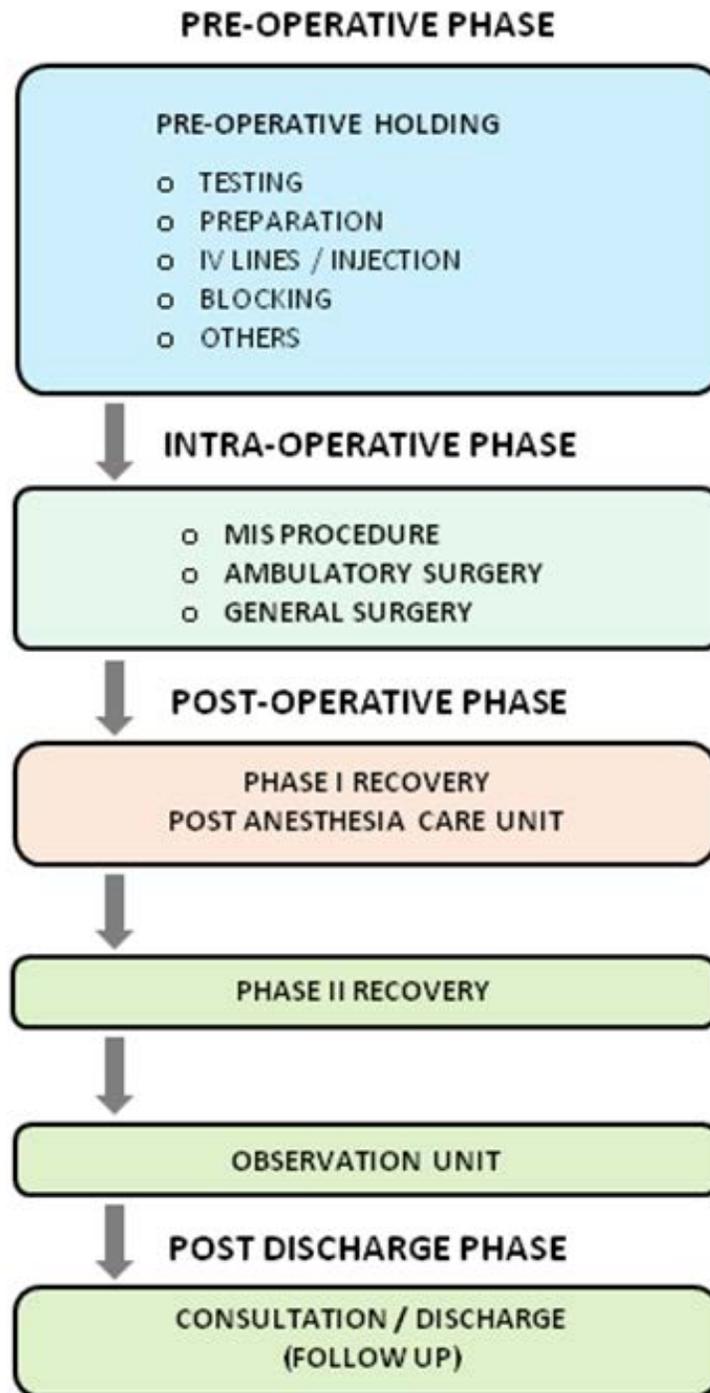


Figure 3.1.2 Hospital Based Surgery (Inpatient Flow)



**Figure 3.1.3** CBOC Ambulatory - Outpatient Surgery Flow

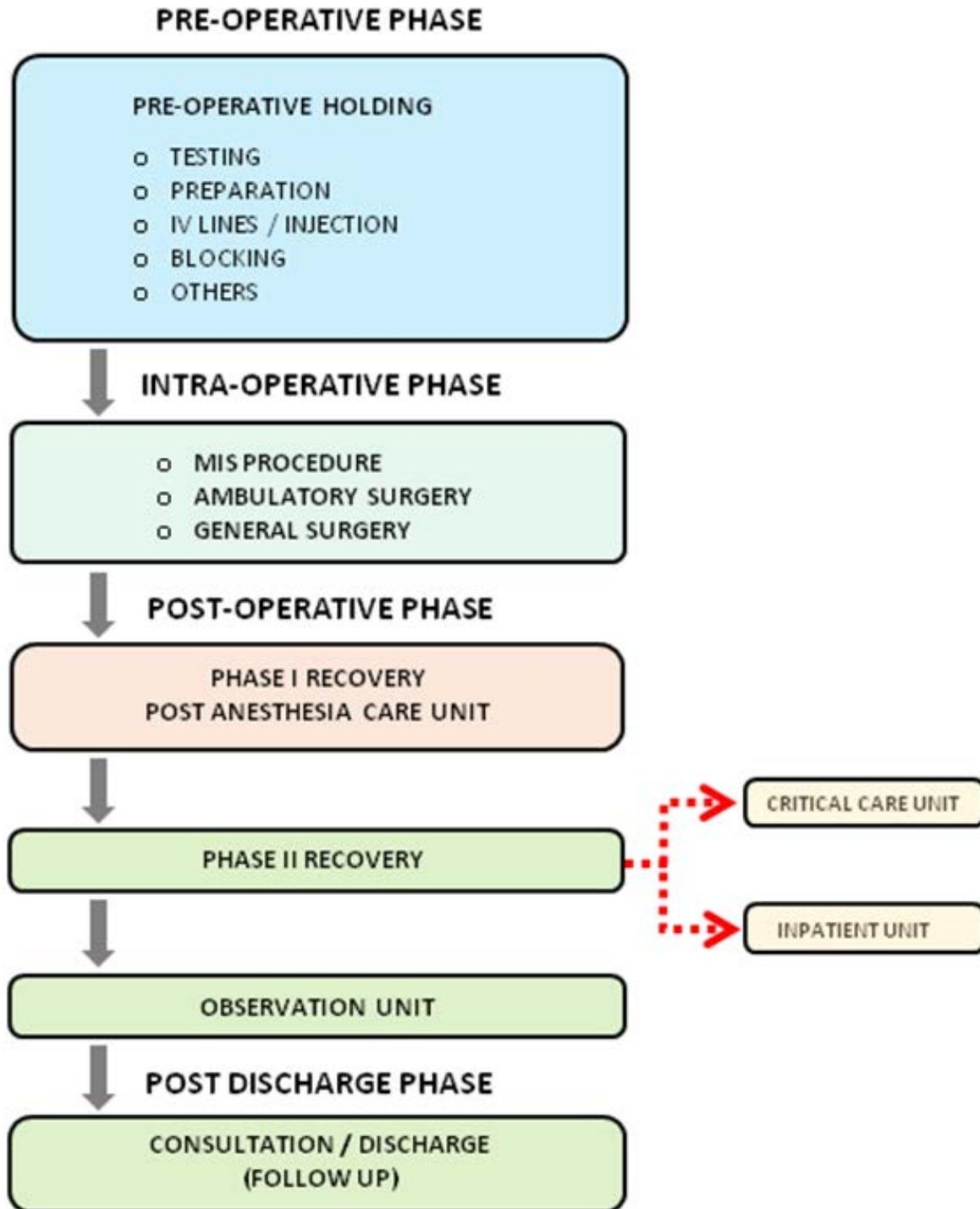


Figure 3.1.4 Hospital Based Ambulatory - Outpatient Surgery Flow

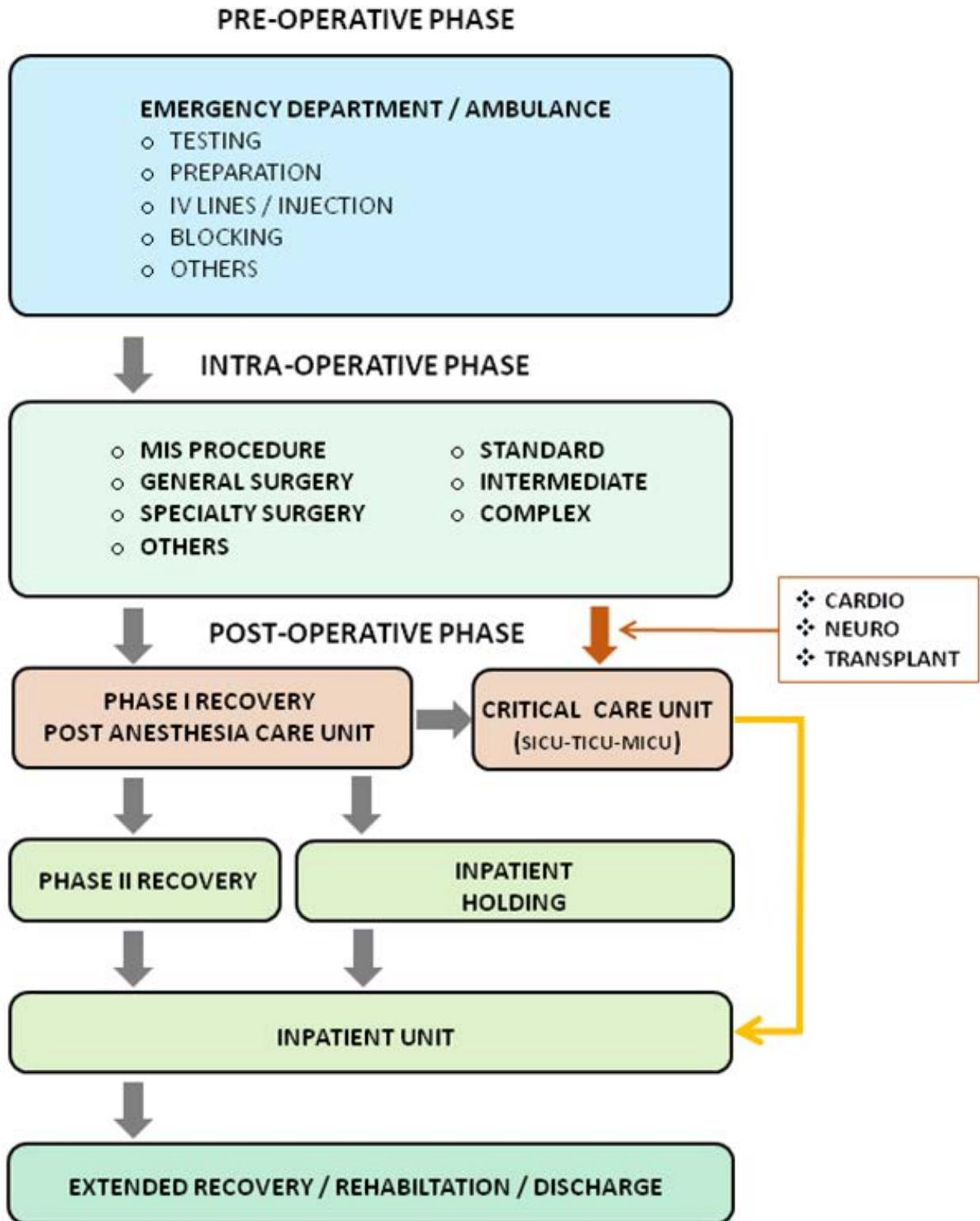


Figure 3.1.5 Emergency / Trauma Based Surgery Flow

### 3.2. The Surgical Suite

The surgical suite consists of both traditional surgical operating rooms (open procedures) that include general, orthopedic, Uro-Cysto, neuro, transplant, robotic, cardiothoracic and endovascular interventional rooms (closed procedures) that include – cardiac catheterization, electrophysiology, interventional radiology and hybrid rooms where either cardiovascular and vascular surgery is performed. The suite is divided into three designated areas that are defined by the physical activities performed in each area of the surgical department. Increasing environmental controls and surgical attire as progression is made from unrestricted to restricted areas decreasing the potential for cross-contamination.

- Unrestricted Area
- Semi-Restricted Area
- Restricted Area

The unrestricted area includes the central control point established to monitor the entrance of patients, personnel, and materials. Street clothes are permitted in this area and traffic is not limited. The front desk, patient hold, and supply are considered semi-restricted support areas. Street clothes may be worn in these areas. Public access to the area may be limited based on the facility's policy and procedures.

The semi-restricted area ("red line") includes the peripheral support areas of the surgical suite. This area includes storage areas for clean and sterile supplies, work areas for processing instruments by SPS personnel, scrub sink areas and corridors leading to the restricted areas of the surgical suite, and the entrances to locker rooms, the preoperative admission area, the PACU, and sterile processing. This area is entered directly from the unrestricted area past a nurses' station or from other areas. Traffic in semi-restricted areas is limited to authorized personnel and patients. Note that personnel are required to wear surgical attire and cover all head and facial hair. The care of the patient during surgery requires movement of patients, personnel, and material within the surgical suite. Planning and controlling these movements assist in the containment of contamination. Only authorized personnel are allowed in the restricted areas. "Authorized" personnel are those assigned to Surgical Services to include:

- Perioperative Nurses and Surgical Technologists
- Anesthesiologists, their residents
- CRNAs, SRNAs, and Anesthesia Technicians
- Surgeons, their residents, interns, and medical students

The **restricted area** includes the Operating Rooms (ORs), endovascular procedure rooms and clean core areas. Proper surgical scrub attire, hair coverings, and name identification are mandatory in the restricted areas. Masks are required at all times and where open sterile supplies or scrubbed persons are located. Unnecessary traffic is not permitted. All doors must be kept closed except as needed for passage of equipment, personnel, and patients and also to maintain pressurization. All staff traffic to and from an operating room will be via

the semi-restricted corridor that surrounds all of the surgical and interventional procedure rooms. Noise and the number of personnel allowed to enter into the operating room and/or endovascular procedure room is kept to a minimum, especially with a surgical procedure in progress.

Persons entering the semi-restricted or restricted areas of the surgical suite for a brief time for a specific purpose, such as parents or biomedical engineers, must don proper surgical scrub attire and may don either freshly laundered surgical attire or a single-use coverall suit designed to totally cover outside apparel. Patients are donned with clean gowns, covered with clean linens and hair coverings. Surgical supplies prepared for surgical procedures outside the surgical suite (e.g. in Sterile Processing Department, SPD) are transported to the surgical suite by means of a clean elevator from SPD to the clean core to maintain cleanliness and sterility and to prevent physical damage.

Soiled supplies, instruments, and equipment shall not enter the clean core area. Contaminated items shall be in closed, covered carts or containers for transport to the decontamination area via a “soiled” elevator which terminates in the soiled side of SPD.

The following Figures 3.2.1, 3.2.2, and 3.2.3 illustrate typical workflows in surgical department of different complexity levels.

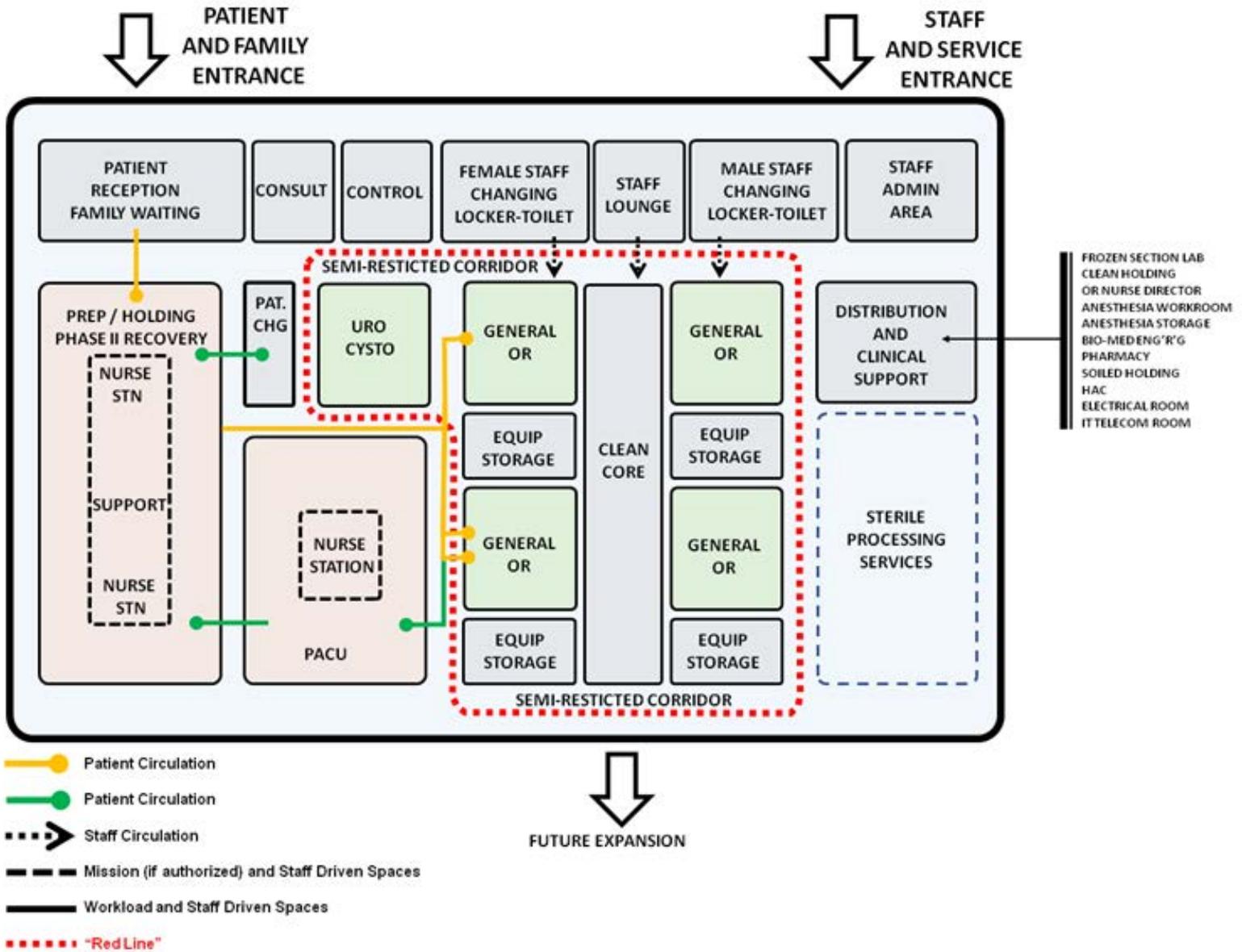


Figure 3.2.1 Adjacency and Flow - Standard - Ambulatory Surgical Suite

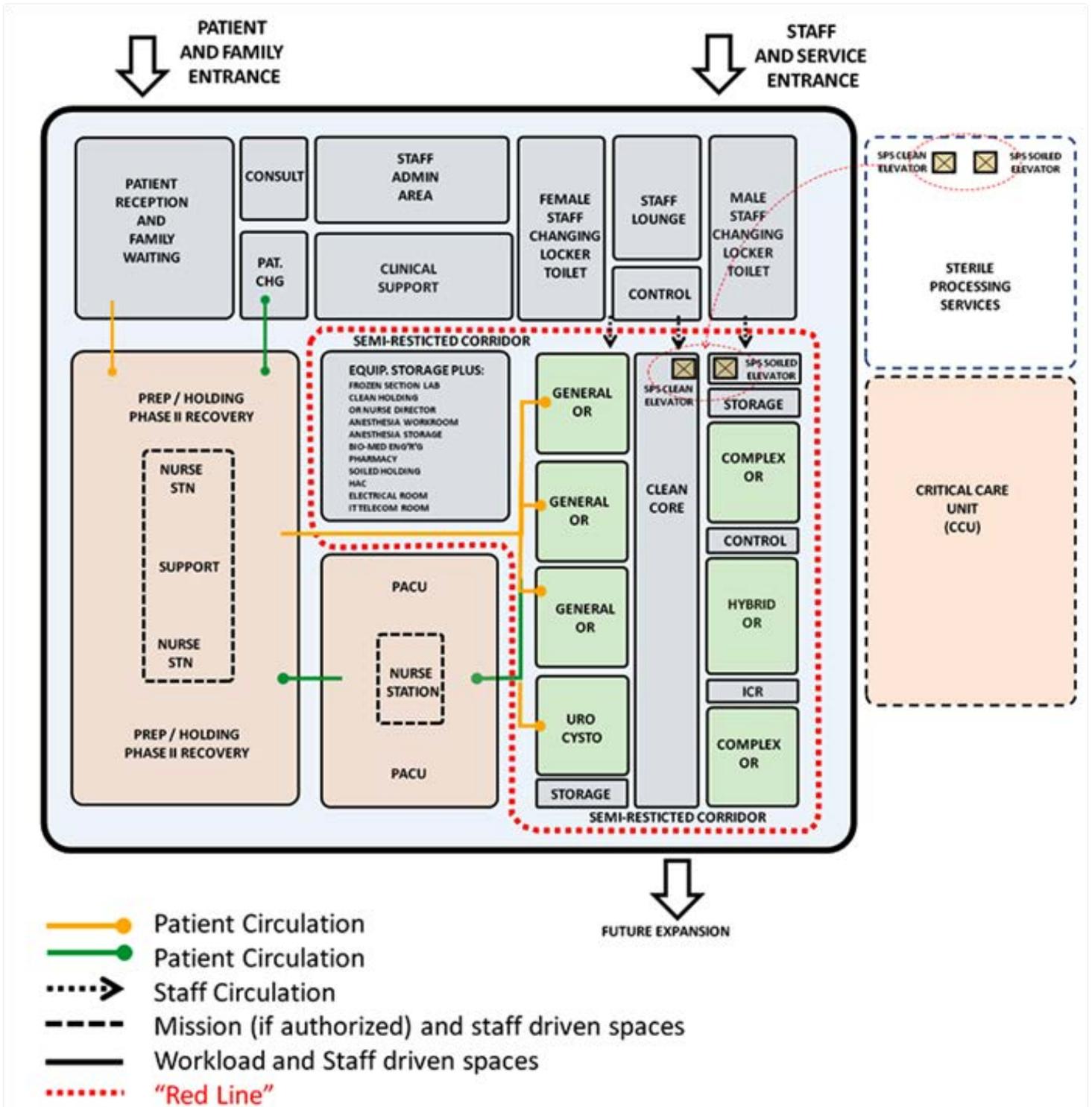


Figure 3.2.2 Adjacency and Flow - Intermediate - Complex Surgical Suite

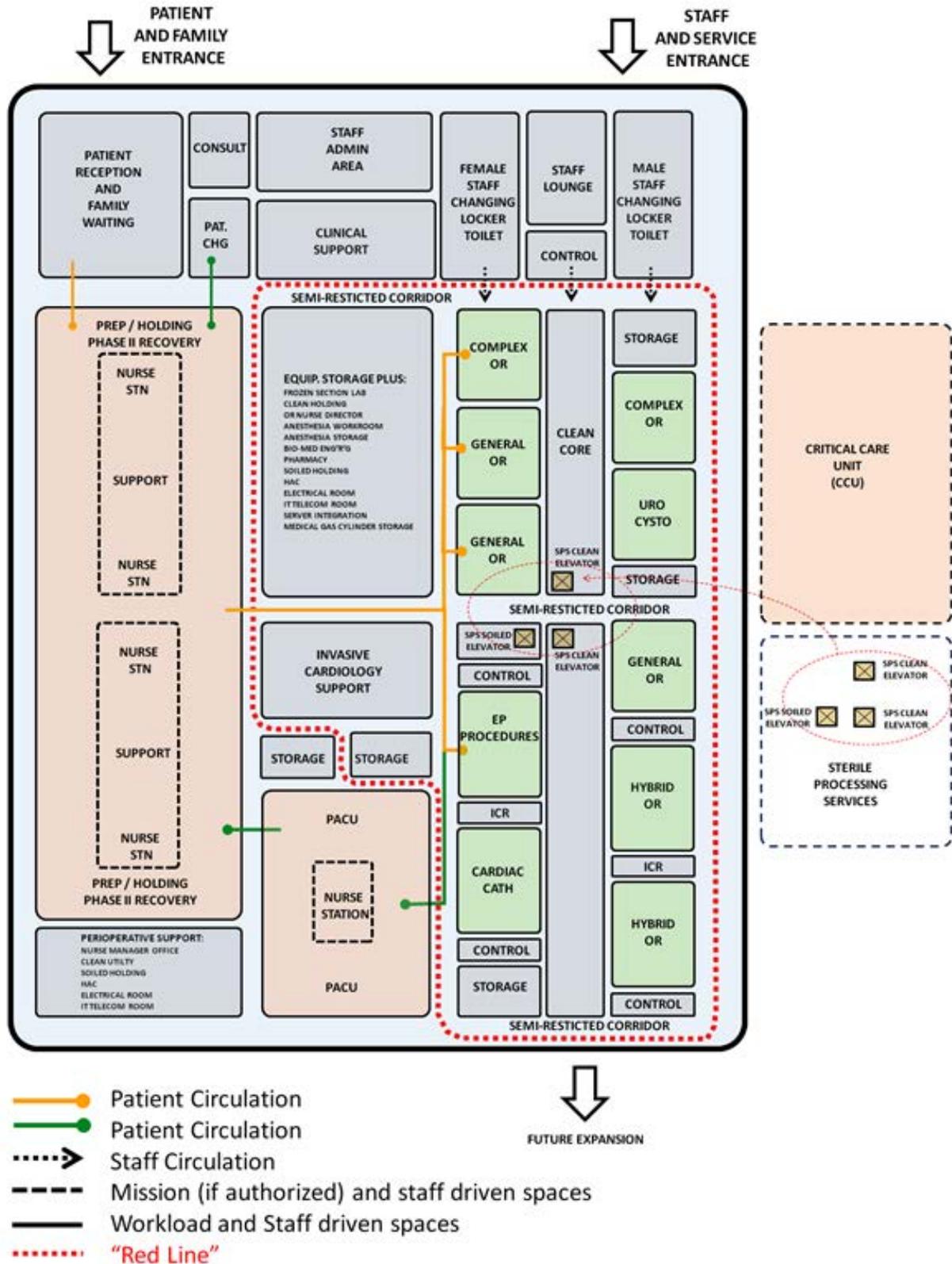
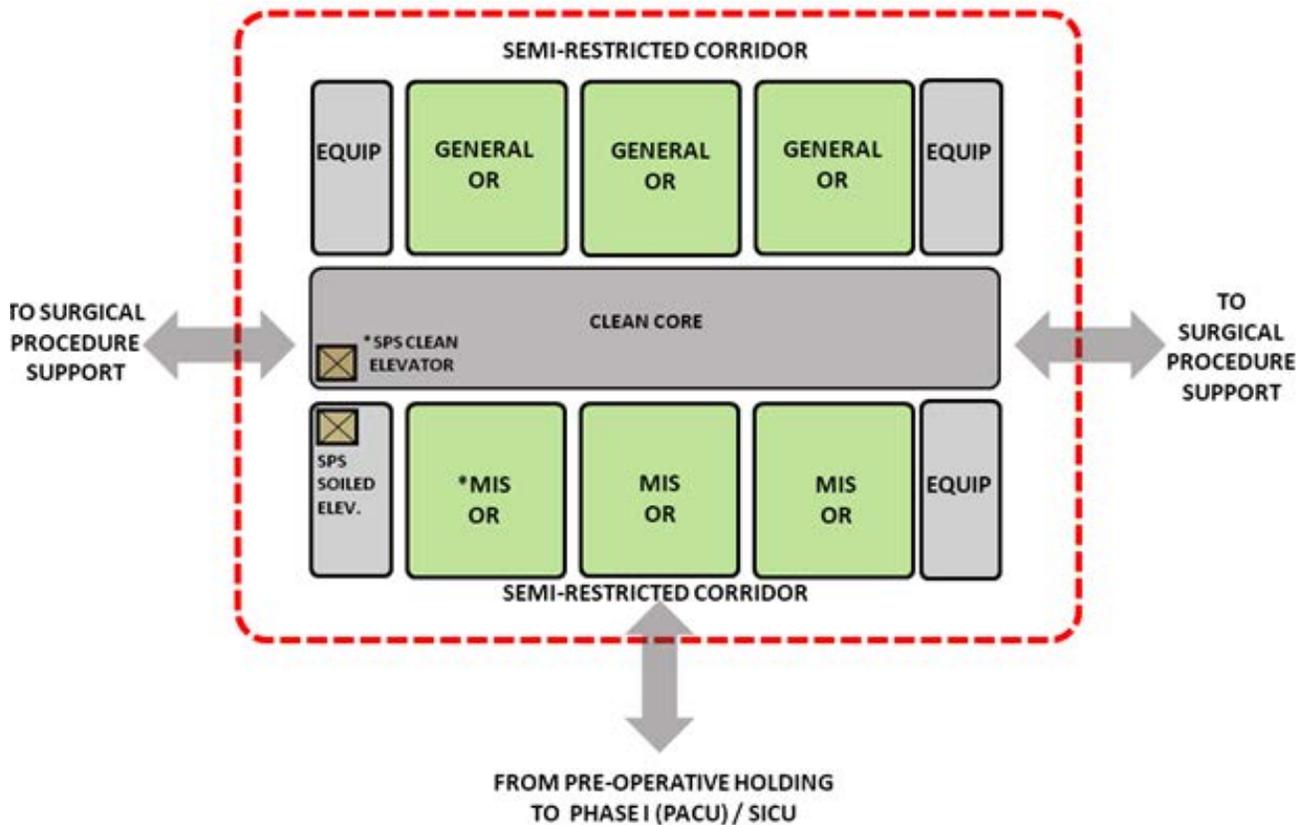


Figure 3.2.3 Adjacency and Flow - Complex Integrated Interventional Suite



**Figure 3.2.4** Standard - Ambulatory Surgical Suite Organization

**Notes:**

General surgery as well as minimally invasive surgery (MIS) are performed in the same size room. It should be noted that non-robotic MIS is also known as endoscopic surgery which includes: laparoscopic surgery and thoracoscopic surgery, also known as “keyhole” surgery. These are minimally invasive procedures that utilize an endoscope to reach internal organs through very small incisions. MIS surgery offers patients several benefits such as smaller incisions, faster recovery times, and reduced pain and scarring. In many cases, MIS surgery also offers a higher accuracy rate compared to traditional open general surgery.

*\* Clean and Soiled elevators are not necessary in facilities with central sterile processing, distribution and waste management located on the same floor with that of perioperative services.*

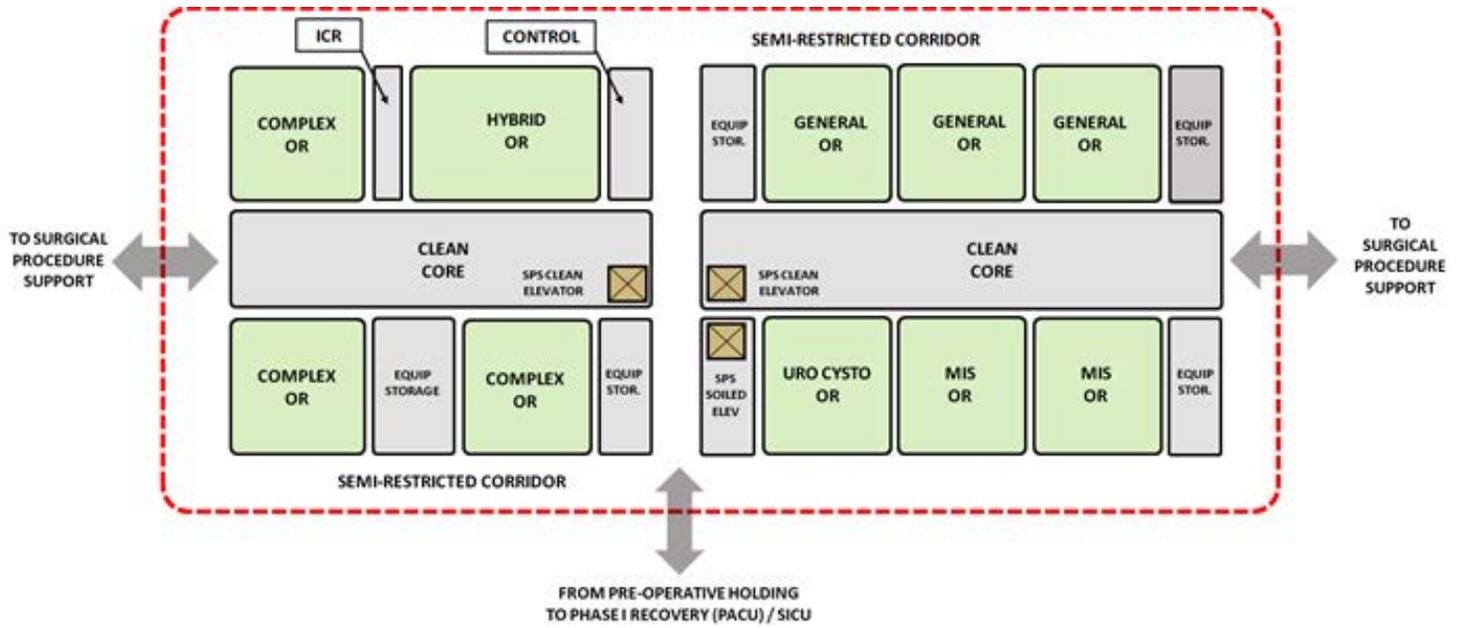


Figure 3.2.5 Intermediate / Complex Surgical Suite Organization. Pods Organization

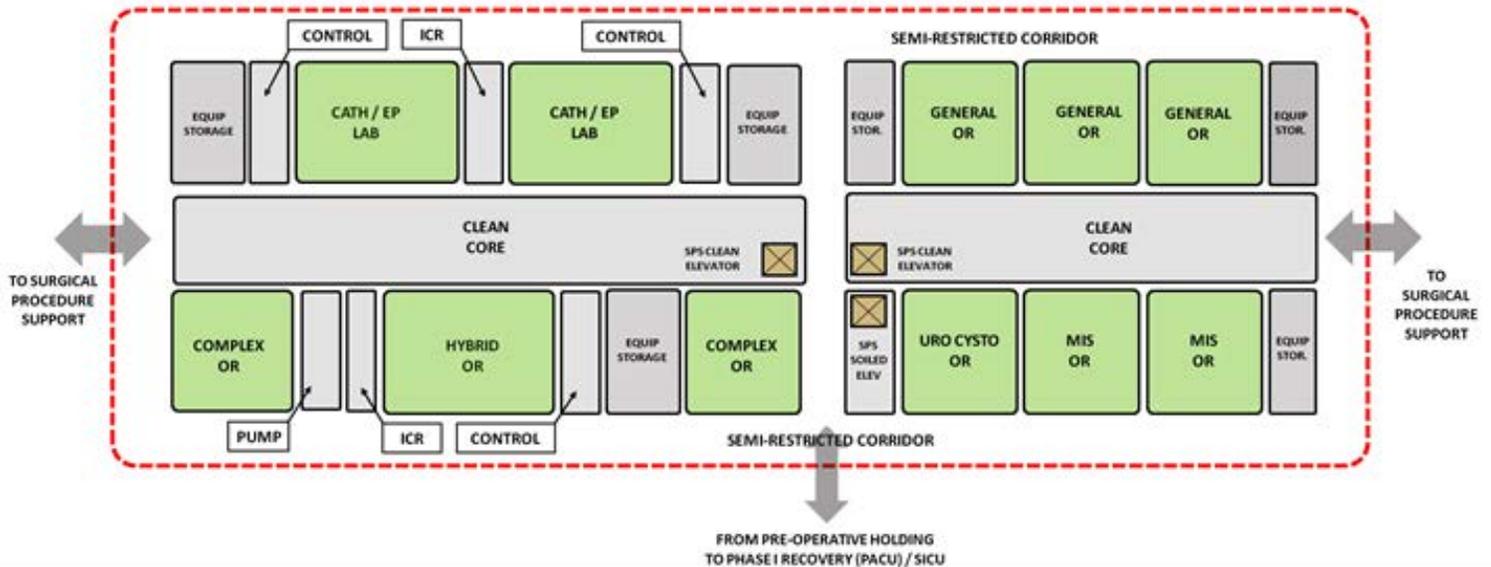


Figure 3.2.6 Complex Integrated Interventional Suite. Pods Organization

The surgical suite is set up to carefully orchestrate the flow of patients, clinical and support staff, sterile and soiled goods through on-stage vs. off-stage circulation organization. the workflow should allow for one-way flow of soiled goods out of the operating room and sterile goods into the operating room on a separate, dedicated routes.

This is best accomplished by grouping operating rooms around the Clean Core, as illustrated in figures 3.2.4 through 3.2.8. Each Clean Core cluster shall be limited to 6 to 8 operating rooms in total in order to avoid excessive patient transportation and travel distances in the semi-restricted corridor.

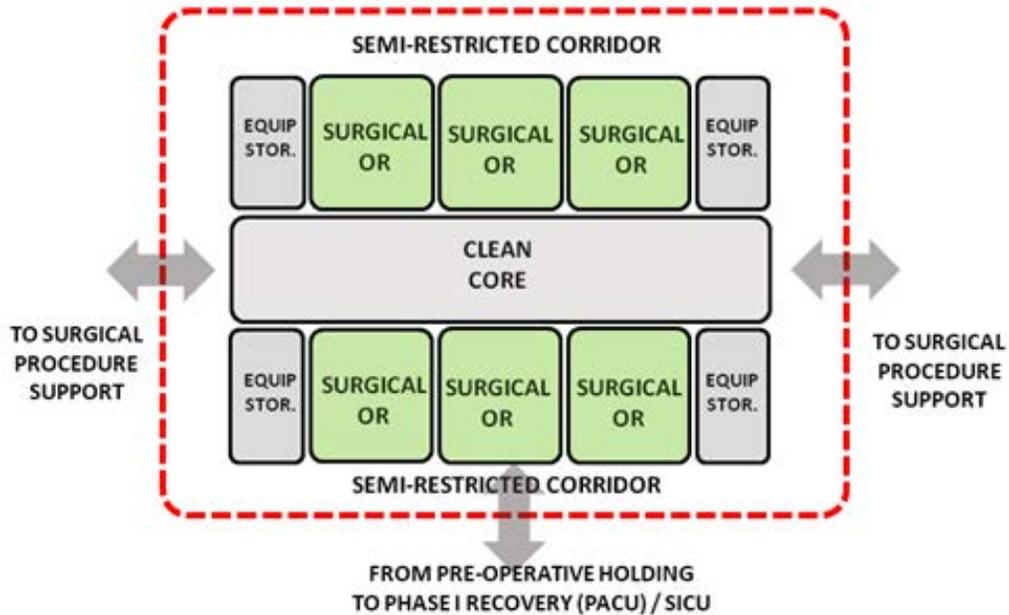


Figure 3.2.7 Clean Core, 1 Pod along Racetrack Single Loaded Corridor

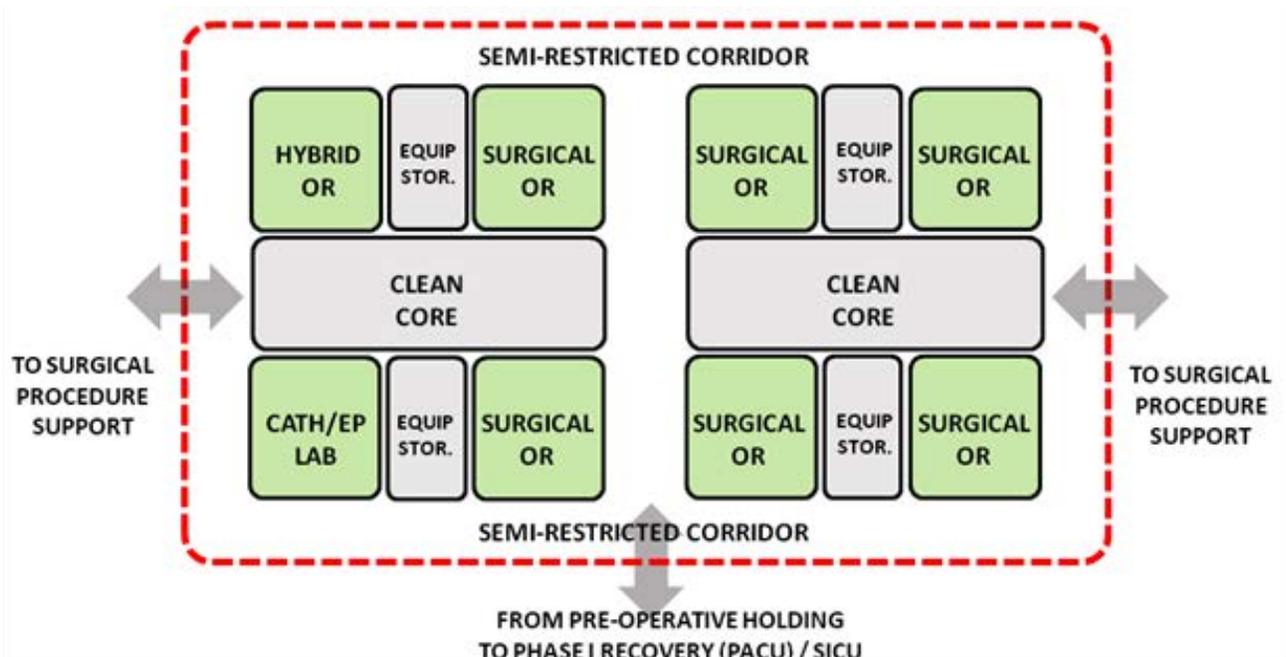


Figure 3.2.8 Clean Core, 2 Pods along Racetrack Single Loaded Corridor - Alternate

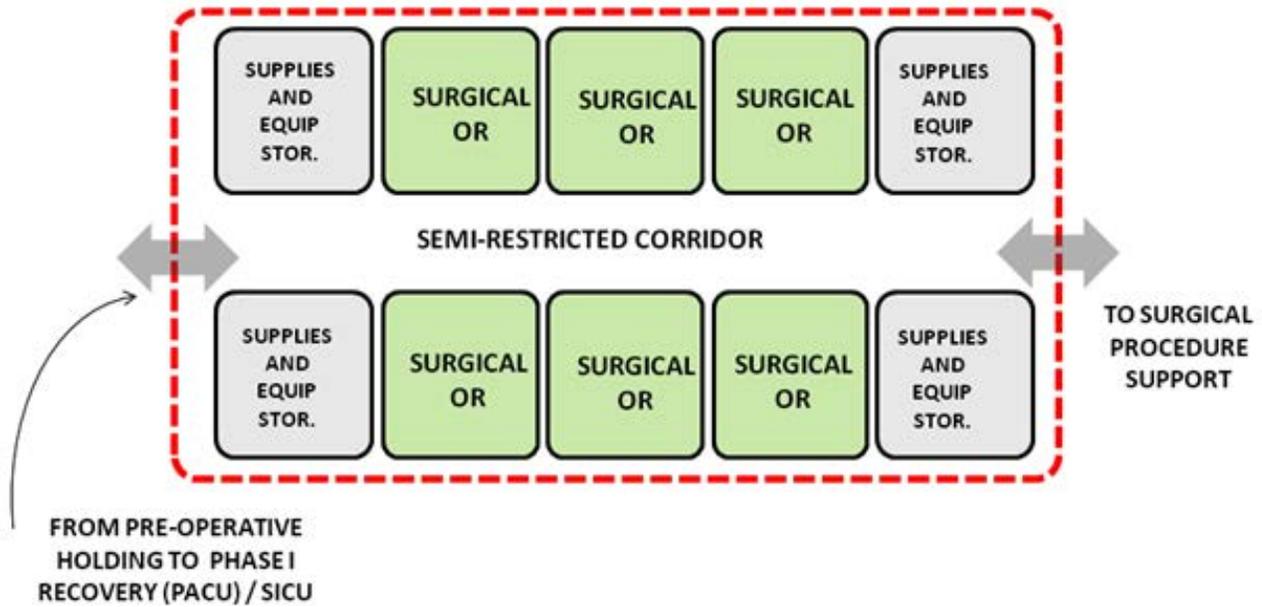


Figure 3.2.9 Single Double Loaded Corridor, No Core

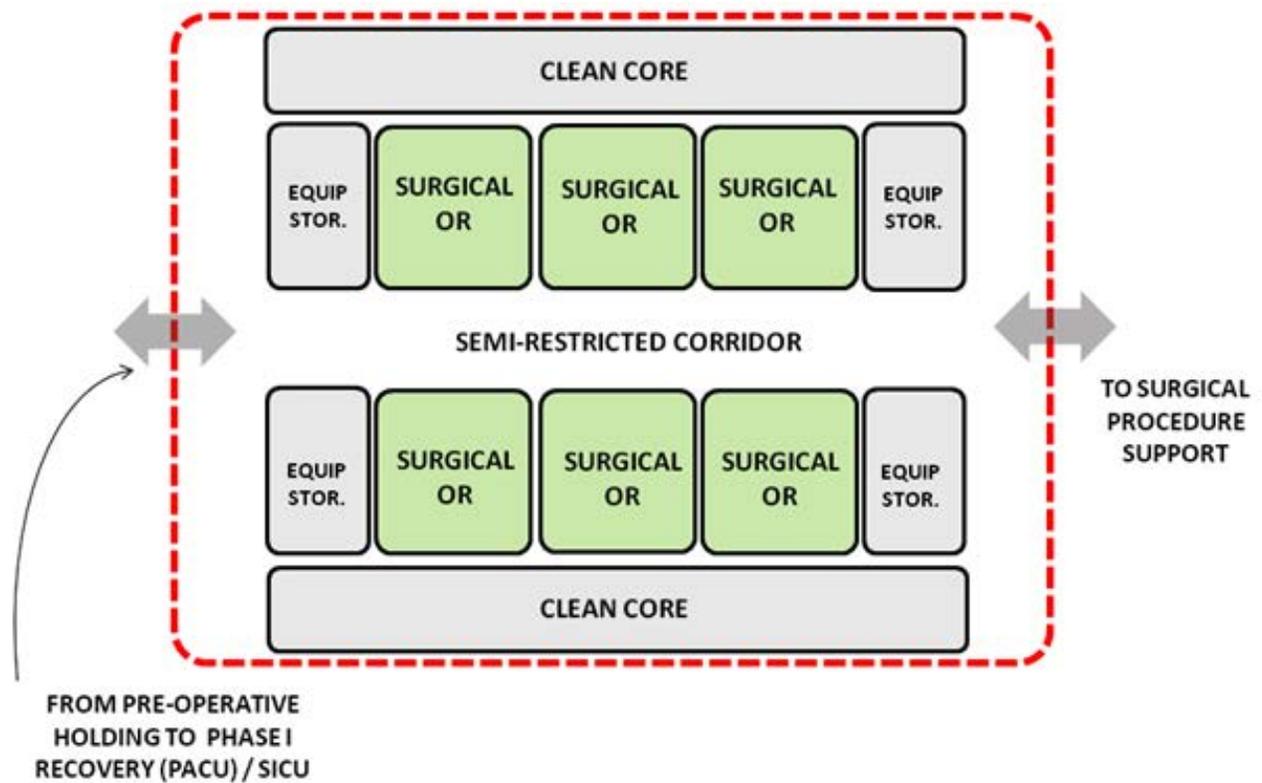
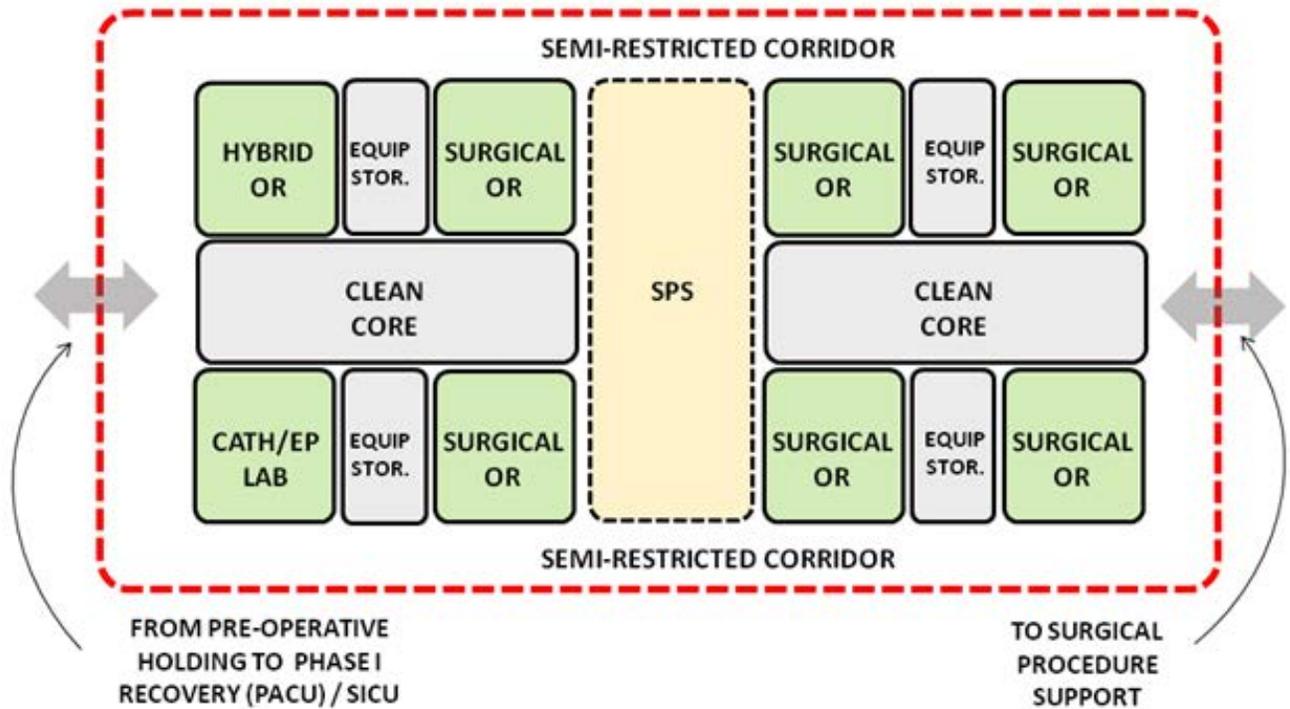


Figure 3.2.10 Single Double Loaded Corridor, Separate Cores



**Figure 3.2.11** Single Corridor, Outer Racetrack Single Loaded Corridor

3.3. Clean Core



**Figure 3.3.1** Typical Clean Core

A double-loaded Clean Core (*OR's on each side of the clean core*) shall have a min. width of 21'-0" (6401 mm). This width will allow for supply shelving in the middle, aisles on each side as well as case cart storage along the wall.

Sterile supplies are brought to from SPS each day via a clean elevator or transported via a clean route to the clean core and/or sterile storage room in the case of double loaded corridor suite design.



**Figure 3.3.2** Clean Case Cart Staging

Staging of case carts in the clean core starts each evening before the first of the day surgical procedure, the carts are staged against the clean core wall either singularly or in pairs contingent on the type and complexity of the procedure to be performed. The case carts for the following procedure are typically staged in an area proximal to the clean elevator (when SPS is beneath surgery). The “core” technician responsibilities include maintaining and facilitating the function of the clean core, that includes case cart preparation with the finalization in the core for scheduled/add-on/emergent cases for current and next day schedule, maintaining, troubleshooting, and assuming responsibility to ensure that instrumentation and supplies are available as needed for cases.

Surgical supplies and instruments should be quickly available to OR staff for performing diverse procedures. Lack of available supplies, especially for expensive items, requires emergency restocking that affects delays in patient treatment, and potentially life-threatening situations for the patient, so it is important to plan the clean core space needs wisely.

Another challenge in controlling surgical supplies and instruments is that inventory between the Core (a storage area surrounded by ORs that is used to support ORs during the procedures) and the ORs themselves may not be accurately tracked using a manual inventory methodology. Within the VA, inventory information systems utilizing RFID technology automatically updates and tracks inventory usage and reduces the potential gap in inventory supplies.



**Figure 3.3.3** Sterile Supplies and Expendables



**Figure 3.3.4** Clean Core 27'-0" +/- width  
(DoD Ft. Hood, Texas)



**Figure 3.3.5** Clean Core  
(DoD Ft. Hood, Texas)

### 3.3.1 Clean Core Configuration

Figure 3.3.1.1 represents a clean core configuration utilizing a width of 21'-0" (6401 mm) servicing an integrated interventional platform consisting of both surgical and endovascular procedure rooms.

The following Figure 3.3.1.2 represents the same clean core configuration with equipment location components identified. It should be noted that the equipment shown can be oriented differently as to meet local preferences.

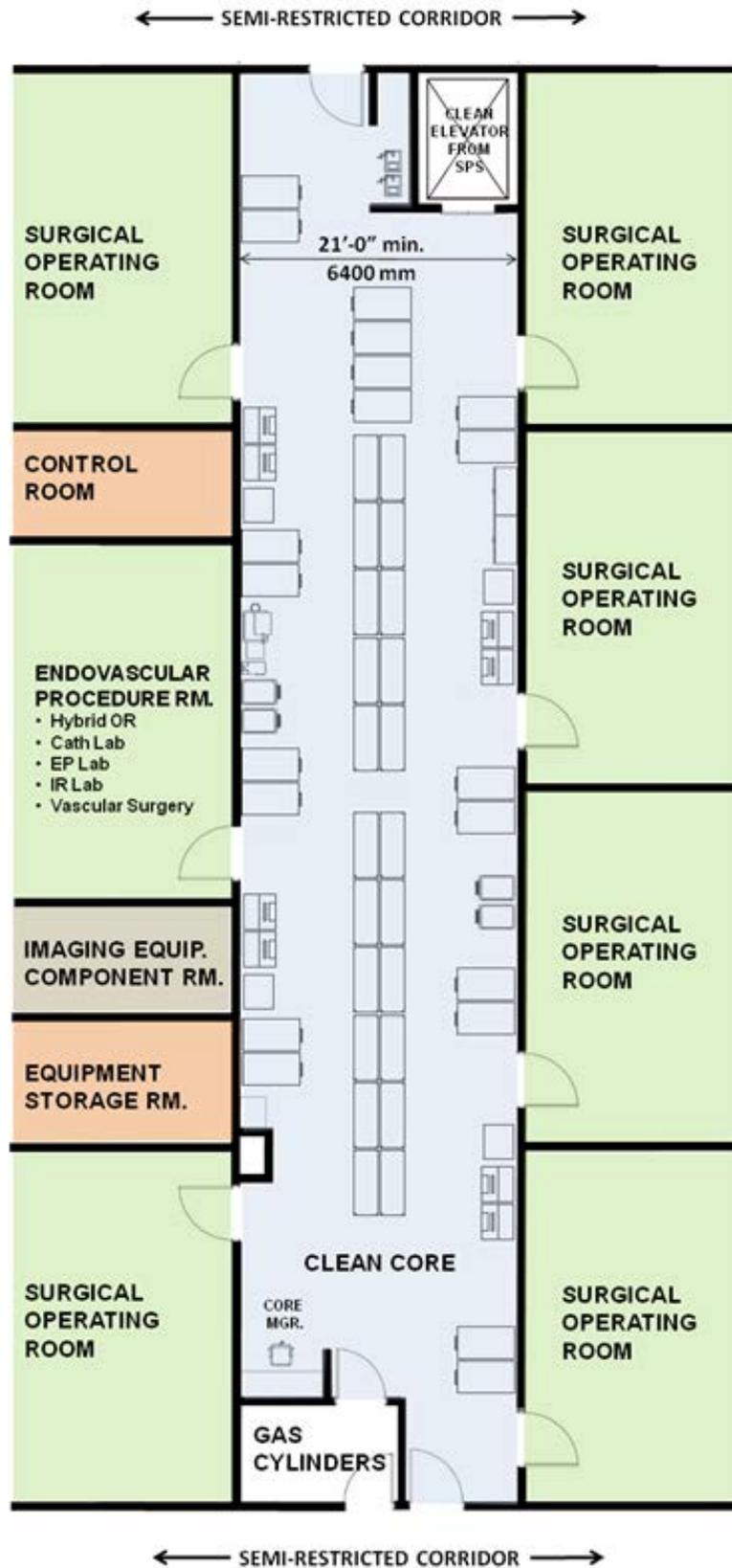


Figure 3.3.1.1 Typical Clean Core Layout

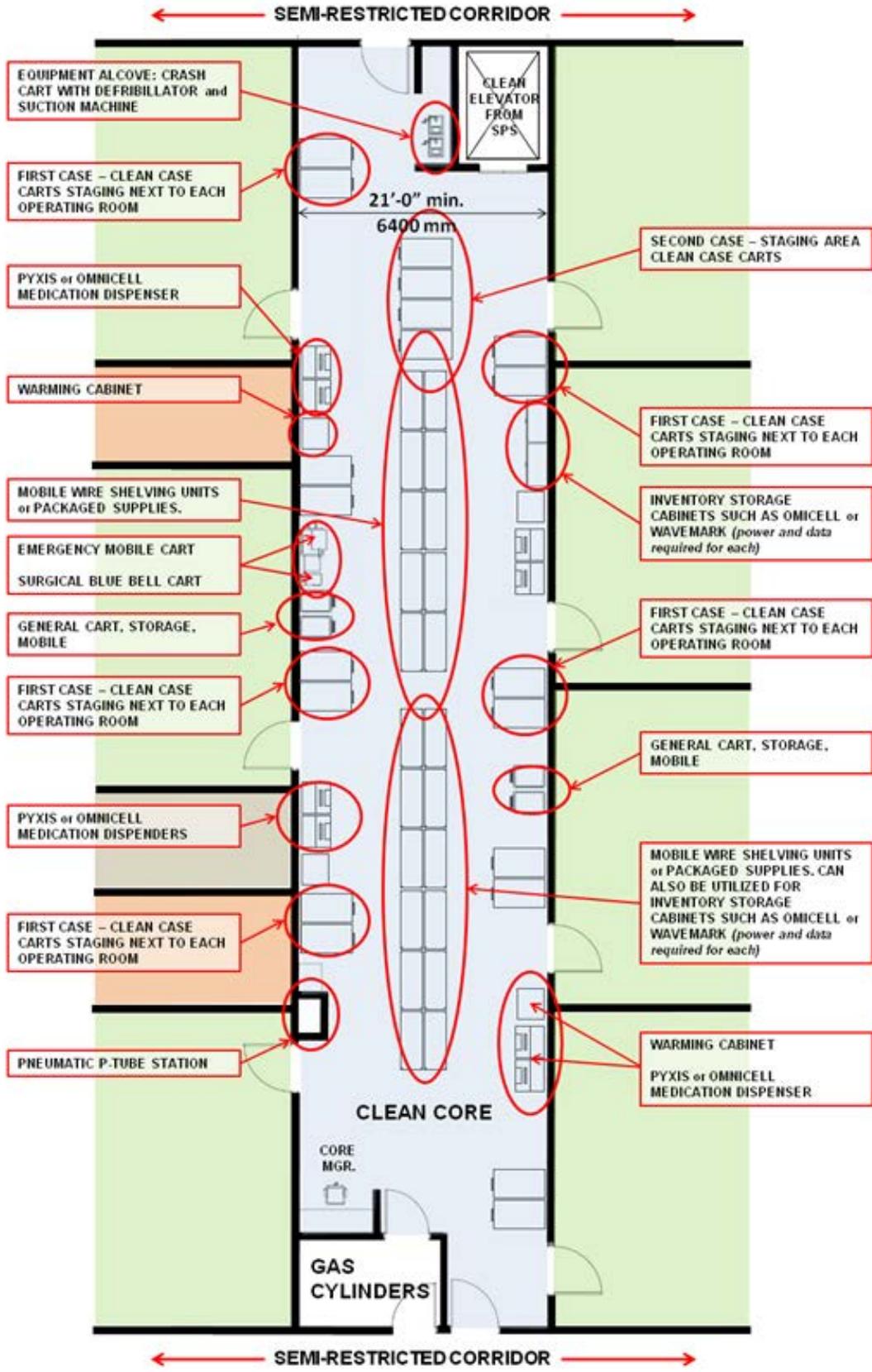


Figure 3.3.1.2 Sterile Supplies and Expendables

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## 4.0 ROOM TEMPLATES

### 4.1. General

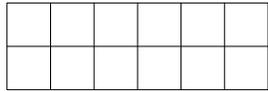
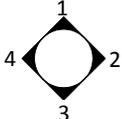
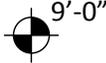
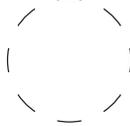
#### Introduction:

The Room Templates are intended as general representations of typical space, furniture and equipment layout, as well as functional and utility supporting needs. The Room Templates were developed as a design tool to assist the Project Team in understanding the choices to be made during design, and to assist designers in understanding VA's space and functional requirements for Surgical Services. The Room Templates are not intended to be project specific and are not meant to limit design opportunities. However, the indicated net square feet (NSF) is the minimum acceptable square feet (the +/- rule does not apply).

While this information is provided for a majority of spaces required, it is not possible to foresee all possible variations or future requirements. The project-specific space program shall be used as the basis for individual project design.

The Room Templates must be reviewed against project criteria and any special requirements. Users shall follow other VA criteria and standards as required by VA. Equipment manufacturers shall be consulted for the most current equipment information such as actual dimensions, weights and utility requirements.

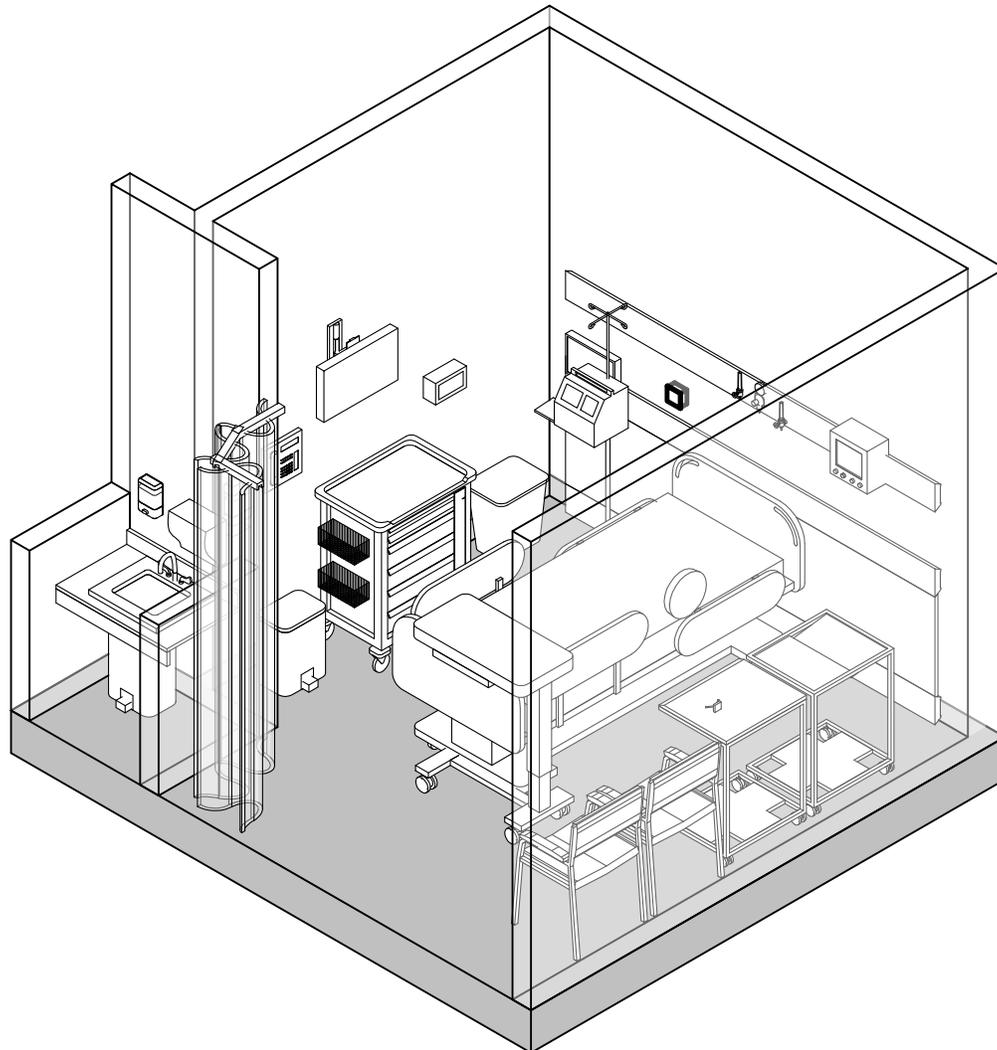
Legend of Symbols:

SYSTEM	DESCRIPTION OF SYMBOLS	SYMBOL
ARCHITECTURAL	2'X2' ACOUSTIC TILE CEILING	
	2'X4' ACOUSTIC TILE CEILING	
	GYPSUM BOARD	
	INTERIOR ELEVATION REFERENCE	
	HEIGHT OF CEILING FINISH ABOVE FINISH FLOOR	
	JSN AND EQUIPMENT NAME	
	WHEELCHAIR CLEARANCE	
	CENTERLINE	

SYSTEM	DESCRIPTION OF SYMBOLS	SYMBOL
<b>WIRING DEVICES SWITCHES</b>	SINGLE POLE SWITCH (SUBSCRIPT INDICATES FIXTURES CONTROLLED)	$S_a$
	THREE-WAY SWITCH	$S_3$
	LOW VOLTAGE, TWO BUTTON DUAL LEVEL SWITCHING	$\overline{SS} \quad \overline{S_3S_3}$
	LOW VOLTAGE DIMMER SWITCH	$S_D$
	OCCUPANCY SENSOR	$\textcircled{DT}$
<b>LIGHTING DEVICES / FIXTURES</b>	2'X4' FLUORESCENT LIGHT FIXTURE	
	2'X4' DIRECT/INDIRECT LIGHT FIXTURE	
	2'X2' FLUORESCENT LIGHT FIXTURE	
	2'X2' DIRECT/INDIRECT LIGHT FIXTURE	
	RECESSED DOWN LIGHT	$\bigcirc$

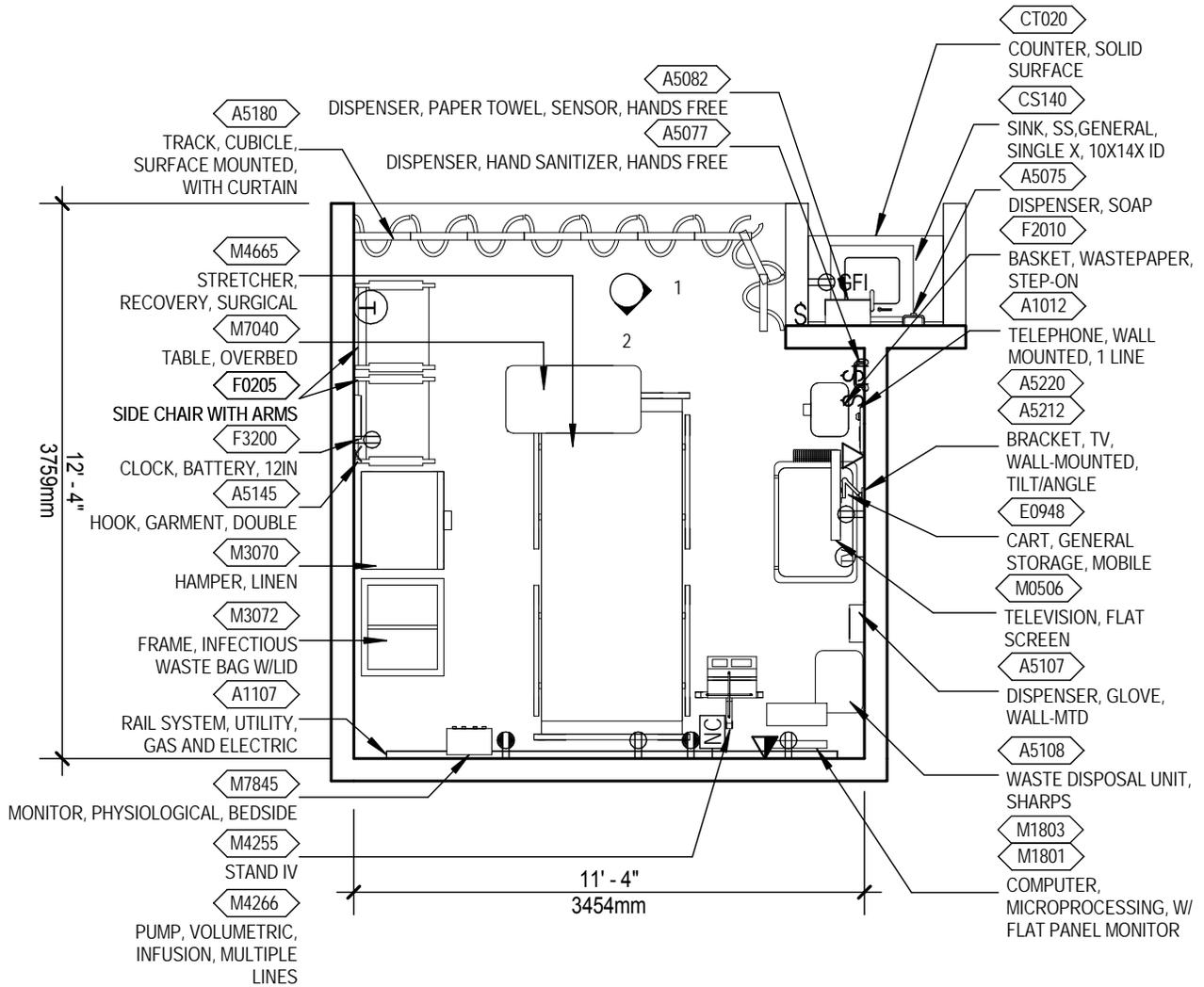
SYSTEM	DESCRIPTION OF SYMBOLS	SYMBOL
<b>WIRING DEVICES RECEPTACLES</b>	DUPLEX RECEPTACLE	
	GROUND FAULT INTERRUPTER RECEPTACLE	
	DUPLEX RECEPTACLE ON EMERGENCY POWER	
	PATIENT GROUND MODULE (4-JACK)	GM
<b>AUXILIARY SYSTEMS</b>	TELEPHONE DATA OUTLET	
	TELEVISION CABLE OUTLET - WALL MOUNTED/CEILING MOUNTED	
	SPEAKER - WALL MOUNTED/CEILING MOUNTED	
	RECEPTACLE, CLOCK HANGER	
	NURSE CALL DEVICE (PULL CORD)	
	NURSE CALL DEVICE (CODE BLUE)	
	PUSH PLATE (AUTO OPENING DOOR)	
<b>MECHANICAL</b>	ROOM THERMOSTAT	
	ROOM HUMIDISTAT (MOISTURE)	
	HVAC SUPPLY	
	HVAC RETURN	
	*LINEAR DIFFUSER	
	EXHAUST REGISTER	
	HOOD EXHAUST	
<b>PLUMBING</b>	SPRINKLER	

### 4.2. PATIENT BAY, PRE-OPERATIVE HOLDING / PHASE II RECOVERY (RRPR1)



Axonometric  
140 NSF / 13,1 NSM

### 4.2. PATIENT BAY, PRE-OPERATIVE HOLDING / PHASE II RECOVERY (RRPR1)

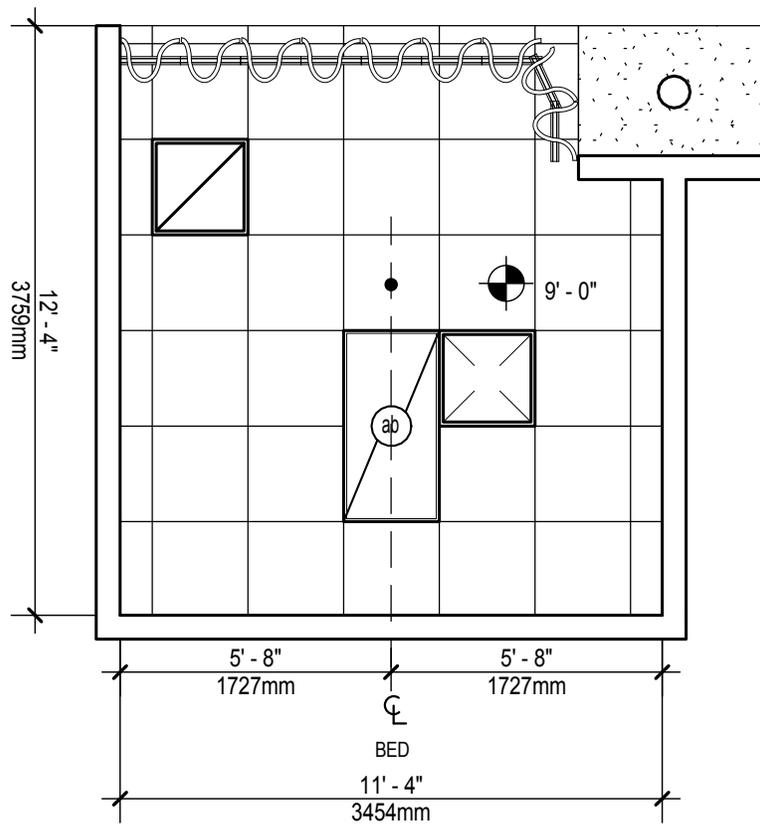


SCALE: 1/4" = 1'-0"



Floor Plan  
140 NSF / 13,1 NSM

**4.2. PATIENT BAY, PRE-OPERATIVE HOLDING /  
PHASE II RECOVERY (RRPR1)**

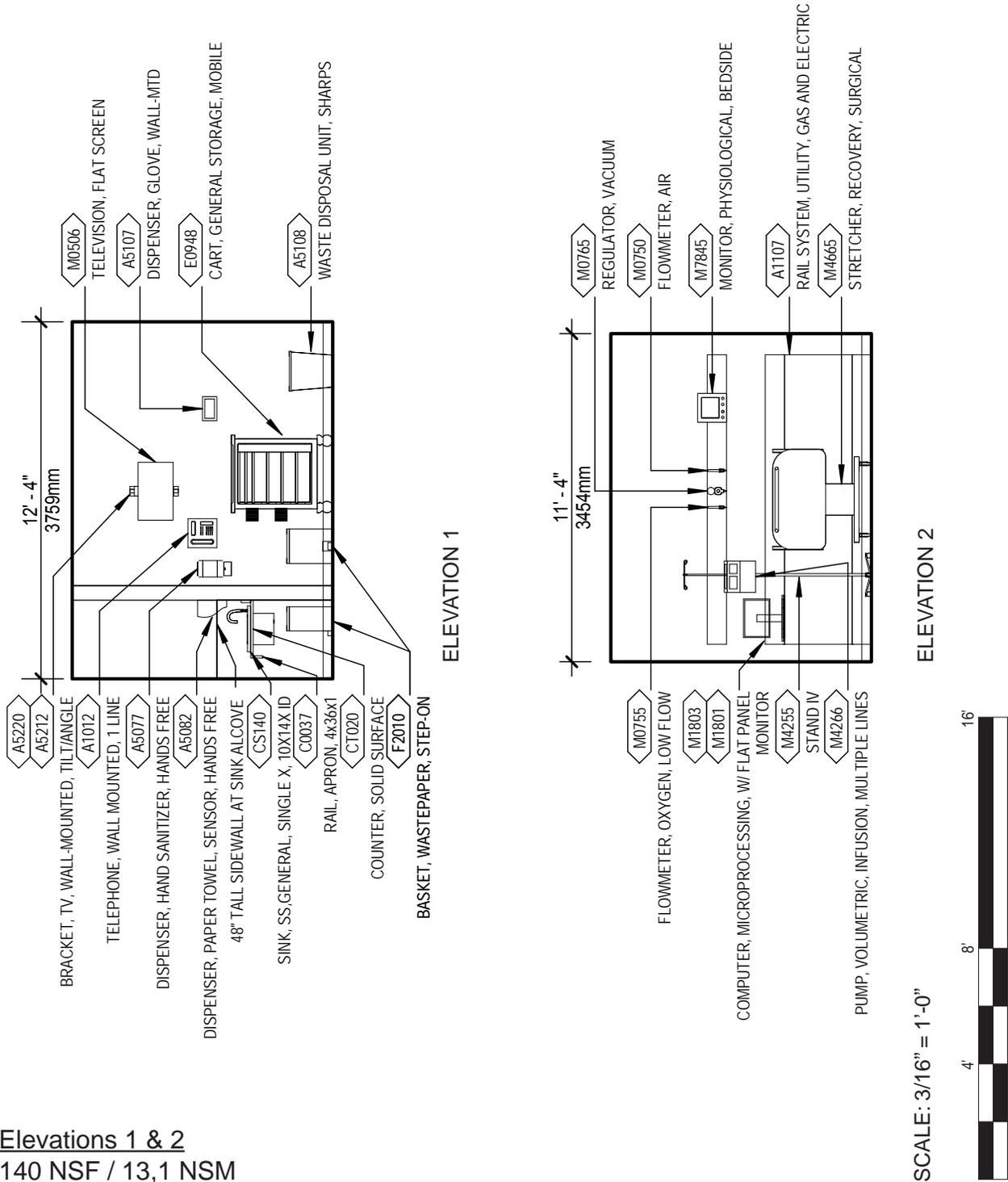


SCALE: 1/4" = 1'-0"



**Reflected Ceiling Plan**  
140 NSF / 13,1 NSM

4.2. PATIENT BAY, PRE-OPERATIVE HOLDING / PHASE II RECOVERY (RRPR1)



Elevations 1 & 2  
 140 NSF / 13,1 NSM

## 4.2. PATIENT BAY, PRE-OPERATIVE HOLDING / PHASE II RECOVERY (RRPR1)

### Room Data Sheet

#### ARCHITECTURAL

Ceiling Type:	Acoustical Ceiling Tile (SP)
Ceiling Height:	9'-0" (2700mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	WSF Integral Base (min. 6"/ 152 mm)
Floor Finish:	Welded Seam Sheet Flooring
Slab Depression:	None Special
Sound Protection:	None
Doors:	None

#### POWER

Normal Power:	To be connected to selected receptacles and equipment.
Emergency Power:	Critical branch of the EES to be connected to selected receptacles and equipment.

#### LIGHTING

Refer to the VA Lighting Design Manual section 4.2.15 - Pre-Operative and Post- Anesthetic Care (PACU) - for lighting design consideration.

#### COMMUNICATIONS

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	No
Intercom:	No
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	Yes
Video Teleconferencing (VTEL):	No

## 4.2. PATIENT BAY, PRE-OPERATIVE HOLDING / PHASE II RECOVERY (RRPR1)

### Room Data Sheet (continued)

#### HEATING, VENTILATING AND AIR CONDITIONING

General Requirement: 70-75 Degree F, 20-60%  
Relative Humidity, Room Return Air

Special Requirement:

#### Notes:

- 1) Six Minimum Total Air Changes
- 2) Two Minimum Outdoor Air Changes
- 3) Positive Pressure

#### PLUMBING AND MEDICAL GASES

Cold Water:	Yes
Hot Water:	Yes
Waste:	Yes
Reagent Grade Water:	No
Medical Air	Yes (1)
Medical Vacuum	Yes (1)
Oxygen	Yes (1)

#### FIRE PROTECTION AND LIFE SAFETY

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Light Hazard

## 4.2. PATIENT BAY, PRE-OPERATIVE HOLDING / PHASE II RECOVERY (RRPR1)

### Equipment List

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A1012	Telephone, Wall Mounted, 1 Line	1	C / C	Telephone, wall mounted, 1 line.
A1107	Rail System , Utility, Gas and Electric	1	C / C	The headwall rail system shall consist of three horizontal rails mounted to the patient room headwall to provide utilities and patient services to support ancillary equipment to include gas and vacuum. The rail system must be capable of quickly adding or relocating medical gases services and be able to accept new equipment, provide physical support to equipment, brackets, shelves and other patient support items.
A5075	Dispenser, Soap, Disposable	1	V / V	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
A5077	Dispenser, Hand Sanitizer, Hands-Free	1	V / V	A touch free wall-mounted hand sanitizer dispenser. For use throughout a healthcare facility. Unit does not include the sanitizing liquid. Units are battery operated.
A5082	Dispenser, Paper Towel, Sensor, Hands Free	1	C / C	A surface mounted, sensor activated, automatic, roll paper towel dispenser. The unit dispenses a paper towel automatically only when hands are placed in position below the dispenser for maximum sanitation and hygiene. May include adjustable settings for sheet length, time delay, and sensor range. Unit is battery operated or with optional AC power adapter.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	1	V / V	Examination glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Provided with wall bracket to facilitate mounting and demounting.
A5108	Waste Disposal Unit, Sharps	1	V / V	A container for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
A5145	Hook, Garment, Double, SS, Surface Mounted	1	C / C	A surface mounted, satin finish stainless steel, double garment hook. Equipped with a concealed mounting bracket that is secured to a concealed wall plate. For general purpose use throughout the facility to hang various items of apparel.

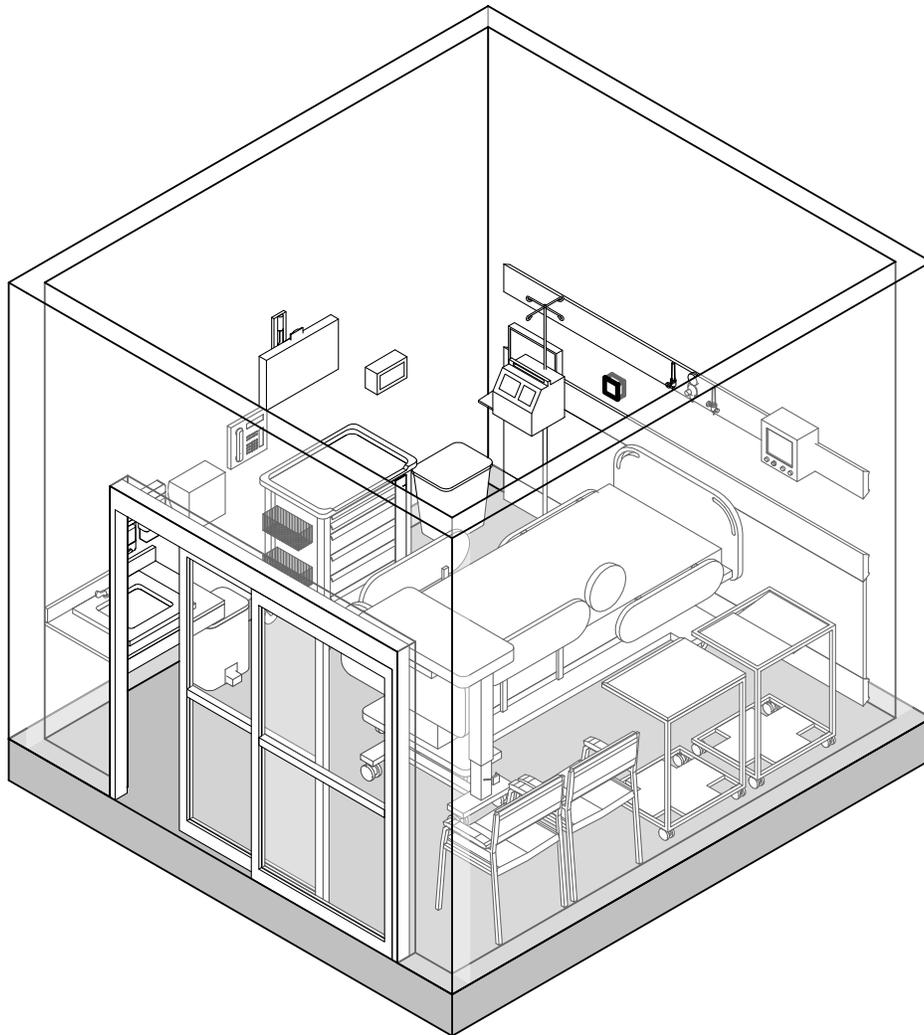
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A5180	Track, Cubicle, Surface Mounted, With Curtain	9	C / C	Surface mounted cubicle track, with curtain. Track constructed of thick extruded aluminum. Equipped with self lubricating carriers, beaded drop chain hooks, and flame resistant curtain. To include removable end caps. Designed to be suspended around patient areas where privacy is needed. Price listed is per foot of the track, curtains to be priced per quote.
A5212	Bracket, Television, Wall-Mounted, Tilt/Angle	1	V / V	A wall mounted, tilt/angled TV bracket for 37" to 80" TVs. Mount will be a universal and VESA compliant unit with a load capacity of up to 130 lbs.
A5220	Bracket, Television, Wall Backing	1	C / C	Wall mounted television bracket backing which provides additional support and strength for the installation of the television bracket. Option available for interior or exterior plate and sized for 12" 16" or 24" stud spacing.
C0037	Rail, Apron, 4x36x1	1	C / C	Apron rail. Also referred to as an apron front, apron panel, or knee space rail. Used to close in front knee space area and/or provide work surface support between two base cabinets or a base cabinet and wall. Apron rails should be ordered in pairs to provide both front and rear work surface support.
CS140	Sink, SS, Single Compartment, 10x14x16 ID	1	C / C	Single compartment stainless steel sink, drop-in, self-rimming, ledge-type, connected with a drain and provided with a mixing faucet. It shall also be provided with punched fixture holes on 4" center, integral back ledge to accommodate deck-mounted fixtures, brushed/polished interior and top surfaces, and sound deadened. Recommended for use in suspended or U/C/B sink cabinets having a high plastic laminate or Chemsurf laminate countertop/work surface. Coordinate actual outside sink dimensions with the actual clear dimension of cabinet specified to ensure that they are compatible. For general purpose use throughout the facility.
CT020	Countertop, Solid Surface	3	C / C	A solid, nonporous countertop with a smooth seamless appearance. Easy to clean and maintain and with proper cleaning does not support the growth of mold. An acrylic-based solid surface product. Standard thickness of 1", and a 4" butt backsplash/curb. Also referred to as a work surface or work top. Available in a choice of colors and depths. Used in lab and other hospital areas requiring optimum physical and chemical resisting properties.

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
E0948	Cart, General Storage, Mobile, 42"H x 32"W x 22"D	1	V / V	THIS TYPICAL INCLUDES: 1 Cart Body, Style-A Narrow, w/Raised Edge Top 2 Drawers, 3" H 4 Drawers, 6" H 1 Accessory Rail, Side Drawer Organizer Bins
F0205	Chair, Side With Arms	2	V / V	Upholstered side chair, 32" high X 21" wide X 23" deep with arms, padded seats and padded backs. Seat height is a minimum of 17". Available with or without sled base.
F2010	Basket, Wastepaper, Step-On	2	V / V	"Step-on" wastepaper basket with inner liner and foot pedal activated flip top.
F3200	Clock, Battery, 12" Diameter	1	V / V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
M0506	Television, Flat Screen	1	V / V	Flat screen television with approximately 32" to 40' diagonal screen size. The TV will have built-in speakers, NTSC tuner, a 16:9 wide screen aspect ratio, a minimum of 1280 x 768 resolution and a remote control.
M0750	Flowmeter, Air, Connect w/50 PSI Supply	1	V / V	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Requires the appropriate adapter for connection to the wall outlet and fitting to connect to tubing. Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0755	Flowmeter, Oxygen, Low Flow	1	V / V	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Database pricing includes DISS fitting and DISS power outlet and wall adapter. Other fitting and adapter configurations are available.
M0765	Regulator, Vacuum	1	V / V	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required. To be used in delivery, neonatal, pediatrics or any area where suction is required. Database pricing reflects continuous regulators graduated to 200 mm Hg with a full line vacuum selection switch and DISS configured inlets and outlets.

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M1801	Computer, Microprocessing, w/Flat Panel Monitor	1	V / V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROMDVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
M1803	Workstation, Computer, Wall Mounted, Adjustable	1	V / V	A wall mounted computer workstation with height adjustable monitor and keyboard arms. Keyboard and monitor can be stored within 8" to 10" of wall. Fingertip adjustability for keyboard and monitor enable frequent position changes. Unit contains an integrated cable management system to hide wires. A separate wall-mounted CPU holder is included.
M3070	Hamper, Linen, Mobile, w/Lid	1	V / V	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters. For linen transport in hospitals and clinics.
M3072	Frame, Infectious Waste Bag w/Lid	1	V / V	Frame for an infectious waste collection bag. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Adjust to hold 18" or 25" trash bags. Mounted on ball bearing casters and includes permanently mounted hinged lid. Provides means of bagging infectious waste at point of waste generation.
M4255	Stand, IV, Adjustable	1	V / V	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.
M4266	Pump, Volumetric, Infusion, Multiple Line	1	V / V	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.

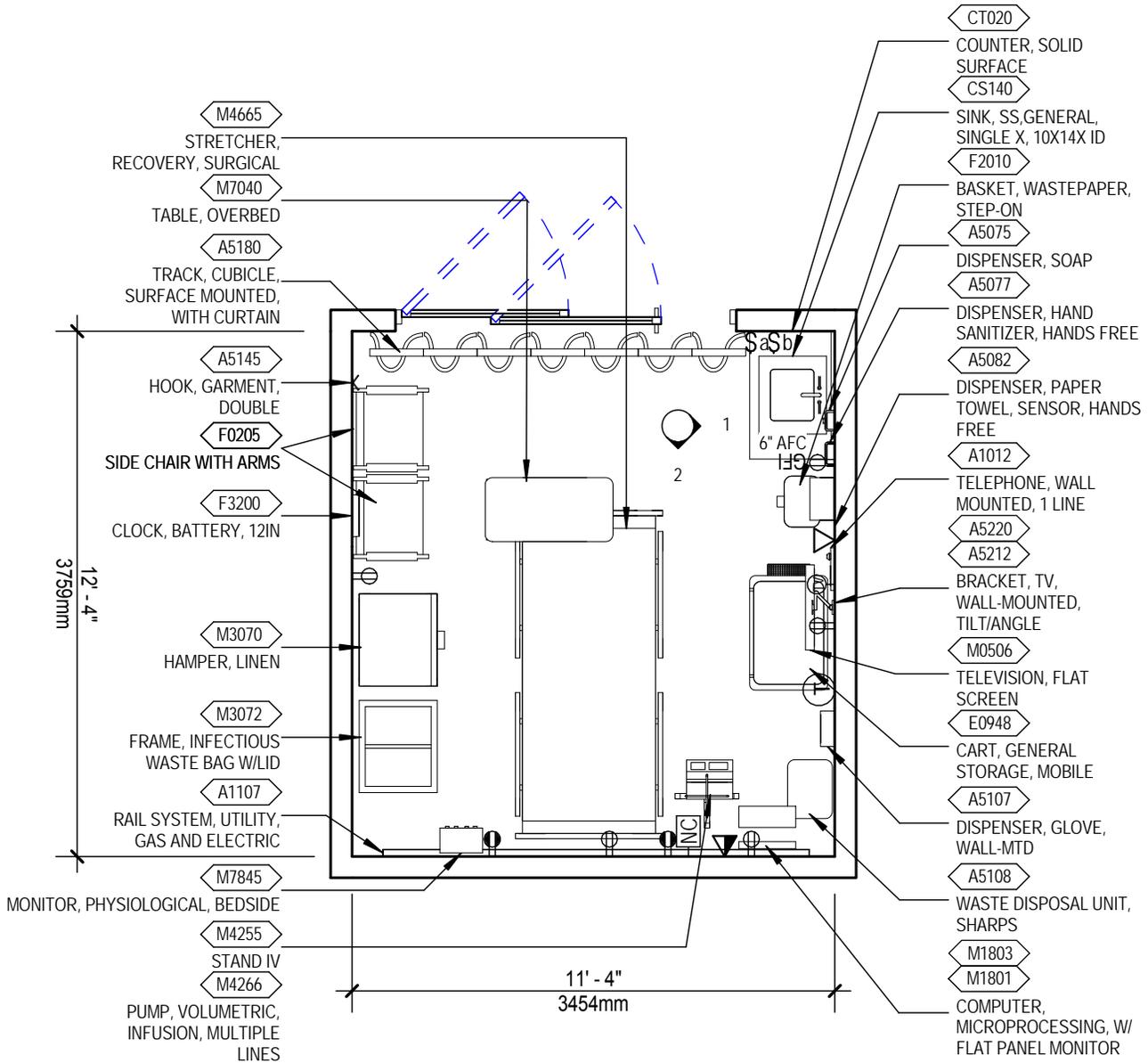
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M4665	Stretcher, Recovery, Surgical	1	V / V	Recovery/surgical stretcher. Strong I-beam construction type unit. The height is adjustable with manual backrest and crank operated knee catch. Stainless or painted steel top and chassis. Features 8" or 10" conductive casters, with lock and brake, folding, tuck-away chrome side-rails and IV stand and a flame retardant antibacterial mattress. Designed for operating room transport or recovery applications.
M7040	Table, Overbed	1	V / V	Overbed table. Adjustable height table constructed of heavy gauge steel. Mounted on 2" diameter twin swivel casters with bumper caps. Table top is constructed with a high pressure plastic laminated surface that resists chipping, scratching, and staining. It includes a vanity tray and a mirror. Table is designed for use over bed, wheelchair or large chair.
M7845	Monitor, Physiological, Bedside, 4 Channel	1	V / V	4 channel bedside physiological monitor. The unit consist of a four-channel non-fade monochrome display monitor, an alarm system and printer-recording capabilities. The monitor has color coded controls and automatic calibration. The unit displays up to four waveforms simultaneously. The parameters to be monitored are user selectable. The monitor may be connected to a central monitoring station. The unit monitors patients in most acute care areas, step-down units, procedure rooms and emergency rooms.

### 4.3. PATIENT ROOM, PRE-OPERATIVE HOLDING / PHASE II RECOVERY (RRPR2)



Axonometric  
140 NSF / 13,1 NSM

### 4.3. PATIENT ROOM, PRE-OPERATIVE HOLDING / PHASE II RECOVERY (RRPR2)

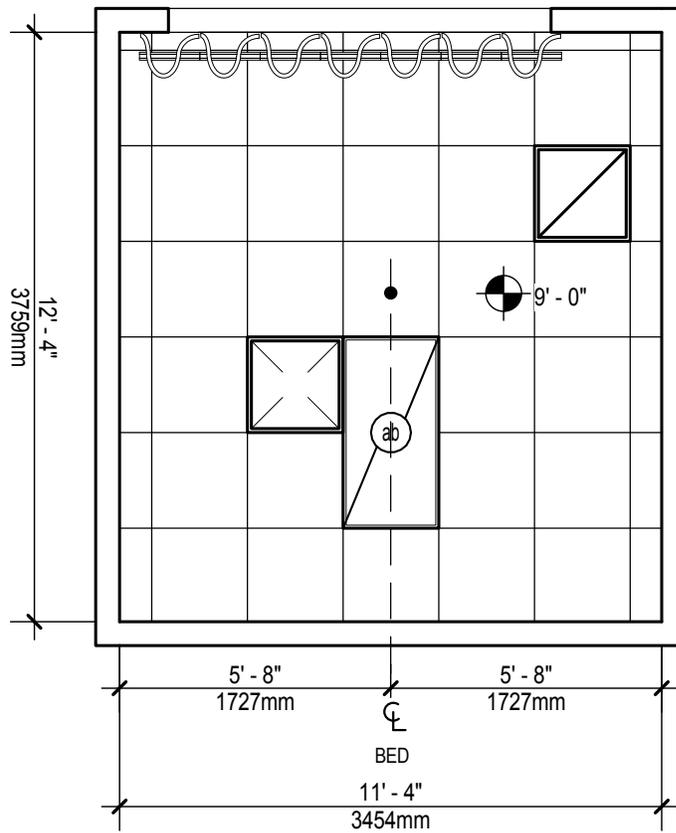


SCALE: 1/4" = 1'-0"



**Floor Plan**  
140 NSF / 13,1 NSM

**4.3. PATIENT ROOM, PRE-OPERATIVE HOLDING / PHASE II RECOVERY (RRPR2)**

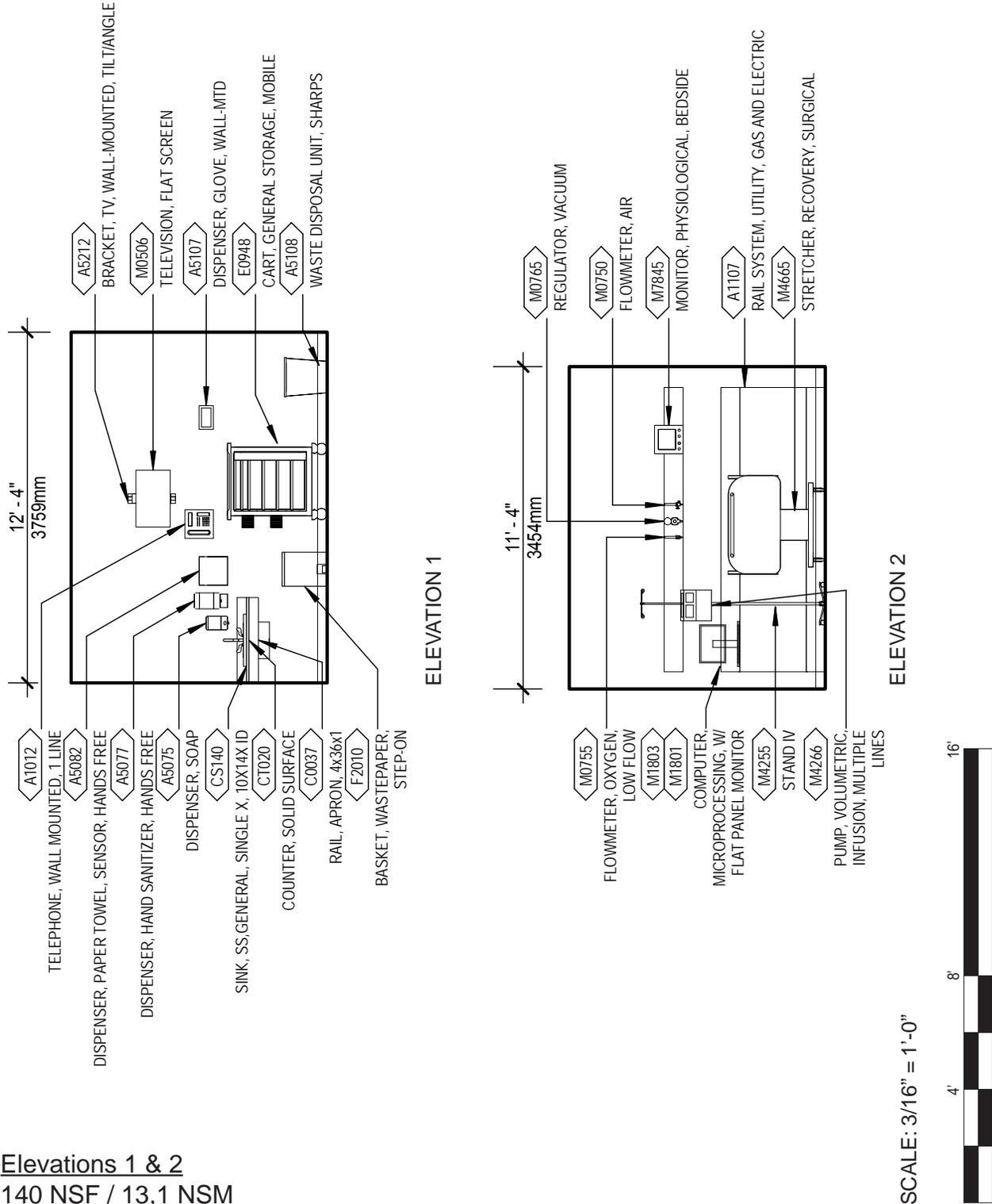


SCALE: 1/4" = 1'-0"



Reflected Ceiling Plan  
140 NSF / 13,1 NSM

### 4.3. PATIENT ROOM, PRE-OPERATIVE HOLDING / PHASE II RECOVERY (RRPR2)



Elevations 1 & 2  
140 NSF / 13,1 NSM

### 4.3. PATIENT ROOM, PRE-OPERATIVE HOLDING / PHASE II RECOVERY (RRPR2)

#### Room Data Sheet

##### ARCHITECTURAL

Ceiling Type:	Acoustical Ceiling Tile (SP)
Ceiling Height:	9'-0" (2700mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	WSF Integral Base (min. 6"/ 152 mm)
Floor Finish:	Welded Seam Sheet Flooring
Slab Depression:	None Special
Sound Protection:	35 STC
Doors:	Sliding Glass Door, Size 8'- 0" x 7'-0" (2438 mm x 2133 mm)

##### LIGHTING

Refer to the VA Lighting Design Manual section 4.2.15 - Pre-Operative and Post - Anesthetic Care (PACU) - for lighting design consideration.

##### POWER

Normal Power:	To be connected to selected receptacles and equipment.
Emergency Power:	Critical branch of the EES to be connected to selected receptacles and equipment.

##### COMMUNICATIONS

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	No
Intercom:	No
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	Yes
Video Teleconferencing (VTEL):	No

### 4.3. PATIENT ROOM, PRE-OPERATIVE HOLDING / PHASE II RECOVERY (RRPR2)

#### Room Data Sheet (continued)

##### HEATING, VENTILATING AND AIR CONDITIONING

General Requirement: 70-75 Degree F, 20-60%  
Relative Humidity, Room Return Air

Special Requirement:

##### Notes:

- 1) Six Minimum Total Air Changes
- 2) Two Minimum Outdoor Air Changes
- 3) Positive Pressure

##### PLUMBING AND MEDICAL GASES

Cold Water:	Yes
Hot Water:	Yes
Waste:	Yes
Reagent Grade Water:	No
Medical Air	Yes (1)
Medical Vacuum	Yes (1)
Oxygen	Yes (1)

##### FIRE PROTECTION AND LIFE SAFETY

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Light Hazard

### 4.3. PATIENT ROOM, PRE-OPERATIVE HOLDING / PHASE II RECOVERY (RRPR2)

#### Equipment List

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A1012	Telephone, Wall Mounted, 1 Line	1	C / C	Telephone, wall mounted, 1 line.
A1107	Rail System , Utility, Gas and Electric	1	C / C	The headwall rail system shall consist of three horizontal rails mounted to the patient room headwall to provide utilities and patient services to support ancillary equipment to include gas and vacuum. The rail system must be capable of quickly adding or relocating medical gases services and be able to accept new equipment, provide physical support to equipment, brackets, shelves and other patient support items.
A5075	Dispenser, Soap, Disposable	1	V / V	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
A5077	Dispenser, Hand Sanitizer, Hands-Free	1	V / V	A touch free wall-mounted hand sanitizer dispenser. For use throughout a healthcare facility. Unit does not include the sanitizing liquid. Units are battery operated.
A5082	Dispenser, Paper Towel, Sensor, Hands Free	1	C / C	A surface mounted, sensor activated, automatic, roll paper towel dispenser. The unit dispenses a paper towel automatically only when hands are placed in position below the dispenser for maximum sanitation and hygiene. May include adjustable settings for sheet length, time delay, and sensor range. Unit is battery operated or with optional AC power adapter.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	1	V / V	Examination glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Provided with wall bracket to facilitate mounting and demounting.
A5108	Waste Disposal Unit, Sharps	1	V / V	A container for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
A5145	Hook, Garment, Double, SS, Surface Mounted	1	C / C	A surface mounted, satin finish stainless steel, double garment hook. Equipped with a concealed mounting bracket that is secured to a concealed wall plate. For general purpose use throughout the facility to hang various items of apparel.

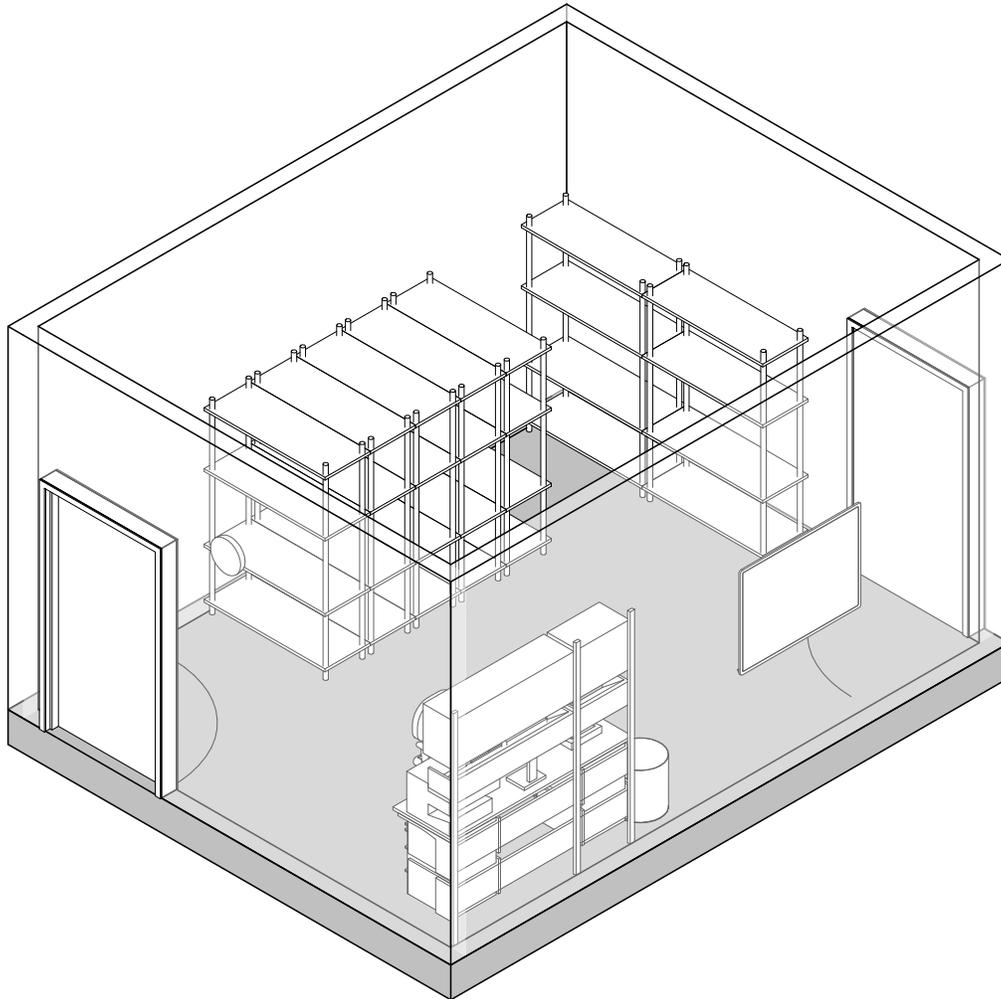
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A5180	Track, Cubicle, Surface Mounted, With Curtain	9	C / C	Surface mounted cubicle track, with curtain. Track constructed of thick extruded aluminum. Equipped with self lubricating carriers, beaded drop chain hooks, and flame resistant curtain. To include removable end caps. Designed to be suspended around patient areas where privacy is needed. Price listed is per foot of the track, curtains to be priced per quote.
A5212	Bracket, Television, Wall-Mounted, Tilt/Angle	1	V / V	A wall mounted, tilt/angled TV bracket for 37" to 80" TVs. Mount will be a universal and VESA compliant unit with a load capacity of up to 130 lbs.
A5220	Bracket, Television, Wall Backing	1	C / C	Wall mounted television bracket backing which provides additional support and strength for the installation of the television bracket. Option available for interior or exterior plate and sized for 12" 16" or 24" stud spacing.
C0037	Rail, Apron, 4x36x1	1	C / C	Apron rail. Also referred to as an apron front, apron panel, or knee space rail. Used to close in front knee space area and/or provide work surface support between two base cabinets or a base cabinet and wall. Apron rails should be ordered in pairs to provide both front and rear work surface support.
CS140	Sink, SS, Single Compartment, 10x14x16 ID	1	C / C	Single compartment stainless steel sink, drop-in, self-rimming, ledge-type, connected with a drain and provided with a mixing faucet. It shall also be provided with punched fixture holes on 4" center, integral back ledge to accommodate deck-mounted fixtures, brushed/polished interior and top surfaces, and sound deadened. Recommended for use in suspended or U/C/B sink cabinets having a high plastic laminate or Chemsurf laminate countertop/work surface. Coordinate actual outside sink dimensions with the actual clear dimension of cabinet specified to ensure that they are compatible. For general purpose use throughout the facility.
CT020	Countertop, Solid Surface	3	C / C	A solid, nonporous countertop with a smooth seamless appearance. Easy to clean and maintain and with proper cleaning does not support the growth of mold. An acrylic-based solid surface product. Standard thickness of 1", and a 4" butt backsplash/curb. Also referred to as a work surface or work top. Available in a choice of colors and depths. Used in lab and other hospital areas requiring optimum physical and chemical resisting properties.
E0948	Cart, General Storage, Mobile, 42"H x 32"W x 22"D	1	V / V	THIS TYPICAL INCLUDES: 1 Cart Body, Style-A Narrow, w/Raised Edge Top 2 Drawers, 3" H 4 Drawers, 6" H 1 Accessory Rail, Side Drawer Organizer Bins

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
F0205	Chair, Side With Arms	2	V / V	Upholstered side chair, 32" high X 21" wide X 23" deep with arms, padded seats and padded backs. Seat height is a minimum of 17". Available with or without sled base.
F2010	Basket, Wastepaper, Step-On	1	V / V	"Step-on" wastepaper basket with inner liner and foot pedal activated flip top.
F3200	Clock, Battery, 12" Diameter	1	V / V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
M0506	Television, Flat Screen	1	V / V	Flat screen television with approximately 32" to 40" diagonal screen size. The TV will have built-in speakers, NTSC tuner, a 16:9 wide screen aspect ratio, a minimum of 1280 x 768 resolution and a remote control.
M0750	Flowmeter, Air, Connect w/50 PSI Supply	1	V / V	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Requires the appropriate adapter for connection to the wall outlet and fitting to connect to tubing. Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0755	Flowmeter, Oxygen, Low Flow	1	V / V	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Database pricing includes DISS fitting and DISS power outlet and wall adapter. Other fitting and adapter configurations are available.
M0765	Regulator, Vacuum	1	V / V	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required. To be used in delivery, neonatal, pediatrics or any area where suction is required. Database pricing reflects continuous regulators graduated to 200 mm Hg with a full line vacuum selection switch and DISS configured inlets and outlets.

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M1801	Computer, Microprocessing, w/Flat Panel Monitor	1	V / V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
M1803	Workstation, Computer, Wall Mounted, Adjustable	1	V / V	A wall mounted computer workstation with height adjustable monitor and keyboard arms. Keyboard and monitor can be stored within 8" to 10" of wall. Fingertip adjustability for keyboard and monitor enable frequent position changes. Unit contains an integrated cable management system to hide wires. A separate wall-mounted CPU holder is included.
M3070	Hamper, Linen, Mobile, w/Lid	1	V / V	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters. For linen transport in hospitals and clinics.
M3072	Frame, Infectious Waste Bag w/Lid	1	V / V	Frame for an infectious waste collection bag. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Adjust to hold 18" or 25" trash bags. Mounted on ball bearing casters and includes permanently mounted hinged lid. Provides means of bagging infectious waste at point of waste generation.
M4255	Stand, IV, Adjustable	1	V / V	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.
M4266	Pump, Volumetric, Infusion, Multiple Line	1	V / V	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.
M4665	Stretcher, Recovery, Surgical	1	V / V	Recovery/surgical stretcher. Strong I-beam construction type unit. The height is adjustable with manual backrest and crank operated knee catch. Stainless or painted steel top and chassis. Features 8" or 10" conductive casters, with lock and brake, folding, tuck-away chrome side-rails and IV stand and a flame retardant antibacterial mattress. Designed for operating room transport or recovery applications.

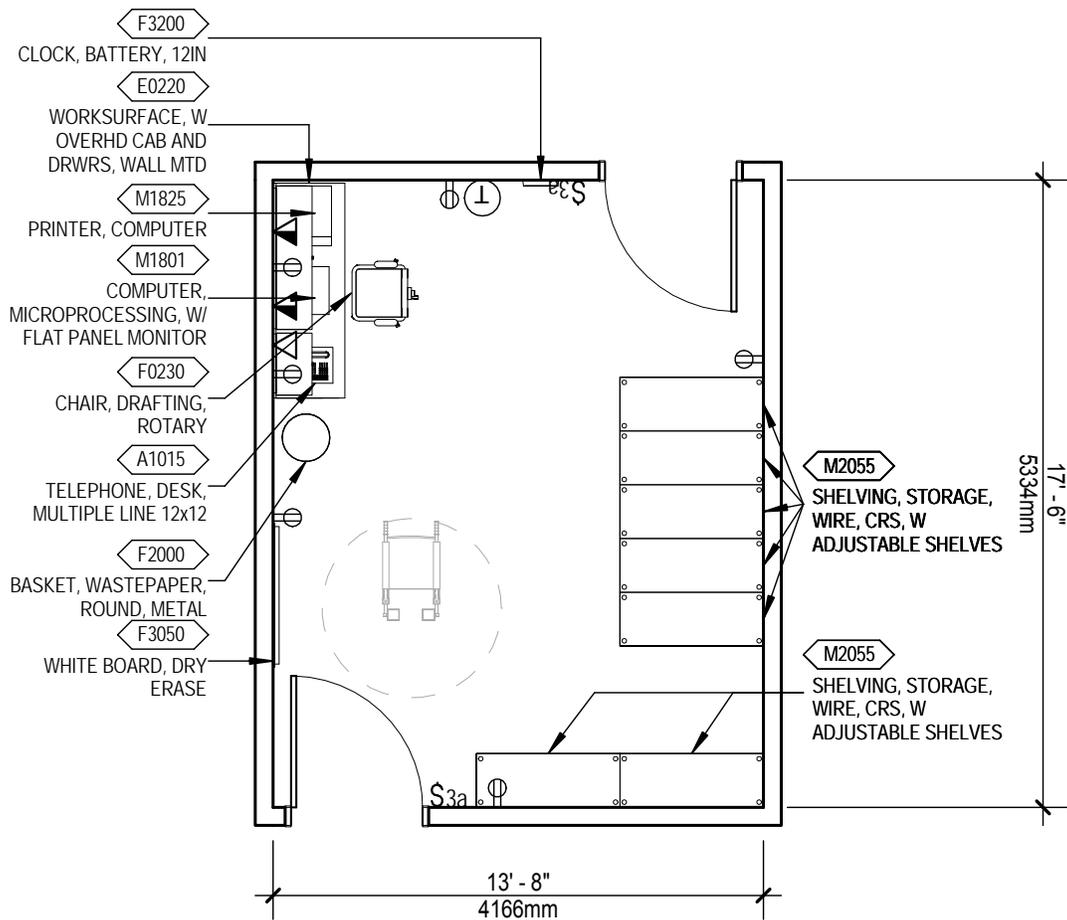
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M7040	Table, Overbed	1	V / V	Overbed table. Adjustable height table constructed of heavy gauge steel. Mounted on 2" diameter twin swivel casters with bumper caps. Table top is constructed with a high pressure plastic laminated surface that resists chipping, scratching, and staining. It includes a vanity tray and a mirror. Table is designed for use over bed, wheelchair or large chair.
M7845	Monitor, Physiological, Bedside, 4 Channel	1	V / V	4 channel bedside physiological monitor. The unit consist of a four-channel non-fade monochrome display monitor, an alarm system and printer-recording capabilities. The monitor has color coded controls and automatic calibration. The unit displays up to four waveforms simultaneously. The parameters to be monitored are user selectable. The monitor may be connected to a central monitoring station. The unit monitors patients in most acute care areas, step-down units, procedure rooms and emergency rooms.

#### 4.4. CLEAN WORKROOM, ANESTHESIA (ANCW2)

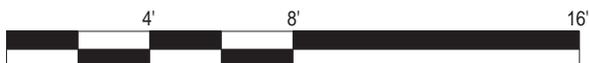


Axonometric  
240 NSF / 22,3 NSM

4.4. CLEAN WORKROOM, ANESTHESIA (ANCW2)

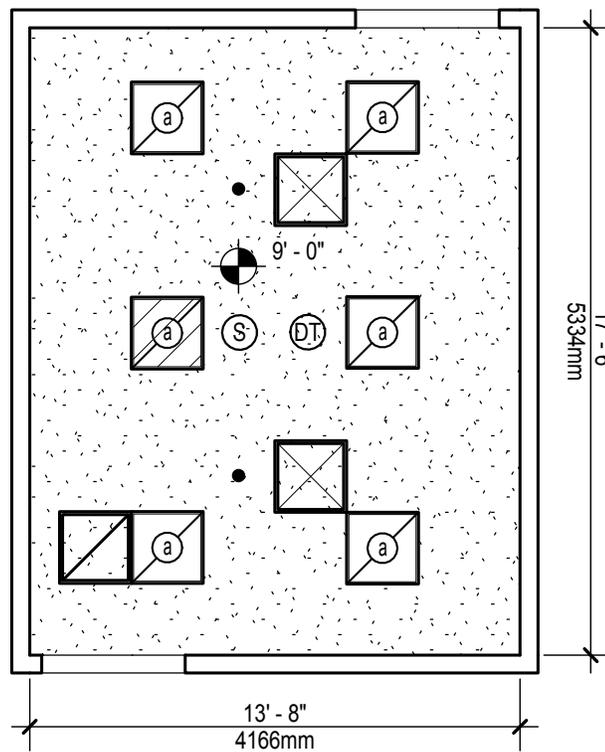


SCALE: 3/16" = 1'-0"



Floor Plan  
 240 NSF / 22,3 NSM

### 4.4. CLEAN WORKROOM, ANESTHESIA (ANCW2)



SCALE: 3/16" = 1'-0"



Reflected Ceiling Plan  
240 NSF / 22,3 NSM

**4.4. CLEAN WORKROOM, ANESTHESIA (ANCW2)****Room Data Sheet****ARCHITECTURAL**

Ceiling Type:	Gypsum Wallboard (SC)
Ceiling Height:	9'-0" (2700mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	Resilient Base
Floor Finish:	Rubber Flooring, Welded Seam Sheet Flooring
Slab Depression:	None Special
Sound Protection:	None
Doors:	Single Door, Size 3'-8" x 7'-0" (1117 mm x 2133 mm) Wood

**LIGHTING**

Anesthesia Work Room has similar lighting design consideration as Exam & Treatment Room. Refer to the VA Lighting Design Manual section 4.2.1 - Examination and Treatment Room - for lighting design consideration.

**POWER**

Normal Power:	To be connected to selected receptacles and equipment.
Emergency Power:	Critical branch of the EES to be connected to selected receptacles and equipment.

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	
Intercom:	No
Motion Intrusion Detection (MID):	No
Nurse Call:	No
Code Blue:	No
Public Address:	Yes
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	
Notes:	

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Anesthesia Workroom and Equipment Room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization.

**4.4. CLEAN WORKROOM, ANESTHESIA (ANCW2)**Room Data Sheet (continued)**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	No
Medical Vacuum	No
Oxygen	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.4. CLEAN WORKROOM, ANESTHESIA (ANCW2)**Equipment List

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
A1015	Telephone, Desk, Multiple Line	1	C / C	Telephone, desk, multiple line.
E0220	Worksurface, w/ Overhd Cab & Drwrs, Wall Mtd, 72" W	1	V / V	THIS TYPICAL INCLUDES: 3 Vertical Hanging Strips 2 Lockable Flipper Units 2 Shelves, Storage/Display 2 Lights 1 Cantilevered Work Surface 4 Storage Frames 4 Drawers, 3"H 6 Drawers, 6"H
F0230	Chair, Drafting, Rotary	1	V / V	Drafting chair approximately 47" high X 20" wide X 20" deep with rotary stool and a 5 (five) star base with casters. Padded seat and back. Foot ring adjusts with chair.
F2000	Basket, Wastepaper, Round, Metal	1	V / V	Round wastepaper basket, approximately 18" high X 16" diameter. This metal unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations.
F3050	Whiteboard, Dry Erase	1	C / C	Whiteboard unit, approximately 36" H x 48" W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
F3200	Clock, Battery, 12" Diameter	1	V / V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
M1801	Computer, Microprocessing, w/Flat Panel Monitor	1	V / V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.

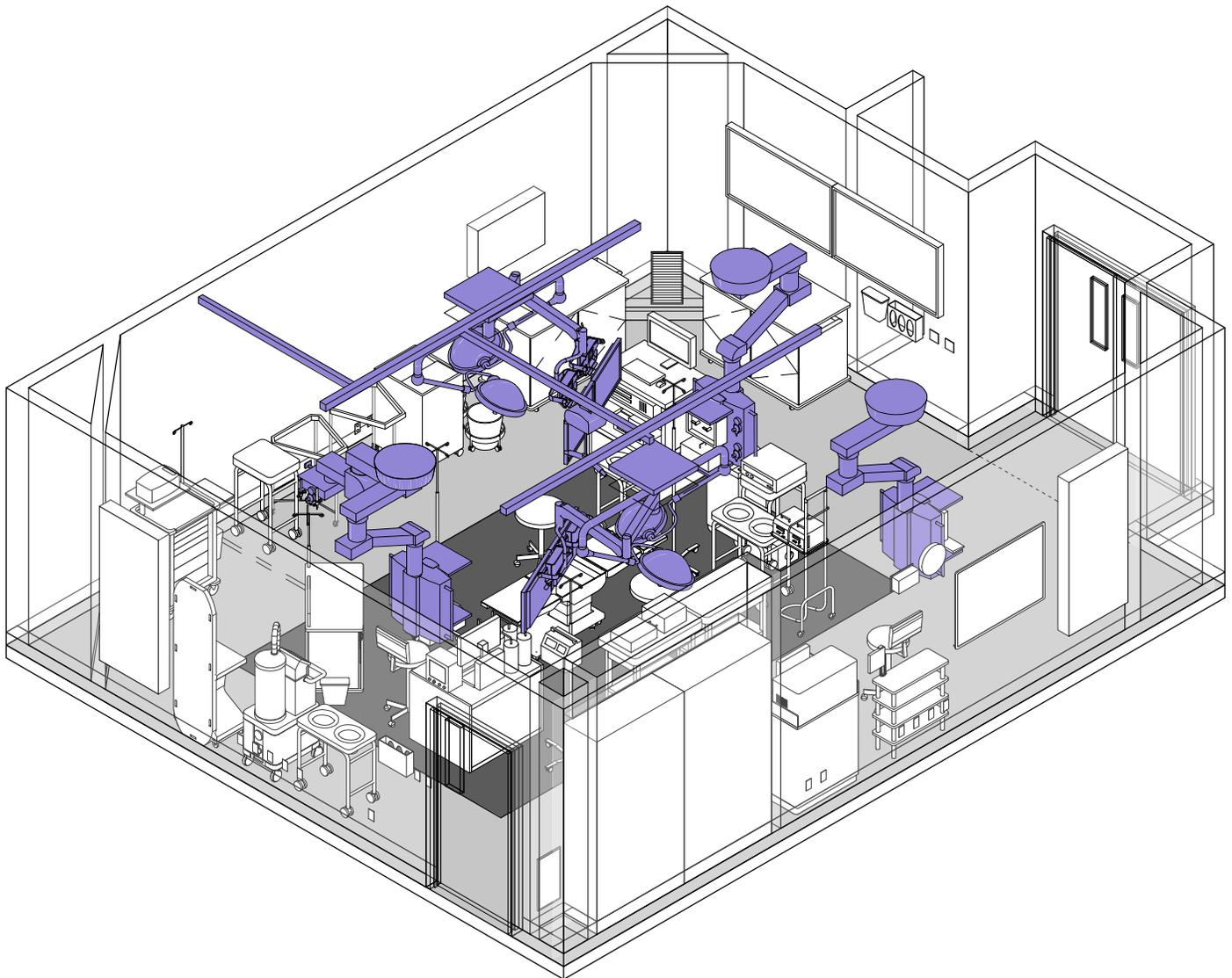
<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
M1825	Printer, Computer	1	V / V	High resolution computer printer with a variety of type styles and sheet/envelope feeder trays. Database information reflects network ready, medium duty office style laser printers. Other types of printers (bubble jet, dot matrix, line or plotter) as well as light or heavy use capabilities are available.
M2055	Shelving, Storage, Wire, CRS, w/Adjustable Shelves	7	V / V	Stationary, wire, shelving unit. Unit has fully adjustable shelves constructed of stainless steel. For use in general purpose storage areas. Shelving is provided in various sizes and configurations. Price provided is for a unit approximately 74"H x 18"D x 48"W with four shelves.



SURGICAL AND ENDOVASCULAR SERVICES (ORGS1) OPERATING ROOM, GENERAL AXONOMETRIC

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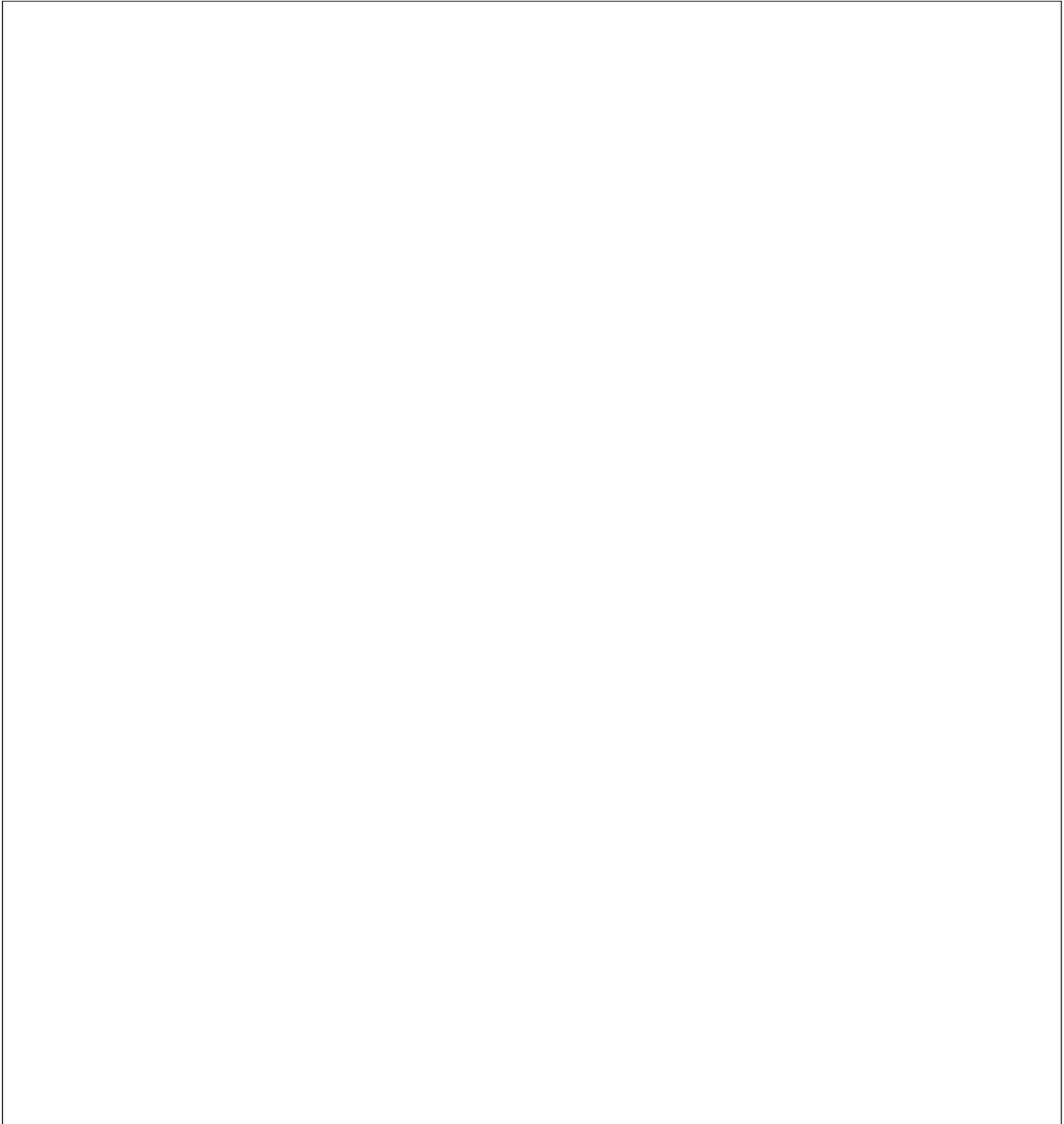


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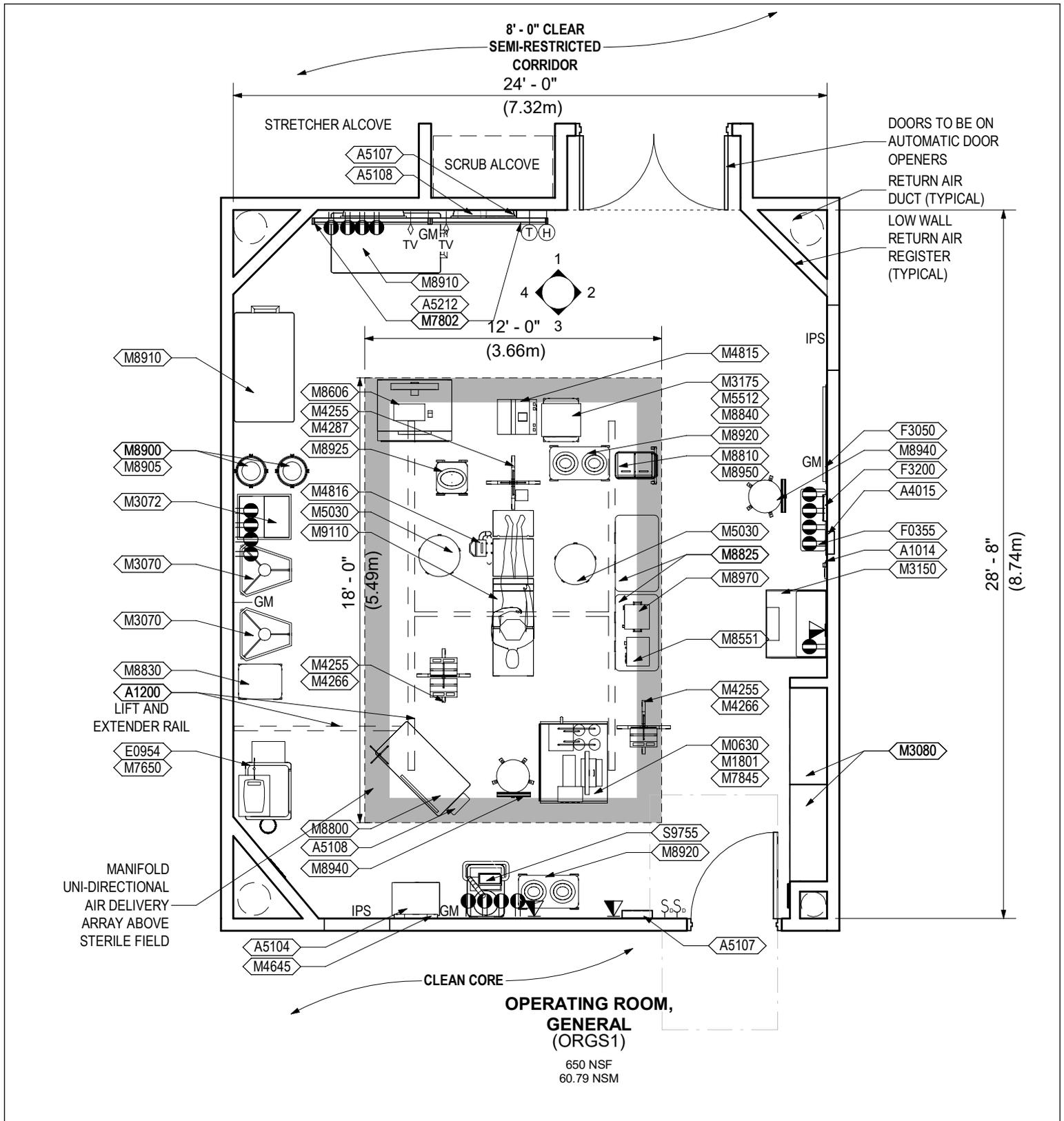




SURGICAL AND ENDOVASCULAR SERVICES (ORGS1) OPERATING ROOM, GENERAL FLOOR PLAN

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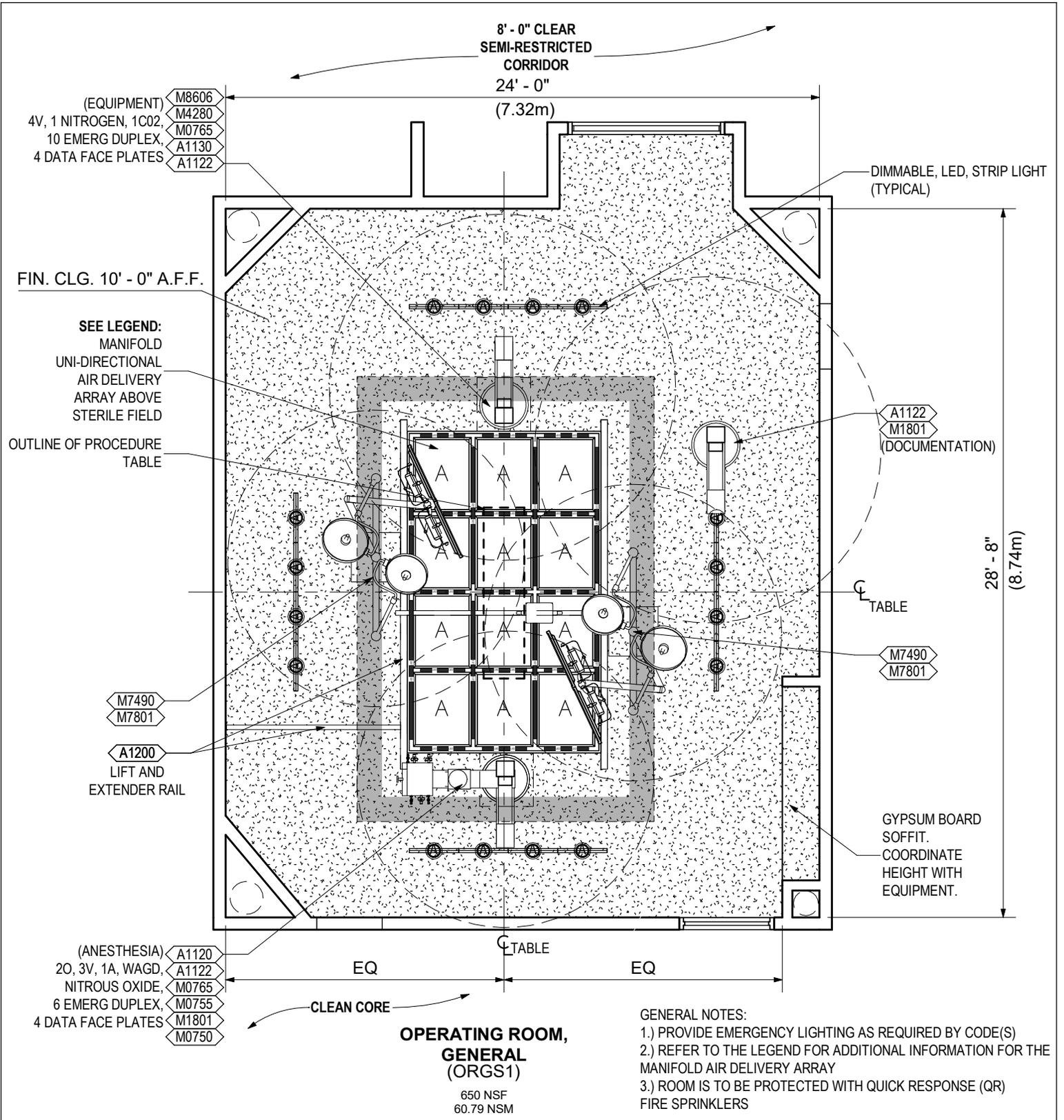


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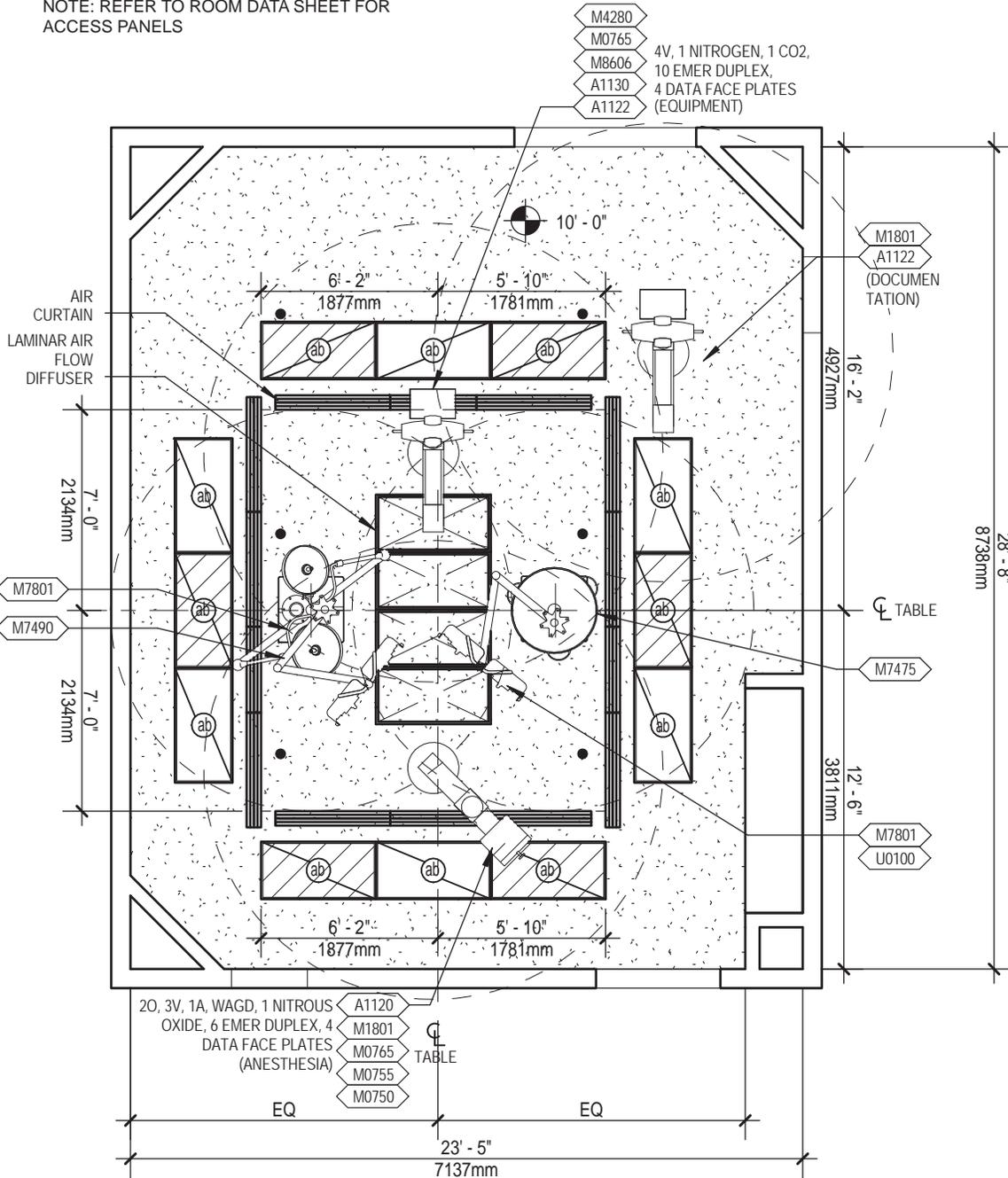


SURGICAL AND ENDOVASCULAR SERVICES (ORGS1) OPERATING ROOM, GENERAL REFLECTED CEILING PLAN (ALTERNATIVE OPTION)

Plot Date: 8/31/2022 4:01:46 PM

SCALE: NOT TO SCALE

NOTE: REFER TO ROOM DATA SHEET FOR ACCESS PANELS



**Reflected Ceiling Plan**  
650 NSF / 60,4 NSM

NOTE: OPTIONAL REFLECTED CEILING PLAN IS AN ALTERNATIVE OPTION TO THE MANIFOLD UNI-DIRECTIONAL AIR DELIVERY SYSTEM. EQUIPMENT TAGS & REFERENCE NOTES MAY NOT BE FULLY COORDINATED WITH THE EQUIPMENT LIST.

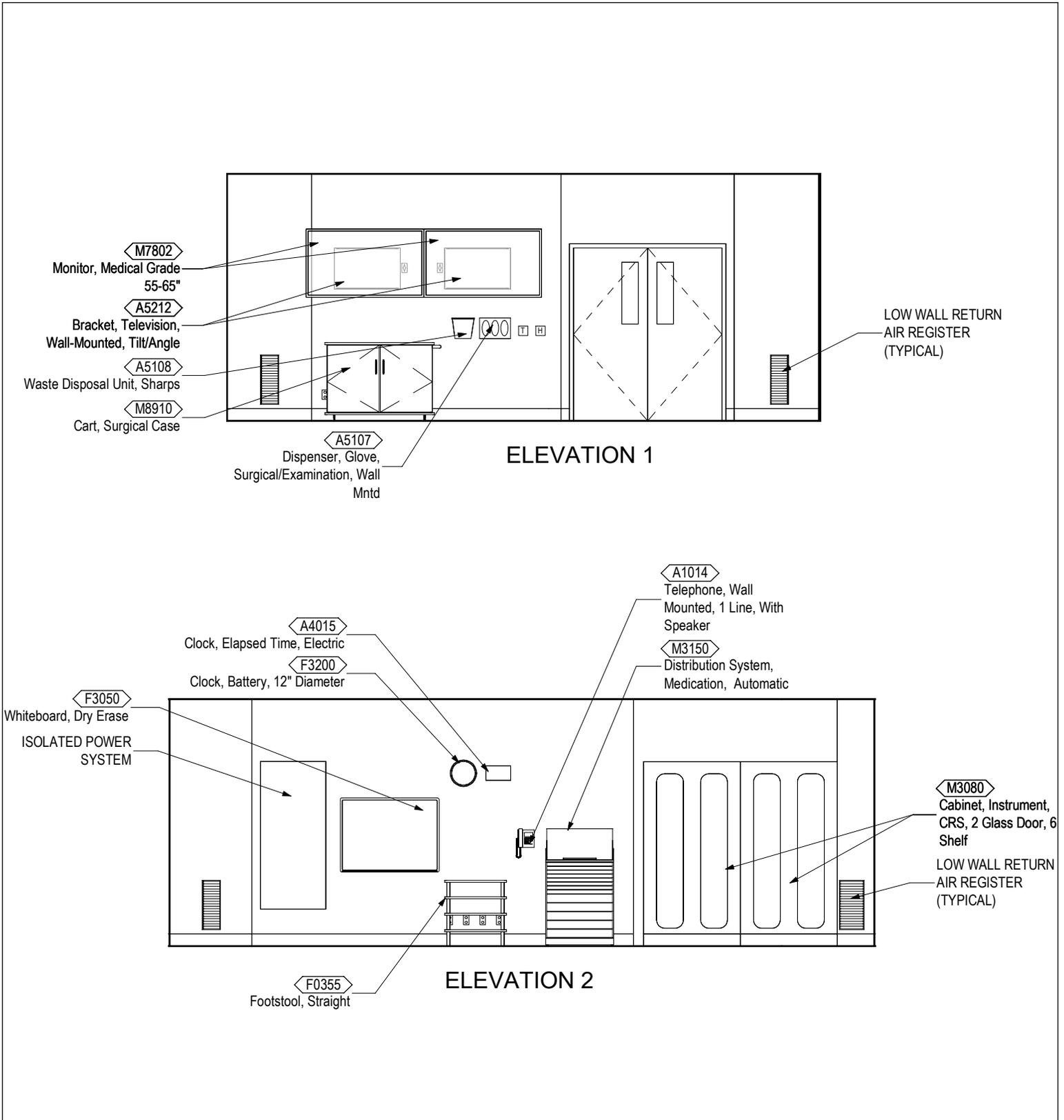
**4.5. OPERATING ROOM, GENERAL (ORGS1)**JSN Legend

JSN	DESCRIPTION		
		M5030	STOOL, SURGEON, REVOLVING
		M5512	LASER, SMOKE EVACUATOR
A1014	TELEPHONE, WALL MOUNTED, 1 LINE, WITH SPEAKER	M7490	LIGHT, SURG, CEILING MTD, DUAL, UNEQUAL DIA HEADS
A1120	COLUMN, SERVICE, PREFAB, SURGICAL, CEILING MOUNTED	M7650	DEFIBRILLATOR/MONITOR ACUTE CARE
A1122	COLUMN, EQUIPMENT ARM, CEILING MOUNTED, SURGERY	M7801	MONITOR, MEDICAL GRADE, 26"- 42"
A1130	CABINET, CONTROL, NITROGEN	M7802	MONITOR, MEDICAL GRADE, 55"- 65"
A1200	LIFT SYSTEM, OVERHEAD, PATIENT ROOM	M7845	MONITOR, PHYSIOLOGICAL, BEDSIDE, 4 CHANNEL
A4015	ELAPSE TIME CLOCK, ELECTRIC	M8551	LIGHT SOURCE, FIBEROPTIC HEADLAMP
A5104	CART, WASTE DISPOSAL, MOBILE W/FOOT PEDAL	M8606	ENDOSCOPY CART, FIBEROPTIC, W/VIDEO ACCESSORY
A5107	DISPENSER, GLOVE, SURGICAL/ EXAMINATION, WALL-MTD	M8800	CART, ANESTHESIA
A5108	WASTE DISPOSAL UNIT, SHARPS	M8810	STAND, MAYO
A5212	BRACKET, TELEVISION WALL MTD, TILT/ANGLE	M8825	TABLE, INSTRUMENT/DRESSING, CRS APPROX 36" x 20" x 34"
E0954	CART, EMERGENCY, MOBILE, 66"H x 32"W x 22" D	M8830	TABLE, INSTRUMENT/DRESSING, MOBILE
F0355	FOOTSTOOL, STRAIGHT	M8840	TABLE, BACK, INSTRUMENT/DRESSING
F3050	WHITE BOARD, DRY ERASE	M8900	CARRIAGE, PAIL, CRS WITHOUT PAIL
F3200	CLOCK, BATTERY, 12IN DIAMETER	M8905	PAIL, UTILITY, CRS WITH CARRIAGE
M0630	ANESTHESIA APPARATUS, 3 GAS	M8910	CART, SURGICAL CASE
M0750	FLOWMETER, AIR, CONNECT W/ 50 PSI SUPPLY	M8920	STAND, BASIN, CRS, MOBILE, DOUBLE
M0755	FLOWMETER, OXYGEN, LOW FLOW	M8925	STAND, BASIN, CRS, MOBILE, SINGLE
M0765	REGULATOR, VACUUM	M8940	STOOL, ANESTHESIA, WITH BACK
M1801	COMPUTER, MICROPROCESSING, W/FLATPANEL MONITOR	M8950	WARMER, BLOOD
M3070	HAMPER, LINEN, MOBILE, W/LID	M8970	WARMER, BLOOD, HIGH VOLUME
M3072	FRAME, INFECTIOUS WASTE BAG W/LID	M9110	TABLE, OPERATING, 5 OR 6 SECTION, TRAUMA
M3080	CABINET, INSTRUMENT, CRS, 2 GLASS DOOR, 6 SHELF	S9755	SUCTION SYSTEM, SURGICAL, MOBILE ROVER UNIT
M3150	DISTRIBUTION SYSTEM, MEDICATION, AUTOMATIC		
M3175	ELECTROSURGICAL UNIT, DUAL OUTPUT		
M4255	STAND IV		
M4266	PUMP, VOLUMETRIC, INFUSION, MULTIPLE LINE		
M4280	PUMP, PNEUMATIC STOCKING/CUFF		
M4287	IRRIGATION SYSTEM, SURGICAL		
M4645	PATIENT TRANSFER DEVICE		
M4815	HYPO/HYPERThERMIA UNIT, AUTOMATIC/MANUAL, MOBILE		
M4816	WARMING UNIT, PATIENT, AUTOMATIC/ MANUAL, AIR		



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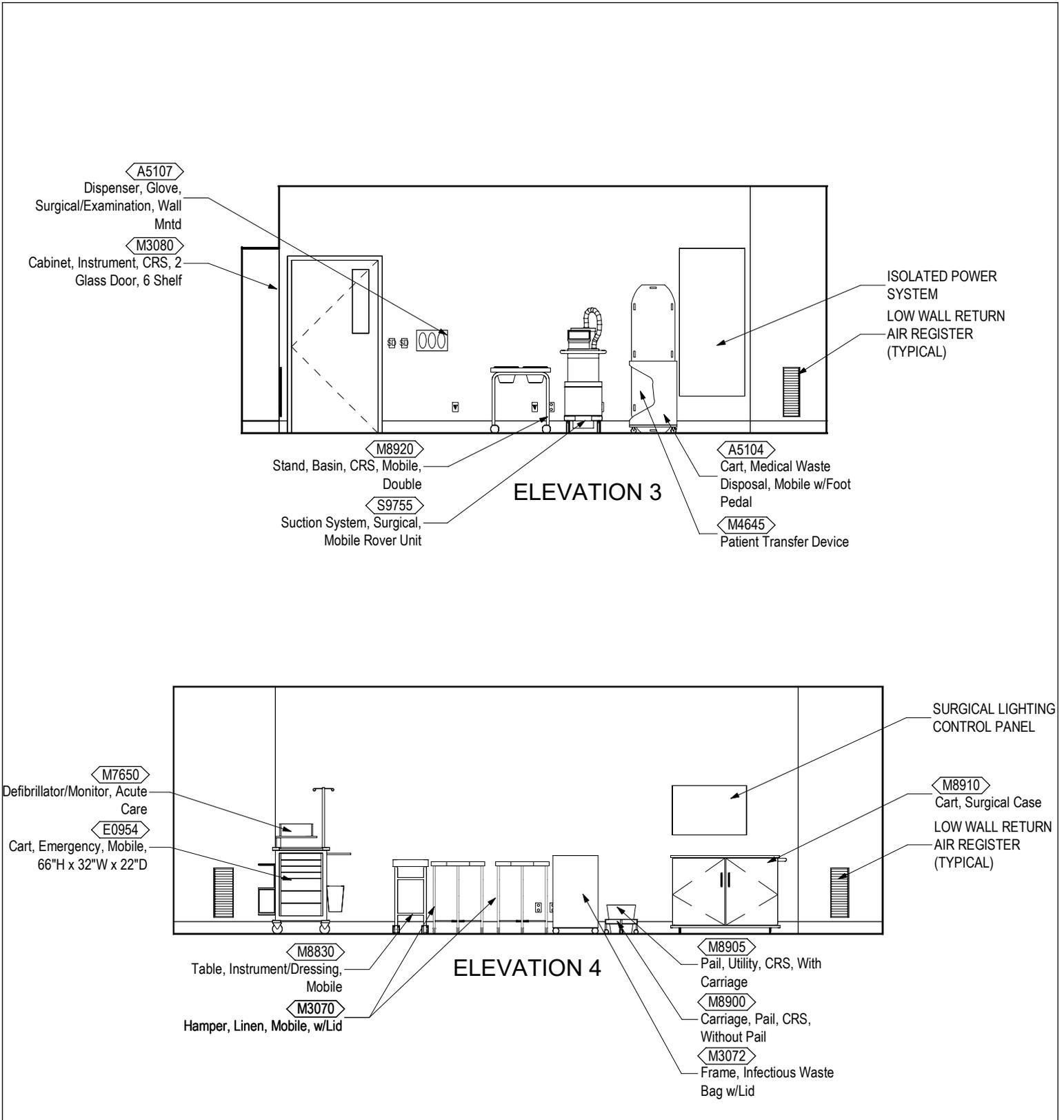
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SCALE: 3/16" = 1'-0"



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## 4.5 OPERATING ROOM, GENERAL (ORGS1)

### Room Data Sheet

#### ARCHITECTURAL

Ceiling Type:	Gypsum Wallboard (SC)
Ceiling Height:	10'-0" (3048 mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	RF Integral Base (min. 6"/152 mm)
Floor Finish:	Resinous Flooring (RF) Res 4
Slab Depression:	None
Sound Protection:	50 STC (to other room), 35 STC (to corridor)
Doors:	Double, Size 6'-0" x 7'-0" (1829 mm x 2133 mm) Wood w/ Narrow View Window; Single, Size 4'-0" x 7'-0" (1219 mm x 2133 mm) Wood w/ Small View Window

Special Requirement:

#### Notes:

- 1) Shielding is to be provided as it is determined by the Physicist on a per project basis.
- 2) Locate access panels as required to allow for the maintenance of surgical booms and lights in facilities without interstitial space. Min. size to be 24" x 24".
- 3) Cabinetry can be built in or free-standing.
- 4) Nominal wall thickness is shown at 8" (203 mm) to account for a variety of wall-mounted panels, such as isolation power unit panels, that require a thicker partition.
- 5) Include wall extensions at both sides of the scrub sink to protect the scrub sinks from cart and stretcher traffic in the semi-restricted corridor.
- 6) Coordinate structural supports, utility connections and other requirements for surgical lighting pendants with manufacturer.
- 7) Equipment and Anesthesia booms are duplicated to provide maximum flexibility. If duplicate booms are not desired, they can be

omitted subject to approval by clinical leadership.

8) Facility will select number and types of scopes and other instrumentation as necessitated by the unique case load.

9) Endoscopy equipment can be located on a cart or on the equipment boom.

10) NSF provided for this space is the minimal acceptable NSF; contact Facilities Standards Services for any deviations.

#### LIGHTING

Refer to the VA Lighting Design Manual section 4.2.13 - Surgery/Operating Room - for lighting design consideration.

#### POWER

Normal Power: Connect selected receptacles and equipment to Normal power IPS.

Emergency Power: Connect selected receptacles and equipment to Critical Branch emergency IPS.

#### Notes:

- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
- 2) IPS Power & ground modules mounted at +24" AFF
- 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
- 4) Provide power connections for articulating utility columns.

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	

Notes:

- 1) Provide connections for articulating utility columns.
- 2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Rooms data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization.

Notes:

- 1) Refer to the latest version of the VA HVAC Design Manual for quantity and location of low air return grilles and ceiling diffusers.

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	Yes
Medical Vacuum	Yes
Oxygen	Yes
Special Requirement:	

Notes:

- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen, Nitrous Oxide, Carbon Dioxide
- 2) For gas quantities per boom refer to the reflected ceiling plan.
- 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project
- 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.5 OPERATING ROOM, GENERAL (ORGS1)**Equipment List

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A1014	Telephone, Wall Mounted, 1 Line, With Speaker	1	V/V	Telephone, wall mounted, 1 line, with speaker.
A1120	Column, Service, Prefab, Surgical, Ceiling Mounted	1	C/C	Prefabricated surgical service column. Strong 18 gauge stainless steel shell ceiling mounted unit with the following services: oxygen, nitrous oxide, nitrogen, medical air, medical vacuum, gas evacuation, electrical outlets, monitoring connectors, and IV holders. Specify type of column (fixed or retractable) and number of outlets required for each service. Size will vary with number of service outlets required. Designed to be used in the operating room, recovery and ICU-CCU rooms.
A1122	Column, Equipment Arm, Ceiling Mounted, Surgery	3	C/C	A ceiling mounted retractable equipment arm for use in the OR. Designed to provide equipment placement support, power receptacles including low-voltage panels, gas outlets and flat screen mounting for a surgical suite. Unit will provide a range of motion of up to 330 degrees with arm providing additional vertical movement. Units are custom configured with multiple options available. Price is based on a unit with two (double) retractable arms. Also available are units for use in anesthesia, ICU and ER.
A1130	Cabinet, Control, Nitrogen	1	C/C	Nitrogen control cabinet. Unit consists of supply cut-off valve, supply pressure gauge, pressure regulator (adjustable 0 to 200 PSI), outlet pressure gauge, nitrogen outlet and connection to surgical gas column. Specify recessed or surface mounting. Designed for powering surgical pneumatic tools.
A1200	Lift System, Overhead, Patient Room	1	V/C	An overhead rail system specifically designed for patient lifting and movement for a single bed patient room. The system will consist of recessed or ceiling mounted primary and secondary rails, lift motor with rolling carriage, patient harness or seat, and a hand controller or control box with charger. System will facilitate lifting and movement of patient to and from bed to gurney, chair or other requirement. Minimum lift capability is 550 pounds. Custom design of track layout by manufacturer is essential to meet individual facility requirements.
A4015	Clock, Elapsed Time, Electric	1	C/C	Elapsed time digital electric clock. Single display time that can be used either as a clock or elapsed time indicator. Clock consists of buttons to set minutes, and hours for the time. For use in operating and delivery room, and medical service columns. Analog or digital displays may be provided as specified by the user.
A5104	Cart, Medical Waste Disposal, Mobile w/Foot Pedal	1	V/V	Mobile molded cart with foot pedal, to house 18-24 gal sharps disposal container. Lid lift or slide opens easily with foot-operated pedal. Lid may remain closed when not in use to reduce exposure to contents. Ergonomic handle is telescopic. Heavy containers can be removed from the side with minimal lifting. Meets requirements of OSHA 29 CFR 1910.130.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	2	V/V	Examination three (Small Medium, Large) glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Hardware not included, Option 3 powder coated steel.

## 4.5 ORGS1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A5108	Waste Disposal Unit, Sharps	2	V/V	A container for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
A5212	Bracket, Television, Wall-Mounted, Tilt/Angle	2	V/V	A wall mounted, tilt/angled TV bracket for 37" to 80" TVs. Mount will be a universal and VESA compliant unit with a load capacity of up to 130 lbs.
E0954	Cart, Emergency, Mobile, 66"H x 32"W x 22"D	1	V/V	THIS TYPICAL INCLUDES: 1 Cart body, style-A narrow, w/raised edge top 1 Accessory rail, side 1 Accessory rail, back 1 Defibrillator tray 1 IV pole 1 Breakaway bar 1 Flip-up shelf 1 Wastebasket 1 Oxygen tank holder 1 Electrical box-4 outlet 1 Cord wrap 4 Drawer, 3"H 3 Drawer, 6"H Drawer organizer bins.
F0355	Footstool, Straight	4	V/V	Step stool. Used to assist patients getting on and off exam or surgical tables. Fitted with electrically conductive rubber tips.
F3050	Whiteboard, Dry Erase	1	V/V	Whiteboard unit, approximately 36" H x 48" W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
F3200	Clock, Battery, 12" Diameter	1	V/V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
M0630	Anesthesia Apparatus, 3 Gas	1	V/V	Three gas anesthesia apparatus. Basic unit consists of steel cabinet with casters with one shallow, one medium, and one deep drawer, seven long scale eleven-inch flowmeters, five cylinder yokes, and telescoping absorber post. It includes two-canister model carbon dioxide absorber with inhalation and exhalation check valves, switch valve, switch valve elbow, sidearm Vernitrol, flow calculator, mounting kit, ventilator calculator, ventilator and an oxygen piping inlet. Also features nitrous oxide fail safe valve kit, aspirator kit, gas evacuator with vacuum and a flow meter safety cover. Used to dispense a mixture of gases during surgical procedures.
M0750	Flowmeter, Air, Connect w/50 PSI Supply	1	V/V	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Requires the appropriate adapter for connection to the wall outlet and fitting to connect to tubing. Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0755	Flowmeter, Oxygen, Low Flow	2	V/V	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Database pricing includes DISS fitting and DISS power outlet and wall adapter. Other fitting and adapter configurations are available.

## 4.5 ORGS1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M0765	Regulator, Vacuum	7	V/V	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required. To be used in delivery, neonatal, pediatrics or any area where suction is required. Database pricing reflects continuous regulators graduated to 200 mm Hg with a full line vacuum selection switch and DISS configured inlets and outlets.
M1801	Computer, Microprocessing, w/Flat Panel Monitor	2	V/V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
M3070	Hamper, Linen, Mobile, w/Lid	2	V/V	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters. For linen transport in hospitals and clinics.
M3072	Frame, Infectious Waste Bag w/Lid	1	V/V	Frame for an infectious waste collection bag. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Adjust to hold 18" or 25" trash bags. Mounted on ball bearing casters and includes permanently mounted hinged lid. Provides means of bagging infectious waste at point of waste generation.
M3080	Cabinet, Instrument, CRS, 2 Glass Door, 6 Shelf	2	V/V	Non-magnetic stainless steel instrument cabinet with two glass doors and six shelves (five adjustable). Cabinet body has a single storage compartment and seamless welded face. Shelf heights are adjustable on full length perforated strips mounted to the back and inside front cabinet corners. Cabinet is mounted on glides or casters. Cabinet may be covered by a sloping top.
M3150	Distribution System, Medication, Automatic	1	V/V	An automated dispensing system that provides controlled dispensing, inventory and security. Size and cost will vary dependent on number of modules selected.
M3175	Electrosurgical Unit, Dual Output	1	V/V	Dual output electrosurgical unit. Solid state power source with foot switch jacks, monopolar and bipolar outputs, and four independent modes of operation. Used in the operating room or surgicenter as an alternative to the scalpel for cutting tissue.
M4255	Stand, IV, Adjustable	3	V/V	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.
M4266	Pump, Volumetric, Infusion, Multiple Line	3	V/V	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.
M4280	Pump, Pneumatic Stocking/Cuff	1	V/V	Pneumatic stocking/cuff pump. Pump provides alternating pressure to pneumatic stockings for reduction of the threat of deep vein thrombophlebitis in post operative patients. May also be used in the CCU for rotating cuff therapy for reduction of peripheral circulation in congestive heart failure patients.
M4287	Irrigation System, Surgical	1	V/V	High flow surgical irrigation pump up to 2.5l/min, available in single and double flow.

## 4.5 ORGS1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M4645	Patient Transfer Device	1	V/V	A patient transfer board designed to make lateral patient transfers safer for staff and be more comfortable for the patients. The board uses a smooth, low friction and static free surface to eliminate the need for metal rollers. The board has a soft foam core that makes them lightweight for ease of use and storage. The long board device also enables the transfer of a patient in the seated or Fowler position. The boards come in three sizes with the long board being foldable. The dimensions and price are for the long wide board.
M4815	Hypo/Hyperthermia Unit, Automatic/Manual, Mobile	1	V/V	Automatic/manual hypo/hyperthermia unit. Sealed refrigeration system. Microprocessor controlled with multiple alarm system constantly monitoring temperature and water levels. Cabinet type unit. Designed to regulate body temperature by application of water-filled hypothermia blankets.
M4816	Warming Unit, Patient, Automatic/Manual, Air	1	V/V	Automatic/manual patient warming unit. Unit delivers a flow of warmed air through a perforated plastic blanket. Used primarily for postoperative patients to speed recovery of normal body temperature.
M5030	Stool, Surgeon, Revolving	2	V/V	Revolving stool. Consists of a padded upholstered seat with height adjustment. Unit rotates and is mounted on ball bearing swivel casters. Designed for use in examinations, treatment, and surgical procedures.
M5512	Laser, Smoke Evacuator	1	V/V	Filtration system used in conjunction with laser operations to remove surgical laser plume. The unit includes a pneumatic foot switch, disposable 0.12 micron HEPA primary filters, a secondary 0.12 micron ULPA/carbon filter, disposable funnels, reducer fittings and connector hoses.
M7490	Light, Surg, Ceiling Mtd, Dual, Unequal Dia Heads	2	V/C	Dual head surgical light ceiling mounted from a single pole. Unit has two lamp heads of differing sizes mounted on individual swing arms. Unit features multiple lighting pods in each lamp head, deep cavity illumination, color-corrected light, intensity control and sterilizable handles. Refer to the manufacturers' specifications for minimum ceiling heights and installation data. The database height dimension below refers to the height of the lamp head itself. The width and depth measurements are the larger of the two sums of the swing arm length and the head diameter. For use in general purpose surgical suites.
M7650	Defibrillator/Monitor, Acute Care	1	V/V	Portable defibrillator/monitor for acute care includes biphasic defibrillator, pacing, SPO2, Interpretive 12-lead, NIBP monitoring, EtCO2 monitoring, Invasive pressure monitoring, Vital Sign monitoring, temperature probe, Fax transmission, PCMCIA Data Cards, Paddle accessories, and a color LCD.
M7801	Monitor, Medical Grade 26 - 42"	4	V/V	LED HD monitor capable of displaying medical grade images. Monitor's size is 26-42".
M7802	Monitor, Medical Grade 55-65"	2	V/V	LED HD monitor capable of displaying medical grade images. Monitor' size is 55 - 65".
M7845	Monitor, Physiological, Bedside, 4 Channel	1	V/V	4 channel bedside physiological monitor. The unit consist of a four-channel non-fade monochrome display monitor, an alarm system and printer-recording capabilities. The monitor has color coded controls and automatic calibration. The unit displays up to four waveforms simultaneously. The parameters to be monitored are user selectable. The monitor may be connected to a central monitoring station. The unit monitors patients in most acute care areas, step-down units, procedure rooms and emergency rooms.

## 4.5 ORGS1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M8551	Light Source, Fiberoptic Headlamp	1	V/V	Fiberoptic light source for surgical headlamps. This unit provides color corrected light for surgical procedures where photography is not required.
M8606	Endoscopy Cart, Fiberoptic, w/Video Accessories	1	V/V	Endoscopy cart with video and print capabilities for use with fiberoptic (direct vision) endoscopes. This cart does not work with videoscopes. System takes optical images from a single endoscope and directly records them or converts them to digital signals for recording. A typical system cart includes the cart, a light source, an insufflator, a suction unit, a heat probe unit, an electrosurgical apparatus, a digital camera converter or color video camera, a camera controller, a monitor, a video/DVD recorder and a color printer. This JSN does not include the endoscope; refer to the endoscopes at JSNs M8500-M8550. Each cart can support one or more types of endoscope and should be specifically tailored to its intended use(s). This cart can be configured to interface with a network endoscopy information management system; refer to JSN M8600. Database physical information and pricing is for a higher cost system containing one of each of the above components.
M8800	Cart, Anesthesia	1	V/V	Mobile anesthesia cart. The cart shall be built of stainless steel or other appropriate material and mounted on 4" casters for easy mobility. It shall be capable of being equipped with bottle holders, adjustable IV pole, storage drawers, shelves and a top bar/rail.
M8810	Stand, Mayo	1	V/V	Adjustable instrument table. Table is corrosion resistant stainless steel construction and is mounted on two casters with two skid rails. It has telescopic upright adjusts from 39 inches to 60 inches with automatic locking device, and removable 13"x19" instrument tray. Designed for use in operating and procedure rooms.
M8825	Table, Instrument/Dressing, CRS, approx. 36x20x34	2	V/V	Instrument and dressing table. Made of corrosion resistant stainless steel with a sound deadened top. Includes guard rail, shelf and two side-by-side drawers. The table is mounted on swivel, ball-bearing casters.
M8830	Table, Instrument/Dressing, Mobile	1	V/V	Mobile instrument/dressing table, approximately 34" H x 20" W x 16" D Corrosion resistant stainless steel mobile table with sound-deadening shelf and drawer. Unit is mounted on 2" casters. Designed for all purpose use in the hospital or clinic.
M8840	Table, Back, Instrument/Dressing	1	V/V	A specialty back table for large cases such as orthopedics, spinal fusions, neuro and craniotomies. The table has a pneumatic tuck-away cantilevered shelf which can hold multiple trays and is angled for clear observation of instruments. It comes with 4" diameter heavy-duty ball bearing brake/swivel casters. Construction is all stainless steel.
M8900	Carriage, Pail, CRS, Without Pail	2	V/V	Carriage, pail (kick bucket) CRS. Consists of a stainless steel ring type carriage mounted on ball bearing casters. Includes circular non-marring bumper. For use in the surgical operating room.
M8905	Pail, Utility, CRS, With Carriage	2	V/V	Utility pail (kick bucket). Shall be a stainless steel 12 quart bucket for use in surgical operating rooms.
M8910	Cart, Surgical Case	2	V/V	Surgical case cart. Unit consists of two hinged cabinet sections, each section equipped with two pull-out shelves with stops. The entire unit is mounted on four heavy duty conductive swivel casters. Used to transport surgical packs and supplies to surgery and soiled items back to central supply.
M8920	Stand, Basin, CRS, Mobile, Double	2	V/V	CRS, mobile, double basin stand with shelf. Stainless steel corrosion resistant frame constructed from two continuous inverted "U" shaped tubes, forming four legs and mounted on casters. Circular rings welded to top receive two removable 8 quart stainless steel basins. For open heart and other procedures.

## 4.5 ORGS1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M8925	Stand, Basin, CRS, Mobile, Single	1	V/V	Mobile single basin stand with shelf. The stand shall be constructed of tubular stainless steel and mounted on 2" swivel casters. Shall include a shelf and an 8 quart stainless steel basin. Intended for use in ORs and treatment areas.
M8940	Stool, Anesthesia, With Back	2	V/V	Anesthesia stool with back. All stainless steel with well-curved back panel and wide conductive seat. Designed for the anesthesiologist during surgical procedures.
M8950	Warmer, Blood	2	V/V	Unit consists of a temperature regulated water bath, circulating fluid, or dry heat with controls and an audible high temperature alarm. The warmer provides a stable environment for the controlled warming of blood or other fluids prior to being transfused to a patient.
M8970	Warmer, Blood, High Volume	1	V/V	Unit contains a proportional controller to regulate temperature in the heat exchanger and an audible high temperature alarm. Designed to provide a stable temperature for the controlled warming of blood or other fluids prior to being transfused to a patient. Unit may be a cuff type or circulating water heat exchanger.
M9110	Table, Operating, 5 or 6 Section, Trauma	1	V/V	Pedestal type, 5 or 6 section, operating table. Pedestal table, mounted on a solid base with casters and locks. Table top surface is fabricated from radio-translucent and conductive panels and is equipped with cassette tunnels in each of the table top sections. Table includes: Electro-hydraulic controls, side rail locking system, grounding receptacle and dual arm support section. It is designed for use in the operating room in a variety of surgical procedures. Table is configured to address the needs of trauma surgery.
S9755	Suction System, Surgical, Mobile Rover Unit	1	V/V	Surgical fluid waste management system with powered IV pole and smoke evacuation. Portable waste collection unit, for use with Docking Station (specified separately). Dual canisters (one 4L and one 20L), two levels of suction: 2-21in/Hg, fluid readout, 3 different port sizes for smoke tubing.



# SURGICAL AND ENDOVASCULAR SERVICES (OROS1) OPERATING ROOM, ORTHOPEDIC AXONOMETRIC

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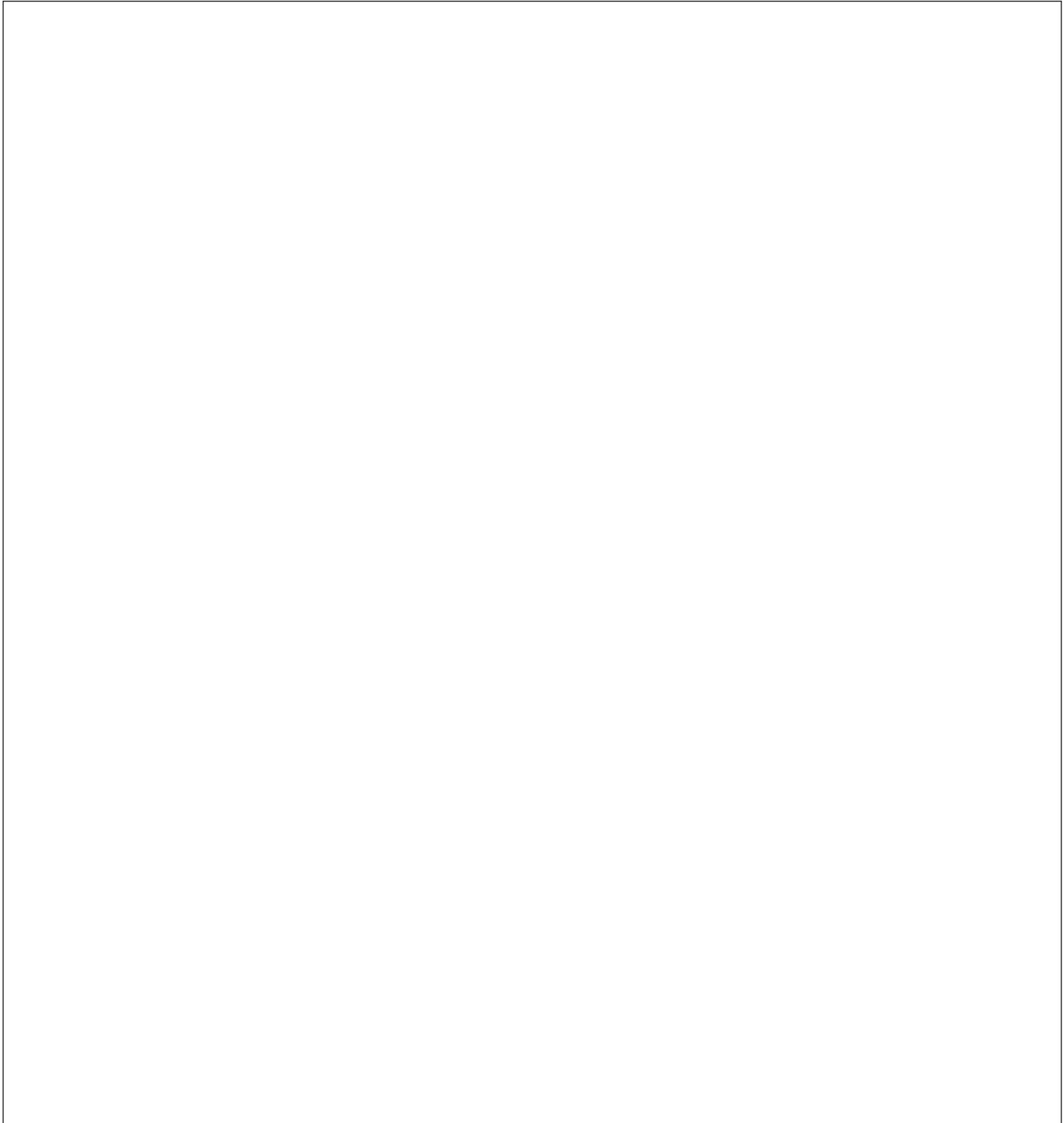


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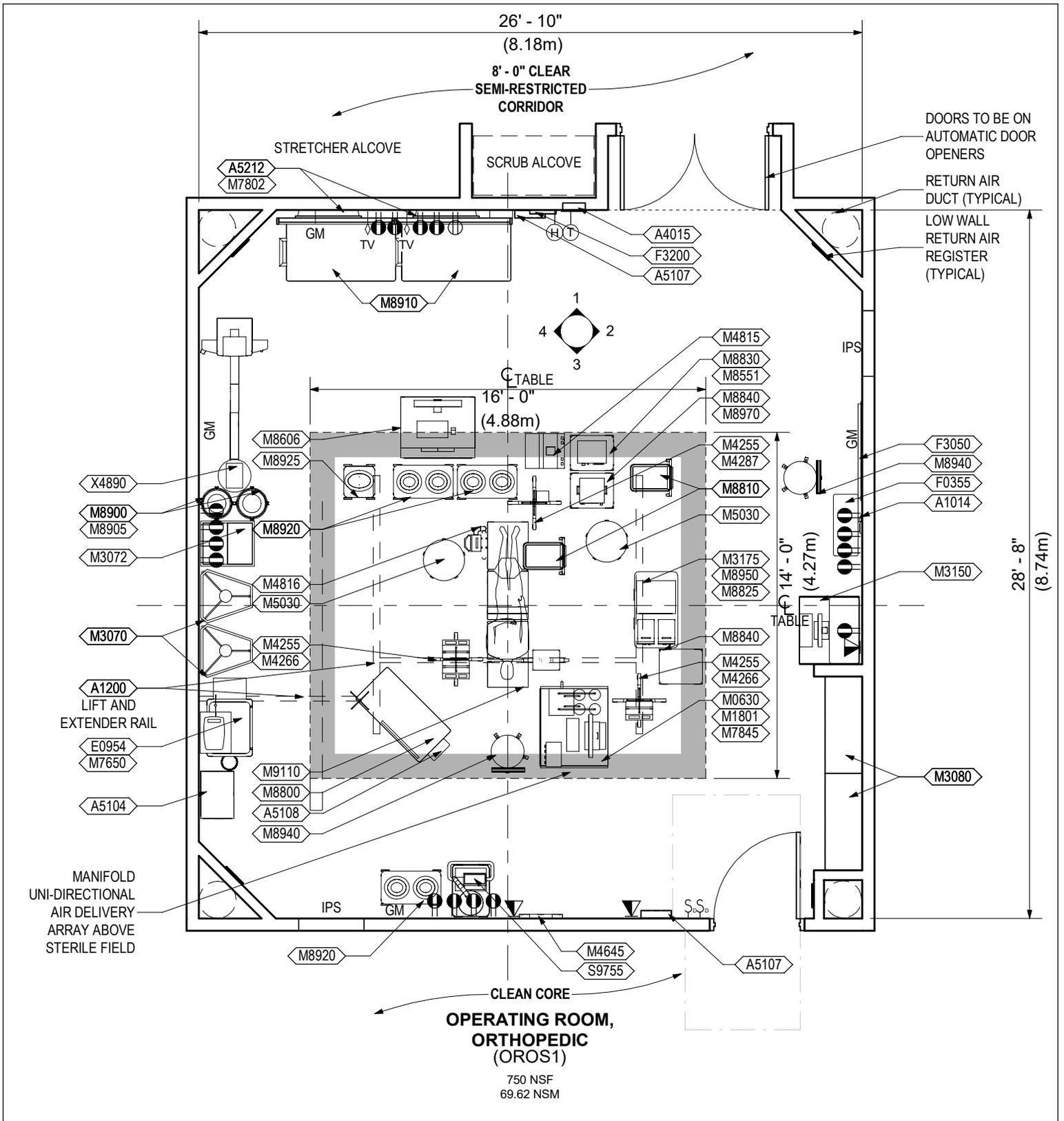
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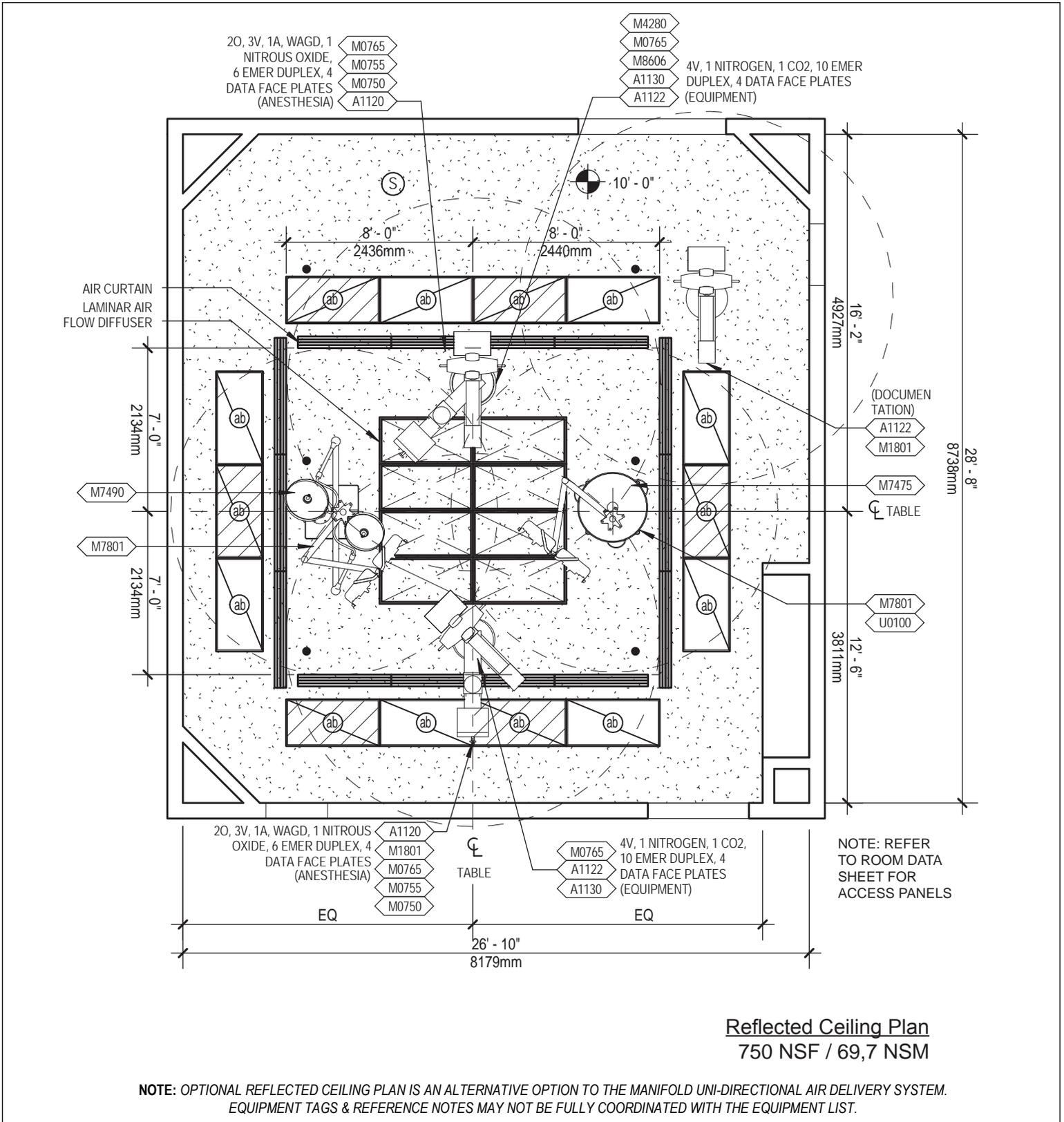




SURGICAL AND ENDOVASCULAR SERVICES  
(OROS1) OPERATING ROOM, ORTHOPEDIC  
REFLECTED CEILING PLAN (ALTERNATE OPTION)

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**Reflected Ceiling Plan**  
750 NSF / 69,7 NSM

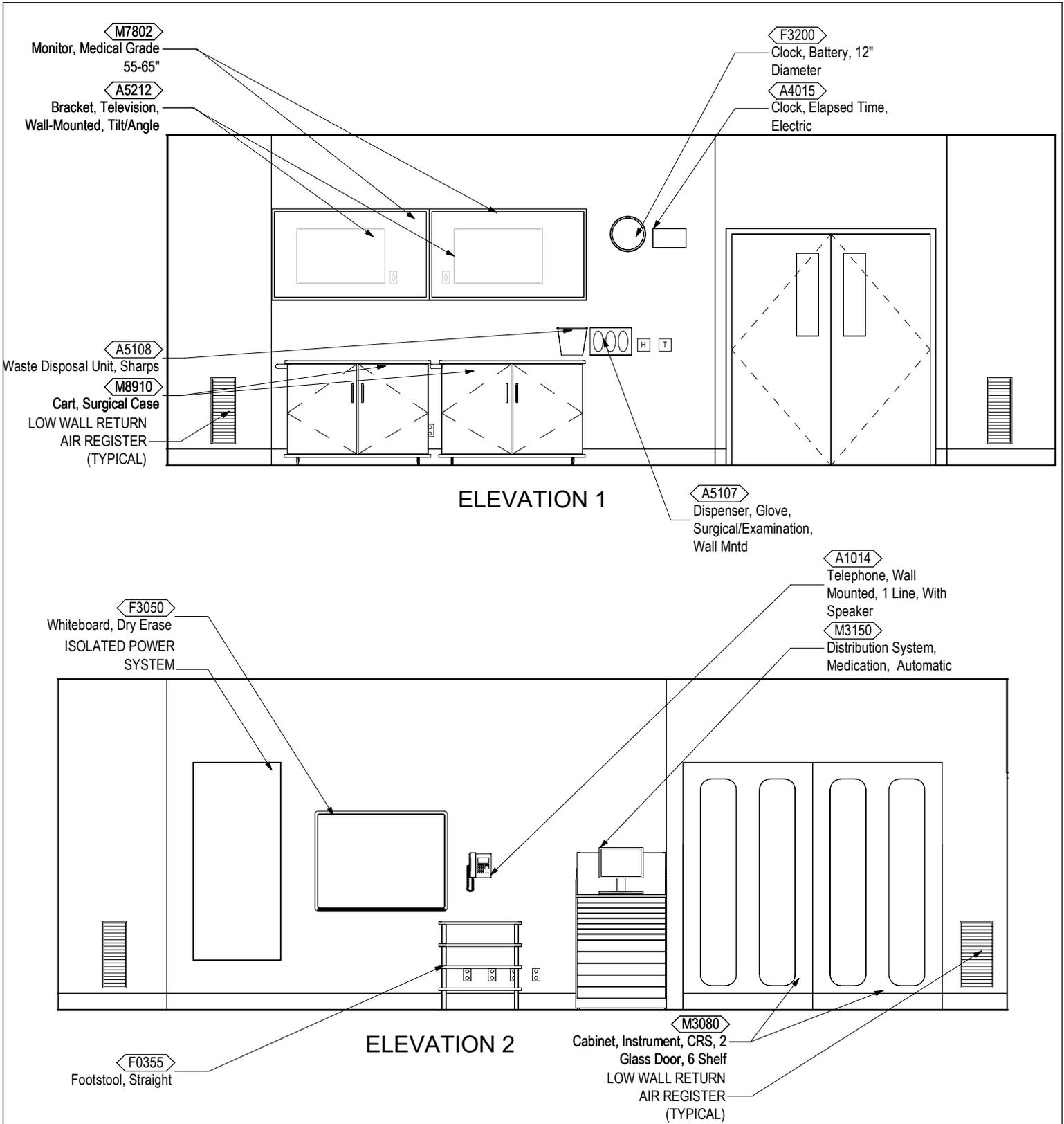
**NOTE: OPTIONAL REFLECTED CEILING PLAN IS AN ALTERNATIVE OPTION TO THE MANIFOLD UNI-DIRECTIONAL AIR DELIVERY SYSTEM. EQUIPMENT TAGS & REFERENCE NOTES MAY NOT BE FULLY COORDINATED WITH THE EQUIPMENT LIST.**

**4.6. OPERATING ROOM, ORTHOPEDIC (OROS1)**JSN Legend

JSN	DESCRIPTION	M4816	WARMING UNIT, PATIENT, AUTOMATIC/MANUAL, AIR
A1014	TELEPHONE, WALL MOUNTED, 1 LINE, WITH SPEAKER	M5030	STOOL, SURGEON, REVOLVING
A1120	COLUMN, SERVICE, PREFAB, SURGICAL, CEILING MOUNTED	M5512	LASER, SMOKE EVACUATOR
A1122	COLUMN, EQUIPMENT ARM, CEILING MOUNTED, SURGERY	M7490	LIGHT, SURG, CEILING MTD, DUAL, UNEQUAL DIA HEADS
A1130	CABINET, CONTROL, NITROGEN	M7650	DEFIBRILLATOR/ MONITOR ACUTE CARE
A1200	LIFT SYSTEM, OVERHEAD, PATIENT RM	M7801	MONITOR, MEDICAL GRADE, 26" - 42"
A4015	CLOCK, ELAPSED TIME, ELECTRIC	M7802	MONITOR, MEDICAL GRADE, 55" - 65"
A5104	CART, WASTE DISPOSAL, MOBILE W/FOOT PEDAL	M7845	MONITOR, PHYSIOLOGICAL, BEDSIDE, 4 CHANNEL
A5107	DISPENSER, GLOVE, SURGICAL/ EXAMINATION, WALL-MTD	M8551	LIGHT SOURCE, FIBEROPTIC HEADLAMP
A5108	WASTE DISPOSAL UNIT, SHARPS	M8606	ENDOSCOPY CART, FIBEROPTIC, W/VIDEO ACCESSORIES
A5212	BRACKET, TELEVISION WALL MTD, TILT/ANGLE	M8800	CART, ANESTHESIA
E0954	CART, EMERGENCY, MOBILE, 66"H x 32"W x 22"D	M8810	STAND, MAYO
F0355	FOOTSTOOL, STRAIGHT	M8825	TABLE, INSTRUMENT/DRESSING, CRS, APPROX 36x20x34
F3050	WHITE BOARD, DRY ERASE	M8830	TABLE, INSTRUMENT/DRESSING
F3200	CLOCK, BATTERY, 12" DIAMETER	M8840	TABLE, BACK, INSTRUMENT/DRESSING
M0630	ANESTHESIA APPARATUS, 3 GAS	M8900	CARRIAGE, PAIL, CRS, WITHOUT PAIL
M0750	FLOWMETER, AIR, CONNECT W/ 50 PSI SUPPLY	M8905	PAIL, UTILITY, CRS, WITH CARRIAGE
M0755	FLOWMETER, OXYGEN, LOW FLOW	M8910	CART, SURGICAL CASE
M0765	REGULATOR, VACUUM	M8920	STAND, BASIN, CRS, MOBILE, DOUBLE
M1801	COMPUTER, MICROPROCESSING, W/ FLAT PANEL MONITOR	M8925	STAND, BASIN, CRS, MOBILE, SINGLE
M3070	HAMPER, LINEN, MOBILE, W/LID	M8940	STOOL, ANESTHESIA, WITH BACK
M3072	FRAME, INFECTIOUS WASTE BAG W/LID	M8950	WARMER, BLOOD
M3080	CABINET, INSTRUMENT, CRS, 2 GLASS DOOR, 6 SHELF	M8970	WARMER, BLOOD, HIGH VOLUME
M3150	DISTRIBUTION SYSTEM, MEDICATION, AUTOMATIC	M9110	TABLE, OPERATING, 5 OR 6 SECTION, TRAUMA
M3175	ELECTROSURGICAL UNIT, DUAL OUTPUT	S9755	SUCTION SYSTEM, SURGICAL, MOBILE ROVER UNIT
M4255	STAND IV, ADJUSTABLE	X4890	RAD/FLUORO UNIT, DIGITAL, MOBILE, C-ARM
M4266	PUMP, VOLUMETRIC, INFUSION, MULTIPLE LINE		
M4280	PUMP, PNEUMATIC STOCKING/CUFF		
M4287	IRRIGATION SYSTEM, SURGICAL		
M4645	PATIENT TRANSFER DEVICE		
M4815	HYPO/HYPERTHERMIA UNIT, AUTOMATIC/MANUAL, MOBILE		

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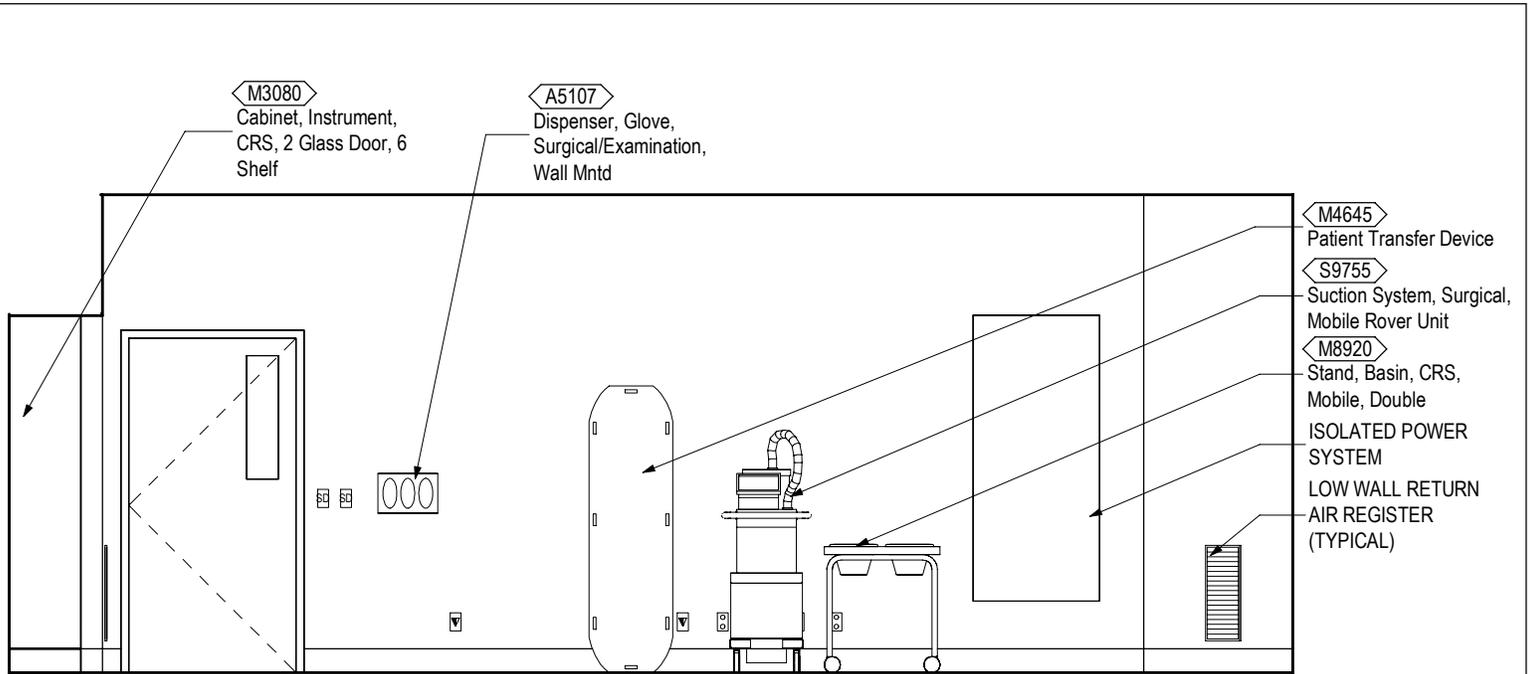
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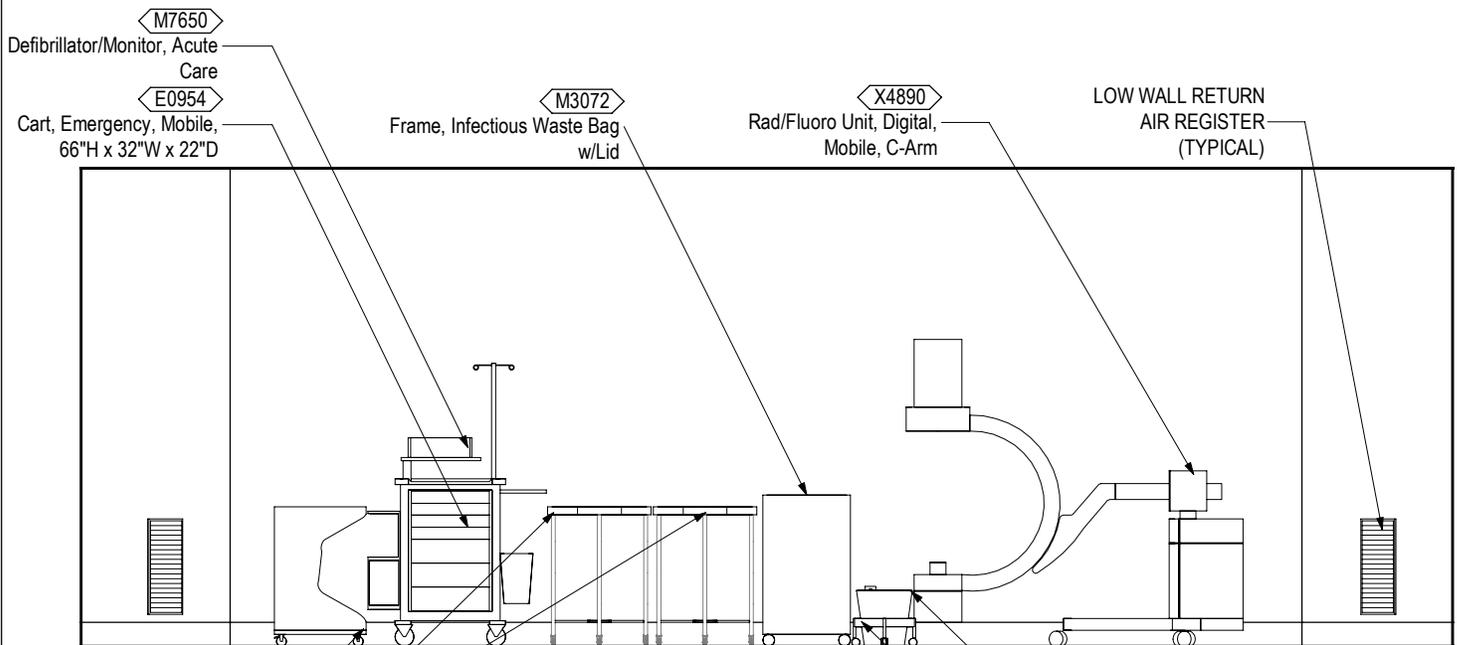
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ELEVATION 3



ELEVATION 4

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## 4.6 OPERATING ROOM, ORTHOPEDIC (OROS1)

### Room Data Sheet

#### ARCHITECTURAL

Ceiling Type:	Gypsum Wallboard (SC)
Ceiling Height:	10'-0" (3048 mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	RF Integral Base (min. 6"/152 mm)
Floor Finish:	Resinous Flooring
Slab Depression:	None
Sound Protection:	50 STC (to other room), 35 STC (to corridor)
Doors:	Double, Size 6'-0" x 7'-0" (1829 mm x 2133 mm) Wood w/ Narrow View Window; Single, Size 4'-0" x 7'-0" (1219 mm x 2133 mm) Wood w/ Small View Window

Special Requirement:

#### Notes:

- 1) Shielding is to be provided as it is determined by the Physicist on a per project basis.
- 2) Locate access panels as required to allow for the maintenance of surgical booms and lights in facilities without interstitial space. Min. size to be 24" x 24".
- 3) Cabinetry can be built in or free-standing.
- 4) Nominal wall thickness is shown at 8" (203 mm) to account for a variety of wall-mounted panels, such as isolation power unit panels, that require a thicker partition.
- 5) Include wall extensions at both sides of the scrub sink to protect the scrub sinks from cart and stretcher traffic in the semi-restricted corridor.
- 6) Coordinate structural supports, utility connections and other requirements for surgical lighting pendants with manufacturer.
- 7) Equipment and Anesthesia booms are duplicated to provide maximum flexibility. If duplicate booms are not desired, they can be

omitted subject to approval by clinical leadership.

8) Facility will select number and types of scopes and other instrumentation as necessitated by the unique case load.

9) Endoscopy equipment can be located on a cart or on the equipment boom.

10) NSF provided for this space is the minimal acceptable NSF; contact Facilities Standards Services for any deviations.

#### LIGHTING

Refer to the VA Lighting Design Manual section 4.2.13 - Surgery/Operating Room - for lighting design consideration.

#### POWER

Normal Power: Connect selected receptacles and equipment to Normal power IPS.

Emergency Power: Connect selected receptacles and equipment to Critical Branch emergency IPS.

#### Notes:

- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
- 2) IPS Power & ground modules mounted at +24" AFF
- 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
- 4) Provide power connections for articulating utility columns.

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Conferencing (VTEL):	No
Special Requirement:	

Notes:

- 1) Provide connections for articulating utility columns.
- 2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization

Notes:

- 1) Refer to the HVAC Design Manual for number and location of low air return grilles and ceiling diffusers.

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Drain:	No
Reagent Grade Water:	No
Medical Air	Yes
Medical Vacuum	Yes
Oxygen	Yes
Special Requirement:	

Notes:

- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen, Nitrous Oxide, Carbon Dioxide.
- 2) For gas quantities per boom refer to the reflected ceiling plan.
- 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project.
- 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.6 OPERATING ROOM, ORTHOPEDIC (OROS1)**Equipment List

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A1014	Telephone, Wall Mounted, 1 Line, With Speaker	1	V/V	Telephone, wall mounted, 1 line, with speaker.
A1120	Column, Service, Prefab, Surgical, Ceiling Mounted	2	C/C	Prefabricated surgical service column. Strong 18 gauge stainless steel shell ceiling mounted unit with the following services: oxygen, nitrous oxide, nitrogen, medical air, medical vacuum, gas evacuation, electrical outlets, monitoring connectors, and IV holders. Specify type of column (fixed or retractable) and number of outlets required for each service. Size will vary with number of service outlets required. Designed to be used in the operating room, recovery and ICU-CCU rooms.
A1122	Column, Equipment Arm, Ceiling Mounted, Surgery	3	C/C	A ceiling mounted retractable equipment arm for use in the OR. Designed to provide equipment placement support, power receptacles including low-voltage panels, gas outlets and flat screen mounting for a surgical suite. Unit will provide a range of motion of up to 330 degrees with arm providing additional vertical movement. Units are custom configured with multiple options available. Price is based on a unit with two (double) retractable arms. Also available are units for use in anesthesia, ICU and ER.
A1130	Cabinet, Control, Nitrogen	2	C/C	Nitrogen control cabinet. Unit consists of supply cut-off valve, supply pressure gauge, pressure regulator (adjustable 0 to 200 PSI), outlet pressure gauge, nitrogen outlet and connection to surgical gas column. Specify recessed or surface mounting. Designed for powering surgical pneumatic tools.
A1200	Lift System, Overhead, Patient Room	1	V/C	An overhead rail system specifically designed for patient lifting and movement for a single bed patient room. The system will consist of recessed or ceiling mounted primary and secondary rails, lift motor with rolling carriage, patient harness or seat, and a hand controller or control box with charger. System will facilitate lifting and movement of patient to and from bed to gurney, chair or other requirement. Minimum lift capability is 550 pounds. Custom design of track layout by manufacturer is essential to meet individual facility requirements.
A4015	Clock, Elapsed Time, Electric	1	C/C	Elapsed time digital electric clock. Single display time that can be used either as a clock or elapsed time indicator. Clock consists of buttons to set minutes, and hours for the time. For use in operating and delivery room, and medical service columns. Analog or digital displays may be provided as specified by the user.
A5104	Cart, Medical Waste Disposal, Mobile w/Foot Pedal	1	V/V	Mobile molded cart with foot pedal, to house 18-24 gal sharps disposal container. Lid lift or slide opens easily with foot-operated pedal. Lid may remain closed when not in use to reduce exposure to contents. Ergonomic handle is telescopic. Heavy containers can be removed from the side with minimal lifting. Meets requirements of OSHA 29 CFR 1910.130.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	2	V/V	Examination three (Small Medium, Large) glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Hardware not included, Option 3 powder coated steel.

## 4.6 OROS1

JSN	NAME	QTY	ACO/INS	DESCRIPTION
A5108	Waste Disposal Unit, Sharps	2	V/V	A container for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
A5212	Bracket, Television, Wall-Mounted, Tilt/Angle	2	V/V	A wall mounted, tilt/angled TV bracket for 37" to 80" TVs. Mount will be a universal and VESA compliant unit with a load capacity of up to 130 lbs.
E0954	Cart, Emergency, Mobile, 66"H x 32"W x 22"D	1	V/V	THIS TYPICAL INCLUDES: 1 Cart body, style-A narrow, w/raised edge top 1 Accessory rail, side 1 Accessory rail, back 1 Defibrillator tray 1 IV pole 1 Breakaway bar 1 Flip-up shelf 1 Wastebasket 1 Oxygen tank holder 1 Electrical box-4 outlet 1 Cord wrap 4 Drawer, 3"H 3 Drawer, 6"H Drawer organizer bins.
F0355	Footstool, Straight	4	V/V	Step stool. Used to assist patients getting on and off exam or surgical tables. Fitted with electrically conductive rubber tips.
F3050	Whiteboard, Dry Erase	1	V/V	Whiteboard unit, approximately 36" H x 48" W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
F3200	Clock, Battery, 12" Diameter	1	V/V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
M0630	Anesthesia Apparatus, 3 Gas	1	V/V	Three gas anesthesia apparatus. Basic unit consists of steel cabinet with casters with one shallow, one medium, and one deep drawer, seven long scale eleven-inch flowmeters, five cylinder yokes, and telescoping absorber post. It includes two-canister model carbon dioxide absorber with inhalation and exhalation check valves, switch valve, switch valve elbow, sidearm Vernitrol, flow calculator, mounting kit, ventilator calculator, ventilator and an oxygen piping inlet. Also features nitrous oxide fail safe valve kit, aspirator kit, gas evacuator with vacuum and a flow meter safety cover. Used to dispense a mixture of gases during surgical procedures.
M0750	Flowmeter, Air, Connect w/50 PSI Supply	2	V/V	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Requires the appropriate adapter for connection to the wall outlet and fitting to connect to tubing. Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0755	Flowmeter, Oxygen, Low Flow	4	V/V	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Database pricing includes DISS fitting and DISS power outlet and wall adapter. Other fitting and adapter configurations are available.

## 4.6 OROS1

JSN	NAME	QTY	ACO/INS	DESCRIPTION
M0765	Regulator, Vacuum	14	V/V	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required. To be used in delivery, neonatal, pediatrics or any area where suction is required. Database pricing reflects continuous regulators graduated to 200 mm Hg with a full line vacuum selection switch and DISS configured inlets and outlets.
M1801	Computer, Microprocessing, w/Flat Panel Monitor	2	V/V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
M3070	Hamper, Linen, Mobile, w/Lid	2	V/V	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters. For linen transport in hospitals and clinics.
M3072	Frame, Infectious Waste Bag w/Lid	1	V/V	Frame for an infectious waste collection bag. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Adjust to hold 18" or 25" trash bags. Mounted on ball bearing casters and includes permanently mounted hinged lid. Provides means of bagging infectious waste at point of waste generation.
M3080	Cabinet, Instrument, CRS, 2 Glass Door, 6 Shelf	2	V/V	Non-magnetic stainless steel instrument cabinet with two glass doors and six shelves (five adjustable). Cabinet body has a single storage compartment and seamless welded face. Shelf heights are adjustable on full length perforated strips mounted to the back and inside front cabinet corners. Cabinet is mounted on glides or casters. Cabinet may be covered by a sloping top.
M3150	Distribution System, Medication, Automatic	1	V/V	An automated dispensing system that provides controlled dispensing, inventory and security. Size and cost will vary dependent on number of modules selected.
M3175	Electrosurgical Unit, Dual Output	1	V/V	Dual output electrosurgical unit. Solid state power source with foot switch jacks, monopolar and bipolar outputs, and four independent modes of operation. Used in the operating room or surgicenter as an alternative to the scalpel for cutting tissue.
M4255	Stand, IV, Adjustable	3	V/V	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.
M4266	Pump, Volumetric, Infusion, Multiple Line	3	V/V	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.
M4280	Pump, Pneumatic Stocking/Cuff	1	V/V	Pneumatic stocking/cuff pump. Pump provides alternating pressure to pneumatic stockings for reduction of the threat of deep vein thrombophlebitis in post operative patients. May also be used in the CCU for rotating cuff therapy for reduction of peripheral circulation in congestive heart failure patients.

## 4.6 OROS1

JSN	NAME	QTY	ACO/INS	DESCRIPTION
M4287	Irrigation System, Surgical	1	V/V	High flow surgical irrigation pump up 2.5l/min, available in single and double flow.
M4645	Patient Transfer Device	1	V/V	A patient transfer board designed to make lateral patient transfers safer for staff and be more comfortable for the patients. The board uses a smooth, low friction and static free surface to eliminate the need for metal rollers. The board has a soft foam core that makes them lightweight for ease of use and storage. The long board device also enables the transfer of a patient in the seated or Fowler position. The boards come in three sizes with the long board being foldable. The dimensions and price are for the long wide board.
M4815	Hypo/Hyperthermia Unit, Automatic/Manual, Mobile	1	V/V	Automatic/manual hypo/hyperthermia unit. Sealed refrigeration system. Microprocessor controlled with multiple alarm system constantly monitoring temperature and water levels. Cabinet type unit. Designed to regulate body temperature by application of water-filled hypothermia blankets.
M4816	Warming Unit, Patient, Automatic/Manual, Air	1	V/V	Automatic/manual patient warming unit. Unit delivers a flow of warmed air through a perforated plastic blanket. Used primarily for postoperative patients to speed recovery of normal body temperature.
M5030	Stool, Surgeon, Revolving	2	V/V	Revolving stool. Consists of a padded upholstered seat with height adjustment. Unit rotates and is mounted on ball bearing swivel casters. Designed for use in examinations, treatment, and surgical procedures.
M5512	Laser, Smoke Evacuator	1	V/V	Filtration system used in conjunction with laser operations to remove surgical laser plume. The unit includes a pneumatic foot switch, disposable 0.12 micron HEPA primary filters, a secondary 0.12 micron ULPA/carbon filter, disposable funnels, reducer fittings and connector hoses.
M7490	Light, Surg, Ceiling Mtd, Dual, Unequal Dia Heads	2	V/C	Dual head surgical light ceiling mounted from a single pole. Unit has two lamp heads of differing sizes mounted on individual swing arms. Unit features multiple lighting pods in each lamp head, deep cavity illumination, color-corrected light, intensity control and sterilizable handles. Refer to the manufacturers' specifications for minimum ceiling heights and installation data. The database height dimension below refers to the height of the lamp head itself. The width and depth measurements are the larger of the two sums of the swing arm length and the head diameter. For use in general purpose surgical suites.
M7650	Defibrillator/Monitor, Acute Care	1	V/V	Portable defibrillator/monitor for acute care includes biphasic defibrillator, pacing, SPO2, Interpretive 12-lead, NIBP monitoring, EtCO2 monitoring, Invasive pressure monitoring, Vital Sign monitoring, temperature probe, Fax transmission, PCMCIA Data Cards, Paddle accessories, and a color LCD.
M7801	Monitor, Medical Grade 26 - 42"	4	V/V	LED HD monitor capable of displaying medical grade images. Monitor's size is 26-42".
M7802	Monitor, Medical Grade 55-65"	2	V/V	LED HD monitor capable of displaying medical grade images. Monitor' size is 55 - 65".

## 4.6 OROS1

JSN	NAME	QTY	ACO/INS	DESCRIPTION
M7845	Monitor, Physiological, Bedside, 4 Channel	1	V/V	4 channel bedside physiological monitor. The unit consist of a four-channel non-fade monochrome display monitor, an alarm system and printer-recording capabilities. The monitor has color coded controls and automatic calibration. The unit displays up to four waveforms simultaneously. The parameters to be monitored are user selectable. The monitor may be connected to a central monitoring station. The unit monitors patients in most acute care areas, step-down units, procedure rooms and emergency rooms.
M8551	Light Source, Fiberoptic Headlamp	1	V/V	Fiberoptic light source for surgical headlamps. This unit provides color corrected light for surgical procedures where photography is not required.
M8606	Endoscopy Cart, Fiberoptic, w/Video Accessories	1	V/V	Endoscopy cart with video and print capabilities for use with fiberoptic (direct vision) endoscopes. This cart does not work with videoscopes. System takes optical images from a single endoscope and directly records them or converts them to digital signals for recording. A typical system cart includes the cart, a light source, an insufflator, a suction unit, a heat probe unit, an electrosurgical apparatus, a digital camera converter or color video camera, a camera controller, a monitor, a video/DVD recorder and a color printer. This JSN does not include the endoscope; refer to the endoscopes at JSNs M8500-M8550. Each cart can support one or more types of endoscope and should be specifically tailored to its intended use(s). This cart can be configured to interface with a network endoscopy information management system; refer to JSN M8600. Database physical information and pricing is for a higher cost system containing one of each of the above components.
M8800	Cart, Anesthesia	1	V/V	Mobile anesthesia cart. The cart shall be built of stainless steel or other appropriate material and mounted on 4" casters for easy mobility. It shall be capable of being equipped with bottle holders, adjustable IV pole, storage drawers, shelves and a top bar/rail.
M8810	Stand, Mayo	2	V/V	Adjustable instrument table. Table is corrosion resistant stainless steel construction and is mounted on two casters with two skid rails. It has telescopic upright adjusts from 39 inches to 60 inches with automatic locking device, and removable 13"x19" instrument tray. Designed for use in operating and procedure rooms.
M8825	Table, Instrument/Dressing, CRS, approx. 36x20x34	1	V/V	Instrument and dressing table. Made of corrosion resistant stainless steel with a sound deadened top. Includes guard rail, shelf and two side-by-side drawers. The table is mounted on swivel, ball-bearing casters.
M8830	Table, Instrument/Dressing, Mobile	1	V/V	Mobile instrument/dressing table, approximately 34" H x 20" W x 16" D Corrosion resistant stainless steel mobile table with sound-deadening shelf and drawer. Unit is mounted on 2" casters. Designed for all purpose use in the hospital or clinic.
M8840	Table, Back, Instrument/Dressing	2	V/V	A specialty back table for large cases such as orthopedics, spinal fusions, neuro and craniotomies. The table has a pneumatic tuck-away cantilevered shelf which can hold multiple trays and is angled for clear observation of instruments. It comes with 4" diameter heavy-duty ball bearing brake/swivel casters. Construction is all stainless steel.
M8900	Carriage, Pail, CRS, Without Pail	2	V/V	Carriage, pail (kick bucket) CRS. Consists of a stainless steel ring type carriage mounted on ball bearing casters. Includes circular non-marring bumper. For use in the surgical operating room.
M8905	Pail, Utility, CRS, With Carriage	2	V/V	Utility pail (kick bucket). Shall be a stainless steel 12 quart bucket for use in surgical operating rooms.

## 4.6 OROS1

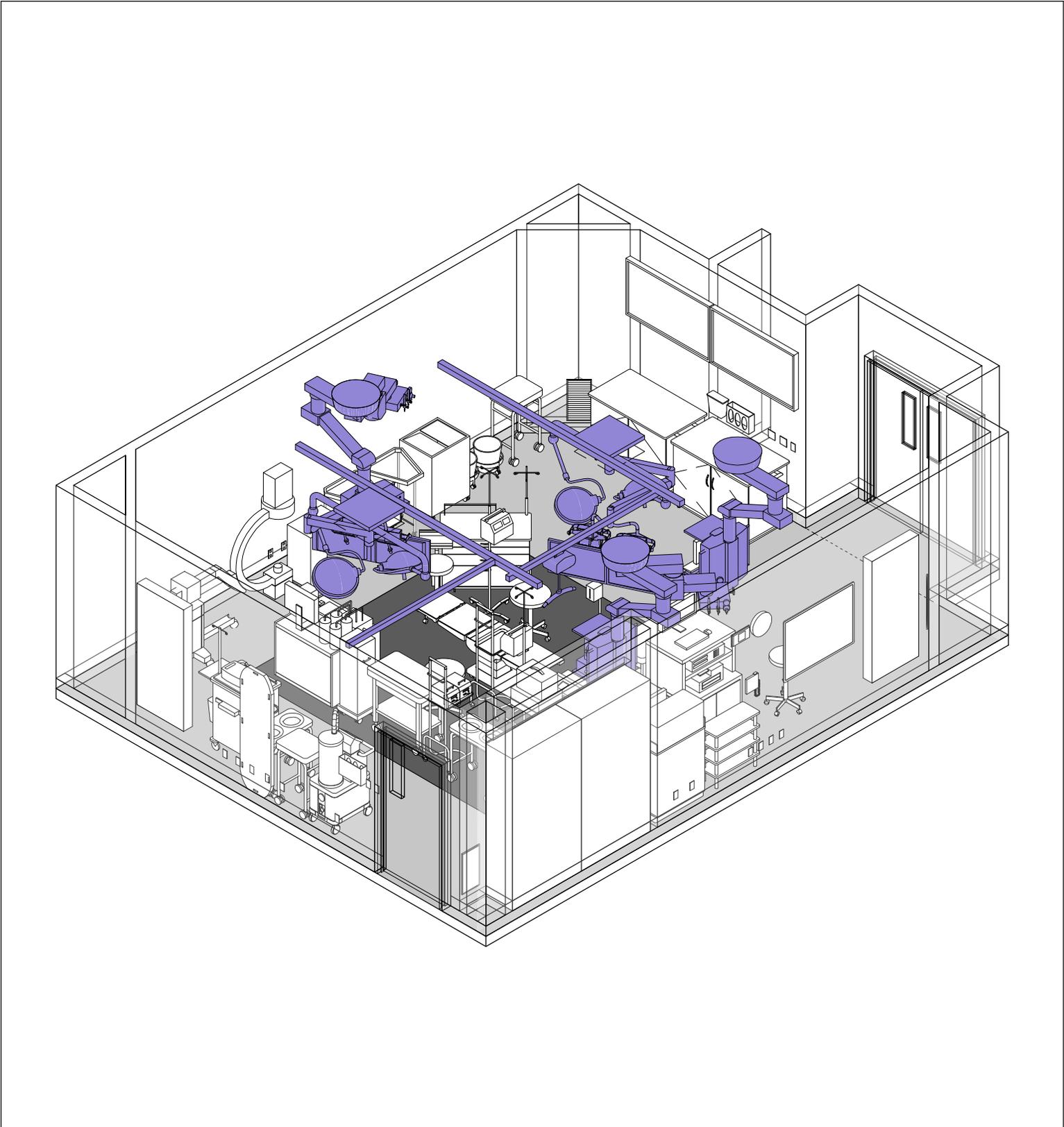
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M8910	Cart, Surgical Case	2	V/V	Surgical case cart. Unit consists of two hinged cabinet sections, each section equipped with two pull-out shelves with stops. The entire unit is mounted on four heavy duty conductive swivel casters. Used to transport surgical packs and supplies to surgery and soiled items back to central supply.
M8920	Stand, Basin, CRS, Mobile, Double	3	V/V	CRS, mobile, double basin stand with shelf. Stainless steel corrosion resistant frame constructed from two continuous inverted "U" shaped tubes, forming four legs and mounted on casters. Circular rings welded to top receive two removable 8 quart stainless steel basins. For open heart and other procedures.
M8925	Stand, Basin, CRS, Mobile, Single	1	V/V	Mobile single basin stand with shelf. The stand shall be constructed of tubular stainless steel and mounted on 2" swivel casters. Shall include a shelf and an 8 quart stainless steel basin. Intended for use in ORs and treatment areas.
M8940	Stool, Anesthesia, With Back	2	V/V	Anesthesia stool with back. All stainless steel with well-curved back panel and wide conductive seat. Designed for the anesthesiologist during surgical procedures.
M8950	Warmer, Blood	2	V/V	Unit consists of a temperature regulated water bath, circulating fluid, or dry heat with controls and an audible high temperature alarm. The warmer provides a stable environment for the controlled warming of blood or other fluids prior to being transfused to a patient.
M8970	Warmer, Blood, High Volume	1	V/V	Unit contains a proportional controller to regulate temperature in the heat exchanger and an audible high temperature alarm. Designed to provide a stable temperature for the controlled warming of blood or other fluids prior to being transfused to a patient. Unit may be a cuff type or circulating water heat exchanger.
M9110	Table, Operating, 5 or 6 Section, Trauma	1	V/V	Pedestal type, 5 or 6 section, operating table. Pedestal table, mounted on a solid base with casters and locks. Table top surface is fabricated from radio-translucent and conductive panels and is equipped with cassette tunnels in each of the table top sections. Table includes: Electro-hydraulic controls, side rail locking system, grounding receptacle and dual arm support section. It is designed for use in the operating room in a variety of surgical procedures. Table is configured to address the needs of trauma surgery.
S9755	Suction System, Surgical, Mobile Rover Unit	1	V/V	Surgical fluid waste management system with powered IV pole and smoke evacuation. Portable waste collection unit, for use with Docking Station (specified separately). Dual canisters (one 4L and one 20L), two levels of suction: 2-21in/Hg, fluid readout, 3 different port sizes for smoke tubing.
X4890	Rad/Fluoro Unit, Digital, Mobile, C-Arm	1	V/V	This system is a high quality radiographic/fluoroscopic mobile digital C-arm for use in orthopedics, general surgery, urology, vascular, neurosurgery, neurovascular and cardiovascular procedures. This units characteristics and components include a high frequency x-ray generator with single or dual focus x-ray tube unit, 9â€ or 12â€ multi-field image intensifier, dual 16â€ monitors, real time digital imaging and last image hold capabilities. The system shall be DICOM 3.0 or latest version, compatible, for easy linkage to filmless image management systems and review stations.



SURGICAL AND ENDOVASCULAR SERVICES  
(ORCS1) OPERATING ROOM, UROLOGY / CYSTOSCOPY  
AXONOMETRIC

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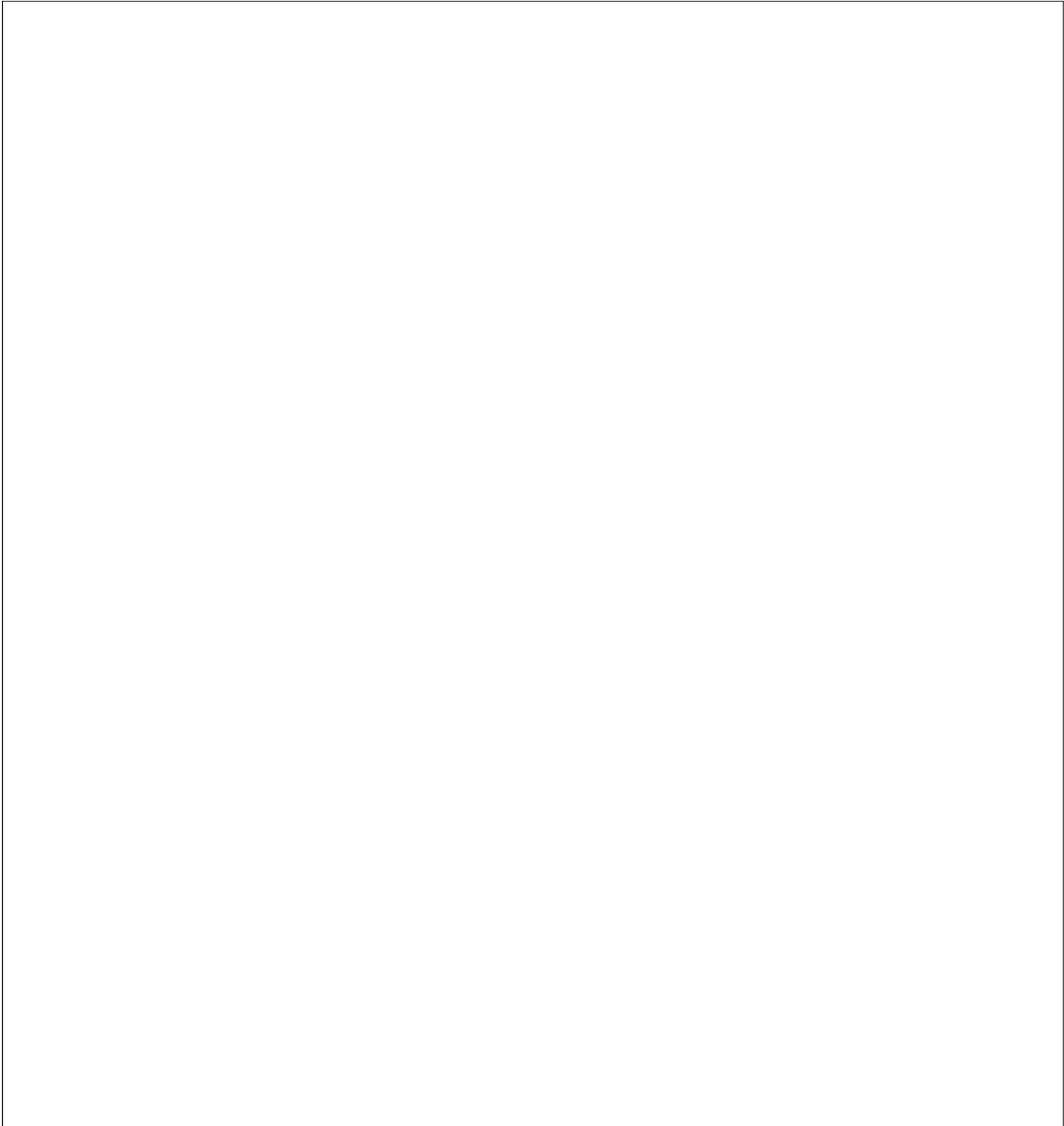


**DISCLAIMER:** ROOM TEMPLATES ARE GRAPHICAL REPRESENTATIONS OF SELECTED ROOM TYPES THAT ILLUSTRATE VA PLANNING REQUIREMENTS FOR SPACE, ROOM CONTENTS, AND ROOM SPECIFIC ENGINEERING SYSTEMS. THEY PROVIDE TYPICAL CONFIGURATIONS, PLANNING CRITERIA, AND GENERAL TECHNICAL GUIDANCE, AND ARE NOT INTENDED TO BE PROJECT SPECIFIC REQUIREMENTS.



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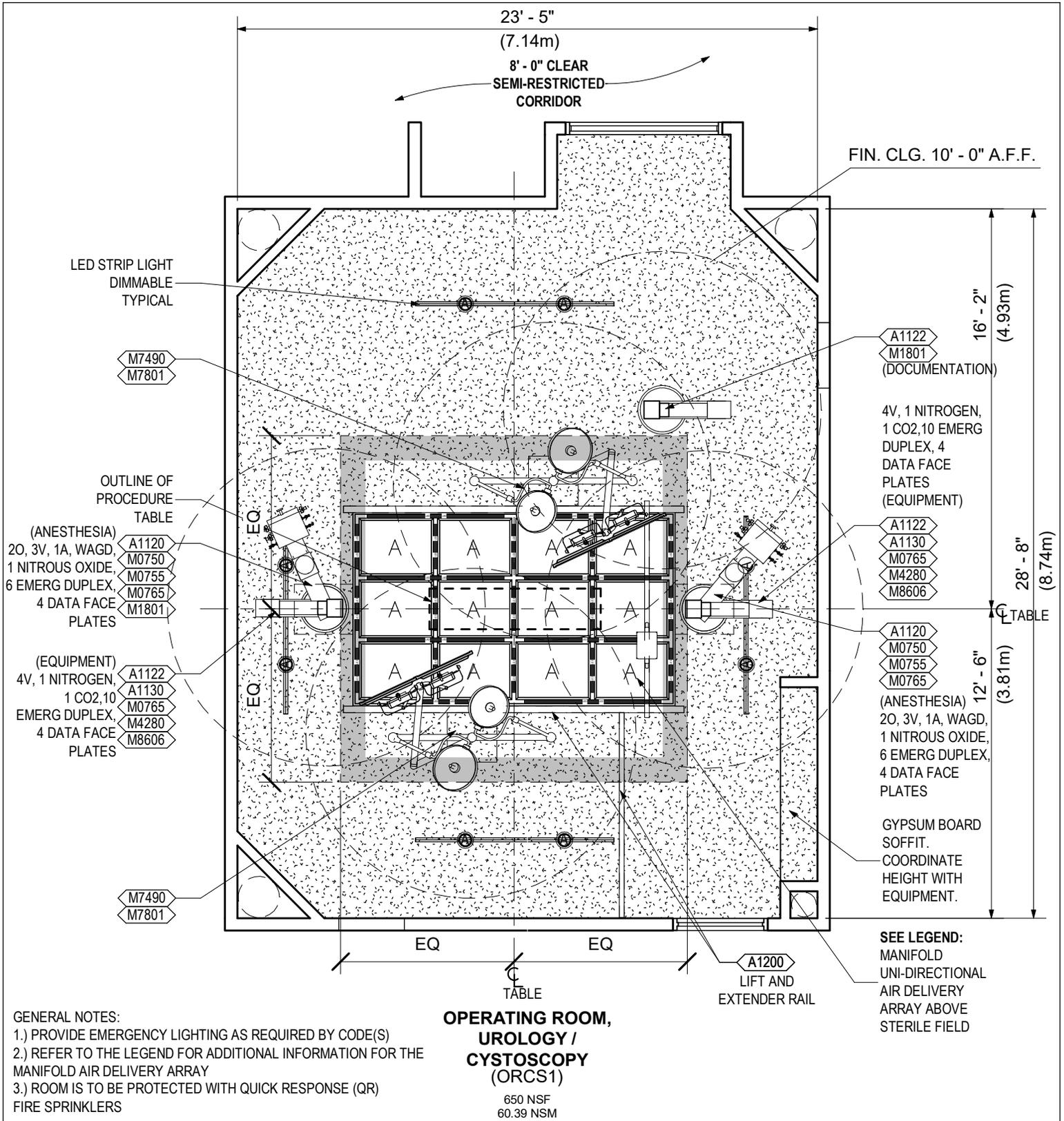






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**GENERAL NOTES:**

- 1.) PROVIDE EMERGENCY LIGHTING AS REQUIRED BY CODE(S)
- 2.) REFER TO THE LEGEND FOR ADDITIONAL INFORMATION FOR THE MANIFOLD AIR DELIVERY ARRAY
- 3.) ROOM IS TO BE PROTECTED WITH QUICK RESPONSE (QR) FIRE SPRINKLERS

**OPERATING ROOM,  
UROLOGY /  
CYSTOSCOPY  
(ORCS1)**

650 NSF  
60.39 NSM

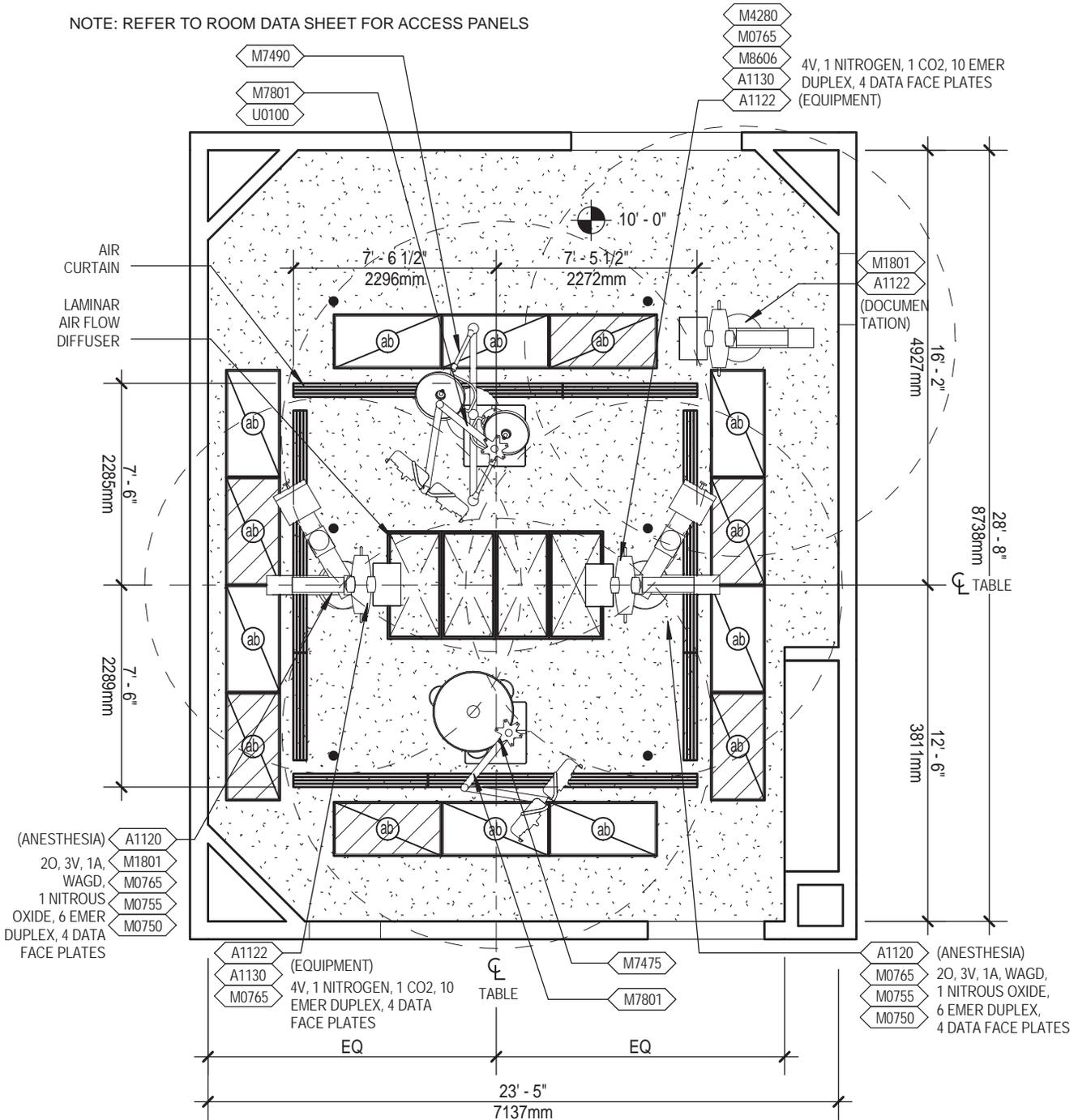
**SEE LEGEND:**  
MANIFOLD  
UNI-DIRECTIONAL  
AIR DELIVERY  
ARRAY ABOVE  
STERILE FIELD



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NOTE: REFER TO ROOM DATA SHEET FOR ACCESS PANELS



**Reflected Ceiling Plan**  
650 NSF / 60,4 NSM

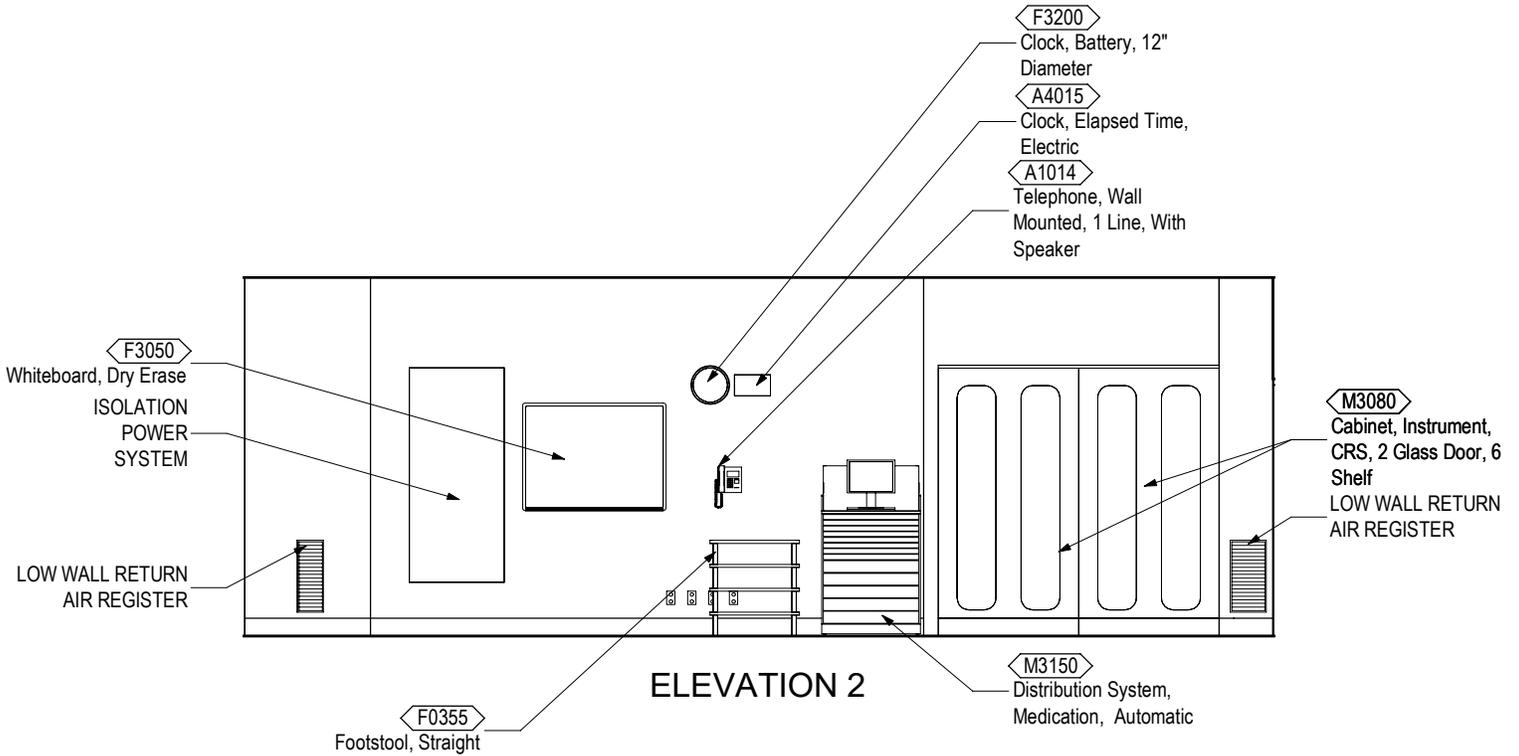
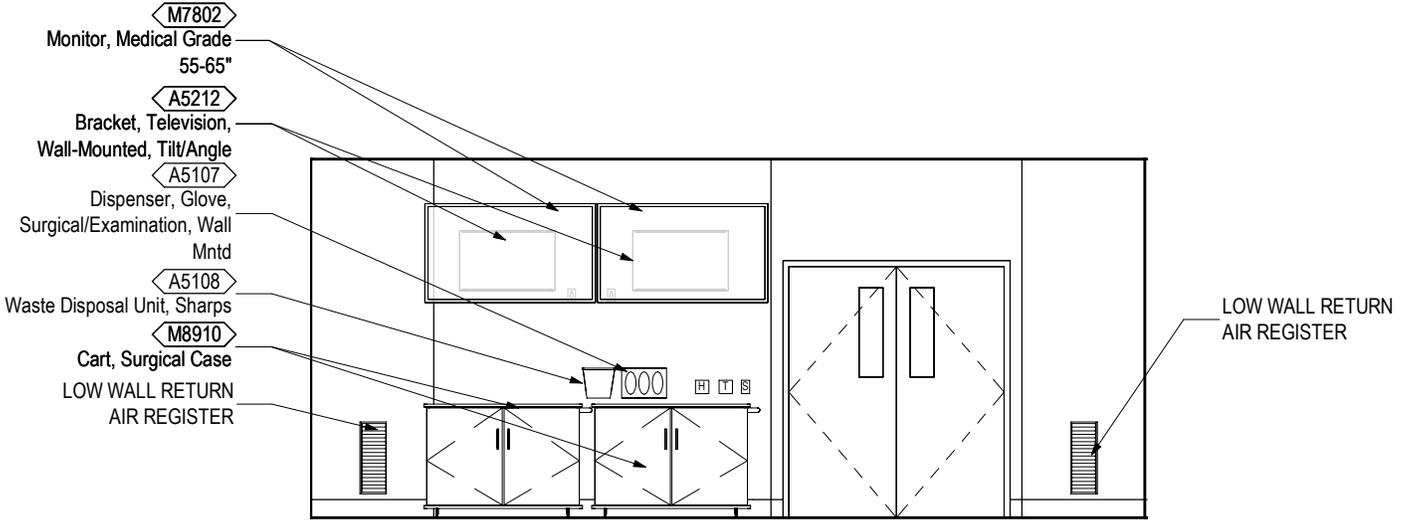
NOTE: OPTIONAL REFLECTED CEILING PLAN IS AN ALTERNATIVE OPTION TO THE MANIFOLD UNI-DIRECTIONAL AIR DELIVERY SYSTEM. EQUIPMENT TAGS & REFERENCE NOTES MAY NOT BE FULLY COORDINATED WITH THE EQUIPMENT LIST.

**4.7. OPERATING ROOM, UROLOGY / CYSTOSCOPY (ORCS1)**JSN Legend

JSN	DESCRIPTION		
		M5030	STOOL, SURGEON, REVOLVING
		M5512	LASER, SMOKE EVACUATOR
A1014	TELEPHONE, WALL MOUNTED, 1 LINE, WITH SPEAKER	M7490	LIGHT, SURG, CEILING MTD, DUAL, UNEQUAL DIA HEADS
A1120	COLUMN, SERVICE, PREFAB, SURGICAL, CEILING MOUNTED	M7650	DEFIBRILLATOR/ MONITOR, ACUTE CARE
A1122	COLUMN, EQUIPMENT ARM, CEILING MOUNTED, SURGERY	M7801	MONITOR, MEDICAL GRADE, 26" - 42"
A1130	CABINET, CONTROL, NITROGEN	M7802	MONITOR, MEDICAL GRADE, 55" - 65"
A4015	CLOCK, ELAPSED TIME, ELECTRIC	M7845	MONITOR, PHYSIOLOGICAL, BEDSIDE, 4-CHANNEL
A5104	CART, MEDICAL WASTE DISPOSAL, MOBILE W/FOOT PEDAL	M8551	LIGHT SOURCE, FIBEROPTIC HEADLAMP
A5107	DISPENSER, GLOVE, SURGICAL/ EXAMINATION, WALL-MTD	M8606	ENDOSCOPY CART, FIBEROPTIC, W/ VIDEO ACCESSORIES
A5108	WASTE DISPOSAL UNIT, SHARPS	M8800	CART, ANESTHESIA
A5212	BRACKET, TELEVISION WALL MTD, TILT/ANGLE	M8810	STAND, MAYO
E0954	CART, EMERGENCY, MOBILE, 66"H x 32"W x 22"D	M8825	TABLE, INSTRUMENT/DRESSING, CRS, APPROX 36x20x34
F0355	FOOTSTOOL, STRAIGHT	M8830	TABLE, INSTRUMENT/DRESSING, MOBILE
F3050	WHITE BOARD, DRY ERASE	M8840	TABLE, BACK, INSTRUMENT/DRESSING
F3200	CLOCK, BATTERY, 12" DIAMETER	M8900	CARRIAGE, PAIL, CRS, WITHOUT PAIL
M0630	ANESTHESIA APPARATUS, 3 GAS	M8905	PAIL, UTILITY, CRS, WITH CARRIAGE
M0750	FLOWMETER, AIR, CONNECT W/ 50 PSI SUPPLY	M8910	CART, SURGICAL CASE
M0755	FLOWMETER, OXYGEN, LOW FLOW	M8920	STAND, BASIN, CRS, MOBILE, DOUBLE
M0765	REGULATOR, VACUUM	M8925	STAND, BASIN, CRS, MOBILE, SINGLE
M1801	COMPUTER, MICROPROCESSING, W/ FLAT PANEL MONITOR	M8940	STOOL, ANESTHESIA, WITH BACK
M3070	HAMPER, LINEN, MOBILE, W/LID	M8950	WARMER, BLOOD
M3072	FRAME, INFECTIOUS WASTE BAG W/LID	M8970	WARMER, BLOOD, HIGH VOLUME
M3080	CABINET, INSTRUMENT, CRS, 2 GLASS DOOR, 6 SHELF	M9110	TABLE, OPERATING, 5 OR 6 SECTION, TRAUMA
M3150	DISTRIBUTION SYSTEM, MEDICATION, AUTOMATIC	S9755	SUCTION SYSTEM, SURGICAL, MOBILE ROVER UNIT
M3175	ELECTROSURGICAL UNIT, DUAL OUTPUT	U0100	INTEGRATED OPERATING ROOM SYSTEM, ALLOWANCE
M4255	STAND IV, ADJUSTABLE	X4890	RAD/FLUORO UNIT, DIGITAL, MOBILE, C-ARM
M4266	PUMP, VOLUMETRIC, INFUSION, MULTIPLE LINE		
M4280	PUMP, PNEUMATIC STOCKING/CUFF		
M4287	IRRIGATION SYSTEM, SURGICAL		
M4645	PATIENT TRANSFER DEVICE		
M4815	HYPO/HYPERThERMIA UNIT, AUTOMATIC/MANUAL, MOBILE		
M4816	WARMING UNIT, PATIENT, AUTOMATIC/ MANUAL, AIR		

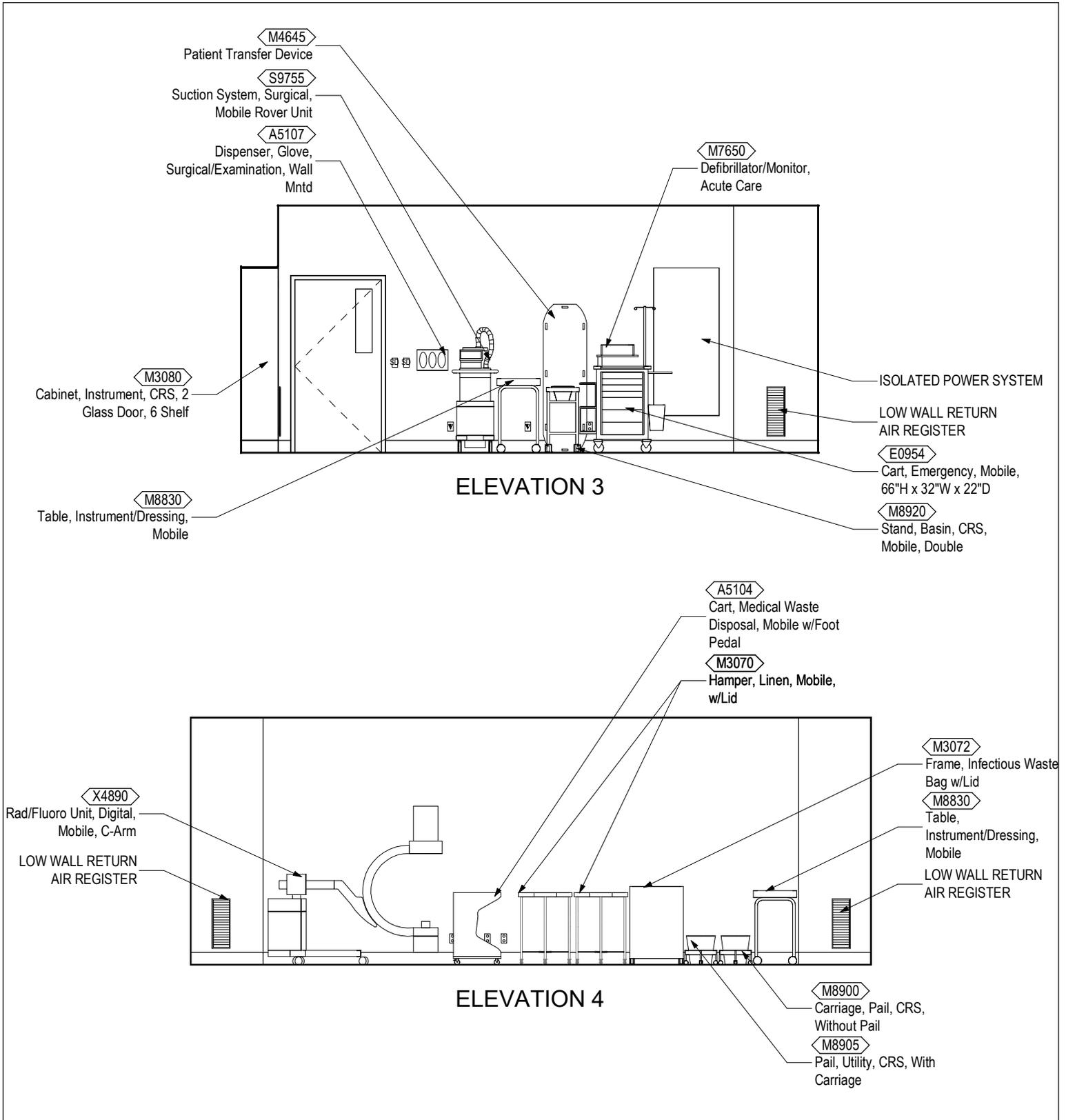
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SCALE: 3/16" = 1'-0"



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## 4.7 OPERATING ROOM, UROLOGY/CYSTOSCOPY (ORCS1)

### Room Data Sheet

#### ARCHITECTURAL

Ceiling Type:	Gypsum Wallboard (SC)
Ceiling Height:	10'-0" (3048 mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	RF Integral Base (min. 6"/152 mm)
Floor Finish:	Resinous Flooring (RF) Res 4
Slab Depression:	None
Sound Protection:	50 STC (to other room), 35 STC (to corridor)
Doors:	Double, Size 6'-0" x 7'-0" (1829 mm x 2133 mm) Wood w/ Narrow View Window; Single, Size 4'-0" x 7'-0" (1219 mm x 2133 mm) Wood w/ Small View Window

Special Requirement:

#### Notes:

- 1) Shielding is to be provided as it is determined by the Physicist on a per project basis.
- 2) Locate access panels as required to allow for the maintenance of surgical booms and lights in facilities without interstitial space. Min. size to be 24" x 24".
- 3) Cabinetry can be built in or free-standing.
- 4) Nominal wall thickness is shown at 8" (203 mm) to account for a variety of wall-mounted panels, such as isolation power unit panels, that require a thicker partition.
- 5) Include wall extensions at both sides of the scrub sink to protect the scrub sinks from cart and stretcher traffic in the semi-restricted corridor.
- 6) Coordinate structural supports, utility connections and other requirements for surgical lighting pendants with manufacturer.

7) Equipment and Anesthesia booms are duplicated to provide maximum flexibility. If duplicate booms are not desired, they can be omitted subject to approval by clinical leadership.

8) Facility will select number and types of scopes and other instrumentation as necessitated by the unique case load.

9) Endoscopy equipment can be located on a cart or on the equipment boom.

10) NSF provided for this space is the minimal acceptable NSF; contact Facilities Standards Services for any deviations.

#### LIGHTING

Refer to the VA Lighting Design Manual section 4.2.13 - Surgery/Operating Room - for lighting design consideration.

#### POWER

Normal Power: Connect selected receptacles and equipment to Normal power IPS.

Emergency Power: Connect selected receptacles and equipment to Critical Branch emergency IPS.

#### Notes:

- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
- 2) IPS Power & ground modules mounted at +24" AFF
- 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
- 4) Provide power connections for articulating utility columns.

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	

**Notes:**

- 1) Provide connections for articulating utility columns.
- 2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Rooms data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization.

**Notes:**

- 1) Refer to the latest version of the VA HVAC Design Manual for quantity and location of low air return grilles and ceiling diffusers.

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	Yes
Medical Vacuum	Yes
Oxygen	Yes
Special Requirement:	

**Notes:**

- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen, Nitrous Oxide, Carbon Dioxide.
- 2) For gas quantities per boom refer to the reflected ceiling plan.
- 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project
- 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.7 OPERATING ROOM, UROLOGY/CYSTOSCOPY (ORCS1)**Equipment List

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A1014	Telephone, Wall Mounted, 1 Line, With Speaker	1	V/V	Telephone, wall mounted, 1 line, with speaker.
A1120	Column, Service, Prefab, Surgical, Ceiling Mounted	2	C/C	Prefabricated surgical service column. Strong 18 gauge stainless steel shell ceiling mounted unit with the following services: oxygen, nitrous oxide, nitrogen, medical air, medical vacuum, gas evacuation, electrical outlets, monitoring connectors, and IV holders. Specify type of column (fixed or retractable) and number of outlets required for each service. Size will vary with number of service outlets required. Designed to be used in the operating room, recovery and ICU-CCU rooms.
A1122	Column, Equipment Arm, Ceiling Mounted, Surgery	3	C/C	A ceiling mounted retractable equipment arm for use in the OR. Designed to provide equipment placement support, power receptacles including low-voltage panels, gas outlets and flat screen mounting for a surgical suite. Unit will provide a range of motion of up to 330 degrees with arm providing additional vertical movement. Units are custom configured with multiple options available. Price is based on a unit with two (double) retractable arms. Also available are units for use in anesthesia, ICU and ER.
A1130	Cabinet, Control, Nitrogen	2	C/C	Nitrogen control cabinet. Unit consists of supply cut-off valve, supply pressure gauge, pressure regulator (adjustable 0 to 200 PSI), outlet pressure gauge, nitrogen outlet and connection to surgical gas column. Specify recessed or surface mounting. Designed for powering surgical pneumatic tools.
A1200	Lift System, Overhead, Patient Room	1	V/C	An overhead rail system specifically designed for patient lifting and movement for a single bed patient room. The system will consist of recessed or ceiling mounted primary and secondary rails, lift motor with rolling carriage, patient harness or seat, and a hand controller or control box with charger. System will facilitate lifting and movement of patient to and from bed to gurney, chair or other requirement. Minimum lift capability is 550 pounds. Custom design of track layout by manufacturer is essential to meet individual facility requirements.
A4015	Clock, Elapsed Time, Electric	1	C/C	Elapsed time digital electric clock. Single display time that can be used either as a clock or elapsed time indicator. Clock consists of buttons to set minutes, and hours for the time. For use in operating and delivery room, and medical service columns. Analog or digital displays may be provided as specified by the user.
A5104	Cart, Medical Waste Disposal, Mobile w/Foot Pedal	1	V/V	Mobile molded cart with foot pedal, to house 18-24 gal sharps disposal container. Lid lift or slide opens easily with foot-operated pedal. Lid may remain closed when not in use to reduce exposure to contents. Ergonomic handle is telescopic. Heavy containers can be removed from the side with minimal lifting. Meets requirements of OSHA 29 CFR 1910.130.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	2	V/V	Examination three (Small Medium, Large) glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Hardware not included, Option 3 powder coated steel.
A5108	Waste Disposal Unit, Sharps	2	V/V	A container for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
A5212	Bracket, Television, Wall-Mounted, Tilt/Angle	2	V/V	A wall mounted, tilt/angled TV bracket for 37" to 80" TVs. Mount will be a universal and VESA compliant unit with a load capacity of up to 130 lbs.

## 4.7 ORCS1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
E0954	Cart, Emergency, Mobile, 66"H x 32"W x 22"D	1	V/V	THIS TYPICAL INCLUDES 1 Cart body, style-A narrow, w/raised edge top: 1 Accessory rail, side 1 Accessory rail, back 1 Defibrillator tray 1 IV pole 1 Breakaway bar 1 Flip-up shelf 1 Wastebasket 1 Oxygen tank holder 1 Electrical box-4 outlet 1 Cord wrap 4 Drawer, 3"H 3 Drawer, 6"H Drawer organizer bins.
F0355	Footstool, Straight	4	V/V	Step stool. Used to assist patients getting on and off exam or surgical tables. Fitted with electrically conductive rubber tips.
F3050	Whiteboard, Dry Erase	1	V/V	Whiteboard unit, approximately 36" H x 48" W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
F3200	Clock, Battery, 12" Diameter	1	V/V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
M0630	Anesthesia Apparatus, 3 Gas	1	V/V	Three gas anesthesia apparatus. Basic unit consists of steel cabinet with casters with one shallow, one medium, and one deep drawer, seven long scale eleven-inch flowmeters, five cylinder yokes, and telescoping absorber post. It includes two-canister model carbon dioxide absorber with inhalation and exhalation check valves, switch valve, switch valve elbow, sidearm Vernitrol, flow calculator, mounting kit, ventilator calculator, ventilator and an oxygen piping inlet. Also features nitrous oxide fail safe valve kit, aspirator kit, gas evacuator with vacuum and a flow meter safety cover. Used to dispense a mixture of gases during surgical procedures.
M0750	Flowmeter, Air, Connect w/50 PSI Supply	2	V/V	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Requires the appropriate adapter for connection to the wall outlet and fitting to connect to tubing. Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0755	Flowmeter, Oxygen, Low Flow	4	V/V	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Database pricing includes DISS fitting and DISS power outlet and wall adapter. Other fitting and adapter configurations are available.
M0765	Regulator, Vacuum	14	V/V	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required. To be used in delivery, neonatal, pediatrics or any area where suction is required. Database pricing reflects continuous regulators graduated to 200 mm Hg with a full line vacuum selection switch and DISS configured inlets and outlets.

## 4.7 ORCS1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M1801	Computer, Microprocessing, w/Flat Panel Monitor	2	V/V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
M3070	Hamper, Linen, Mobile, w/Lid	2	V/V	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters. For linen transport in hospitals and clinics.
M3072	Frame, Infectious Waste Bag w/Lid	1	V/V	Frame for an infectious waste collection bag. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Adjust to hold 18" or 25" trash bags. Mounted on ball bearing casters and includes permanently mounted hinged lid. Provides means of bagging infectious waste at point of waste generation.
M3080	Cabinet, Instrument, CRS, 2 Glass Door, 6 Shelf	2	V/V	Non-magnetic stainless steel instrument cabinet with two glass doors and six shelves (five adjustable). Cabinet body has a single storage compartment and seamless welded face. Shelf heights are adjustable on full length perforated strips mounted to the back and inside front cabinet corners. Cabinet is mounted on glides or casters. Cabinet may be covered by a sloping top.
M3150	Distribution System, Medication, Automatic	1	V/V	An automated dispensing system that provides controlled dispensing, inventory and security. Size and cost will vary dependent on number of modules selected.
M3175	Electrosurgical Unit, Dual Output	1	V/V	Dual output electrosurgical unit. Solid state power source with foot switch jacks, monopolar and bipolar outputs, and four independent modes of operation. Used in the operating room or surgicenter as an alternative to the scalpel for cutting tissue.
M4255	Stand, IV, Adjustable	3	V/V	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.
M4266	Pump, Volumetric, Infusion, Multiple Line	2	V/V	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.
M4280	Pump, Pneumatic Stocking/Cuff	2	V/V	Pneumatic stocking/cuff pump. Pump provides alternating pressure to pneumatic stockings for reduction of the threat of deep vein thrombophlebitis in post operative patients. May also be used in the CCU for rotating cuff therapy for reduction of peripheral circulation in congestive heart failure patients.
M4287	Irrigation System, Surgical	1	V/V	High flow surgical irrigation pump up 2.5l/min, available in single and double flow.
M4645	Patient Transfer Device	1	V/V	A patient transfer board designed to make lateral patient transfers safer for staff and be more comfortable for the patients. The board uses a smooth, low friction and static free surface to eliminate the need for metal rollers. The board has a soft foam core that makes them lightweight for ease of use and storage. The long board device also enables the transfer of a patient in the seated or Fowler position. The boards come in three sizes with the long board being foldable. The dimensions and price are for the long wide board.

## 4.7 ORCS1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M4815	Hypo/Hyperthermia Unit, Automatic/Manual, Mobile	1	V/V	Automatic/manual hypo/hyperthermia unit. Sealed refrigeration system. Microprocessor controlled with multiple alarm system constantly monitoring temperature and water levels. Cabinet type unit. Designed to regulate body temperature by application of water-filled hypothermia blankets.
M4816	Warming Unit, Patient, Automatic/Manual, Air	1	V/V	Automatic/manual patient warming unit. Unit delivers a flow of warmed air through a perforated plastic blanket. Used primarily for postoperative patients to speed recovery of normal body temperature.
M5030	Stool, Surgeon, Revolving	2	V/V	Revolving stool. Consists of a padded upholstered seat with height adjustment. Unit rotates and is mounted on ball bearing swivel casters. Designed for use in examinations, treatment, and surgical procedures.
M5512	Laser, Smoke Evacuator	1	V/V	Filtration system used in conjunction with laser operations to remove surgical laser plume. The unit includes a pneumatic foot switch, disposable 0.12 micron HEPA primary filters, a secondary 0.12 micron ULPA/carbon filter, disposable funnels, reducer fittings and connector hoses.
M7490	Light, Surg, Ceiling Mtd, Dual, Unequal Dia Heads	2	V/C	Dual head surgical light ceiling mounted from a single pole. Unit has two lamp heads of differing sizes mounted on individual swing arms. Unit features multiple lighting pods in each lamp head, deep cavity illumination, color-corrected light, intensity control and sterilizable handles. Refer to the manufacturers' specifications for minimum ceiling heights and installation data. The database height dimension below refers to the height of the lamp head itself. The width and depth measurements are the larger of the two sums of the swing arm length and the head diameter. For use in general purpose surgical suites.
M7650	Defibrillator/Monitor, Acute Care	1	V/V	Portable defibrillator/monitor for acute care includes biphasic defibrillator, pacing, SPO2, Interpretive 12-lead, NIBP monitoring, EtCO2 monitoring, Invasive pressure monitoring, Vital Sign monitoring, temperature probe, Fax transmission, PCMCIA Data Cards, Paddle accessories, and a color LCD.
M7801	Monitor, Medical Grade 26 - 42"	4	V/V	LED HD monitor capable of displaying medical grade images. Monitor's size is 26-42".
M7802	Monitor, Medical Grade 55-65"	2	V/V	LED HD monitor capable of displaying medical grade images. Monitor' size is 55 - 65".
M7845	Monitor, Physiological, Bedside, 4 Channel	1	V/V	4 channel bedside physiological monitor. The unit consist of a four-channel non-fade monochrome display monitor, an alarm system and printer-recording capabilities. The monitor has color coded controls and automatic calibration. The unit displays up to four waveforms simultaneously. The parameters to be monitored are user selectable. The monitor may be connected to a central monitoring station. The unit monitors patients in most acute care areas, step-down units, procedure rooms and emergency rooms.
M8551	Light Source, Fiberoptic Headlamp	1	V/V	Fiberoptic light source for surgical headlamps. This unit provides color corrected light for surgical procedures where photography is not required.

## 4.7 ORCS1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M8606	Endoscopy Cart, Fiberoptic, w/Video Accessories	1	V/V	Endoscopy cart with video and print capabilities for use with fiberoptic (direct vision) endoscopes. This cart does not work with videoscopes. System takes optical images from a single endoscope and directly records them or converts them to digital signals for recording. A typical system cart includes the cart, a light source, an insufflator, a suction unit, a heat probe unit, an electro-surgical apparatus, a digital camera converter or color video camera, a camera controller, a monitor, a video/DVD recorder and a color printer. This JSN does not include the endoscope; refer to the endoscopes at JSNs M8500-M8550. Each cart can support one or more types of endoscope and should be specifically tailored to its intended use(s). This cart can be configured to interface with a network endoscopy information management system; refer to JSN M8600. Database physical information and pricing is for a higher cost system containing one of each of the above components.
M8800	Cart, Anesthesia	1	V/V	Mobile anesthesia cart. The cart shall be built of stainless steel or other appropriate material and mounted on 4" casters for easy mobility. It shall be capable of being equipped with bottle holders, adjustable IV pole, storage drawers, shelves and a top bar/rail.
M8810	Stand, Mayo	2	V/V	Adjustable instrument table. Table is corrosion resistant stainless steel construction and is mounted on two casters with two skid rails. It has telescopic upright adjusts from 39 inches to 60 inches with automatic locking device, and removable 13"x19" instrument tray. Designed for use in operating and procedure rooms.
M8825	Table, Instrument/Dressing, CRS, approx. 36x20x34	2	V/V	Instrument and dressing table. Made of corrosion resistant stainless steel with a sound deadened top. Includes guard rail, shelf and two side-by-side drawers. The table is mounted on swivel, ball-bearing casters.
M8830	Table, Instrument/Dressing, Mobile	2	V/V	Mobile instrument/dressing table, approximately 34" H x 20" W x 16" D Corrosion resistant stainless steel mobile table with sound-deadening shelf and drawer. Unit is mounted on 2" casters. Designed for all purpose use in the hospital or clinic.
M8840	Table, Back, Instrument/Dressing	1	V/V	A specialty back table for large cases such as orthopedics, spinal fusions, neuro and craniotomies. The table has a pneumatic tuck-away cantilevered shelf which can hold multiple trays and is angled for clear observation of instruments. It comes with 4" diameter heavy-duty ball bearing brake/swivel casters. Construction is all stainless steel.
M8900	Carriage, Pail, CRS, Without Pail	2	V/V	Carriage, pail (kick bucket) CRS. Consists of a stainless steel ring type carriage mounted on ball bearing casters. Includes circular non-marring bumper. For use in the surgical operating room.
M8905	Pail, Utility, CRS, With Carriage	2	V/V	Utility pail (kick bucket). Shall be a stainless steel 12 quart bucket for use in surgical operating rooms.
M8910	Cart, Surgical Case	2	V/V	Surgical case cart. Unit consists of two hinged cabinet sections, each section equipped with two pull-out shelves with stops. The entire unit is mounted on four heavy duty conductive swivel casters. Used to transport surgical packs and supplies to surgery and soiled items back to central supply.
M8920	Stand, Basin, CRS, Mobile, Double	2	V/V	CRS, mobile, double basin stand with shelf. Stainless steel corrosion resistant frame constructed from two continuous inverted "U" shaped tubes, forming four legs and mounted on casters. Circular rings welded to top receive two removable 8 quart stainless steel basins. For open heart and other procedures.
M8925	Stand, Basin, CRS, Mobile, Single	1	V/V	Mobile single basin stand with shelf. The stand shall be constructed of tubular stainless steel and mounted on 2" swivel casters. Shall include a shelf and an 8 quart stainless steel basin. Intended for use in ORs and treatment areas.

## 4.7 ORCS1

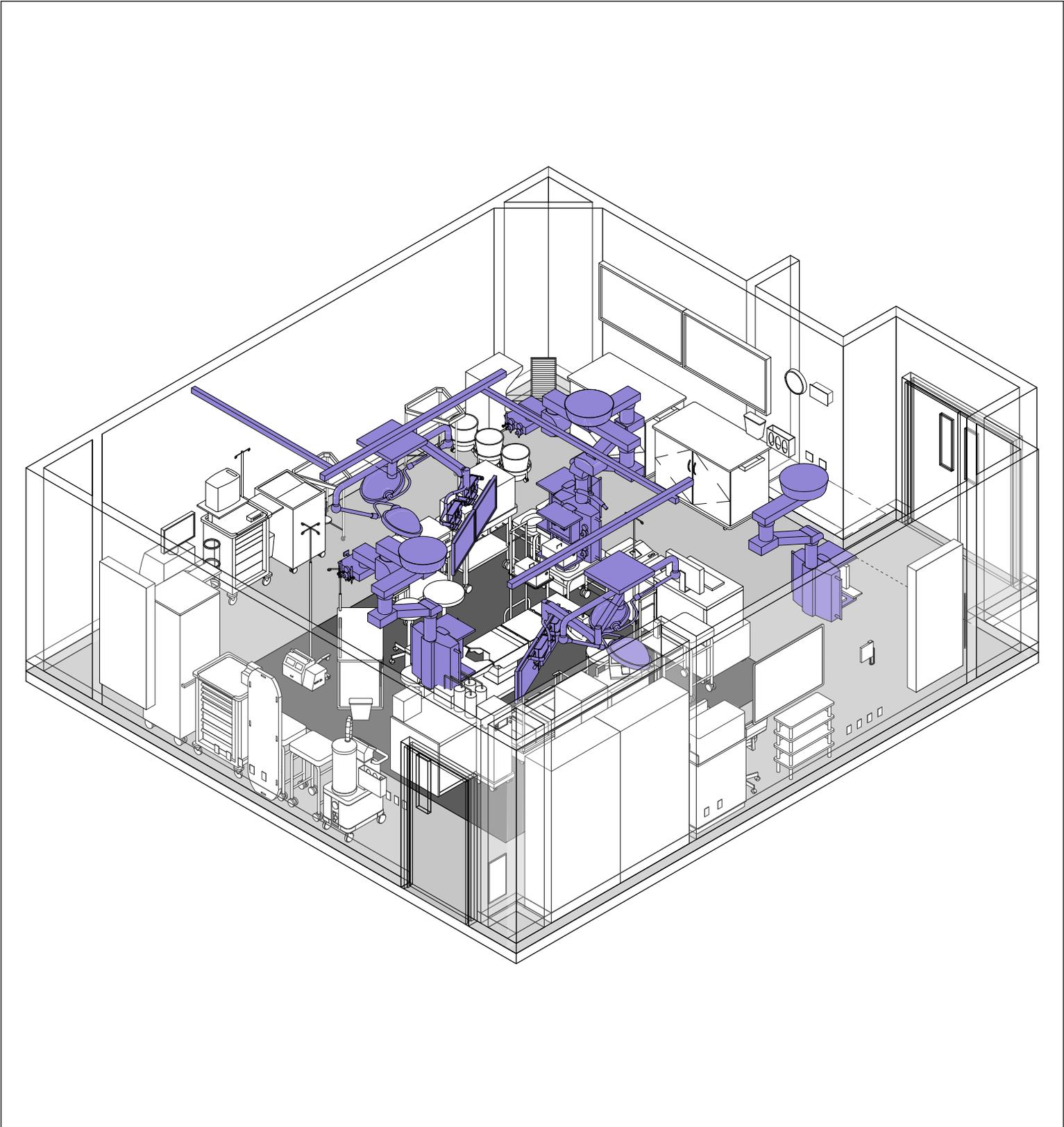
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M8940	Stool, Anesthesia, With Back	2	V/V	Anesthesia stool with back. All stainless steel with well-curved back panel and wide conductive seat. Designed for the anesthesiologist during surgical procedures.
M8950	Warmer, Blood	2	V/V	Unit consists of a temperature regulated water bath, circulating fluid, or dry heat with controls and an audible high temperature alarm. The warmer provides a stable environment for the controlled warming of blood or other fluids prior to being transfused to a patient.
M8970	Warmer, Blood, High Volume	1	V/V	Unit contains a proportional controller to regulate temperature in the heat exchanger and an audible high temperature alarm. Designed to provide a stable temperature for the controlled warming of blood or other fluids prior to being transfused to a patient. Unit may be a cuff type or circulating water heat exchanger.
M9110	Table, Operating, 5 or 6 Section, Trauma	1	V/V	Pedestal type, 5 or 6 section, operating table. Pedestal table, mounted on a solid base with casters and locks. Table top surface is fabricated from radio-translucent and conductive panels and is equipped with cassette tunnels in each of the table top sections. Table includes: Electro-hydraulic controls, side rail locking system, grounding receptacle and dual arm support section. It is designed for use in the operating room in a variety of surgical procedures. Table is configured to address the needs of trauma surgery.
S9755	Suction System, Surgical, Mobile Rover Unit	1	V/V	Surgical fluid waste management system with powered IV pole and smoke evacuation. Portable waste collection unit, for use with Docking Station (specified separately). Dual canisters (one 4L and one 20L), two levels of suction: 2-21in/Hg, fluid readout, 3 different port sizes for smoke tubing.
U0100	Integrated Operating Room System, Allowance	1	V/V	Allowance for Integrated System for each Operating Room, Hybrid Operating Room, Cath Lab or EP room. Requirements are defined on a project by project basis. Integration provides visual image, patient information and communication management. Integration can also include the control of some equipment settings and environment settings such as lighting.
X4890	Rad/Fluoro Unit, Digital, Mobile, C-Arm	1	V/V	This system is a high quality radiographic/fluoroscopic mobile digital C-arm for use in orthopedics, general surgery, urology, vascular, neurosurgery, neurovascular and cardiovascular procedures. This units characteristics and components include a high frequency x-ray generator with single or dual focus x-ray tube unit, 9â€ or 12â€ multi-field image intensifier, dual 16â€ monitors, real time digital imaging and last image hold capabilities. The system shall be DICOM 3.0 or latest version, compatible, for easy linkage to filmless image management systems and review stations.



SURGICAL AND ENDOVASCULAR SERVICES (ORCT1) OPERATING ROOM, CARDIOTHORACIC AXONOMETRIC

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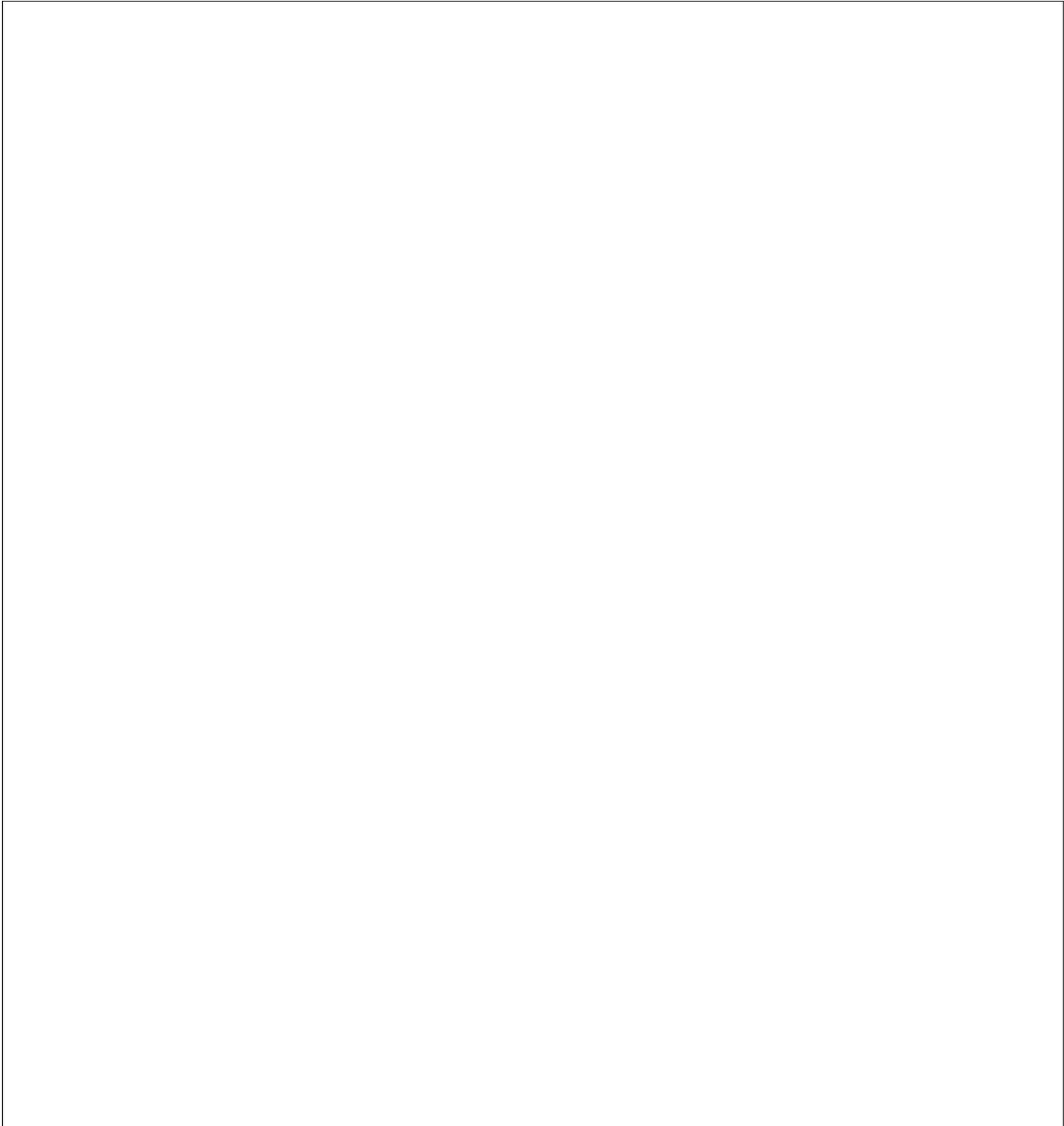


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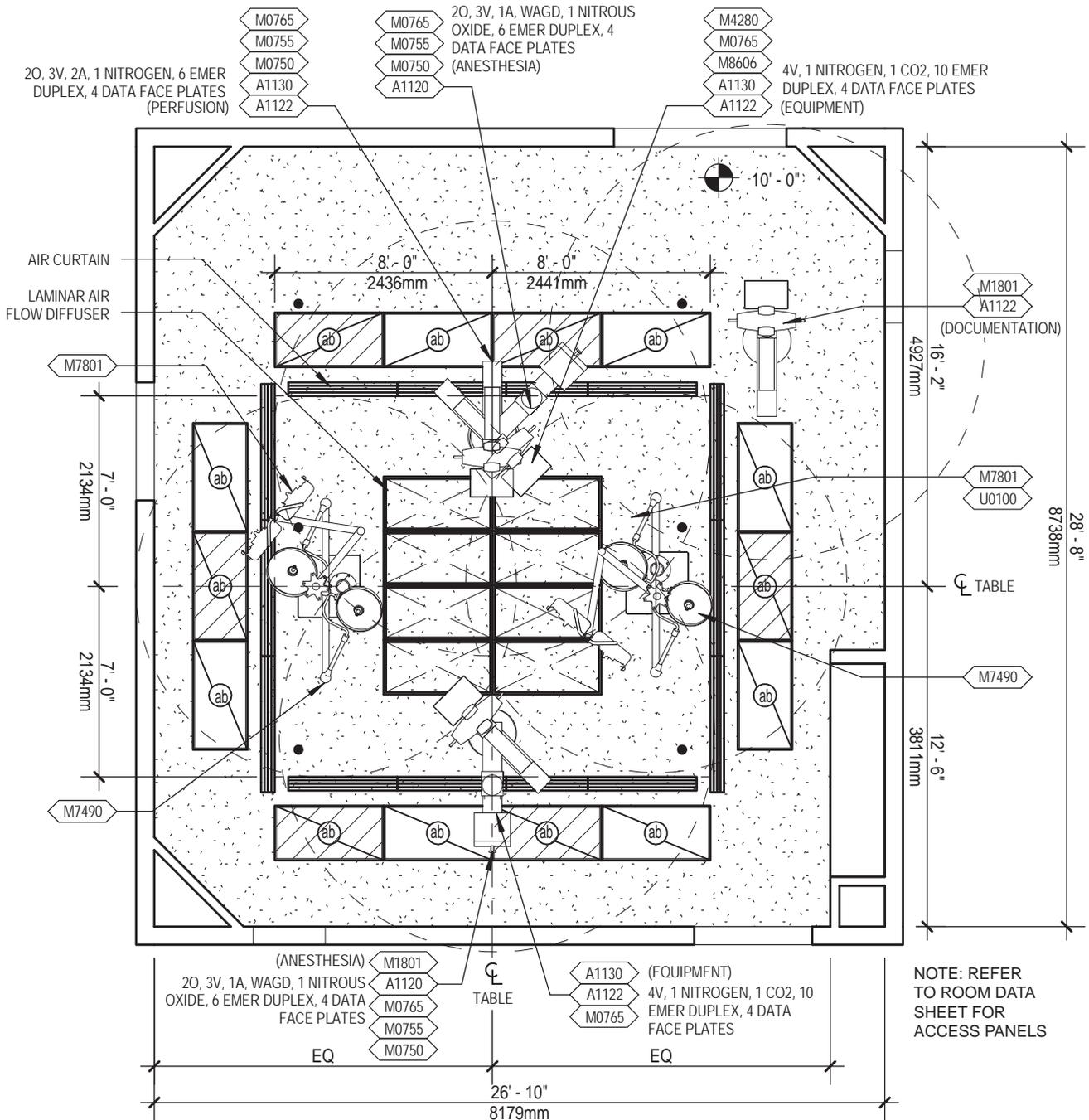




SURGICAL AND ENDOVASCULAR SERVICES (ORCT1) OPERATING ROOM, CARDIOTHORACIC REFLECTED CEILING PLAN (ALTERNATE OPTION)

Plot Date: 8/31/2022 3:57:29 PM

SCALE: NOT TO SCALE



NOTE: REFER TO ROOM DATA SHEET FOR ACCESS PANELS

Reflected Ceiling Plan  
750 NSF / 69,7 NSM

NOTE: OPTIONAL REFLECTED CEILING PLAN IS AN ALTERNATIVE OPTION TO THE MANIFOLD UNI-DIRECTIONAL AIR DELIVERY SYSTEM. EQUIPMENT TAGS & REFERENCE NOTES MAY NOT BE FULLY COORDINATED WITH THE EQUIPMENT LIST.

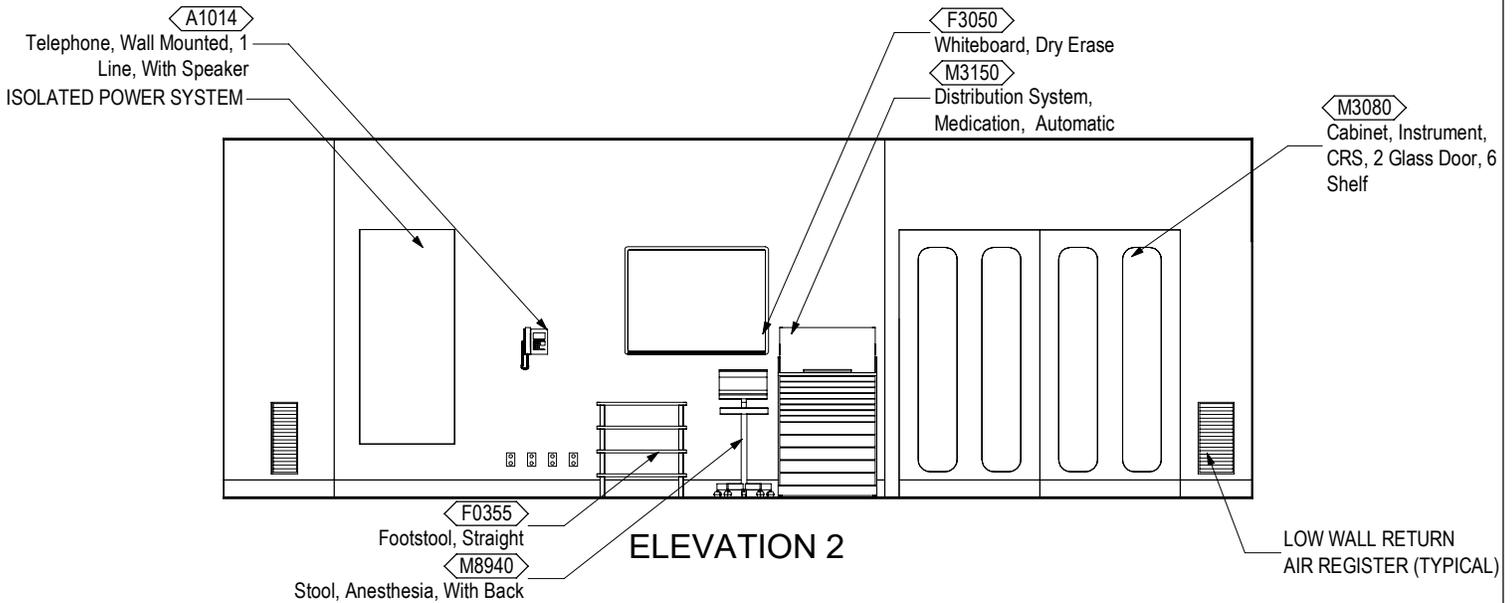
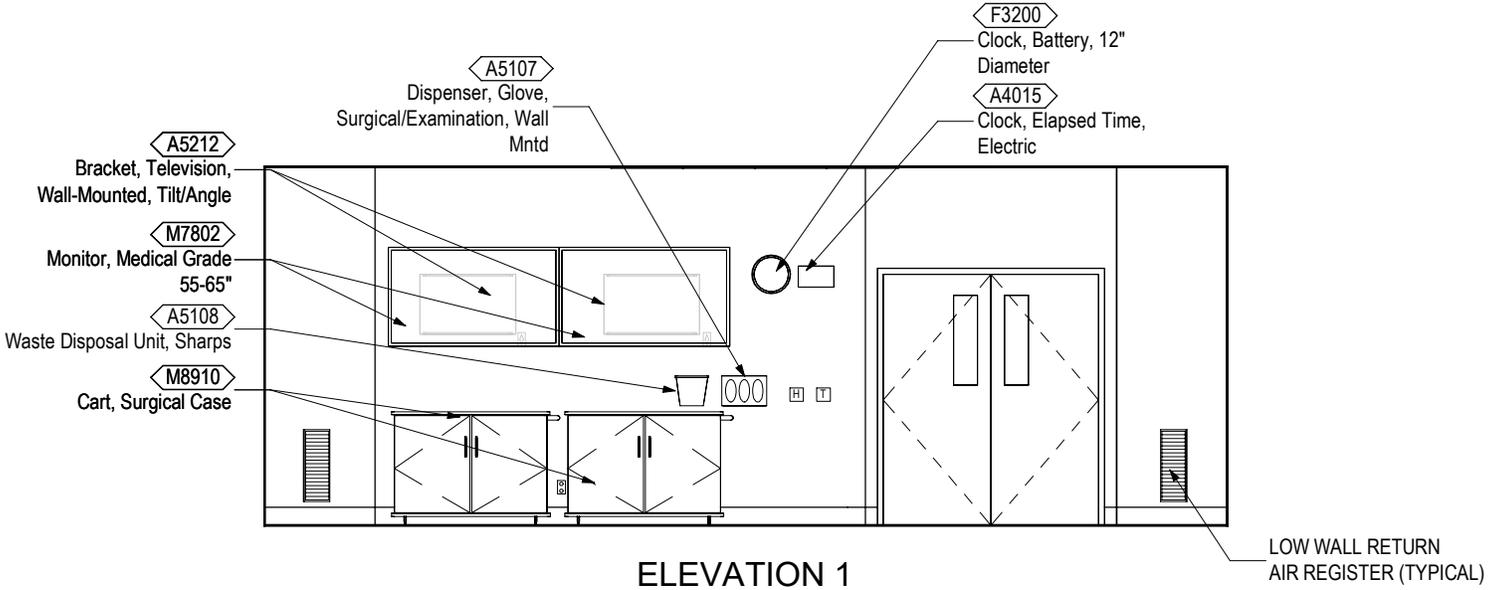
**4.8. OPERATING ROOM, CARDIOTHORACIC (ORCT1)**JSN Legend

JSN	DESCRIPTION	
		M4645 PATIENT TRANSFER DEVICE
		M4810 HEART/ LUNG MACHINE, BYPASS, MODULAR
A1014	TELEPHONE, WALL MOUNTED, 1 LINE, WITH SPEAKER	M4811 PUMP, INTRA-AORTIC, BALLOON
A1120	COLUMN, SERVICE, PREFAB, SURGICAL, CEILING MOUNTED	M4812 PACEMAKER, SINGLE CHAMBER, EXTERNAL, TEMPORARY
A1122	COLUMN, EQUIPMENT ARM, CEILING MOUNTED, SURGERY	M4815 HYPO/HYPERThERMIA UNIT, AUTOMATIC/MANUAL, MOBILE
A1130	CABINET, CONTROL, NITROGEN	M4816 WARMING UNIT, PATIENT, AUTOMATIC/MANUAL, AIR
A1200	LIFT SYSTEM, OVERHEAD, PATIENT ROOM	M5030 STOOL, SURGEON, REVOLVING
A4015	CLOCK, ELAPSED TIME, ELECTRIC	M5512 LASER, SMOKE EVACUATOR
A5104	CART, MEDICAL WASTE DISPOSAL, MOBILE W/FOOT PEDAL	M7490 LIGHT, SURG, CEILING MTD, DUAL, UNEQUAL DIA HEADS
A5107	DISPENSER, GLOVE, SURGICAL/ EXAMINATION, WALL-MTD	M7650 DEFIBRILLATOR/ MONITOR, ACUTE CARE
A5108	WASTE DISPOSAL UNIT, SHARPS	M7801 MONITOR, MEDICAL GRADE, 26"-42"
A5212	BRACKET, TELEVISION, WALL-MTD, TILT/ANGLE	M7802 MONITOR, MEDICAL GRADE, 55"-65"
E0954	CART, EMERGENCY, MOBILE, 66"H x 32"W x 22"D	M7818 MONITOR, TRANSPORT
E0963	CART, GEN. STORAGE, MOBILE	M7845 MONITOR, PHYSIOLOGICAL, BEDSIDE, 4 CHANNEL
F0355	FOOTSTOOL, STRAIGHT	M8551 LIGHT SOURCE, FIBEROPTIC HEADLAMP
F3050	WHITEBOARD, DRY ERASE	M8606 ENDOSCOPY CART, FIBEROPTIC, W/VIDEO ACCESSORIES
F3200	CLOCK, BATTERY, 12" DIAMETER	M8800 CART, ANESTHESIA
L0221	ANALYZER, BLOOD, PORTABLE, HAND HELD	M8810 STAND, MAYO
L1095	CELL SAVER,	M8825 TABLE, INSTRUMENT/DRESSING, CRS, APPROX 36"x20"x34"
M0630	ANESTHESIA APPARATUS, 3 GAS	M8830 TABLE, INSTRUMENT/DRESSING, MOBILE
M0750	FLOWMETER, AIR, CONNECT W/50 PSI SUPPLY	M8840 TABLE, BACK, INSTRUMENT/DRESSING
M0755	FLOWMETER, OXYGEN, LOW FLOW	M8900 CARRIAGE, PAIL, CRS, WITHOUT PAIL
M0765	REGULATOR, VACUUM	M8905 PAIL, UTILITY, CRS WITH CARRIAGE
M1801	COMPUTER, MICROPROCESSING, W/FLAT PANEL MONITOR	M8910 CART, SURGICAL CASE
M3070	HAMPER, LINEN, MOBILE, W/LID	M8920 STAND, BASIN, CRS, MOBILE, DOUBLE
M3072	FRAME, INFECTIOUS WASTE BAG W/LID	M8925 STAND, BASIN, CRS, MOBILE, SINGLE
M3080	CABINET, INSTRUMENT, CRS, 2 GLASS DOOR, 6 SHELF	M8940 STOOL, ANESTHESIA, WITH BACK
M3109	ELECTROSURGICAL/COAGULATOR, ARGON PLASMA	M8950 WARMER, BLOOD
M3150	DISTRIBUTION SYSTEM, MEDICATION, AUTOMATIC	M8970 WARMER, BLOOD, HIGH VOLUME
M3175	ELECTROSURGICAL UNIT, DUAL OUTPUT	M9080 TABLE, OPERATING, PEDESTAL, 5 SECTION
M4250	PUMP, SYRINGE, INFUSION	R4785 ICE MAKER, SURGICAL SLUSH
M4255	STAND, IV, ADJUSTABLE	S9755 SUCTION SYSTEM, SURGICAL, MOBILE ROVER UNIT
M4266	PUMP, VOLUMETRIC, INFUSION, MULTIPLE LINE	U0105 EXTRACORPOREAL SUPPORT SYSTEM
M4280	PUMP, PNEUMATIC STOCKING/CUFF	X2105 SCANNER, ULTRASOUND, CARDIAC (ECHO)
M4287	IRRIGATION SYSTEM, SURGICAL	



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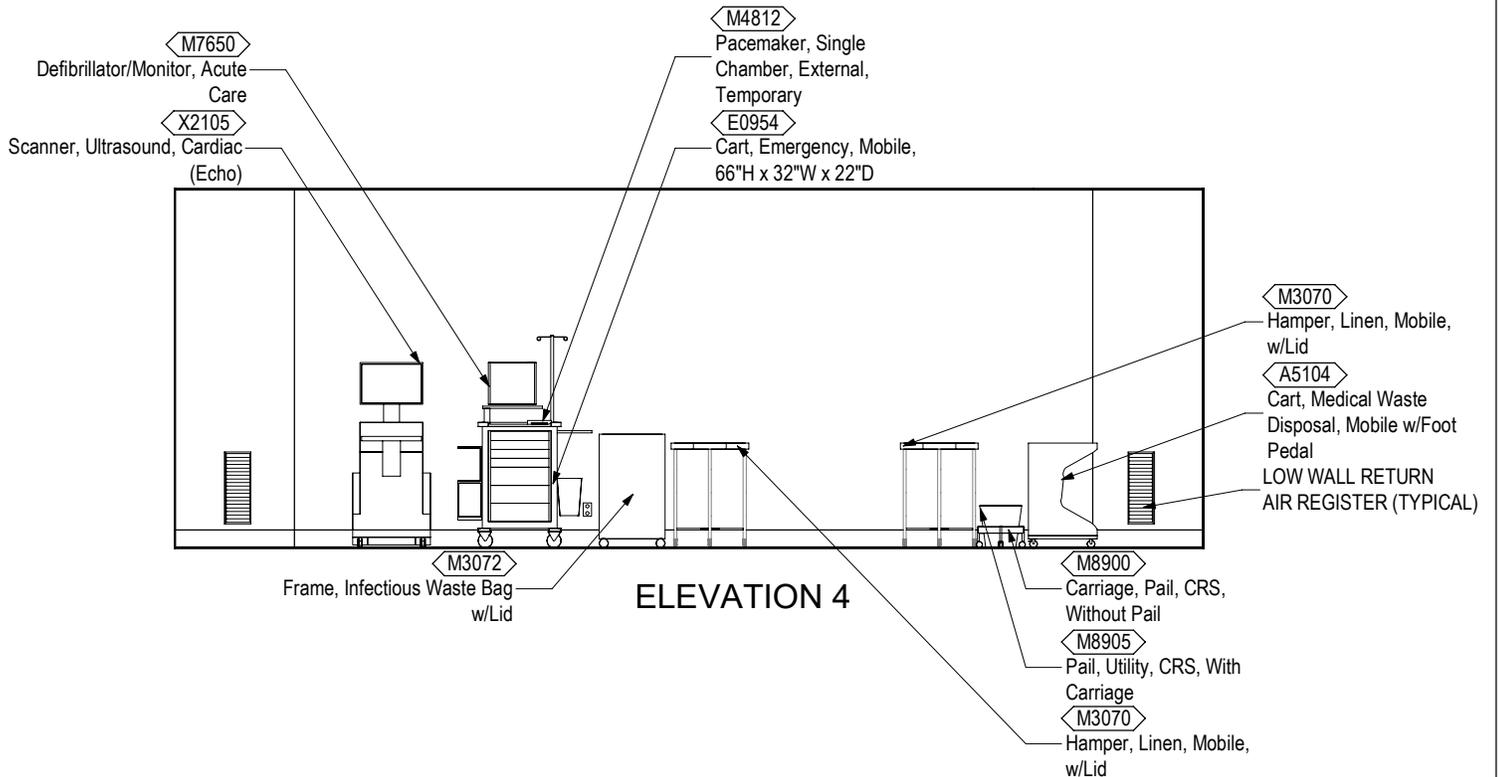
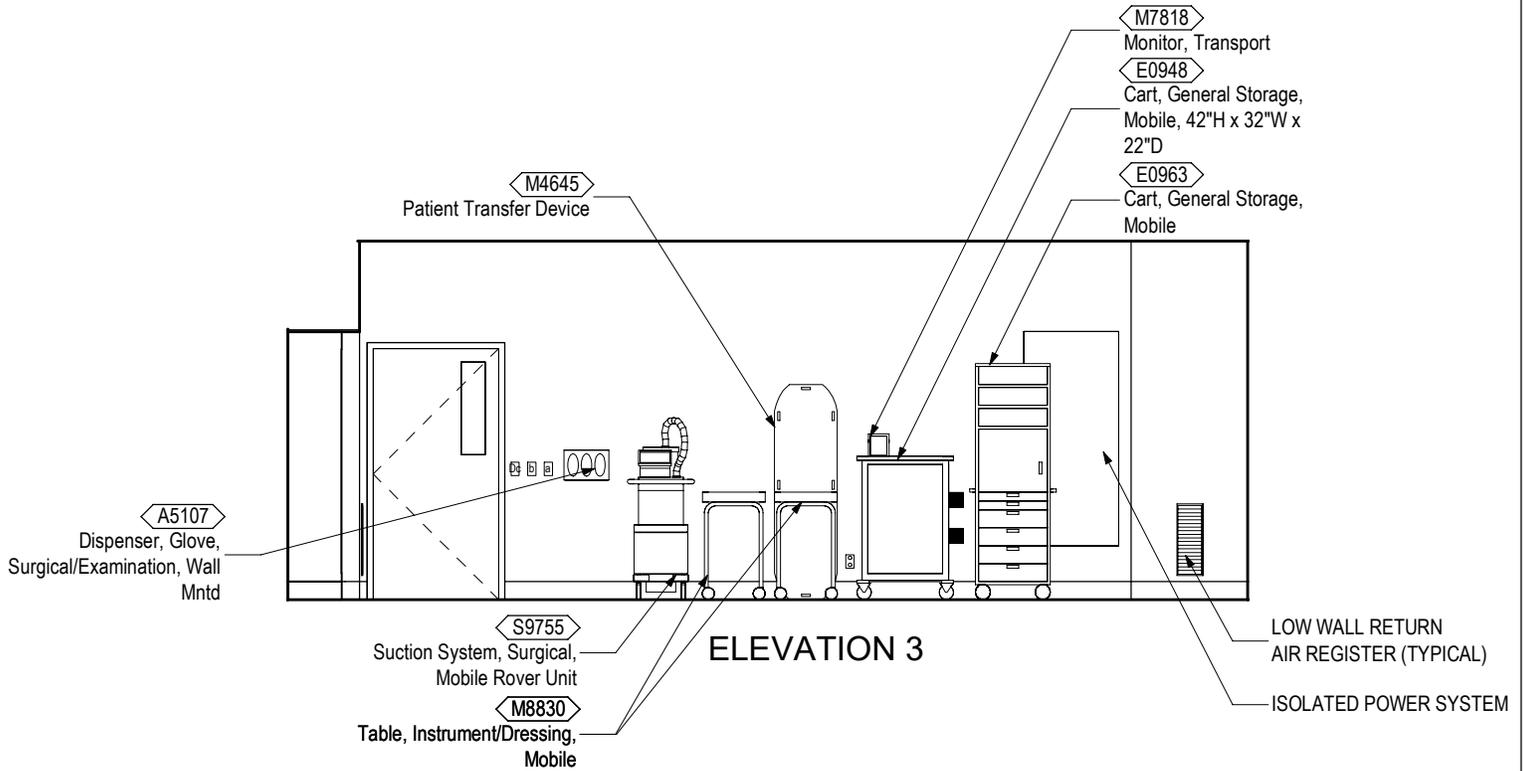




SURGICAL AND ENDOVASCULAR SERVICES (ORCT1) OPERATING ROOM, CARDIOTHORACIC ELEVATIONS

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## 4.8 OPERATING ROOM, CARDIOTHORACIC (ORCT1)

### Room Data Sheet

#### ARCHITECTURAL

Ceiling Type:	Gypsum Wallboard (SC)
Ceiling Height:	10'-0" (3048 mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	RF Integral Base (min. 6"/152 mm)
Floor Finish:	Resinous Flooring (RD) Res 4
Slab Depression:	None
Sound Protection:	50 STC (to other room), 35 STC (to corridor)
Doors:	Double, Size 6'-0" x 7'-0" (1829 mm x 2133 mm) Wood w/ Narrow View Window; Single, Size 4'-0" x 7'-0" (1219 mm x 2133 mm) Wood w/ Small View Window

Special Requirement:

#### Notes:

- 1) Shielding is to be provided as it is determined by the Physicist on a per project basis.
- 2) Locate access panels as required to allow for the maintenance of surgical booms and lights in facilities without interstitial space. Min. size to be 24" x 24".
- 3) Cabinetry can be built in or free-standing.
- 4) Nominal wall thickness is shown at 8" (203 mm) to account for a variety of wall-mounted panels, such as isolation power unit panels, that require a thicker partition.
- 5) Include wall extensions at both sides of the scrub sink to protect the scrub sinks from cart and stretcher traffic in the semi-restricted corridor.
- 6) Coordinate structural supports, utility connections and other requirements for surgical lighting pendants with manufacturer.
- 7) Equipment and Anesthesia booms are duplicated to provide maximum flexibility. If duplicate booms are not desired, they can be

omitted subject to approval by clinical leadership.

8) Facility will select number and types of scopes and other instrumentation as necessitated by the unique case load.

9) Endoscopy equipment can be located on a cart or on the equipment boom.

10) NSF provided for this space is the minimal acceptable NSF; contact Facilities Standards Services for any deviations.

#### LIGHTING

Refer to the VA Lighting Design Manual section 4.2.13 - Surgery/Operating Room - for lighting design consideration.

#### POWER

Normal Power: Connect selected receptacles and equipment to Normal power IPS.

Emergency Power: Connect selected receptacles and equipment to Critical Branch emergency IPS.

#### Notes:

- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
- 2) IPS Power & ground modules mounted at +24" AFF
- 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
- 4) Provide power connections for articulating utility columns.

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	

**Notes:**

- 1) Provide connections for articulating utility columns.
- 2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Rooms data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization.

**Notes:**

- 1) Refer to the latest version of the VA HVAC Design Manual for quantity and location of low air return grilles and ceiling diffusers.

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	Yes
Medical Vacuum	Yes
Oxygen	Yes
Special Requirement:	

**Notes:**

- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen, Nitrous Oxide Carbon Dioxide
- 2) For gas quantities per boom refer to the reflected ceiling plan.
- 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project
- 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.8 OPERATING ROOM, CARDIOTHORACIC (ORCT1)****Equipment List**

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A1014	Telephone, Wall Mounted, 1 Line, With Speaker	1	V/V	Telephone, wall mounted, 1 line, with speaker.
A1120	Column, Service, Prefab, Surgical, Ceiling Mounted	2	C/C	Prefabricated surgical service column. Strong 18 gauge stainless steel shell ceiling mounted unit with the following services: oxygen, nitrous oxide, nitrogen, medical air, medical vacuum, gas evacuation, electrical outlets, monitoring connectors, and IV holders. Specify type of column (fixed or retractable) and number of outlets required for each service. Size will vary with number of service outlets required. Designed to be used in the operating room, recovery and ICU-CCU rooms..
A1122	Column, Equipment Arm, Ceiling Mounted, Surgery	4	C/C	A ceiling mounted retractable equipment arm for use in the OR. Designed to provide equipment placement support, power receptacles including low-voltage panels, gas outlets and flat screen mounting for a surgical suite. Unit will provide a range of motion of up to 330 degrees with arm providing additional vertical movement. Units are custom configured with multiple options available. Price is based on a unit with two (double) retractable arms. Also available are units for use in anesthesia, ICU and ER.
A1130	Cabinet, Control, Nitrogen	3	C/C	Nitrogen control cabinet. Unit consists of supply cut-off valve, supply pressure gauge, pressure regulator (adjustable 0 to 200 PSI), outlet pressure gauge, nitrogen outlet and connection to surgical gas column. Specify recessed or surface mounting. Designed for powering surgical pneumatic tools.
A1200	Lift System, Overhead, Patient Room	1	V/C	An overhead rail system specifically designed for patient lifting and movement for a single bed patient room. The system will consist of recessed or ceiling mounted primary and secondary rails, lift motor with rolling carriage, patient harness or seat, and a hand controller or control box with charger. System will facilitate lifting and movement of patient to and from bed to gurney, chair or other requirement. Minimum lift capability is 550 pounds. Custom design of track layout by manufacturer is essential to meet individual facility requirements.
A4015	Clock, Elapsed Time, Electric	1	C/C	Elapsed time digital electric clock. Single display time that can be used either as a clock or elapsed time indicator. Clock consists of buttons to set minutes, and hours for the time. For use in operating and delivery room, and medical service columns. Analog or digital displays may be provided as specified by the user.
A5104	Cart, Medical Waste Disposal, Mobile w/Foot Pedal	1	V/V	Mobile molded cart with foot pedal, to house 18-24 gal sharps disposal container. Lid lift or slide opens easily with foot-operated pedal. Lid may remain closed when not in use to reduce exposure to contents. Ergonomic handle is telescopic. Heavy containers can be removed from the side with minimal lifting. Meets requirements of OSHA 29 CFR 1910.130.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	2	V/V	Examination three (Small Medium, Large) glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Hardware not included, Option 3 powder coated steel.
A5108	Waste Disposal Unit, Sharps	2	V/V	A container for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.

## 4.8 ORCT1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A5212	Bracket, Television, Wall-Mounted, Tilt/Angle	2	V/V	A wall mounted, tilt/angled TV bracket for 37" to 80" TVs. Mount will be a universal and VESA compliant unit with a load capacity of up to 130 lbs.
E0954	Cart, Emergency, Mobile, 66"H x 32"W x 22"D	1	V/V	THIS TYPICAL INCLUDES: 1 Cart body, style-A narrow, w/raised edge top; 1 Accessory rail, side; 1 Accessory rail, back; 1 Defibrillator tray; 1 IV pole; 1 Breakaway bar; 1 Flip-up shelf; 1 Wastebasket; 1 Oxygen tank holder; 1 Electrical box-4 outlet; 1 Cord wrap; 4 Drawer, 3"H; 3 Drawer, 6"H; Drawer organizer bins.
E0963	Cart, General Storage, Mobile	1	V/V	Mobile General Storage Cart, approximately 72"H x 23"W x 22"D. THIS TYPICAL INCLUDES; Locker Storage Container on Wheels, w/Solid Door 3 Tray/Shelves; Drawers, 3"H; 4 Drawers, 6"H; 1 Tray/Shelf Divider Drawer Organizer Bins
F0355	Footstool, Straight	4	V/V	Step stool. Used to assist patients getting on and off exam or surgical tables. Fitted with electrically conductive rubber tips.
F3050	Whiteboard, Dry Erase	1	V/V	Whiteboard unit, approximately 36" H x 48" W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
F3200	Clock, Battery, 12" Diameter	1	V/V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
L0221	Analyzer, Blood, Portable, Hand Held	1	V/V	Handheld point-of-care testing analyzer. Utilizes single-use, disposable cartridges for diagnostic testing to include: Blood gases, electrolytes and chemistries, lactate, coagulation, hematology, and cardiac markers.
L1095	Cell Saver	1	V/V	Autologous blood recovery system, also known as a "Cell Saver." Used in the operating room and laboratory to wash extravascular blood free of debris, clots, etc., and to make the blood safe for re-infusion into the patient.
M0630	Anesthesia Apparatus, 3 Gas	1	V/V	Three gas anesthesia apparatus. Basic unit consists of steel cabinet with casters with one shallow, one medium, and one deep drawer, seven long scale eleven-inch flowmeters, five cylinder yokes, and telescoping absorber post. It includes two-canister model carbon dioxide absorber with inhalation and exhalation check valves, switch valve, switch valve elbow, sidearm Vernitrol, flow calculator, mounting kit, ventilator calculator, ventilator and an oxygen piping inlet. Also features nitrous oxide fail safe valve kit, aspirator kit, gas evacuator with vacuum and a flow meter safety cover. Used to dispense a mixture of gases during surgical procedures.
M0750	Flowmeter, Air, Connect w/50 PSI Supply	4	V/V	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Requires the appropriate adapter for connection to the wall outlet and fitting to connect to tubing. Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0755	Flowmeter, Oxygen, Low Flow	6	V/V	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Database pricing includes DISS fitting and DISS power outlet and wall adapter. Other fitting and adapter configurations are available.

## 4.8 ORCT1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M0765	Regulator, Vacuum	17	V/V	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required. To be used in delivery, neonatal, pediatrics or any area where suction is required. Database pricing reflects continuous regulators graduated to 200 mm Hg with a full line vacuum selection switch and DISS configured inlets and outlets.
M1801	Computer, Microprocessing, w/Flat Panel Monitor	1	V/V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
M3070	Hamper, Linen, Mobile, w/Lid	2	V/V	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters. For linen transport in hospitals and clinics.
M3072	Frame, Infectious Waste Bag w/Lid	1	V/V	Frame for an infectious waste collection bag. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Adjust to hold 18" or 25" trash bags. Mounted on ball bearing casters and includes permanently mounted hinged lid. Provides means of bagging infectious waste at point of waste generation.
M3080	Cabinet, Instrument, CRS, 2 Glass Door, 6 Shelf	2	V/V	Non-magnetic stainless steel instrument cabinet with two glass doors and six shelves (five adjustable). Cabinet body has a single storage compartment and seamless welded face. Shelf heights are adjustable on full length perforated strips mounted to the back and inside front cabinet corners. Cabinet is mounted on glides or casters. Cabinet may be covered by a sloping top.
M3109	Electrosurgical/Coagulator, Argon Plasma	1	V/V	An electrosurgical generator with an argon plasma coagulator and APC pulsed mode. This feature auto-regulates beam ignition and provides automatic dosing of power for increased control. The plug and play digital instrument recognition technology automatically configures the entire system to preprogrammed procedural parameters.
M3150	Distribution System, Medication, Automatic	1	V/V	An automated dispensing system that provides controlled dispensing, inventory and security. Size and cost will vary dependent on number of modules selected.
M3175	Electrosurgical Unit, Dual Output	1	V/V	Dual output electrosurgical unit. Solid state power source with foot switch jacks, monopolar and bipolar outputs, and four independent modes of operation. Used in the operating room or surgicenter as an alternative to the scalpel for cutting tissue.

## 4.8 ORCT1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M4250	Pump, Syringe, Infusion	1	V/V	The infusion syringe pump ensures highly accurate volume delivery and consistent flow for small volumes (<50 ml) of pharmacologic agents or thick feeding solutions. It shall be small, lightweight construction, making it transportable. Shall have menu-driven programming capable of flow rates (e.g. 0.1 or 1.0 mL/hr) that are intended for long-term bedside use and/or critical care patient transport, plunger positioning sensor, LCD display for easy viewing, volume limit programming to serve as a convenient cue of volume or dose delivery completion and multiple delivery modes for all applications requiring precisely controlled infusion rates. The infusion pump shall have automatic syringe size sensing which will give the flexibility to accept a wide range of syringe sizes (up to 60 mL) from different manufacturers. Shall be battery powered/AC adapter.
M4255	Stand, IV, Adjustable	2	V/V	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.
M4266	Pump, Volumetric, Infusion, Multiple Line	1	V/V	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.
M4280	Pump, Pneumatic Stocking/Cuff	2	V/V	Pneumatic stocking/cuff pump. Pump provides alternating pressure to pneumatic stockings for reduction of the threat of deep vein thrombophlebitis in post operative patients. May also be used in the CCU for rotating cuff therapy for reduction of peripheral circulation in congestive heart failure patients.
M4287	Irrigation System, Surgical	1	V/V	High flow surgical irrigation pump up 2.5l/min, available in single and double flow.
M4645	Patient Transfer Device	1	V/V	A patient transfer board designed to make lateral patient transfers safer for staff and be more comfortable for the patients. The board uses a smooth, low friction and static free surface to eliminate the need for metal rollers. The board has a soft foam core that makes them lightweight for ease of use and storage. The long board device also enables the transfer of a patient in the seated or Fowler position. The boards come in three sizes with the long board being foldable. The dimensions and price are for the long wide board.
M4810	Heart/Lung Machine, Bypass, Modular	1	V/V	Modular by-pass heart lung machine. Unit consists of an arterial pump, a backup arterial pump, one or two suction pumps, a water mixer, and a backup battery pack. To include disposable components: oxygenator/heater exchanger, cardiotomy reservoir, blood filters, and tubing. Unit is designed to temporarily replace the function of the patients heart and lungs during open-heart surgery or any surgical procedure that requires isolation of the heart.

## 4.8 ORCT1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M4811	Pump, Intra-Aortic, Balloon	1	V/V	Intra-aortic balloon pump. Item is used to treat cardiogenic shock resulting from extensive myocardial injury or damage. The pump shall function from line or battery power and is to be a mobile unit. It contains physiological monitoring, pacing, and pumping capabilities. It requires minimal set-up time and has immediate pumping capability. Adjustments can be accomplished without interruption of pumping. The monitor can be mounted remotely for the clinicians convenience and permits viewing of both cardio-pulmonary bypass and intra-aortic balloon pump simultaneously. The pump is designed for use in the critical care unit, operating room, cardiac cath lab and during transport.
M4812	Pacemaker, Single Chamber, External, Temporary	1	V/V	A single chamber, external temporary pacemaker designed to provide acute therapeutic, prophylactic, and diagnostic pacing support. It is capable of operating in the demand or asynchronous modes and includes adjustable rate, output, and sensing controls. Battery operated.
M4815	Hypo/Hyperthermia Unit, Automatic/Manual, Mobile	2	V/V	Automatic/manual hypo/hyperthermia unit. Sealed refrigeration system. Microprocessor controlled with multiple alarm system constantly monitoring temperature and water levels. Cabinet type unit. Designed to regulate body temperature by application of water-filled hypothermia blankets.
M4816	Warming Unit, Patient, Automatic/Manual, Air	1	V/V	Automatic/manual patient warming unit. Unit delivers a flow of warmed air through a perforated plastic blanket. Used primarily for postoperative patients to speed recovery of normal body temperature.
M5030	Stool, Surgeon, Revolving	2	V/V	Revolving stool. Consists of a padded upholstered seat with height adjustment. Unit rotates and is mounted on ball bearing swivel casters. Designed for use in examinations, treatment, and surgical procedures.
M5512	Laser, Smoke Evacuator	1	V/V	Filtration system used in conjunction with laser operations to remove surgical laser plume. The unit includes a pneumatic foot switch, disposable 0.12 micron HEPA primary filters, a secondary 0.12 micron ULPA/carbon filter, disposable funnels, reducer fittings and connector hoses.
M7490	Light, Surg, Ceiling Mtd, Dual, Unequal Dia Heads	2	V/C	Dual head surgical light ceiling mounted from a single pole. Unit has two lamp heads of differing sizes mounted on individual swing arms. Unit features multiple lighting pods in each lamp head, deep cavity illumination, color-corrected light, intensity control and sterilizable handles. Refer to the manufacturers' specifications for minimum ceiling heights and installation data. The database height dimension below refers to the height of the lamp head itself. The width and depth measurements are the larger of the two sums of the swing arm length and the head diameter. For use in general purpose surgical suites.
M7650	Defibrillator/Monitor, Acute Care	1	V/V	Portable defibrillator/monitor for acute care includes biphasic defibrillator, pacing, SPO2, Interpretive 12-lead, NIBP monitoring, EtCO2 monitoring, Invasive pressure monitoring, Vital Sign monitoring, temperature probe, Fax transmission, PCMCIA Data Cards, Paddle accessories, and a color LCD.
M7801	Monitor, Medical Grade 26 - 42"	4	V/V	LED HD monitor capable of displaying medical grade images. Monitor's size is 26-42".
M7802	Monitor, Medical Grade 55- 65"	2	V/V	LED HD monitor capable of displaying medical grade images. Monitor' size is 55 - 65".

## 4.8 ORCT1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M7818	Monitor, Transport	1	V/V	A light weight, rugged patient monitor for use during transport. Unit consists of a compact monitor with touchscreen display with up to 3 waveforms on a on a bright non-fading display. The unit measures ECG/respiration, NBP, SpO2, pressure, and temperature and CO2. Data can be transferred seamlessly throughout the continuum of care. Unit is approved for aeromedical use (US Army Airworthiness Certification and Evaluation (ACE) program. Battery run time of 3 hours before recharge.
M7845	Monitor, Physiological, Bedside, 4 Channel	1	V/V	4 channel bedside physiological monitor. The unit consist of a four-channel non-fade monochrome display monitor, an alarm system and printer-recording capabilities. The monitor has color coded controls and automatic calibration. The unit displays up to four waveforms simultaneously. The parameters to be monitored are user selectable. The monitor may be connected to a central monitoring station. The unit monitors patients in most acute care areas, step-down units, procedure rooms and emergency rooms.
M8551	Light Source, Fiberoptic Headlamp	1	V/V	Fiberoptic light source for surgical headlamps. This unit provides color corrected light for surgical procedures where photography is not required.
M8606	Endoscopy Cart, Fiberoptic, w/Video Accessories	1	V/V	Endoscopy cart with video and print capabilities for use with fiberoptic (direct vision) endoscopes. This cart does not work with videoscopes. System takes optical images from a single endoscope and directly records them or converts them to digital signals for recording. A typical system cart includes the cart, a light source, an insufflator, a suction unit, a heat probe unit, an electrosurgical apparatus, a digital camera converter or color video camera, a camera controller, a monitor, a video/DVD recorder and a color printer. This JSN does not include the endoscope; refer to the endoscopes at JSNs M8500-M8550. Each cart can support one or more types of endoscope and should be specifically tailored to its intended use(s). This cart can be configured to interface with a network endoscopy information management system; refer to JSN M8600. Database physical information and pricing is for a higher cost system containing one of each of the above components.
M8800	Cart, Anesthesia	1	V/V	Mobile anesthesia cart. The cart shall be built of stainless steel or other appropriate material and mounted on 4" casters for easy mobility. It shall be capable of being equipped with bottle holders, adjustable IV pole, storage drawers, shelves and a top bar/rail.
M8810	Stand, Mayo	2	V/V	Adjustable instrument table. Table is corrosion resistant stainless steel construction and is mounted on two casters with two skid rails. It has telescopic upright adjusts from 39 inches to 60 inches with automatic locking device, and removable 13"x19" instrument tray. Designed for use in operating and procedure rooms.
M8825	Table, Instrument/Dressing, CRS, approx. 36x20x34	2	V/V	Instrument and dressing table. Made of corrosion resistant stainless steel with a sound deadened top. Includes guard rail, shelf and two side-by-side drawers. The table is mounted on swivel, ball-bearing casters.
M8830	Table, Instrument/Dressing, Mobile	2	V/V	Mobile instrument/dressing table, approximately 34" H x 20" W x 16" D Corrosion resistant stainless steel mobile table with sound-deadening shelf and drawer. Unit is mounted on 2" casters. Designed for all purpose use in the hospital or clinic.

## 4.8 ORCT1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M8840	Table, Back, Instrument/Dressing	1	V/V	A specialty back table for large cases such as orthopedics, spinal fusions, neuro and craniotomies. The table has a pneumatic tuck-away cantilevered shelf which can hold multiple trays and is angled for clear observation of instruments. It comes with 4" diameter heavy-duty ball bearing brake/swivel casters. Construction is all stainless steel.
M8900	Carriage, Pail, CRS, Without Pail	3	V/V	Carriage, pail (kick bucket) CRS. Consists of a stainless steel ring type carriage mounted on ball bearing casters. Includes circular non-marring bumper. For use in the surgical operating room.
M8905	Pail, Utility, CRS, With Carriage	3	V/V	Utility pail (kick bucket). Shall be a stainless steel 12 quart bucket for use in surgical operating rooms.
M8910	Cart, Surgical Case	2	V/V	Surgical case cart. Unit consists of two hinged cabinet sections, each section equipped with two pull-out shelves with stops. The entire unit is mounted on four heavy duty conductive swivel casters. Used to transport surgical packs and supplies to surgery and soiled items back to central supply.
M8920	Stand, Basin, CRS, Mobile, Double	1	V/V	CRS, mobile, double basin stand with shelf. Stainless steel corrosion resistant frame constructed from two continuous inverted "U" shaped tubes, forming four legs and mounted on casters. Circular rings welded to top receive two removable 8 quart stainless steel basins. For open heart and other procedures.
M8925	Stand, Basin, CRS, Mobile, Single	2	V/V	Mobile single basin stand with shelf. The stand shall be constructed of tubular stainless steel and mounted on 2" swivel casters. Shall include a shelf and an 8 quart stainless steel basin. Intended for use in ORs and treatment areas.
M8940	Stool, Anesthesia, With Back	3	V/V	Anesthesia stool with back. All stainless steel with well-curved back panel and wide conductive seat. Designed for the anesthesiologist during surgical procedures.
M8950	Warmer, Blood	1	V/V	Unit consists of a temperature regulated water bath, circulating fluid, or dry heat with controls and an audible high temperature alarm. The warmer provides a stable environment for the controlled warming of blood or other fluids prior to being transfused to a patient.
M8970	Warmer, Blood, High Volume	1	V/V	Unit contains a proportional controller to regulate temperature in the heat exchanger and an audible high temperature alarm. Designed to provide a stable temperature for the controlled warming of blood or other fluids prior to being transfused to a patient. Unit may be a cuff type or circulating water heat exchanger.
M9080	Table, Operating, Pedestal, 5 Section	1	V/V	Pedestal type major operating table with 5 sections. Table is mounted on a solid base with casters and locks. Table top surface is fabricated from radio-translucent, conductive panels and the larger table sections are equipped with radiographic cassette tunnels. Table includes Electro-hydraulic controls, side rail locking system, kidney elevator, grounding receptacle and dual arm support section. Designed for use in the operating room in a variety of surgical procedures.
R4785	Ice Maker, Surgical Slush	1	V/V	An automated surgical slush machine designed to produce a velvet soft slush to limit the likelihood of damaging tissue due to large or sharp ice particles during surgical procedures. Unit operates with a temperature range of 30 degrees F to 32 degrees F. The unit is also designed to operate quietly to not disrupt the OR environment. Casters allow for easy movement.

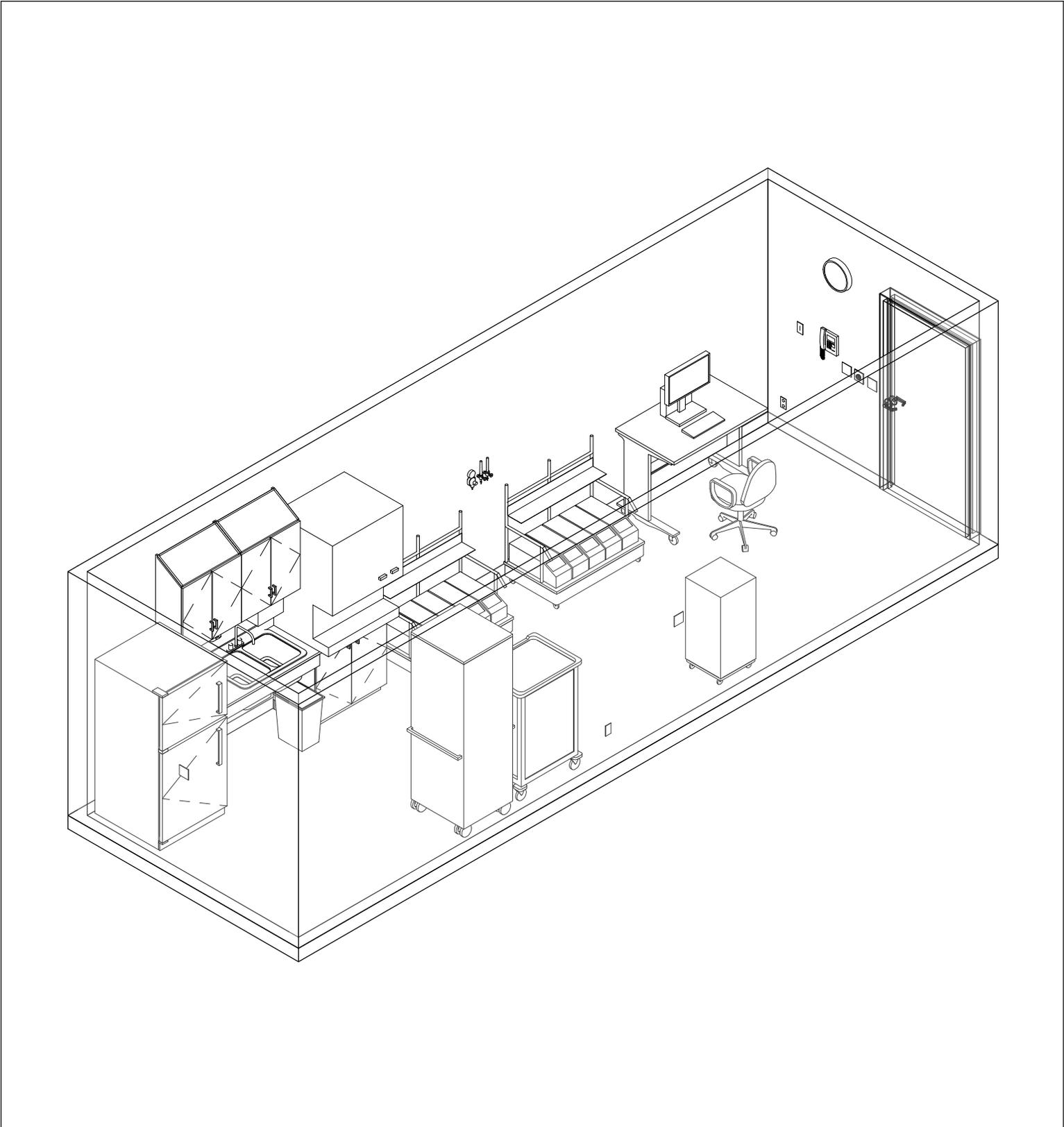
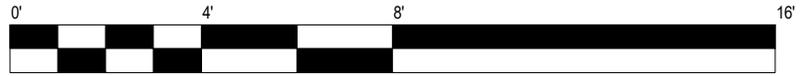
## 4.8 ORCT1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
S9755	Suction System, Surgical, Mobile Rover Unit	1	V/V	Surgical fluid waste management system with powered IV pole and smoke evacuation. Portable waste collection unit, for use with Docking Station (specified separately). Dual canisters (one 4L and one 20L), two levels of suction: 2-21in/Hg, fluid readout, 3 different port sizes for smoke tubing.
U0105	ExtraCorporeal Support System	1	V/V	ECHO is a device used to provide cardio pulmonary support on a temporary basis and assist oxygen to vital body systems. Provides oxygenation and carbon dioxide removal from the blood.
X2105	Scanner, Ultrasound, Cardiac (Echo)	1	V/V	High definition, diagnostic ultrasound system for Radiology, Cardiology, Vascular, ob-gyn, Perinatology, and Surgical imaging applications. The unit employs curved, phased and linear array imaging technology. The system supports colorflow, pulse, continuous wave imaging modalities. On board software measurement packages available for all imaging applications. The system is DICOM 3.0 compatible, for easy linkage to filmless image management systems and review stations. In addition, a full line of probes and conventional recording devices are available.



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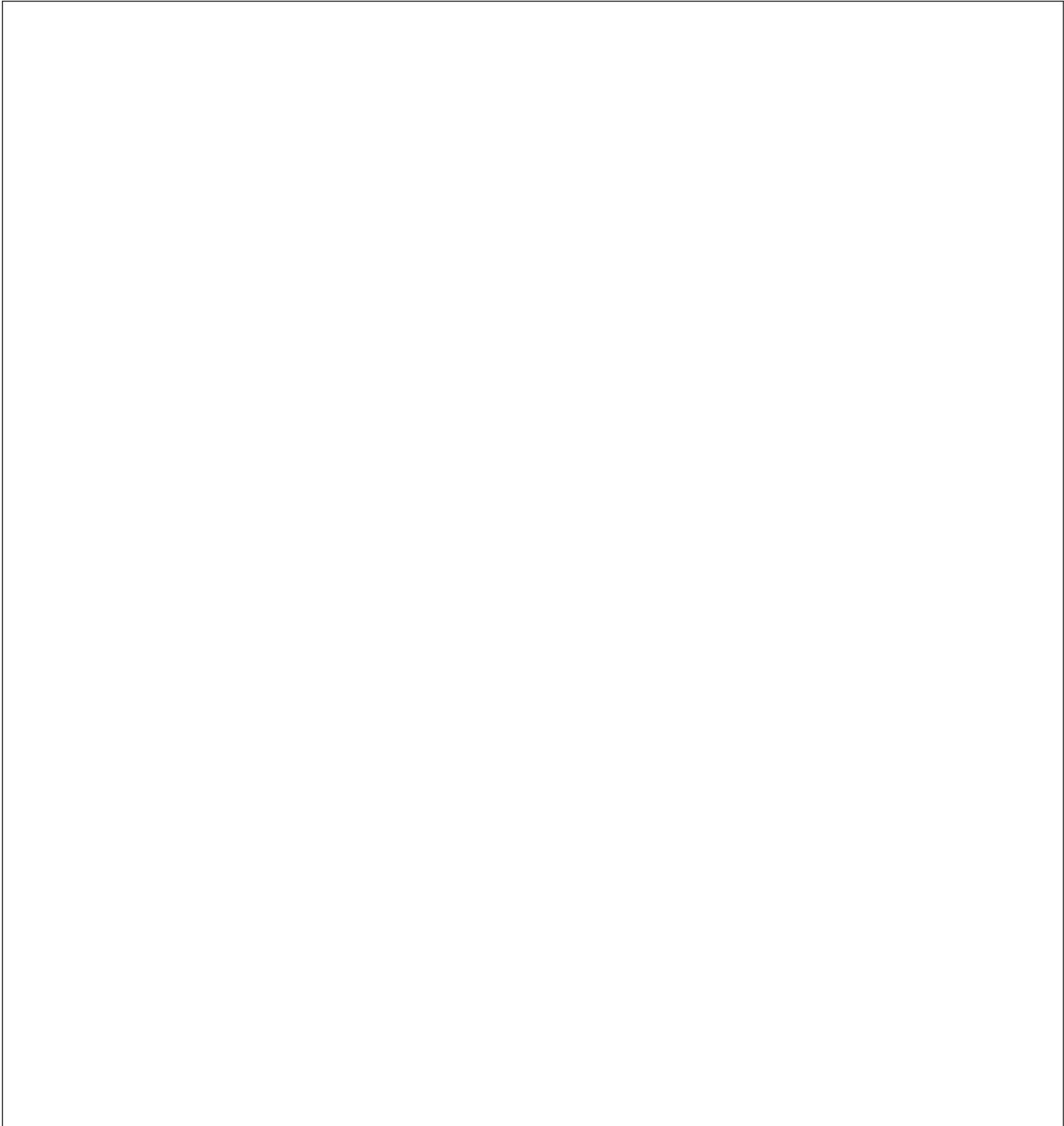
U.S. Department  
of Veterans Affairs

SURGICAL AND ENDOVASCULAR SERVICES  
(ORHL1) PUMP ROOM, CARDIOTHORACIC / HYBRID OR  
INTERACTIVE 3D PDF

4.9. ORHL1

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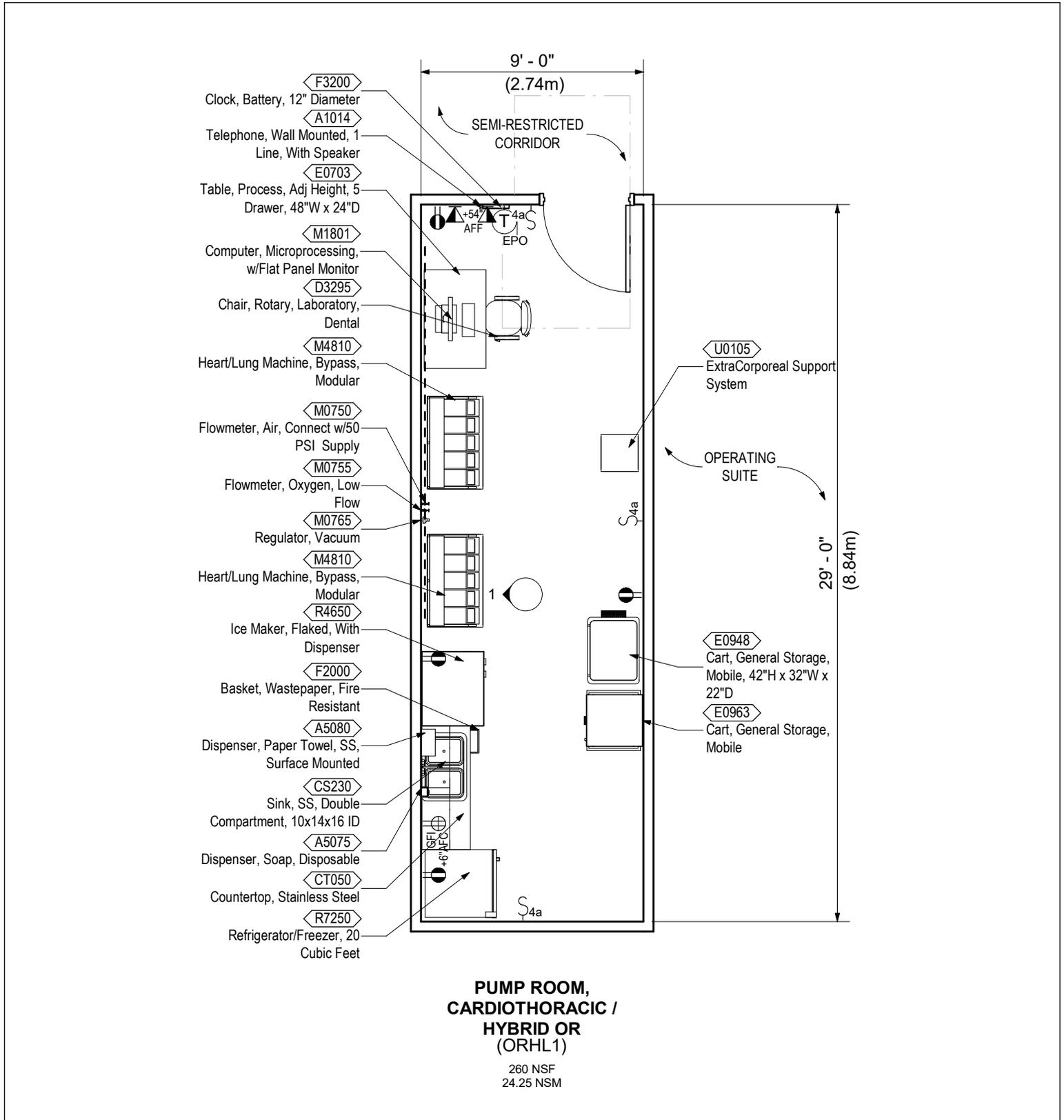
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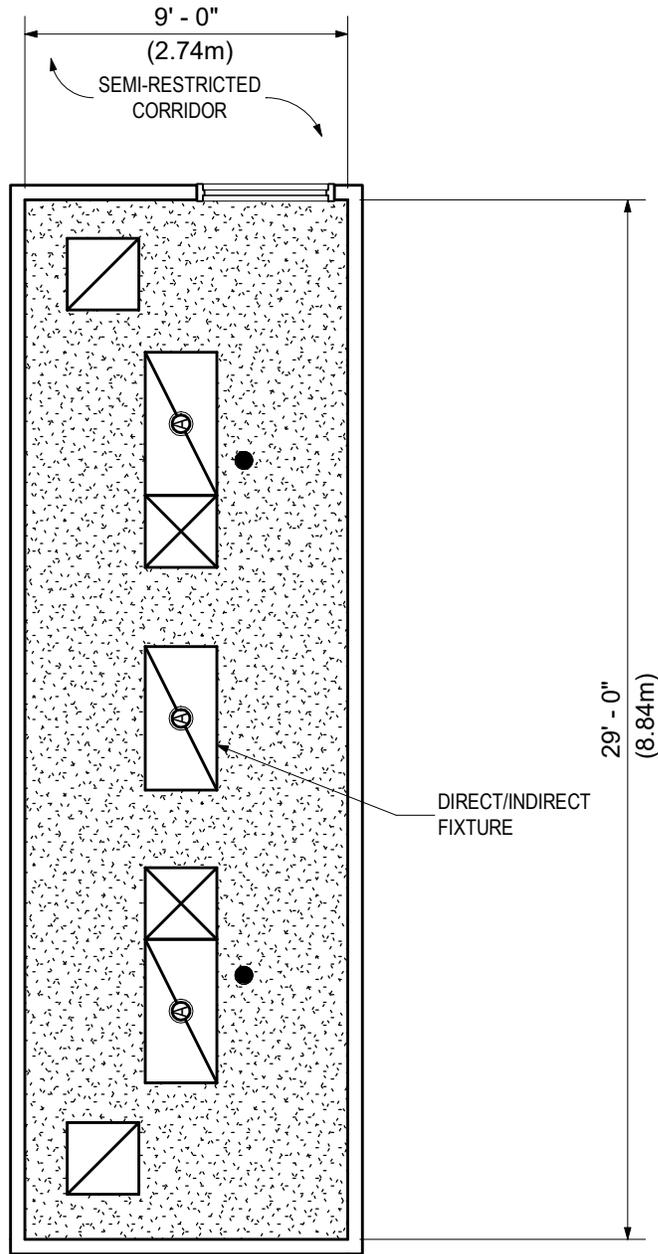
**PUMP ROOM,  
CARDIOTHORACIC /  
HYBRID OR  
(ORHL1)**

260 NSF  
24.25 NSM



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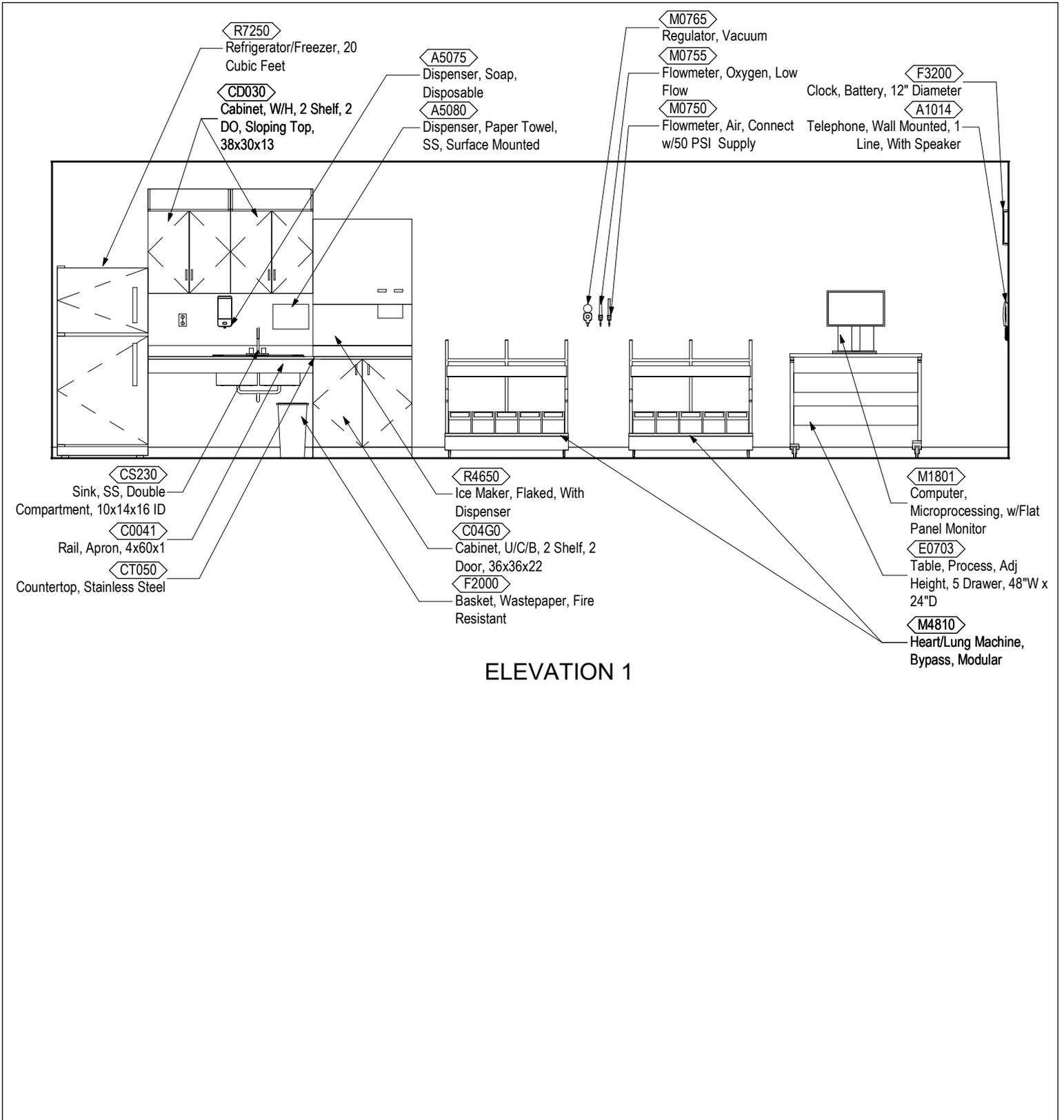
**PUMP ROOM,  
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HYBRID OR  
(ORHL1)**

260 NSF  
24.25 NSM



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**4.9 PUMP ROOM, CARDIOTHORACIC/HYBRID OR (ORHL1)**Room Data Sheet**ARCHITECTURAL**

Ceiling Type:	Gypsum Wallboard (SC)
Ceiling Height:	9'-0" (2700 mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	RF Integral Base (min. 6"/152 mm)
Floor Finish:	Resinous Flooring
Slab Depression:	None
Sound Protection:	None
Doors:	Single, Size 4'-0" x 7'-0" (1219 mm x 2133 mm) Wood
Special Requirement:	

**LIGHTING**

Refer to the VA Lighting Design Manual section 7.10 - Equipment Room - for lighting design consideration.

**POWER**

Normal Power:	To be connected to selected receptacles and equipment.
Emergency Power:	Critical branch of the EES to be connected to selected receptacles and equipment.

Notes:

- 1) Provide a duplex receptacle per computer and equipment location connected on emergency.
- 2) Provide convenience duplex receptacle on normal power.

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	No
Intercom:	No
Motion Intrusion Detection (MID):	No
Nurse Call:	No
Code Blue:	No
Public Address:	Yes
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Conferencing (VTEL):	No
Special Requirement:	No

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Instrument Preparation and Storage room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization

**PLUMBING AND MEDICAL GASES**

Cold Water:	Yes
Hot Water:	Yes
Waste:	Yes
Reagent Grade Water:	No
Medical Air	Yes
Medical Vacuum	Yes
Oxygen	Yes

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Light Hazard

**4.9 PUMP ROOM, CARDIOTHORACIC/HYBRID OR (ORHL1)**Equipment List

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A1014	Telephone, Wall Mounted, 1 Line, With Speaker	1	V/V	Telephone, wall mounted, 1 line, with speaker.
A5075	Dispenser, Soap, Disposable	1	V/V	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
A5080	Dispenser, Paper Towel, SS, Surface Mounted	1	C/C	A surface mounted, satin finish stainless steel, single-fold, paper towel dispenser. Dispenser features: tumbler lock; front hinged at bottom; and refill indicator slot. Minimum capacity 400 single-fold paper towels. For general purpose use throughout the facility.
C04G0	Cabinet, U/C/B, 2 Shelf, 2 Door, 36x36x22	1	C/C	Standing height under counter base cabinet with two adjustable shelves and two solid hinged doors. Also referred to as a cupboard cabinet. For general purpose use throughout the facility.
C0041	Rail, Apron, 4x60x1	1	C/C	Apron rail. Also referred to as an apron front, apron panel, or knee space rail. Used to close in front knee space area and/or provide work surface support between two base cabinets or a base cabinet and wall. Apron rails should be ordered in pairs to provide both front and rear work surface support.
CD030	Cabinet, W/H, 2 Shelf, 2 DO, Sloping Top, 38x30x13	2	C/C	Wall hung steel cabinet with two adjustable shelves, solid hinged doors, and sloping top. Also referred to as a solid hinged double door wall case. For general purpose use throughout the facility.
CS230	Sink, SS, Double Compartment, 10x14x16 ID	1	C/C	Double compartment stainless steel sink, drop-in, self-rimming, ledge-type, connected with a drain and provided with a mixing faucet. It shall also be provided with pre-punched fixture holes on 4" center, integral back ledge to accommodate deck-mounted fixtures, brushed/polished interior and top surfaces, and sound deadened. Recommended for use in suspended or U/C/B sink cabinets having a high plastic laminate or Chemsurf laminate countertop/work surface. Coordinate actual outside sink dimensions with the actual clear dimension of cabinet specified to ensure that they are compatible. For general purpose use throughout the facility.
CT050	Countertop, Stainless Steel	1	C/C	Stainless steel countertop (composition of heavy-gauge Type No. 304 stainless steel) having a smooth satin finish and integral 4" backsplash/curb. Also referred to as a corrosion-resistant steel work surface or work top. Available in various depths. Used in areas where excellent ease of cleaning, abrasion resistance, bacteria resistance, impact resistance, load capacity and moisture resistance, are of concern. Pricing based upon a 24" depth.
D3295	Chair, Rotary, Laboratory, Dental	1	V/V	Rotary dental laboratory chair. The chair is used by technicians while working at a bench. Chairs also have casters and an adjustable backrest.
E0703	Table, Process, Adj Height, 5 Drawer, 48"W x 24"D	1	V/V	Height adjustable table. The table top is available in a plastic laminate or chemical resistant material (Chem-Surf). Casters or glides are options with some tables. All tables will accept various storage components underneath. These work surfaces are available in 24" or 30" depth. THIS TYPICAL INCLUDES: 1 height adjustable table; 1 storage frame; 3 drawers, 3"H; 1 drawer, 6"H; 1 drawer, 9"H; and drawer organizer bins.

## 4.9 ORHL1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
E0948	Cart, General Storage, Mobile, 42"H x 32"W x 22"D	1	V/V	THIS TYPICAL INCLUDES: 1 Cart Body, Style-A Narrow, w/Raised Edge Top 2 Drawers, 3" H; 4 Drawers, 6" H; 1 Accessory Rail, Side Drawer Organizer Bins
E0963	Cart, General Storage, Mobile	1	V/V	Mobile General Storage Cart, approximately 72"H x 23"W x 22"D. THIS TYPICAL INCLUDES: Locker Storage Container on Wheels, w/Solid Door 3 Tray/Shelves; Drawers, 3"H; 4 Drawers, 6"H; 1 Tray/Shelf Divider Drawer Organizer Bins
F2000	Basket, Wastepaper, Fire Resistant	1	V/V	Wastepaper basket, fire resistant, approximately 40 quart capacity. This unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations. Size and shape varies depending on the application and manufacturer selected.
F3200	Clock, Battery, 12" Diameter	1	V/V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
M0750	Flowmeter, Air, Connect w/50 PSI Supply	1	V/V	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Requires the appropriate adapter for connection to the wall outlet and fitting to connect to tubing. Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0755	Flowmeter, Oxygen, Low Flow	1	V/V	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Database pricing includes DISS fitting and DISS power outlet and wall adapter. Other fitting and adapter configurations are available.
M0765	Regulator, Vacuum	1	V/V	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required. To be used in delivery, neonatal, pediatrics or any area where suction is required. Database pricing reflects continuous regulators graduated to 200 mm Hg with a full line vacuum selection switch and DISS configured inlets and outlets.
M1801	Computer, Microprocessing, w/Flat Panel Monitor	1	V/V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
M4810	Heart/Lung Machine, Bypass, Modular	2	V/V	Modular by-pass heart lung machine. Unit consists of an arterial pump, a backup arterial pump, one or two suction pumps, a water mixer, and a backup battery pack. To include disposable components: oxygenator/heater exchanger, cardiotomy reservoir, blood filters, and tubing. Unit is designed to temporarily replace the function of the patients heart and lungs during open-heart surgery or any surgical procedure that requires isolation of the heart.

## 4.9 ORHL1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
R4650	Ice Maker, Flaked, With Dispenser	1	C/C	Ice maker dispenser approximately 71" H x 19"D x 24"W. This unit provides flaked ice and cooled water automatically. The unit has a daily capacity up to 650 pounds and a 100 pound capacity stainless steel storage compartment with water station. Unit may be free-standing or counter-mounted, automatic load ice dispenser for food service and healthcare use. The unit is used in healthcare institutions and various commercial food service operations for dispensing ice.
R7250	Refrigerator/Freezer, 20 Cubic Feet	1	V/V	Refrigerator/freezer unit. This type unit includes a food saver system that helps keep food fresher. It also includes roll out wheels and is equipped for an optional automatic icemaker. This unit is of commercial or residential design and use.
U0105	ExtraCorporeal Support System	1	V/V	ECHO is a device used to provide cardio pulmonary support on a temporary basis and assist oxygen to vital body systems. Provides oxygenation and carbon dioxide removal from the blood.



SURGICAL AND ENDOVASCULAR SERVICES (ORNS1) OPERATING ROOM, NEUROSURGICAL AXONOMETRIC

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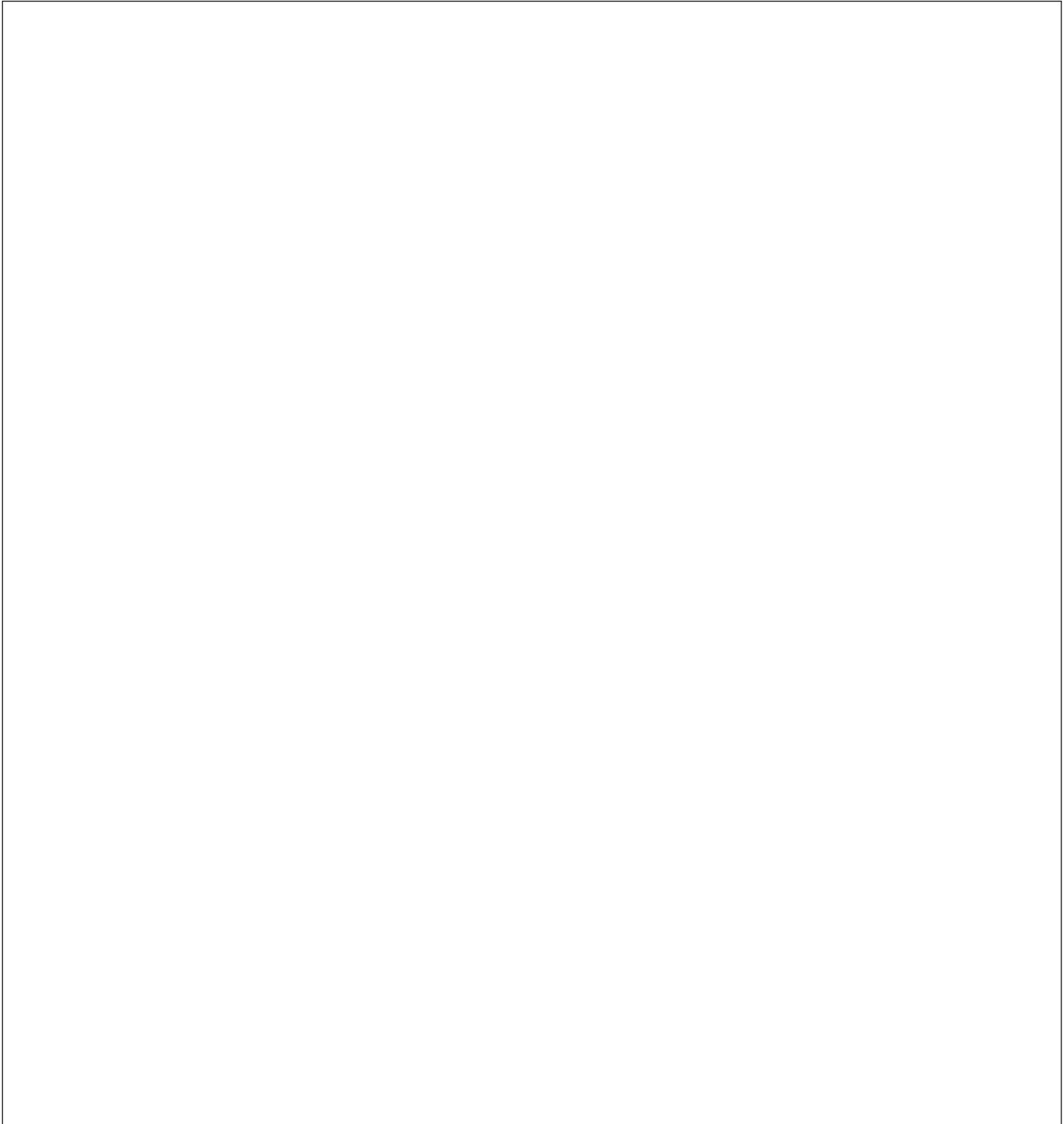


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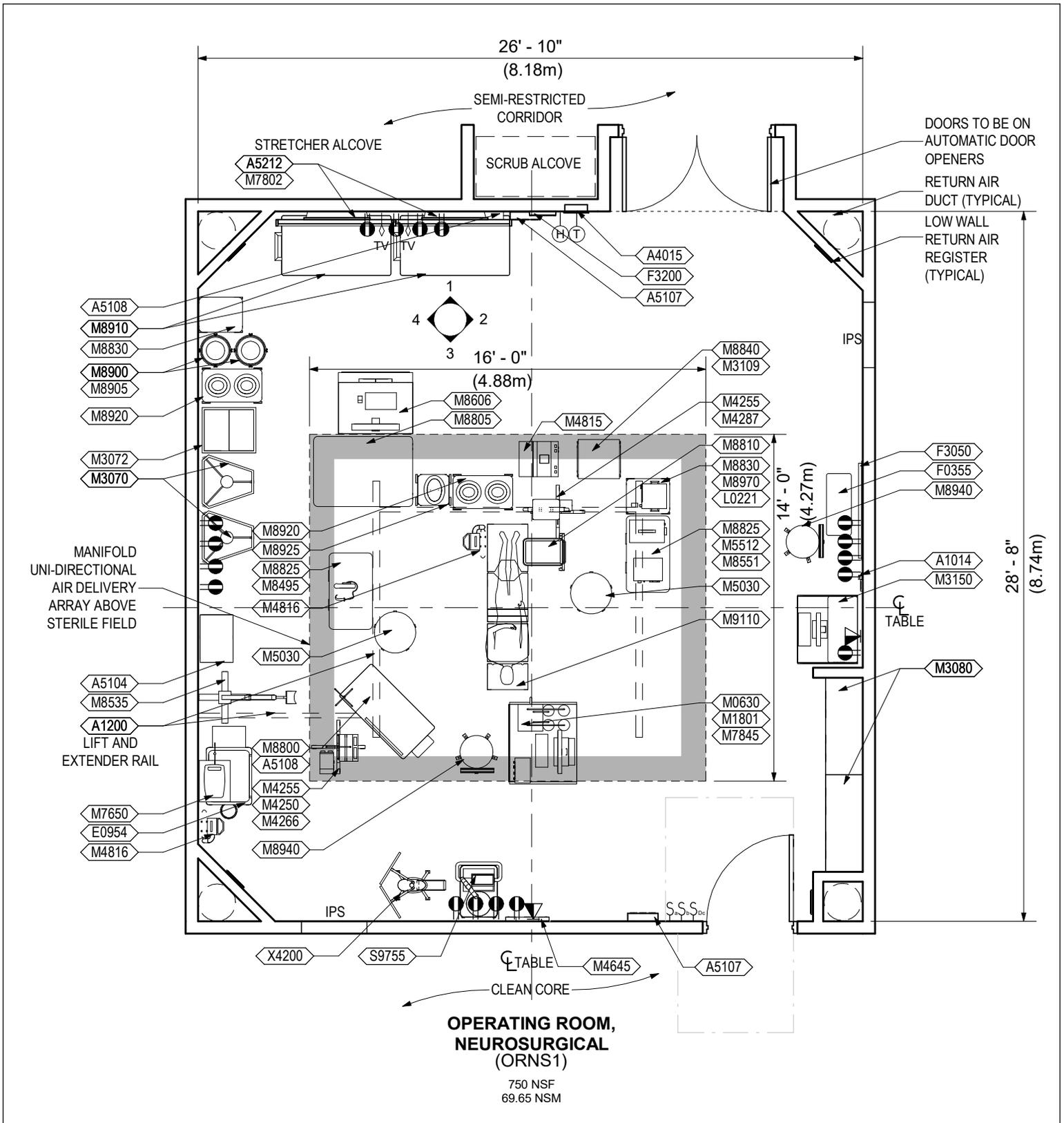




SURGICAL AND ENDOVASCULAR SERVICES (ORNS1) OPERATING ROOM, NEUROSURGICAL FLOOR PLAN

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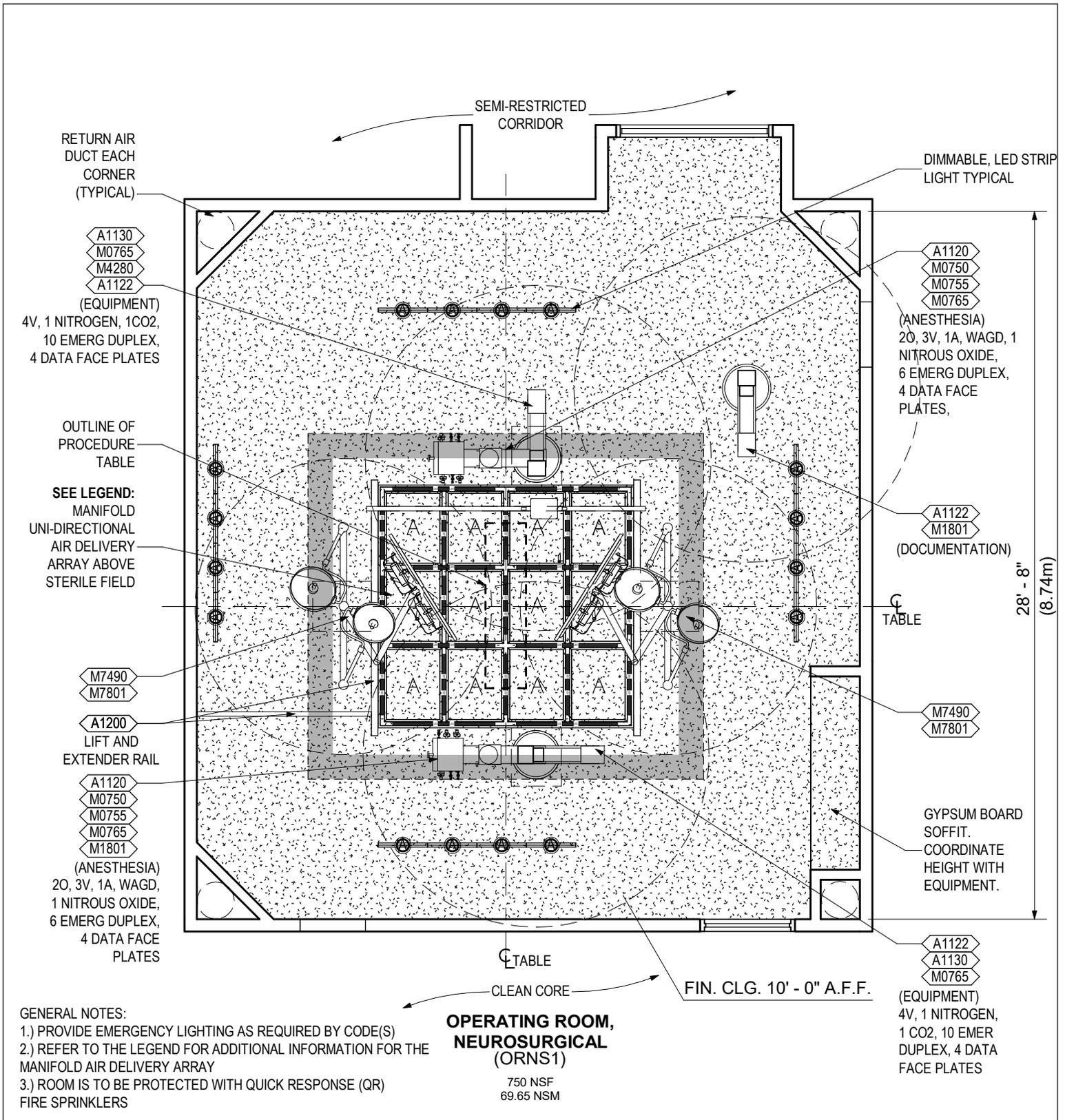


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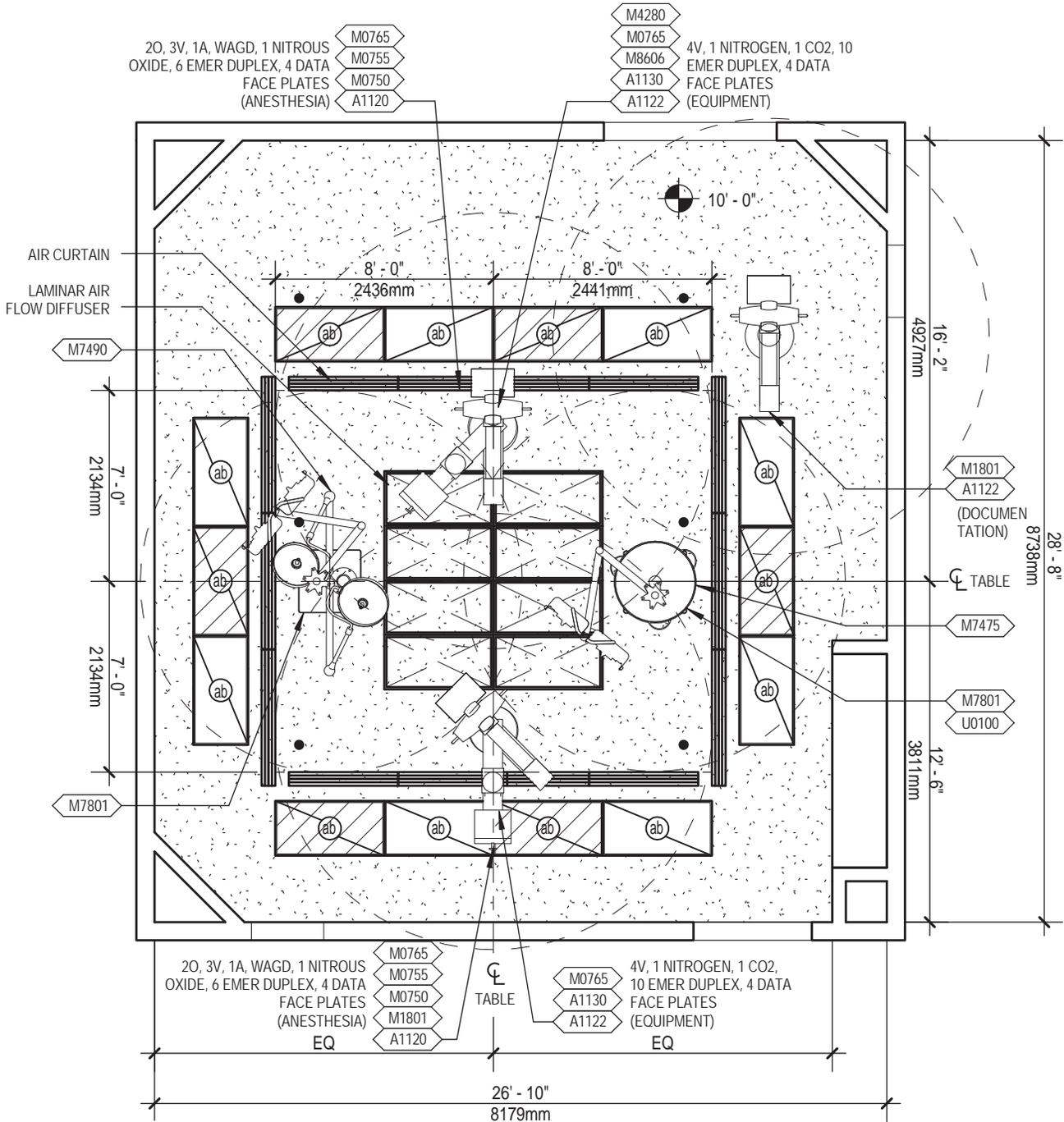
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SURGICAL AND ENDOVASCULAR SERVICES (ORNS1) OPERATING ROOM, NEUROSURGICAL REFLECTED CEILING PLAN (ALTERNATE OPTION)

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**Reflected Ceiling Plan**  
750 NSF / 69,7 NSM

**NOTE:** OPTIONAL REFLECTED CEILING PLAN IS AN ALTERNATIVE OPTION TO THE MANIFOLD UNI-DIRECTIONAL AIR DELIVERY SYSTEM. EQUIPMENT TAGS & REFERENCE NOTES MAY NOT BE FULLY COORDINATED WITH THE EQUIPMENT LIST.

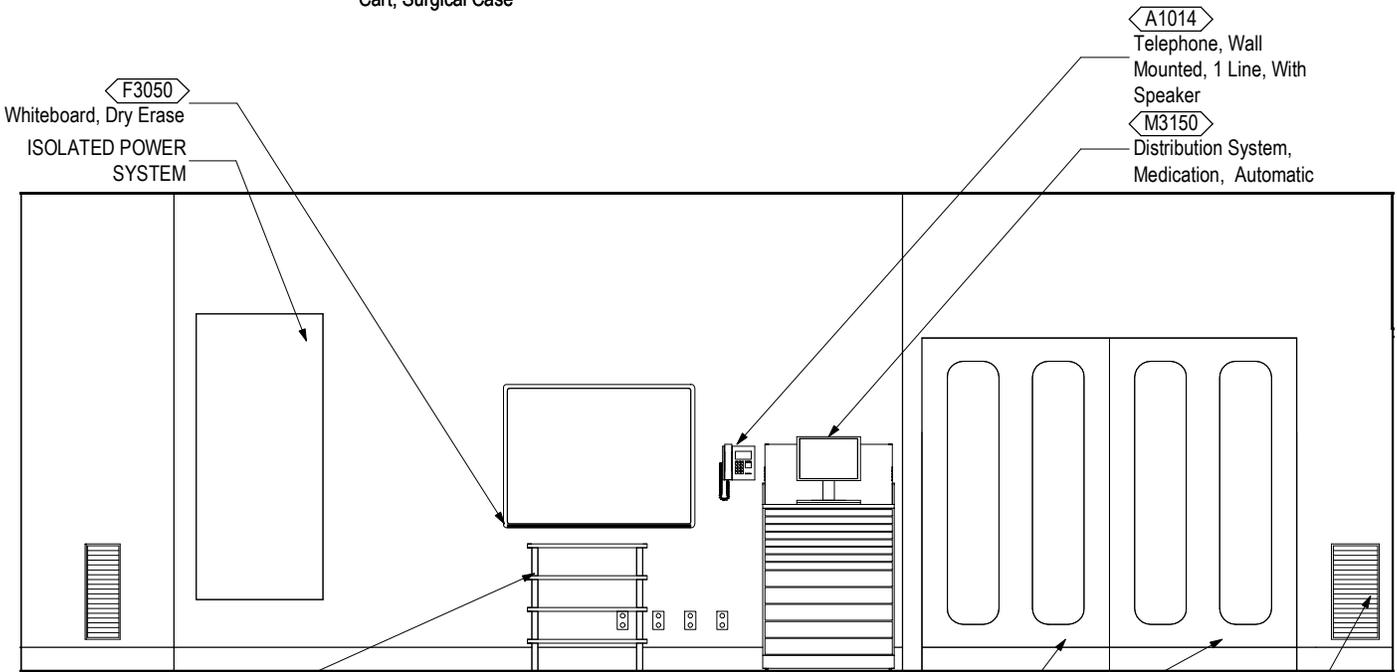
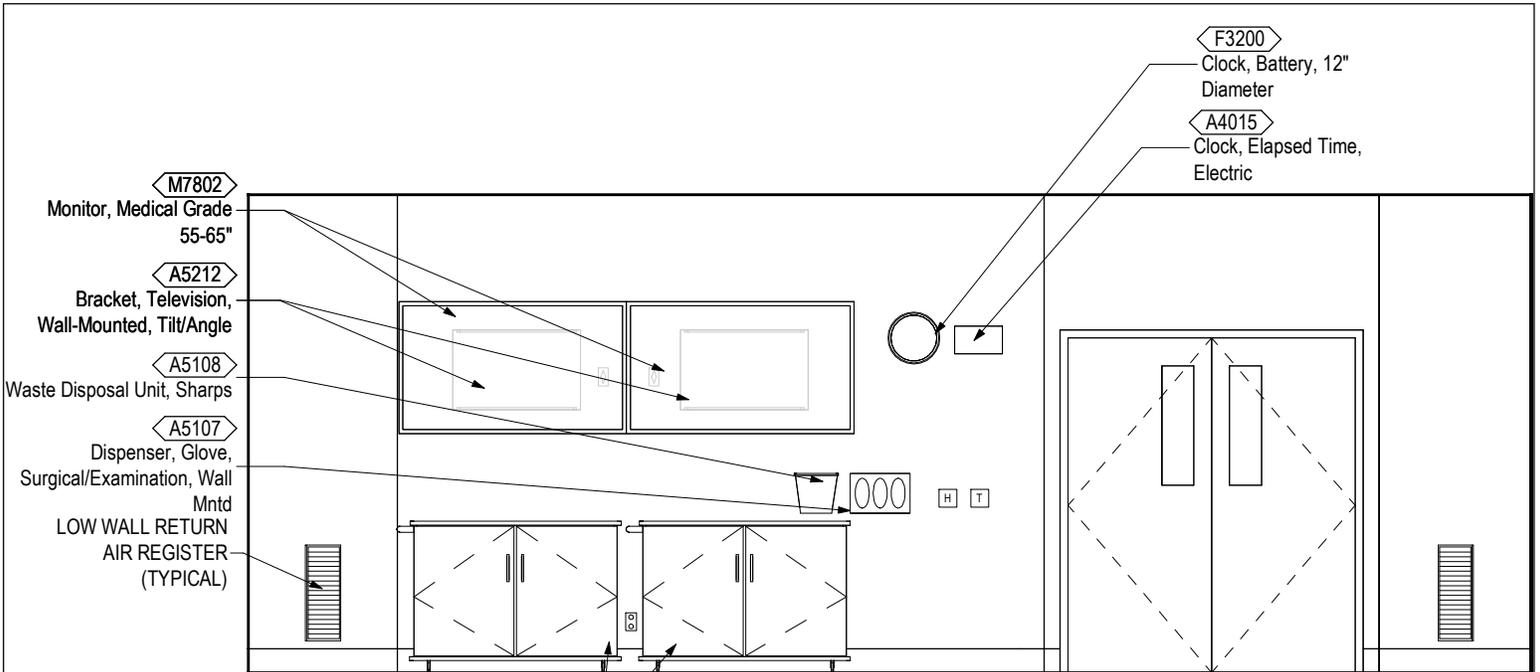
**4.10. OPERATING ROOM, NEUROSURGICAL (ORNS1)**JSN Legend

JSN	DESCRIPTION		
		M4815	HYPO/HYPERTHERMIA UNIT, AUTOMATIC/MANUAL, MOBILE
A1014	TELEPHONE, WALL MOUNTED, 1 LINE, WITH SPEAKER	M4816	WARMING UNIT, PATIENT, AUTOMATIC/MANUAL, AIR
A1120	COLUMN, SERVICE, PREFAB, SURGICAL, CEILING MOUNTED	M5030	STOOL, SURGEON, REVOLVING
A1122	COLUMN, EQUIPMENT ARM, CEILING MOUNTED, SURGERY	M5512	LASER, SMOKE EVACUATOR
A1130	CABINET, CONTROL, NITROGEN	M7490	LIGHT, SURG, CEILING MTD, DUAL, UNEQUAL DIA HEADS
A1200	LIFT SYSTEM, OVERHEAD, PATIENT RM	M7650	DEFIBRILLATOR/ MONITOR, ACUTE CARE
A4015	CLOCK, ELAPSED TIME, ELECTRIC	M7801	MONITOR, MEDICAL GRADE, 26" - 42"
A5104	CART, MEDICAL WASTE DISPOSAL, MOBILE W/ FOOT PEDAL	M7802	MONITOR, MEDICAL GRADE, 55" - 65"
A5107	DISPENSER, GLOVE, SURGICAL/ EXAMINATION, WALL-MTD	M7845	MONITOR, PHYSIOLOGICAL, BEDSIDE, 4 CHANNEL
A5108	WASTE DISPOSAL UNIT, SHARPS	M8495	LARYNGOSCOPE, VIDEO GLIDESCOPE
A5212	BRACKET/TELEVISION, WALL-MTD, TILT/ ANGLE	M8535	MICROSCOPE, OPERATING, PORTABLE
E0954	CART, EMERGENCY, MOBILE, 66"H x 32"W x 22"D	M8551	LIGHT SOURCE, FIBEROPTIC HEADLAMP
F0355	FOOTSTOOL, STRAIGHT	M8606	ENDOSCOPY CART, FIBEROPTIC, W/ VIDEO ACCESSORIES
F3050	WHITE BOARD, DRY ERASE	M8800	CART, ANESTHESIA
F3200	CLOCK, BATTERY, 12" DIAMETER	M8805	TABLE, INSTRUMENT, STRADDLE
L0221	ANALYZER, BLOOD, PORTABLE, HAND HELD	M8810	STAND, MAYO
M0630	ANESTHESIA APPARATUS, 3 GAS	M8825	TABLE, INSTRUMENT/DRESSING, CRS, APPROX 36x20x34
M0750	FLOWMETER, AIR, CONNECT W/ 50 PSI SUPPLY	M8830	TABLE, INSTRUMENT/DRESSING, MOBILE
M0755	FLOWMETER, OXYGEN, LOW FLOW	M8840	TABLE, BACK, INSTRUMENT/DRESSING
M0765	REGULATOR, VACUUM	M8900	CARRIAGE, PAIL, CRS, WITHOUT PAIL
M1801	COMPUTER, MIRCOPROCESSING, W/ FLAT PANEL MONITOR	M8905	PAIL, UTILITY, CRS, WITH CARRIAGE
M3070	HAMPER, LINEN, MOBILE, W/LID	M8910	CART, SURGICAL CASE
M3072	FRAME, INFECTIOUS WASTE BAG W/LID	M8920	STAND, BASIN, CRS, MOBILE, DOUBLE
M3080	CABINET, INSTRUMENT, CRS, 2 GLASS DOOR, 6 SHELF	M8925	STAND, BASIN, CRS, MOBILE, SINGLE
M3109	ELECTROSURGICAL/COAGULATOR, ARGON PLASMA	M8940	STOOL, ANESTHESIA, WITH BACK
M3150	DISTRIBUTION SYSTEM, MEDICATION, AUTOMATIC	M8970	WARMER, BLOOD, HIGH VOLUME
M4250	PUMP, SYRINGE, INFUSION	M9110	TABLE, OPERATING, 5 OR 6 SECTION, TRAUMA
M4255	STAND, IV, ADJUSTABLE	S9755	SUCTION SYSTEM, SURGICAL, MOBILE ROVER UNIT
M4266	PUMP, VOLUMETRIC, INFUSION, MULTIPLE LINE	X4200	STEREOTACTIC SURGICAL SYSTEM
M4280	PUMP, PNEUMATIC STOCKING/CUFF		
M4287	IRRIGATION SYSTEM, SURGICAL		
M4645	PATIENT TRANSFER DEVICE		



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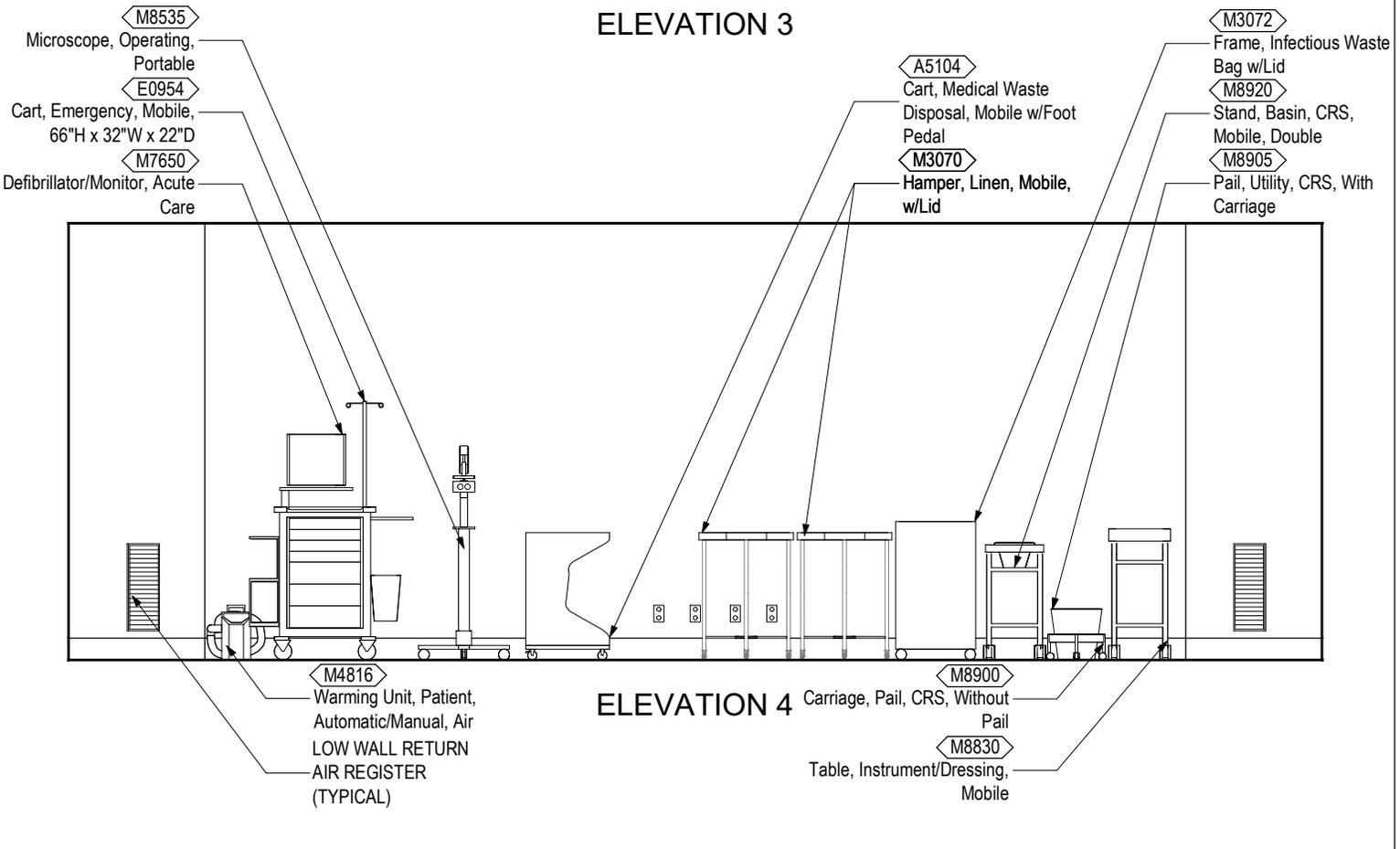
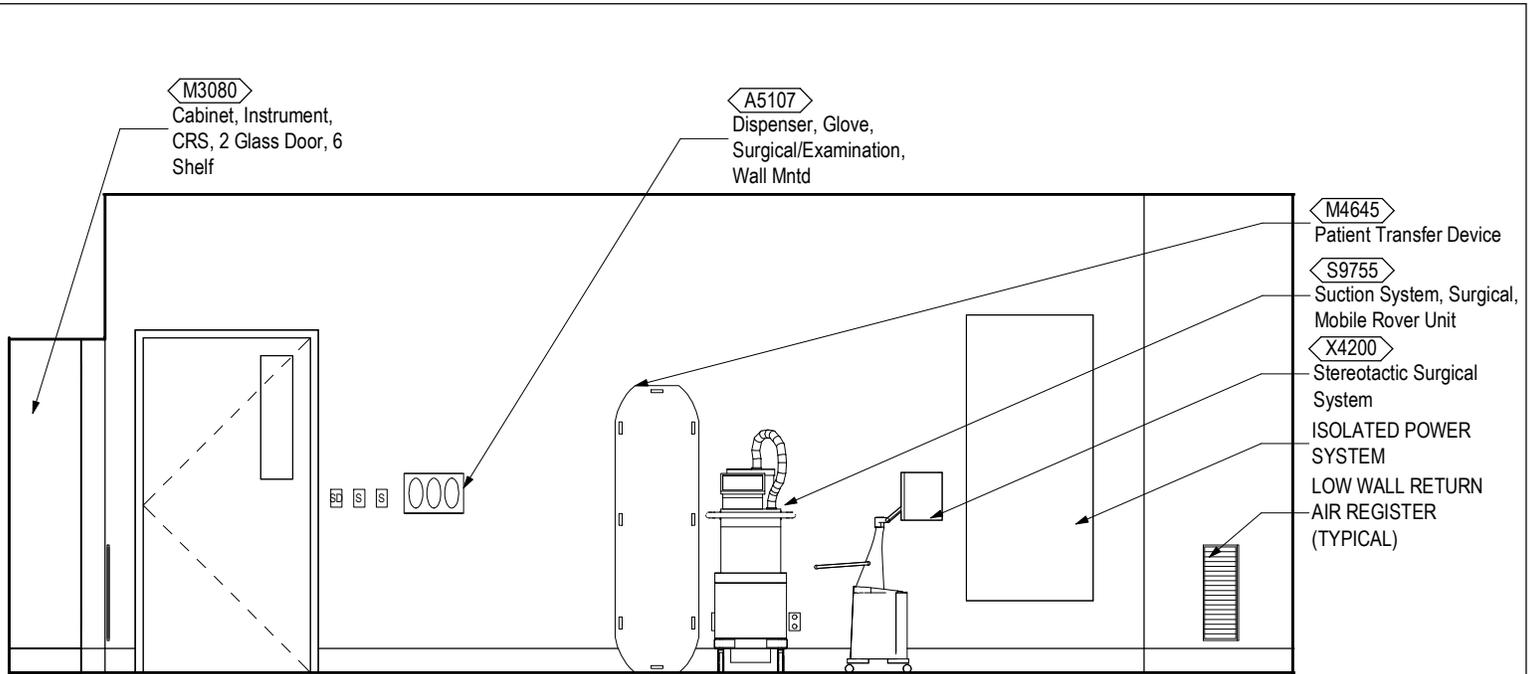


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SCALE: 1/4" = 1'-0"



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**4.10 OPERATING ROOM, NEUROSURGICAL (ORNS1)****Room Data Sheet****ARCHITECTURAL**

Ceiling Type:	Gypsum Wallboard (SC)
Ceiling Height:	10'-0" (3048 mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	RF Integral Base (min. 6"/152 mm)
Floor Finish:	Resinous Flooring (RF) Res 4
Slab Depression:	None
Sound Protection:	50 STC (to other room), 35 STC (to corridor)
Doors:	Double, Size 6'-0" x 7'-0" (1829 mm x 2133 mm) Wood w/ Narrow View Window; Single, Size 4'-0" x 7'-0" (1219 mm x 2133 mm) Wood w/ Small View Window

Special Requirement:

**Notes:**

- 1) Shielding is to be provided as it is determined by the Physicist on a per project basis.
- 2) Locate access panels as required to allow for the maintenance of surgical booms and lights in facilities without interstitial space. Min. size to be 24" x 24".
- 3) Cabinetry can be built in or free-standing.
- 4) Nominal wall thickness is shown at 8" (203 mm) to account for a variety of wall-mounted panels, such as isolation power unit panels, that require a thicker partition.
- 5) Include wall extensions at both sides of the scrub sink to protect the scrub sinks from cart and stretcher traffic in the semi-restricted corridor.
- 6) Coordinate structural supports, utility connections and other requirements for surgical lighting pendants with manufacturer.

7) Equipment and Anesthesia booms are duplicated to provide maximum flexibility. If duplicate booms are not desired, they can be omitted subject to approval by clinical leadership.

8) Facility will select number and types of scopes and other instrumentation as necessitated by the unique case load.

9) Endoscopy equipment can be located on a cart or on the equipment boom.

10) NSF provided for this space is the minimal acceptable NSF; contact Facilities Standards Service for any deviations.

**LIGHTING**

Refer to the VA Lighting Design Manual section 4.2.13 - Surgery/Operating Room - for lighting design consideration.

**POWER**

Normal Power: Connect selected receptacles and equipment to Normal power IPS.

Emergency Power: Connect selected receptacles and equipment to Critical Branch emergency IPS.

**Notes:**

- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
- 2) IPS Power & ground modules mounted at +24" AFF
- 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
- 4) Provide power connections for articulating utility columns.

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	

**Notes:**

- 1) Provide connections for articulating utility columns.
- 2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Rooms data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization.

**Notes:**

- 1) Refer to the latest version of the VA HVAC Design Manual for quantity and location of low air return grilles and ceiling diffusers.

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	Yes
Medical Vacuum	Yes
Oxygen	Yes
Special Requirement:	

**Notes:**

- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen, Nitrous Oxide, Carbon Dioxide.
- 2) For gas quantities per boom refer to the reflected ceiling plan.
- 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project
- 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.10 OPERATING ROOM, NEUROSURGICAL (ORNS1)**Equipment List

JSN	NAME	QTY	ACO/INS	DESCRIPTION
A1014	Telephone, Wall Mounted, 1 Line, With Speaker	1	V/V	Telephone, wall mounted, 1 line, with speaker.
A1120	Column, Service, Prefab, Surgical, Ceiling Mounted	2	C/C	Prefabricated surgical service column. Strong 18 gauge stainless steel shell ceiling mounted unit with the following services: oxygen, nitrous oxide, nitrogen, medical air, medical vacuum, gas evacuation, electrical outlets, monitoring connectors, and IV holders. Specify type of column (fixed or retractable) and number of outlets required for each service. Size will vary with number of service outlets required. Designed to be used in the operating room, recovery and ICU-CCU rooms.
A1122	Column, Equipment Arm, Ceiling Mounted, Surgery	3	C/C	A ceiling mounted retractable equipment arm for use in the OR. Designed to provide equipment placement support, power receptacles including low-voltage panels, gas outlets and flat screen mounting for a surgical suite. Unit will provide a range of motion of up to 330 degrees with arm providing additional vertical movement. Units are custom configured with multiple options available. Price is based on a unit with two (double) retractable arms. Also available are units for use in anesthesia, ICU and ER.
A1130	Cabinet, Control, Nitrogen	2	C/C	Nitrogen control cabinet. Unit consists of supply cut-off valve, supply pressure gauge, pressure regulator (adjustable 0 to 200 PSI), outlet pressure gauge, nitrogen outlet and connection to surgical gas column. Specify recessed or surface mounting. Designed for powering surgical pneumatic tools.
A1200	Lift System, Overhead, Patient Room	1	V/C	An overhead rail system specifically designed for patient lifting and movement for a single bed patient room. The system will consist of recessed or ceiling mounted primary and secondary rails, lift motor with rolling carriage, patient harness or seat, and a hand controller or control box with charger. System will facilitate lifting and movement of patient to and from bed to gurney, chair or other requirement. Minimum lift capability is 550 pounds. Custom design of track layout by manufacturer is essential to meet individual facility requirements.
A4015	Clock, Elapsed Time, Electric	1	C/C	Elapsed time digital electric clock. Single display time that can be used either as a clock or elapsed time indicator. Clock consists of buttons to set minutes, and hours for the time. For use in operating and delivery room, and medical service columns. Analog or digital displays may be provided as specified by the user.
A5104	Cart, Medical Waste Disposal, Mobile w/Foot Pedal	1	V/V	Mobile molded cart with foot pedal, to house 18-24 gal sharps disposal container. Lid lift or slide opens easily with foot-operated pedal. Lid may remain closed when not in use to reduce exposure to contents. Ergonomic handle is telescopic. Heavy containers can be removed from the side with minimal lifting. Meets requirements of OSHA 29 CFR 1910.130.

## 4.10 ORNS1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	2	V/V	Examination three (Small Medium, Large) glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Hardware not included, Option 3 powder coated steel.
A5108	Waste Disposal Unit, Sharps	2	V/V	A container for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
A5212	Bracket, Television, Wall-Mounted, Tilt/Angle	2	V/V	A wall mounted, tilt/angled TV bracket for 37" to 80" TVs. Mount will be a universal and VESA compliant unit with a load capacity of up to 130 lbs.
E0954	Cart, Emergency, Mobile, 66"H x 32"W x	1	V/V	THIS TYPICAL INCLUDES: 1 Cart body, style-A narrow, w/raised edge top; 1 Accessory rail, side; 1 Accessory rail, back; 1 Defibrillator tray; 1 IV pole; 1 Breakaway bar; 1 Flip-up shelf; 1 Wastebasket; 1 Oxygen tank holder; 1 Electrical box-4 outlet; 1 Cord wrap; 4 Drawer, 3"H; 3 Drawer, 6"H; Drawer organizer bins. 22"D
F0355	Footstool, Straight	4	V/V	Step stool. Used to assist patients getting on and off exam or surgical tables. Fitted with electrically conductive rubber tips.
F3050	Whiteboard, Dry Erase	1	V/V	Whiteboard unit, approximately 36" H x 48" W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
F3200	Clock, Battery, 12" Diameter	1	V/V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
L0221	Analyzer, Blood, Portable, Hand Held	1	V/V	Handheld point-of-care testing analyzer. Utilizes single-use, disposable cartridges for diagnostic testing to include: Blood gases, electrolytes and chemistries, lactate, coagulation, hematology, and cardiac markers.
M0630	Anesthesia Apparatus, 3 Gas	1	V/V	Three gas anesthesia apparatus. Basic unit consists of steel cabinet with casters with one shallow, one medium, and one deep drawer, seven long scale eleven-inch flowmeters, five cylinder yokes, and telescoping absorber post. It includes two-canister model carbon dioxide absorber with inhalation and exhalation check valves, switch valve, switch valve elbow, sidearm Vernitrol, flow calculator, mounting kit, ventilator calculator, ventilator and an oxygen piping inlet. Also features nitrous oxide fail safe valve kit, aspirator kit, gas evacuator with vacuum and a flow meter safety cover. Used to dispense a mixture of gases during surgical procedures.
M0750	Flowmeter, Air, Connect w/50 PSI Supply	2	V/V	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Requires the appropriate adapter for connection to the wall outlet and fitting to connect to tubing. Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.

## 4.10 ORNS1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M0755	Flowmeter, Oxygen, Low Flow	4	V/V	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Database pricing includes DISS fitting and DISS power outlet and wall adapter. Other fitting and adapter configurations are available.
M0765	Regulator, Vacuum	14	V/V	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required. To be used in delivery, neonatal, pediatrics or any area where suction is required. Database pricing reflects continuous regulators graduated to 200 mm Hg with a full line vacuum selection switch and DISS configured inlets and outlets.
M1801	Computer, Microprocessing, w/Flat Panel Monitor	2	V/V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
M3070	Hamper, Linen, Mobile, w/Lid	2	V/V	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters. For linen transport in hospitals and clinics.
M3072	Frame, Infectious Waste Bag w/Lid	1	V/V	Frame for an infectious waste collection bag. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Adjust to hold 18" or 25" trash bags. Mounted on ball bearing casters and includes permanently mounted hinged lid. Provides means of bagging infectious waste at point of waste generation.
M3080	Cabinet, Instrument, CRS, 2 Glass Door, 6 Shelf	2	V/V	Non-magnetic stainless steel instrument cabinet with two glass doors and six shelves (five adjustable). Cabinet body has a single storage compartment and seamless welded face. Shelf heights are adjustable on full length perforated strips mounted to the back and inside front cabinet corners. Cabinet is mounted on glides or casters. Cabinet may be covered by a sloping top.
M3109	Electrosurgical/Coagulator, Argon Plasma	1	V/V	An electrosurgical generator with an argon plasma coagulator and APC pulsed mode. This feature auto-regulates beam ignition and provides automatic dosing of power for increased control. The plug and play digital instrument recognition technology automatically configures the entire system to preprogrammed procedural parameters.
M3150	Distribution System, Medication, Automatic	1	V/V	An automated dispensing system that provides controlled dispensing, inventory and security. Size and cost will vary dependent on number of modules selected.

## 4.10 ORNS1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M4250	Pump, Syringe, Infusion	1	V/V	The infusion syringe pump ensures highly accurate volume delivery and consistent flow for small volumes (<50 ml) of pharmacologic agents or thick feeding solutions. It shall be small, lightweight construction, making it transportable. Shall have menu-driven programming capable of flow rates (e.g. 0.1 or 1.0 mL/hr) that are intended for long-term bedside use and/or critical care patient transport, plunger positioning sensor, LCD display for easy viewing, volume limit programming to serve as a convenient cue of volume or dose delivery completion and multiple delivery modes for all applications requiring precisely controlled infusion rates. The infusion pump shall have automatic syringe size sensing which will give the flexibility to accept a wide range of syringe sizes (up to 60 mL) from different manufacturers. Shall be battery powered/AC adapter.
M4255	Stand, IV, Adjustable	2	V/V	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.
M4266	Pump, Volumetric, Infusion, Multiple Line	1	V/V	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.
M4280	Pump, Pneumatic Stocking/Cuff	1	V/V	Pneumatic stocking/cuff pump. Pump provides alternating pressure to pneumatic stockings for reduction of the threat of deep vein thrombophlebitis in post operative patients. May also be used in the CCU for rotating cuff therapy for reduction of peripheral circulation in congestive heart failure patients.
M4287	Irrigation System, Surgical	1	V/V	High flow surgical irrigation pump up 2.5l/min, available in single and double flow.
M4645	Patient Transfer Device	1	V/V	A patient transfer board designed to make lateral patient transfers safer for staff and be more comfortable for the patients. The board uses a smooth, low friction and static free surface to eliminate the need for metal rollers. The board has a soft foam core that makes them lightweight for ease of use and storage. The long board device also enables the transfer of a patient in the seated or Fowler position. The boards come in three sizes with the long board being foldable. The dimensions and price are for the long wide board.
M4815	Hypo/Hyperthermia Unit, Automatic/Manual, Mobile	1	V/V	Automatic/manual hypo/hyperthermia unit. Sealed refrigeration system. Microprocessor controlled with multiple alarm system constantly monitoring temperature and water levels. Cabinet type unit. Designed to regulate body temperature by application of water-filled hypothermia blankets.
M4816	Warming Unit, Patient, Automatic/Manual, Air	2	V/V	Automatic/manual patient warming unit. Unit delivers a flow of warmed air through a perforated plastic blanket. Used primarily for postoperative patients to speed recovery of normal body temperature.

## 4.10 ORNS1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M5030	Stool, Surgeon, Revolving	2	V/V	Revolving stool. Consists of a padded upholstered seat with height adjustment. Unit rotates and is mounted on ball bearing swivel casters. Designed for use in examinations, treatment, and surgical procedures.
M5512	Laser, Smoke Evacuator	1	V/V	Filtration system used in conjunction with laser operations to remove surgical laser plume. The unit includes a pneumatic foot switch, disposable 0.12 micron HEPA primary filters, a secondary 0.12 micron ULPA/carbon filter, disposable funnels, reducer fittings and connector hoses.
M7490	Light, Surg, Ceiling Mtd, Dual, Unequal Dia Heads	2	V/C	Dual head surgical light ceiling mounted from a single pole. Unit has two lamp heads of differing sizes mounted on individual swing arms. Unit features multiple lighting pods in each lamp head, deep cavity illumination, color-corrected light, intensity control and sterilizable handles. Refer to the manufacturers' specifications for minimum ceiling heights and installation data. The database height dimension below refers to the height of the lamp head itself. The width and depth measurements are the larger of the two sums of the swing arm length and the head diameter. For use in general purpose surgical suites.
M7650	Defibrillator/Monitor, Acute Care	1	V/V	Portable defibrillator/monitor for acute care includes biphasic defibrillator, pacing, SPO2, Interpretive 12-lead, NIBP monitoring, EtCO2 monitoring, Invasive pressure monitoring, Vital Sign monitoring, temperature probe, Fax transmission, PCMCIA Data Cards, Paddle accessories, and a color LCD.
M7801	Monitor, Medical Grade 26 - 42"	6	V/V	
M7802	Monitor, Medical Grade 55-65"	2	V/V	LED HD monitor capable of displaying medical grade images. Monitor' size is 55 - 65".
M7845	Monitor, Physiological, Bedside, 4 Channel	1	V/V	4 channel bedside physiological monitor. The unit consist of a four-channel non-fade monochrome display monitor, an alarm system and printer-recording capabilities. The monitor has color coded controls and automatic calibration. The unit displays up to four waveforms simultaneously. The parameters to be monitored are user selectable. The monitor may be connected to a central monitoring station. The unit monitors patients in most acute care areas, step-down units, procedure rooms and emergency rooms.
M8495	Laryngoscope, Video Glidescope	1	V/V	A video-assist laryngoscope system with a digital color monitor and digital camera providing real-time view of the airway enabling quick intubation. Unit is designed for first pass success. The unit includes a reusable video baton with digital camera and sterile single use GVL Stats in various sizes.
M8535	Microscope, Operating, Portable	1	V/V	Portable operating microscope complete with objectives and stand. Unit consists of a binocular microscope body equipped with a range of accessories for co-observation, documentation and illumination. Control knobs equipped with sterilizable handles. Mounted on a large swinging-arm stand. For examinations and diagnosis in medical consultancies and as a laboratory training instrument. Configured for use primarily for eye and neuro surgery.

## 4.10 ORNS1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M8551	Light Source, Fiberoptic Headlamp	1	V/V	Fiberoptic light source for surgical headlamps. This unit provides color corrected light for surgical procedures where photography is not required.
M8606	Endoscopy Cart, Fiberoptic, w/Video Accessories	1	V/V	Endoscopy cart with video and print capabilities for use with fiberoptic (direct vision) endoscopes. This cart does not work with videoscopes. System takes optical images from a single endoscope and directly records them or converts them to digital signals for recording. A typical system cart includes the cart, a light source, an insufflator, a suction unit, a heat probe unit, an electro-surgical apparatus, a digital camera converter or color video camera, a camera controller, a monitor, a video/DVD recorder and a color printer. This JSN does not include the endoscope; refer to the endoscopes at JSNs M8500-M8550. Each cart can support one or more types of endoscope and should be specifically tailored to its intended use(s). This cart can be configured to interface with a network endoscopy information management system; refer to JSN M8600. Database physical information and pricing is for a higher cost system containing one of each of the above components.
M8800	Cart, Anesthesia	1	V/V	Mobile anesthesia cart. The cart shall be built of stainless steel or other appropriate material and mounted on 4" casters for easy mobility. It shall be capable of being equipped with bottle holders, adjustable IV pole, storage drawers, shelves and a top bar/rail.
M8805	Table, Instrument, Straddle	1	V/V	Instrument table to straddle an operating table. All stainless steel welded construction, mounted on 3" ball-bearing casters with foot brakes. Adjustable height from approximately 40 to 60 inches. For instruments and diagnostic equipment during surgery.
M8810	Stand, Mayo	1	V/V	Adjustable instrument table. Table is corrosion resistant stainless steel construction and is mounted on two casters with two skid rails. It has telescopic upright adjusts from 39 inches to 60 inches with automatic locking device, and removable 13"x19" instrument tray. Designed for use in operating and procedure rooms.
M8825	Table, Instrument/Dressing, CRS, approx. 36x20x34	2	V/V	Instrument and dressing table. Made of corrosion resistant stainless steel with a sound deadened top. Includes guard rail, shelf and two side-by-side drawers. The table is mounted on swivel, ball-bearing casters.
M8830	Table, Instrument/Dressing, Mobile	2	V/V	Mobile instrument/dressing table, approximately 34" H x 20" W x 16" D Corrosion resistant stainless steel mobile table with sound-deadening shelf and drawer. Unit is mounted on 2" casters. Designed for all purpose use in the hospital or clinic.
M8840	Table, Back, Instrument/Dressing	1	V/V	A specialty back table for large cases such as orthopedics, spinal fusions, neuro and craniotomies. The table has a pneumatic tuck-away cantilevered shelf which can hold multiple trays and is angled for clear observation of instruments. It comes with 4" diameter heavy-duty ball bearing brake/swivel casters. Construction is all stainless steel.

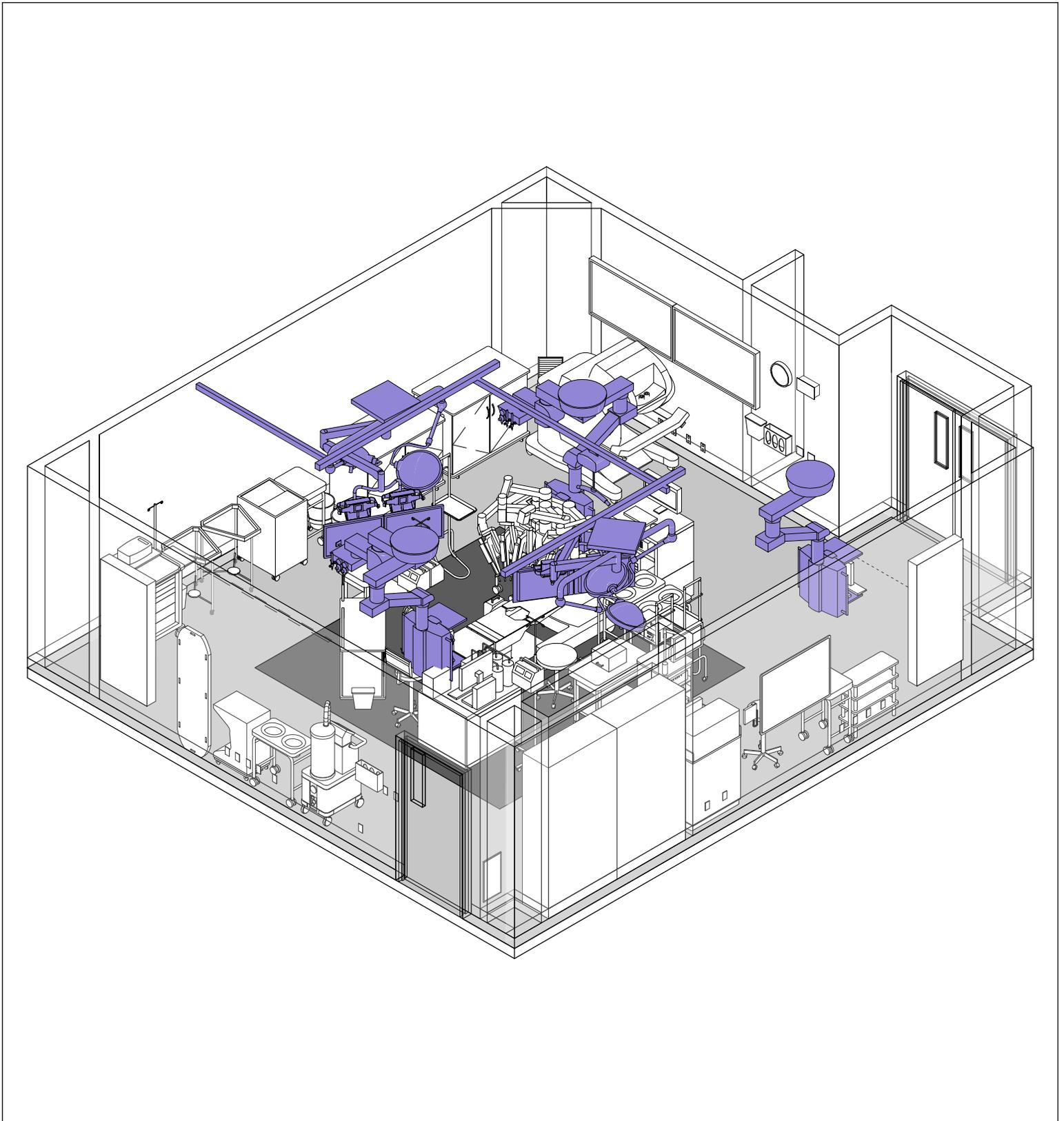
## 4.10 ORNS1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M8900	Carriage, Pail, CRS, Without Pail	2	V/V	Carriage, pail (kick bucket) CRS. Consists of a stainless steel ring type carriage mounted on ball bearing casters. Includes circular non-marring bumper. For use in the surgical operating room.
M8905	Pail, Utility, CRS, With Carriage	2	V/V	Utility pail (kick bucket). Shall be a stainless steel 12 quart bucket for use in surgical operating rooms.
M8910	Cart, Surgical Case	2	V/V	Surgical case cart. Unit consists of two hinged cabinet sections, each section equipped with two pull-out shelves with stops. The entire unit is mounted on four heavy duty conductive swivel casters. Used to transport surgical packs and supplies to surgery and soiled items back to central supply.
M8920	Stand, Basin, CRS, Mobile, Double	2	V/V	CRS, mobile, double basin stand with shelf. Stainless steel corrosion resistant frame constructed from two continuous inverted "U" shaped tubes, forming four legs and mounted on casters. Circular rings welded to top receive two removable 8 quart stainless steel basins. For open heart and other procedures.
M8925	Stand, Basin, CRS, Mobile, Single	1	V/V	Mobile single basin stand with shelf. The stand shall be constructed of tubular stainless steel and mounted on 2" swivel casters. Shall include a shelf and an 8 quart stainless steel basin. Intended for use in ORs and treatment areas.
M8940	Stool, Anesthesia, With Back	2	V/V	Anesthesia stool with back. All stainless steel with well-curved back panel and wide conductive seat. Designed for the anesthesiologist during surgical procedures.
M8970	Warmer, Blood, High Volume	1	V/V	Unit contains a proportional controller to regulate temperature in the heat exchanger and an audible high temperature alarm. Designed to provide a stable temperature for the controlled warming of blood or other fluids prior to being transfused to a patient. Unit may be a cuff type or circulating water heat exchanger.
M9110	Table, Operating, 5 or 6 Section, Trauma	1	V/V	Pedestal type, 5 or 6 section, operating table. Pedestal table, mounted on a solid base with casters and locks. Table top surface is fabricated from radio-transparent and conductive panels and is equipped with cassette tunnels in each of the table top sections. Table includes: Electro-hydraulic controls, side rail locking system, grounding receptacle and dual arm support section. It is designed for use in the operating room in a variety of surgical procedures. Table is configured to address the needs of trauma surgery.
S9755	Suction System, Surgical, Mobile Rover Unit	1	V/V	Surgical fluid waste management system with powered IV pole and smoke evacuation. Portable waste collection unit, for use with Docking Station (specified separately). Dual canisters (one 4L and one 20L), two levels of suction: 2-21in/Hg, fluid readout, 3 different port sizes for smoke tubing.
X4200	Stereotactic Surgical System	1	V/C	Surgical instrument guided system used to track surgical instruments in cranial procedures. Interfacing with CT and MRI the device assists the surgeon in the cranial surgical procedure by showing the precise location of the hand instruments during a procedure. The device allows for simulation surgery prior to the actual operation.



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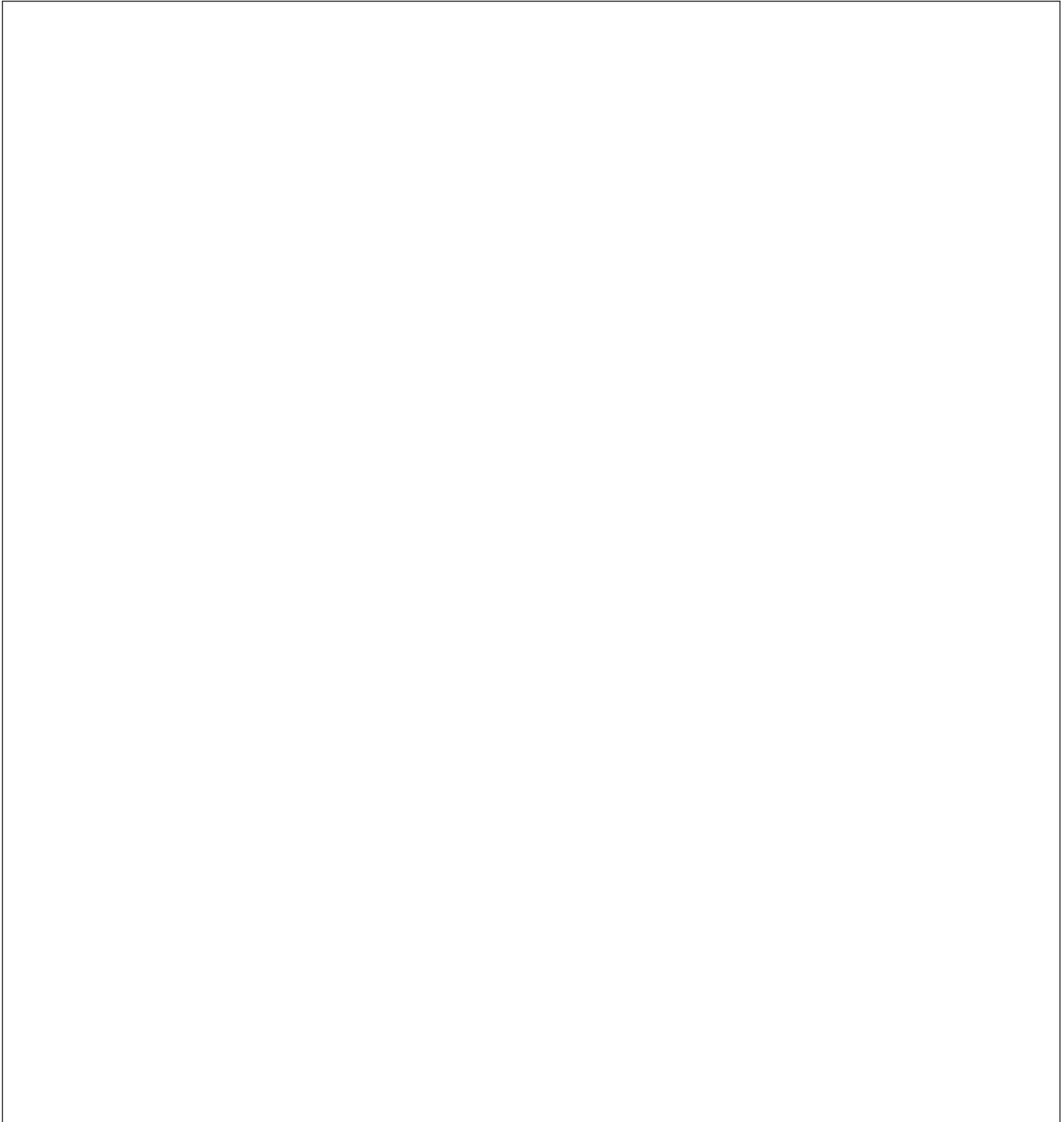


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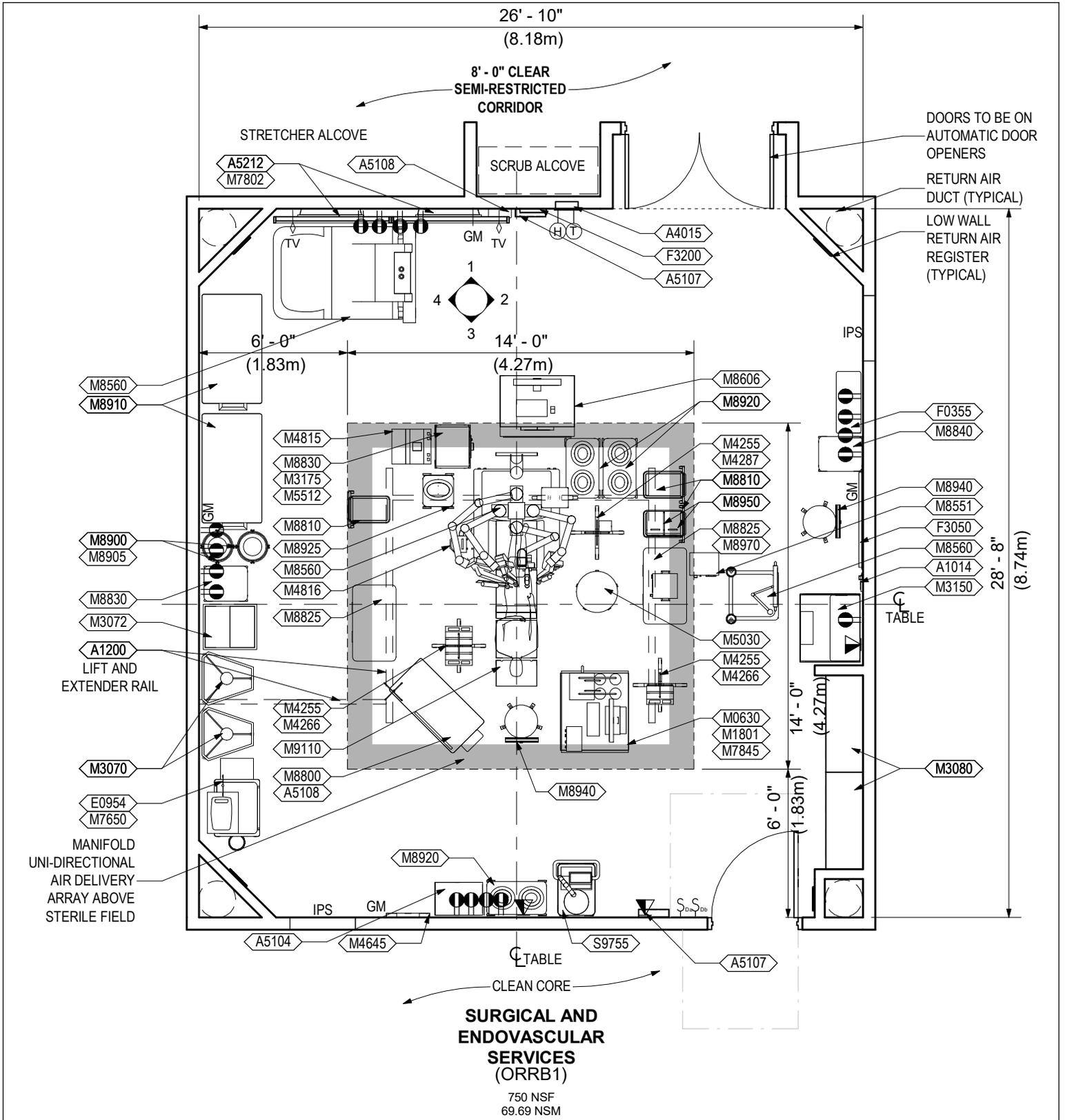




SURGICAL AND ENDOVASCULAR SERVICES (ORRB1) OPERATING ROOM, ROBOTICS FLOOR PLAN

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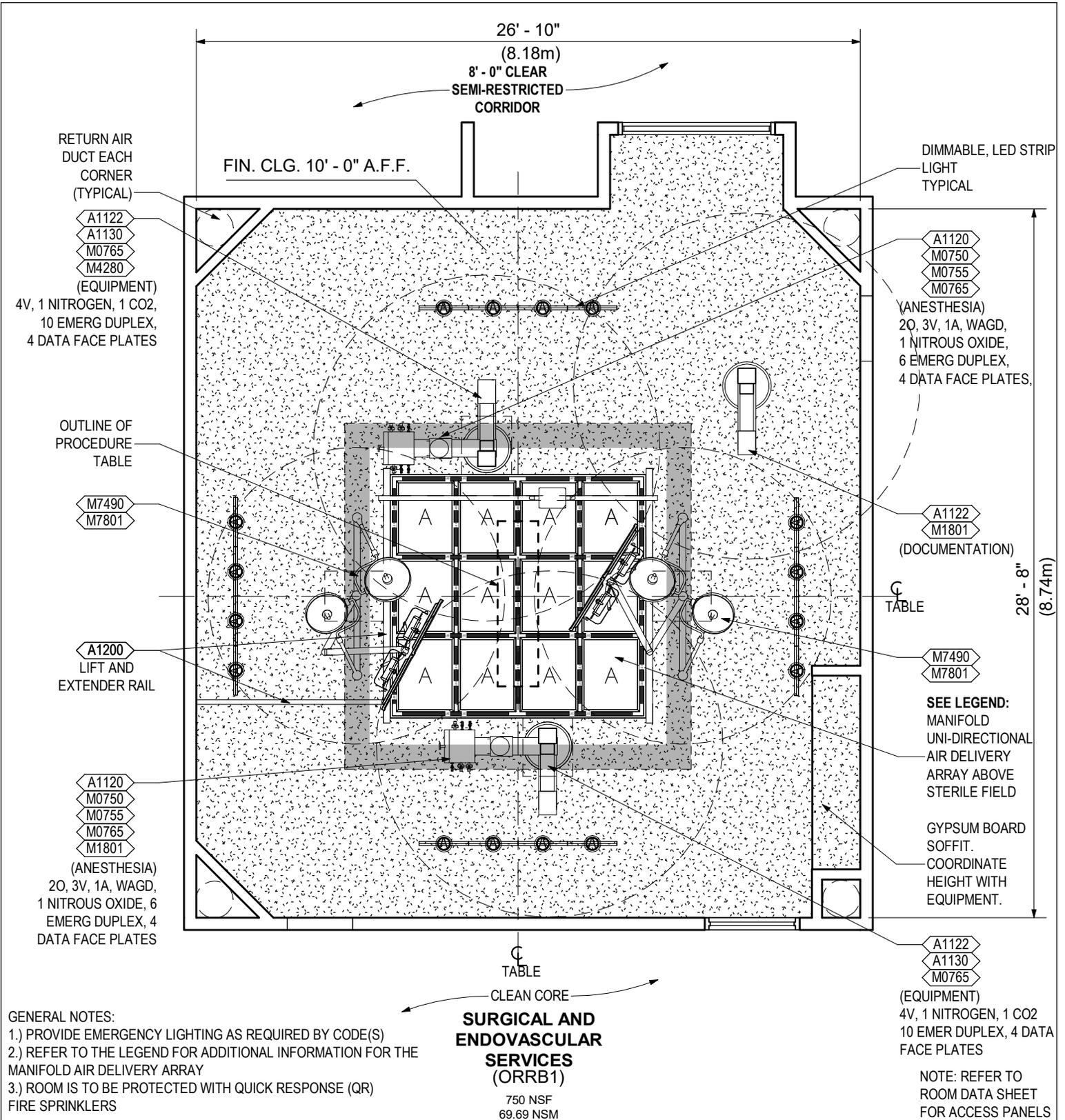
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SURGICAL AND ENDOVASCULAR SERVICES (ORRB1) OPERATING ROOM, ROBOTICS REFLECTED CEILING PLAN

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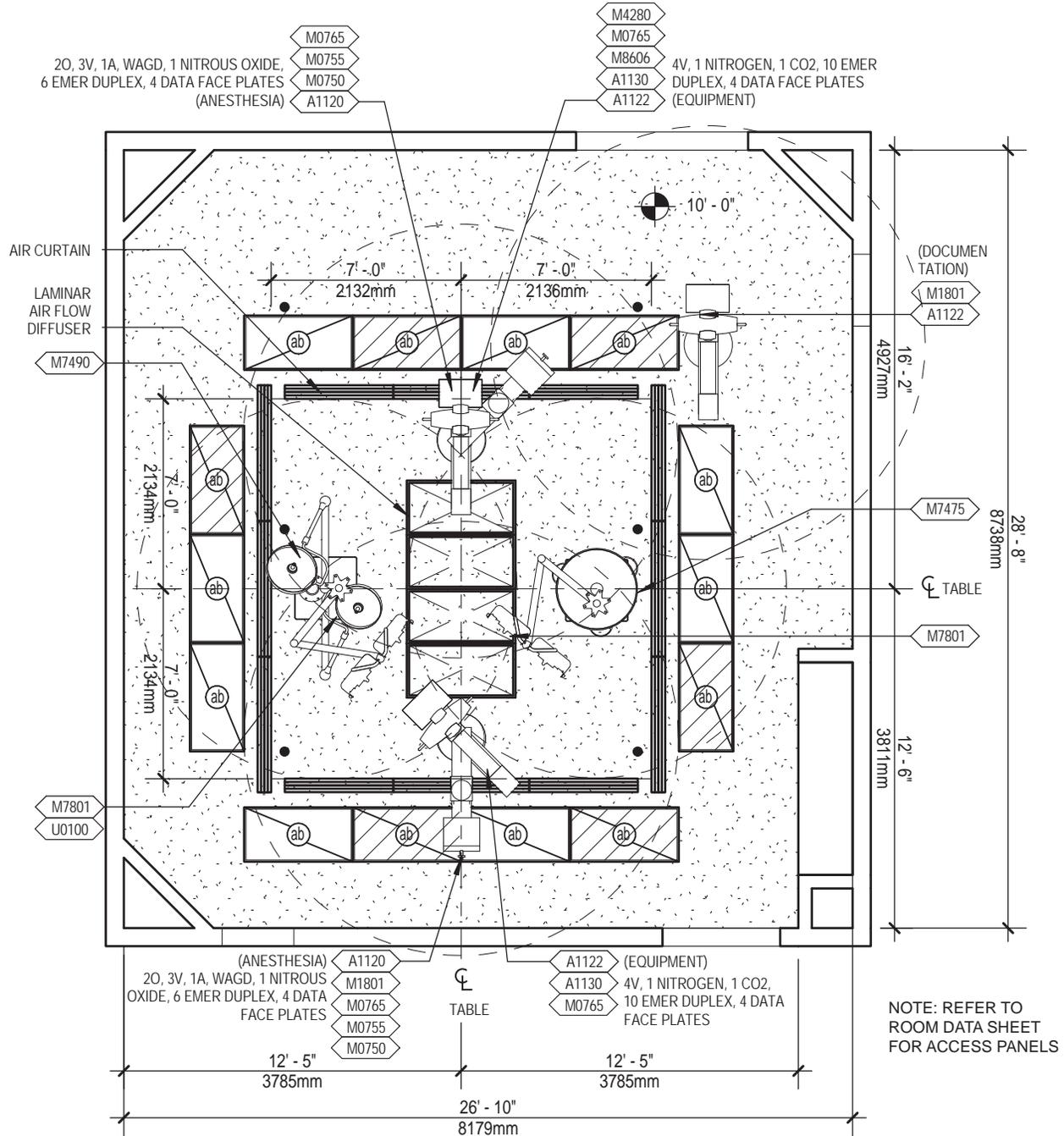
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SURGICAL AND ENDOVASCULAR SERVICES (ORRB1) OPERATING ROOM, ROBOTICS REFLECTED CEILING PLAN (ALTERNATE OPTION)

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Reflected Ceiling Plan  
750 NSF / 69,7 NSM

NOTE: OPTIONAL REFLECTED CEILING PLAN IS AN ALTERNATIVE OPTION TO THE MANIFOLD UNI-DIRECTIONAL AIR DELIVERY SYSTEM. EQUIPMENT TAGS & REFERENCE NOTES MAY NOT BE FULLY COORDINATED WITH THE EQUIPMENT LIST.

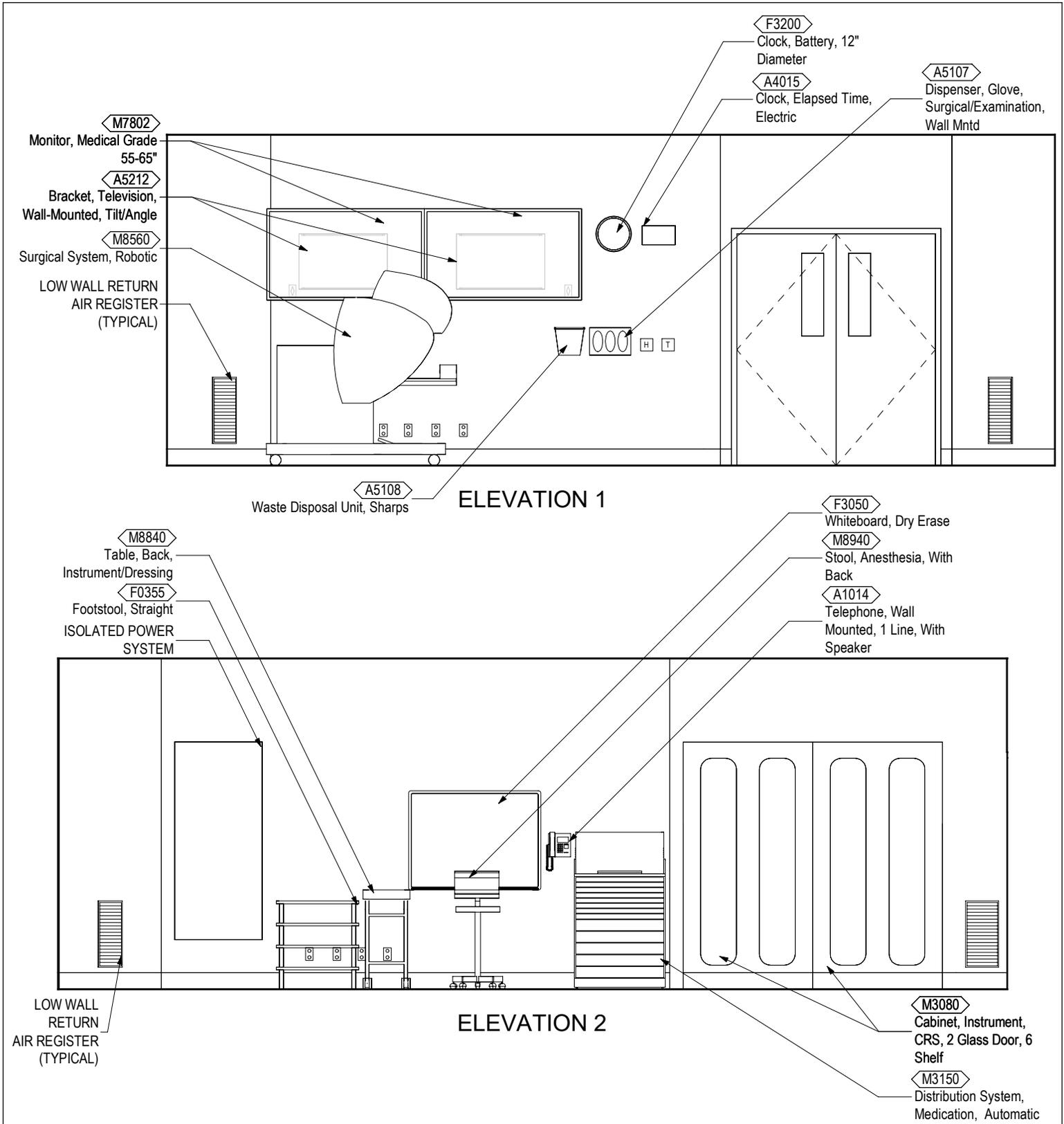
**4.11. OPERATING ROOM, ROBOTICS (ORRB1)**JSN Legend

JSN	DESCRIPTION	M4816	WARMING UNIT, PATIENT, AUTOMATIC/ MANUAL, AIR
A1014	TELEPHONE, WALL MOUNTED, 1 LINE, WITH SPEAKER	M5030	STOOL, SURGEON, REVOLVING
A1120	COLUMN, SERVICE, PREFAB, SURGICAL, CEILING MOUNTED	M5512	LASER, SMOKE EVACUATOR
A1122	COLUMN, EQUIPMENT ARM, CEILING MOUNTED, SURGERY	M7490	LIGHT, SURG, CEILING MTD, DUAL, UNEQUAL DIA HEADS
A1130	CABINET, CONTROL, NITROGEN	M7650	DEFIBRILLATOR/ MONITOR, ACUTE CARE
A1200	LIFT SYSTEM, OVERHEAD, PATIENT RM	M7801	MONITOR, MEDICAL GRADE, 26"-42"
A4015	CLOCK, ELAPSED TIME, ELECTRIC	M7802	MONITOR, MEDICAL GRADE, 55"-65"
A5104	CART, MEDICAL WASTE DISPOSAL, MOBILE W/ FOOT PEDAL	M7845	MONITOR, PHYSIOLOGICAL, BEDSIDE, 4 CHANNEL
A5107	DISPENSER, GLOVE, SURGICAL/ EXAMINATION, WALL-MTD	M8551	LIGHT SOURCE, FIBEROPTIC HEADLAMP
A5108	WASTE DISPOSAL UNIT, SHARPS	M8560	SURGICAL SYSTEM, ROBOTIC
A5212	BRACKET, TELEVISION WALL MTD, TILT/ANGLE	M8606	ENDOSCOPY CART, FIBEROPTIC, W/ VIDEO ACCESSORIES
E0954	CART, EMERGENCY, MOBILE, 66"H x 32"W x 22"D	M8800	CART, ANESTHESIA
F0355	FOOTSTOOL, STRAIGHT	M8810	STAND, MAYO
F3050	WHITE BOARD, DRY ERASE	M8825	TABLE, INSTRUMENT/DRESSING, CRS, APPROX 36x20x34
F3200	CLOCK, BATTERY, 12" DIAMETER	M8830	TABLE, INSTRUMENT/DRESSING, MOBILE
M0630	ANESTHESIA APPARATUS, 3 GAS	M8840	TABLE, BACK, INSTRUMENT/DRESSING
M0750	FLOWMETER, AIR, CONNECT W/ 50 PSI SUPPLY	M8900	CARRIAGE, PAIL, CRS, WITHOUT PAIL
M0755	FLOWMETER, OXYGEN, LOW FLOW	M8905	PAIL, UTILITY, CRS, WITH CARRIAGE
M0765	REGULATOR, VACUUM	M8910	CART, SURGICAL CASE
M1801	COMPUTER, MICROPROCESSING, W/ FLAT PANEL MONITOR	M8920	STAND, BASIN, CRS, MOBILE, DOUBLE
M3070	HAMPER, LINEN, MOBILE, W/LID	M8925	STAND, BASIN, CRS, MOBILE, SINGLE
M3072	FRAME, INFECTIOUS WASTE BAG W/ LID	M8940	STOOL, ANESTHESIA, WITH BACK
M3080	CABINET, INSTRUMENT, CRS, 2 GLASS DOOR, 6 SHELF	M8950	WARMER, BLOOD
M3150	DISTRIBUTION SYSTEM, MEDICATION, AUTOMATIC	M8970	WARMER, BLOOD, HIGH VOLUME
M3175	ELECTROSURGICAL UNIT, DUAL OUTPUT	M9110	TABLE, OPERATING, 5 OR 6 SECTION, TRAUMA
M4255	STAND, IV, AJUSTABLE	S9755	SUCTION SYSTEM, SURGICAL, MOBILE ROVER UNIT
M4266	PUMP, VOLUMETRIC, INFUSION, MULTIPLE LINE		
M4280	PUMP, PNEUMATIC STOCKING/CUFF		
M4287	IRRIGATION SYSTEM, SURGICAL		
M4645	PATIENT TRANSFER DEVICE		
M4815	HYPO/HYPERThERMIA UNIT, AUTOMATIC/MANUAL MOBILE		



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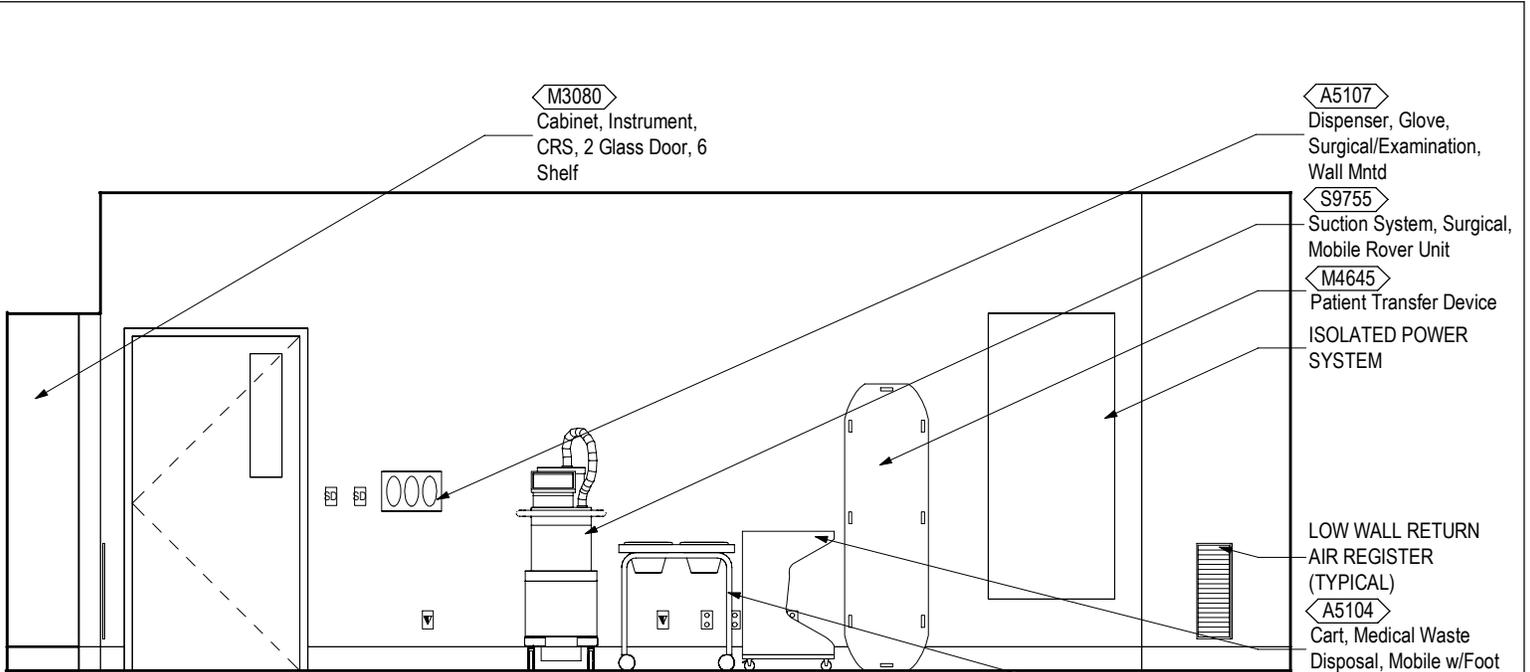


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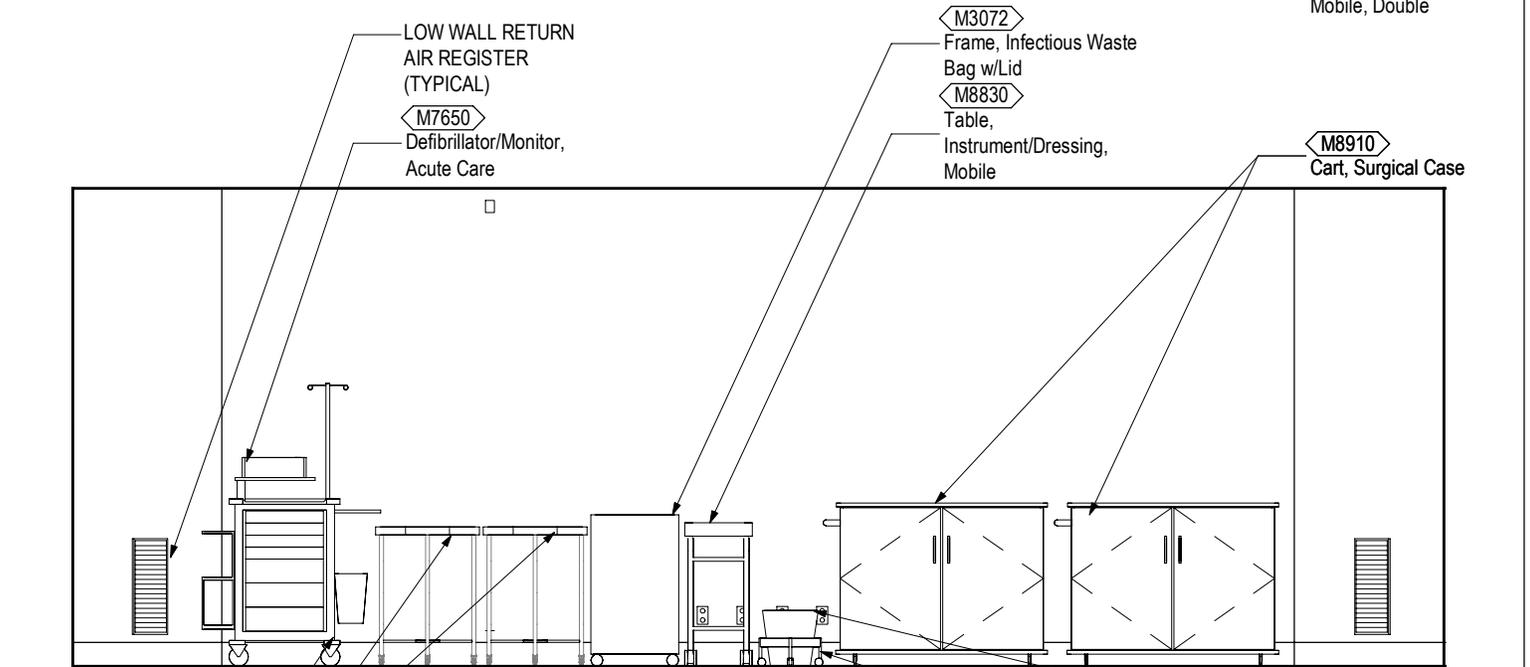


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ELEVATION 3



ELEVATION 4

- M3080** Cabinet, Instrument, CRS, 2 Glass Door, 6 Shelf
- A5107** Dispenser, Glove, Surgical/Examination, Wall Mntd
- S9755** Suction System, Surgical, Mobile Rover Unit
- M4645** Patient Transfer Device
- ISOLATED POWER SYSTEM**
- LOW WALL RETURN AIR REGISTER (TYPICAL)**
- A5104** Cart, Medical Waste Disposal, Mobile w/Foot Pedal
- M8920** Stand, Basin, CRS, Mobile, Double
- M3072** Frame, Infectious Waste Bag w/Lid
- M8830** Table, Instrument/Dressing, Mobile
- M8910** Cart, Surgical Case
- E0954** Cart, Emergency, Mobile, 66"H x 32"W x 22"D
- M3070** Hamper, Linen, Mobile, w/Lid
- M7650** Defibrillator/Monitor, Acute Care
- M8905** Pail, Utility, CRS, With Carriage
- M8900** Carriage, Pail, CRS, Without Pail

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**4.11 OPERATING ROOM, ROBOTICS (ORRB1)****Room Data Sheet****ARCHITECTURAL**

Ceiling Type:	Gypsum Wallboard (SC)
Ceiling Height:	10'-0" (3048 mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	RF Integral Base (min. 6"/152 mm)
Floor Finish:	Resinous Flooring (RF) Res 4
Slab Depression:	None
Sound Protection:	50 STC (to other room), 35 STC (to corridor)
Doors:	Double, Size 6'-0" x 7'-0" (1829 mm x 2133 mm) Wood w/ Narrow View Window; Single, Size 4'-0" x 7'-0" (1219 mm x 2133 mm) Wood w/ Small View Window

Special Requirement:

**Notes:**

- 1) Shielding is to be provided as it is determined by the Physicist on a per project basis.
- 2) Locate access panels as required to allow for the maintenance of surgical booms and lights in facilities without interstitial space. Min. size to be 24" x 24".
- 3) Cabinetry can be built in or free-standing.
- 4) Nominal wall thickness is shown at 8" (203 mm) to account for a variety of wall-mounted panels, such as isolation power unit panels, that require a thicker partition.
- 5) Include wall extensions at both sides of the scrub sink to protect the scrub sinks from cart and stretcher traffic in the semi-restricted corridor.
- 6) Coordinate structural supports, utility connections and other requirements for surgical lighting pendants with manufacturer.

7) Equipment and Anesthesia booms are duplicated to provide maximum flexibility. If duplicate booms are not desired, they can be omitted subject to approval by clinical leadership.

8) Facility will select number and types of scopes and other instrumentation as necessitated by the unique case load.

9) Endoscopy equipment can be located on a cart or on the equipment boom.

10) NSF provided for this space is the minimal acceptable NSF; contact Facilities Standards Service for any deviations.

**LIGHTING**

Refer to the VA Lighting Design Manual section 4.2.13 - Surgery/Operating Room - for lighting design consideration.

**POWER**

Normal Power: Connect selected receptacles and equipment to Normal power IPS.

Emergency Power: Connect selected receptacles and equipment to Critical Branch emergency IPS.

**Notes:**

- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
- 2) IPS Power & ground modules mounted at +24" AFF
- 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
- 4) Provide power connections for articulating utility columns.

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	

**Notes:**

- 1) Provide connections for articulating utility columns.
- 2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Rooms data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization.

**Notes:**

- 1) Refer to the latest version of the VA HVAC Design Manual for quantity and location of low air return grilles and ceiling diffusers.

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	Yes
Medical Vacuum	Yes
Oxygen	Yes
Special Requirement:	

**Notes:**

- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen, Nitrous Oxide, Carbon Dioxide.
- 2) For gas quantities per boom refer to the reflected ceiling plan.
- 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project
- 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.11 OPERATING ROOM, ROBOTICS (ORRB1)****Equipment List**

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A1014	Telephone, Wall Mounted, 1 Line, With Speaker	1	V/V	Telephone, wall mounted, 1 line, with speaker.
A1120	Column, Service, Prefab, Surgical, Ceiling Mounted	2	C/C	Prefabricated surgical service column. Strong 18 gauge stainless steel shell ceiling mounted unit with the following services: oxygen, nitrous oxide, nitrogen, medical air, medical vacuum, gas evacuation, electrical outlets, monitoring connectors, and IV holders. Specify type of column (fixed or retractable) and number of outlets required for each service. Size will vary with number of service outlets required. Designed to be used in the operating room, recovery and ICU-CCU rooms.
A1122	Column, Equipment Arm, Ceiling Mounted, Surgery	3	C/C	A ceiling mounted retractable equipment arm for use in the OR. Designed to provide equipment placement support, power receptacles including low-voltage panels, gas outlets and flat screen mounting for a surgical suite. Unit will provide a range of motion of up to 330 degrees with arm providing additional vertical movement. Units are custom configured with multiple options available. Price is based on a unit with two (double) retractable arms. Also available are units for use in anesthesia, ICU and ER.
A1130	Cabinet, Control, Nitrogen	2	C/C	Nitrogen control cabinet. Unit consists of supply cut-off valve, supply pressure gauge, pressure regulator (adjustable 0 to 200 PSI), outlet pressure gauge, nitrogen outlet and connection to surgical gas column. Specify recessed or surface mounting. Designed for powering surgical pneumatic tools.
A1200	Lift System, Overhead, Patient Room	1	V/C	An overhead rail system specifically designed for patient lifting and movement for a single bed patient room. The system will consist of recessed or ceiling mounted primary and secondary rails, lift motor with rolling carriage, patient harness or seat, and a hand controller or control box with charger. System will facilitate lifting and movement of patient to and from bed to gurney, chair or other requirement. Minimum lift capability is 550 pounds. Custom design of track layout by manufacturer is essential to meet individual facility requirements.
A4015	Clock, Elapsed Time, Electric	1	C/C	Elapsed time digital electric clock. Single display time that can be used either as a clock or elapsed time indicator. Clock consists of buttons to set minutes, and hours for the time. For use in operating and delivery room, and medical service columns. Analog or digital displays may be provided as specified by the user.
A5104	Cart, Medical Waste Disposal, Mobile w/Foot Pedal	1	V/V	Mobile molded cart with foot pedal, to house 18-24 gal sharps disposal container. Lid lift or slide opens easily with foot-operated pedal. Lid may remain closed when not in use to reduce exposure to contents. Ergonomic handle is telescopic. Heavy containers can be removed from the side with minimal lifting. Meets requirements of OSHA 29 CFR 1910.130.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	2	V/V	Examination three (Small Medium, Large) glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Hardware not included, Option 3 powder coated steel.
A5108	Waste Disposal Unit, Sharps	2	V/V	A container for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
A5212	Bracket, Television, Wall-Mounted, Tilt/Angle	2	V/V	A wall mounted, tilt/angled TV bracket for 37" to 80" TVs. Mount will be a universal and VESA compliant unit with a load capacity of up to 130 lbs.

## 4.11 ORRB1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
E0954	Cart, Emergency, Mobile, 66"H x 32"W x 22"D	1	V/V	THIS TYPICAL INCLUDES: 1 Cart body, style-A narrow, w/raised edge top; 1 Accessory rail, side; 1 Accessory rail, back; 1 Defibrillator tray; 1 IV pole; 1 Breakaway bar; 1 Flip-up shelf; 1 Wastebasket; 1 Oxygen tank holder; 1 Electrical box-4 outlet; 1 Cord wrap; 4 Drawer, 3"H; 3 Drawer, 6"H; Drawer organizer bins.
F0355	Footstool, Straight	4	V/V	Step stool. Used to assist patients getting on and off exam or surgical tables. Fitted with electrically conductive rubber tips.
F3050	Whiteboard, Dry Erase	1	V/V	Whiteboard unit, approximately 36" H x 48" W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
F3200	Clock, Battery, 12" Diameter	1	V/V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
M0630	Anesthesia Apparatus, 3 Gas	1	V/V	Three gas anesthesia apparatus. Basic unit consists of steel cabinet with casters with one shallow, one medium, and one deep drawer, seven long scale eleven-inch flowmeters, five cylinder yokes, and telescoping absorber post. It includes two-canister model carbon dioxide absorber with inhalation and exhalation check valves, switch valve, switch valve elbow, sidearm Vernitrol, flow calculator, mounting kit, ventilator calculator, ventilator and an oxygen piping inlet. Also features nitrous oxide fail safe valve kit, aspirator kit, gas evacuator with vacuum and a flow meter safety cover. Used to dispense a mixture of gases during surgical procedures.
M0750	Flowmeter, Air, Connect w/50 PSI Supply	2	V/V	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Requires the appropriate adapter for connection to the wall outlet and fitting to connect to tubing. Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0755	Flowmeter, Oxygen, Low Flow	4	V/V	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Database pricing includes DISS fitting and DISS power outlet and wall adapter. Other fitting and adapter configurations are available.
M0765	Regulator, Vacuum	14	V/V	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required. To be used in delivery, neonatal, pediatrics or any area where suction is required. Database pricing reflects continuous regulators graduated to 200 mm Hg with a full line vacuum selection switch and DISS configured inlets and outlets.
M1801	Computer, Microprocessing, w/Flat Panel Monitor	2	V/V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
M3070	Hamper, Linen, Mobile, w/Lid	2	V/V	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters. For linen transport in hospitals and clinics.
M3072	Frame, Infectious Waste Bag w/Lid	1	V/V	Frame for an infectious waste collection bag. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Adjust to hold 18" or 25" trash bags. Mounted on ball bearing casters and includes permanently mounted hinged lid. Provides means of bagging infectious waste at point of waste generation.

## 4.11 ORRB1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M3080	Cabinet, Instrument, CRS, 2 Glass Door, 6 Shelf	2	V/V	Non-magnetic stainless steel instrument cabinet with two glass doors and six shelves (five adjustable). Cabinet body has a single storage compartment and seamless welded face. Shelf heights are adjustable on full length perforated strips mounted to the back and inside front cabinet corners. Cabinet is mounted on glides or casters. Cabinet may be covered by a sloping top.
M3150	Distribution System, Medication, Automatic	1	V/V	An automated dispensing system that provides controlled dispensing, inventory and security. Size and cost will vary dependent on number of modules selected.
M3175	Electrosurgical Unit, Dual Output	1	V/V	Dual output electrosurgical unit. Solid state power source with foot switch jacks, monopolar and bipolar outputs, and four independent modes of operation. Used in the operating room or surgicenter as an alternative to the scalpel for cutting tissue.
M4255	Stand, IV, Adjustable	3	V/V	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.
M4266	Pump, Volumetric, Infusion, Multiple Line	3	V/V	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.
M4280	Pump, Pneumatic Stocking/Cuff	1	V/V	Pneumatic stocking/cuff pump. Pump provides alternating pressure to pneumatic stockings for reduction of the threat of deep vein thrombophlebitis in post operative patients. May also be used in the CCU for rotating cuff therapy for reduction of peripheral circulation in congestive heart failure patients.
M4287	Irrigation System, Surgical	1	V/V	High flow surgical irrigation pump up 2.5l/min, available in single and double flow.
M4645	Patient Transfer Device	1	V/V	A patient transfer board designed to make lateral patient transfers safer for staff and be more comfortable for the patients. The board uses a smooth, low friction and static free surface to eliminate the need for metal rollers. The board has a soft foam core that makes them lightweight for ease of use and storage. The long board device also enables the transfer of a patient in the seated or Fowler position. The boards come in three sizes with the long board being foldable. The dimensions and price are for the long wide board.
M4815	Hypo/Hyperthermia Unit, Automatic/Manual, Mobile	1	V/V	Automatic/manual hypo/hyperthermia unit. Sealed refrigeration system. Microprocessor controlled with multiple alarm system constantly monitoring temperature and water levels. Cabinet type unit. Designed to regulate body temperature by application of water-filled hypothermia blankets.
M4816	Warming Unit, Patient, Automatic/Manual, Air	1	V/V	Automatic/manual patient warming unit. Unit delivers a flow of warmed air through a perforated plastic blanket. Used primarily for postoperative patients to speed recovery of normal body temperature.
M5030	Stool, Surgeon, Revolving	1	V/V	Revolving stool. Consists of a padded upholstered seat with height adjustment. Unit rotates and is mounted on ball bearing swivel casters. Designed for use in examinations, treatment, and surgical procedures.
M5512	Laser, Smoke Evacuator	1	V/V	Filtration system used in conjunction with laser operations to remove surgical laser plume. The unit includes a pneumatic foot switch, disposable 0.12 micron HEPA primary filters, a secondary 0.12 micron ULPA/carbon filter, disposable funnels, reducer fittings and connector hoses.

## 4.11 ORRB1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M7490	Light, Surg, Ceiling Mtd, Dual, Unequal Dia Heads	2	V/C	Dual head surgical light ceiling mounted from a single pole. Unit has two lamp heads of differing sizes mounted on individual swing arms. Unit features multiple lighting pods in each lamp head, deep cavity illumination, color-corrected light, intensity control and sterilizable handles. Refer to the manufacturers' specifications for minimum ceiling heights and installation data. The database height dimension below refers to the height of the lamp head itself. The width and depth measurements are the larger of the two sums of the swing arm length and the head diameter. For use in general purpose surgical suites.
M7650	Defibrillator/Monitor, Acute Care	1	V/V	Portable defibrillator/monitor for acute care includes biphasic defibrillator, pacing, SPO2, Interpretive 12-lead, NIBP monitoring, EtCO2 monitoring, Invasive pressure monitoring, Vital Sign monitoring, temperature probe, Fax transmission, PCMCIA Data Cards, Paddle accessories, and a color LCD.
M7801	Monitor, Medical Grade 26 - 42"	6	V/V	
M7802	Monitor, Medical Grade 55-65"	2	V/V	LED HD monitor capable of displaying medical grade images. Monitor' size is 55 - 65".
M7845	Monitor, Physiological, Bedside, 4 Channel	1	V/V	4 channel bedside physiological monitor. The unit consist of a four-channel non-fade monochrome display monitor, an alarm system and printer-recording capabilities. The monitor has color coded controls and automatic calibration. The unit displays up to four waveforms simultaneously. The parameters to be monitored are user selectable. The monitor may be connected to a central monitoring station. The unit monitors patients in most acute care areas, step-down units, procedure rooms and emergency rooms.
M8551	Light Source, Fiberoptic Headlamp	1	V/V	Fiberoptic light source for surgical headlamps. This unit provides color corrected light for surgical procedures where photography is not required.
M8560	Surgical System, Robotic	3	V/V	Robotic, surgical navigation system. System consists of surgeon's console, patient cart with four interactive robotic arms, vision cart with high definition, 3D vision system. Features dual-console capability to support training and collaboration during minimally invasive surgery. 3D HD visualization with up to 10x magnification and an immersive view of the operative field. Also provides extensibility for digital OR integration, Boom compatibility and expandable system architecture for upgrades and future OR technology (dimensions and utilities shown are for the Patient cart).
M8606	Endoscopy Cart, Fiberoptic, w/Video Accessories	1	V/V	Endoscopy cart with video and print capabilities for use with fiberoptic (direct vision) endoscopes. This cart does not work with videoscopes. System takes optical images from a single endoscope and directly records them or converts them to digital signals for recording. A typical system cart includes the cart, a light source, an insufflator, a suction unit, a heat probe unit, an electro-surgical apparatus, a digital camera converter or color video camera, a camera controller, a monitor, a video/DVD recorder and a color printer. This JSN does not include the endoscope; refer to the endoscopes at JSNs M8500-M8550. Each cart can support one or more types of endoscope and should be specifically tailored to its intended use(s). This cart can be configured to interface with a network endoscopy information management system; refer to JSN M8600. Database physical information and pricing is for a higher cost system containing one of each of the above components.
M8800	Cart, Anesthesia	1	V/V	Mobile anesthesia cart. The cart shall be built of stainless steel or other appropriate material and mounted on 4" casters for easy mobility. It shall be capable of being equipped with bottle holders, adjustable IV pole, storage drawers, shelves and a top bar/rail.
M8810	Stand, Mayo	3	V/V	Adjustable instrument table. Table is corrosion resistant stainless steel construction and is mounted on two casters with two skid rails. It has telescopic upright adjusts from 39 inches to 60 inches with automatic locking device, and removable 13"x19" instrument tray. Designed for use in operating and procedure rooms.

## 4.11 ORRB1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M8825	Table, Instrument/Dressing, CRS, approx. 36x20x34	2	V/V	Instrument and dressing table. Made of corrosion resistant stainless steel with a sound deadened top. Includes guard rail, shelf and two side-by-side drawers. The table is mounted on swivel, ball-bearing casters.
M8830	Table, Instrument/Dressing, Mobile	2	V/V	Mobile instrument/dressing table, approximately 34" H x 20" W x 16" D Corrosion resistant stainless steel mobile table with sound-deadening shelf and drawer. Unit is mounted on 2" casters. Designed for all purpose use in the hospital or clinic.
M8840	Table, Back, Instrument/Dressing	1	V/V	A specialty back table for large cases such as orthopedics, spinal fusions, neuro and craniotomies. The table has a pneumatic tuck-away cantilevered shelf which can hold multiple trays and is angled for clear observation of instruments. It comes with 4" diameter heavy-duty ball bearing brake/swivel casters. Construction is all stainless steel.
M8900	Carriage, Pail, CRS, Without Pail	2	V/V	Carriage, pail (kick bucket) CRS. Consists of a stainless steel ring type carriage mounted on ball bearing casters. Includes circular non-marring bumper. For use in the surgical operating room.
M8905	Pail, Utility, CRS, With Carriage	2	V/V	Utility pail (kick bucket). Shall be a stainless steel 12 quart bucket for use in surgical operating rooms.
M8910	Cart, Surgical Case	2	V/V	Surgical case cart. Unit consists of two hinged cabinet sections, each section equipped with two pull-out shelves with stops. The entire unit is mounted on four heavy duty conductive swivel casters. Used to transport surgical packs and supplies to surgery and soiled items back to central supply.
M8920	Stand, Basin, CRS, Mobile, Double	3	V/V	CRS, mobile, double basin stand with shelf. Stainless steel corrosion resistant frame constructed from two continuous inverted "U" shaped tubes, forming four legs and mounted on casters. Circular rings welded to top receive two removable 8 quart stainless steel basins. For open heart and other procedures.
M8925	Stand, Basin, CRS, Mobile, Single	1	V/V	Mobile single basin stand with shelf. The stand shall be constructed of tubular stainless steel and mounted on 2" swivel casters. Shall include a shelf and an 8 quart stainless steel basin. Intended for use in ORs and treatment areas.
M8940	Stool, Anesthesia, With Back	2	V/V	Anesthesia stool with back. All stainless steel with well-curved back panel and wide conductive seat. Designed for the anesthesiologist during surgical procedures.
M8950	Warmer, Blood	2	V/V	Unit consists of a temperature regulated water bath, circulating fluid, or dry heat with controls and an audible high temperature alarm. The warmer provides a stable environment for the controlled warming of blood or other fluids prior to being transfused to a patient.
M8970	Warmer, Blood, High Volume	1	V/V	Unit contains a proportional controller to regulate temperature in the heat exchanger and an audible high temperature alarm. Designed to provide a stable temperature for the controlled warming of blood or other fluids prior to being transfused to a patient. Unit may be a cuff type or circulating water heat exchanger.
M9110	Table, Operating, 5 or 6 Section, Trauma	1	V/V	Pedestal type, 5 or 6 section, operating table. Pedestal table, mounted on a solid base with casters and locks. Table top surface is fabricated from radio-translucent and conductive panels and is equipped with cassette tunnels in each of the table top sections. Table includes: Electro-hydraulic controls, side rail locking system, grounding receptacle and dual arm support section. It is designed for use in the operating room in a variety of surgical procedures. Table is configured to address the needs of trauma surgery.
S9755	Suction System, Surgical, Mobile Rover Unit	1	V/V	Surgical fluid waste management system with powered IV pole and smoke evacuation. Portable waste collection unit, for use with Docking Station (specified separately). Dual canisters (one 4L and one 20L), two levels of suction: 2-21in/Hg, fluid readout, 3 different port sizes for smoke tubing.



# SURGICAL AND ENDOVASCULAR SERVICES (ORTR1) OPERATING ROOM, TRANSPLANT AXONOMETRIC

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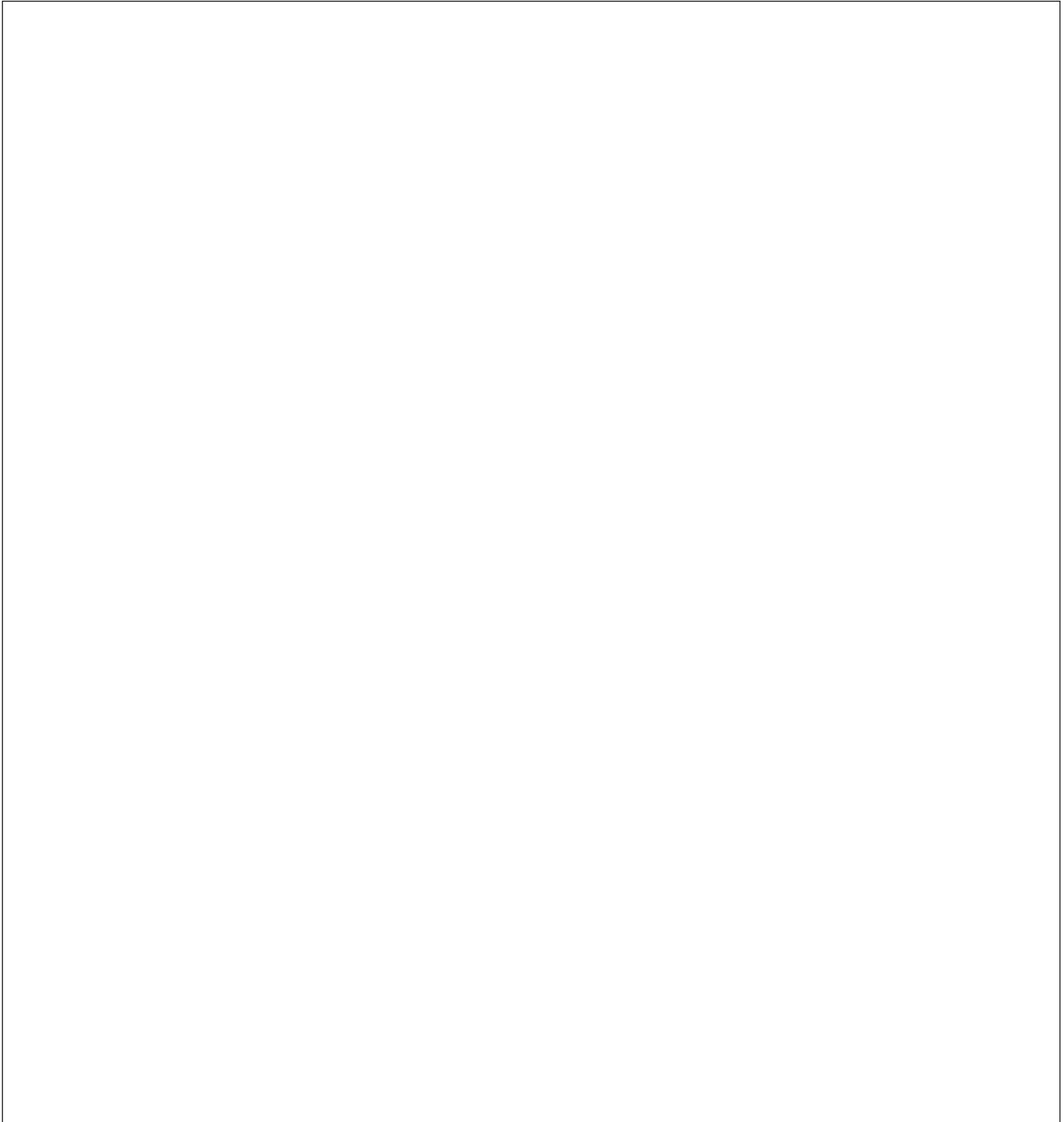


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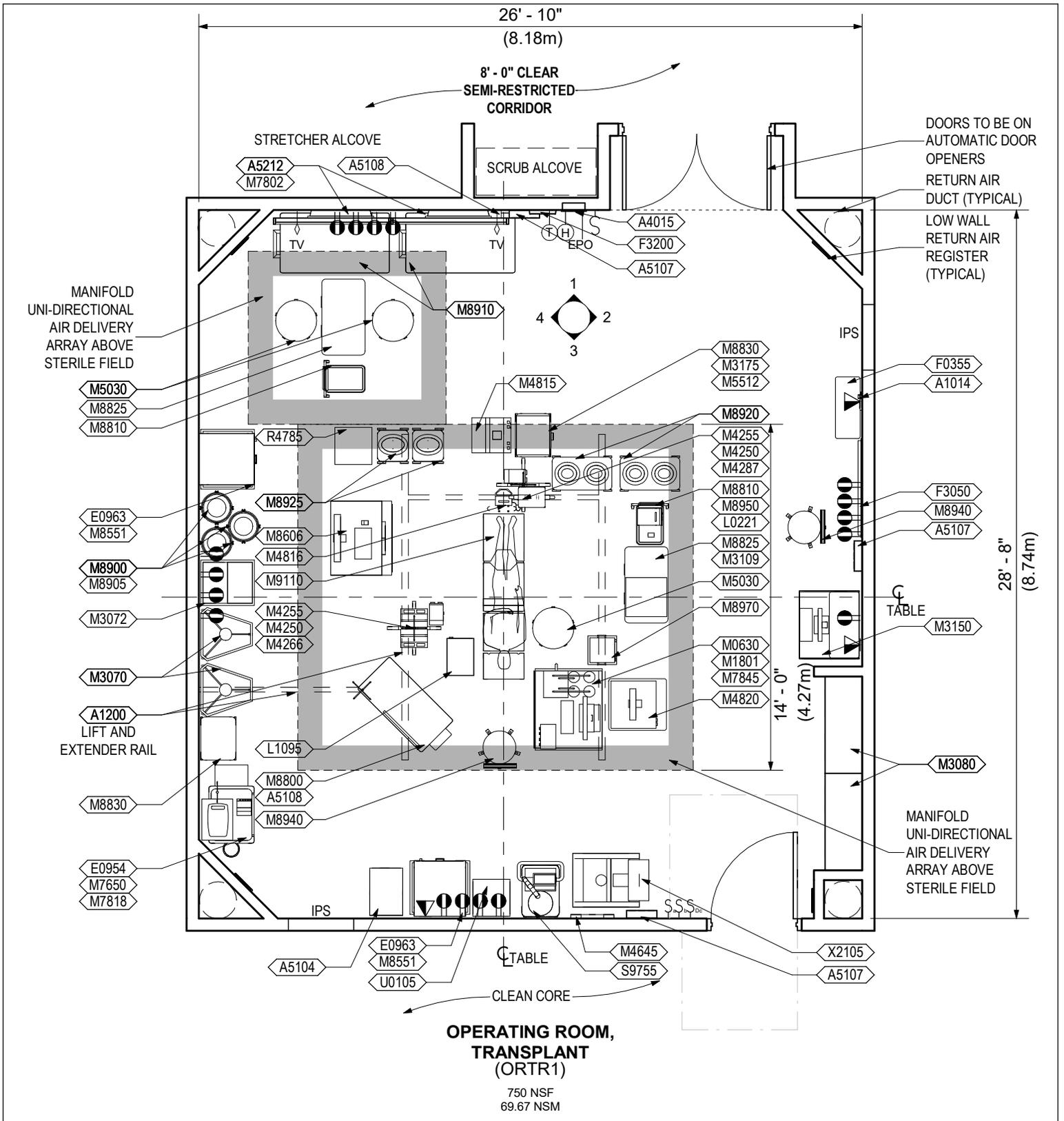
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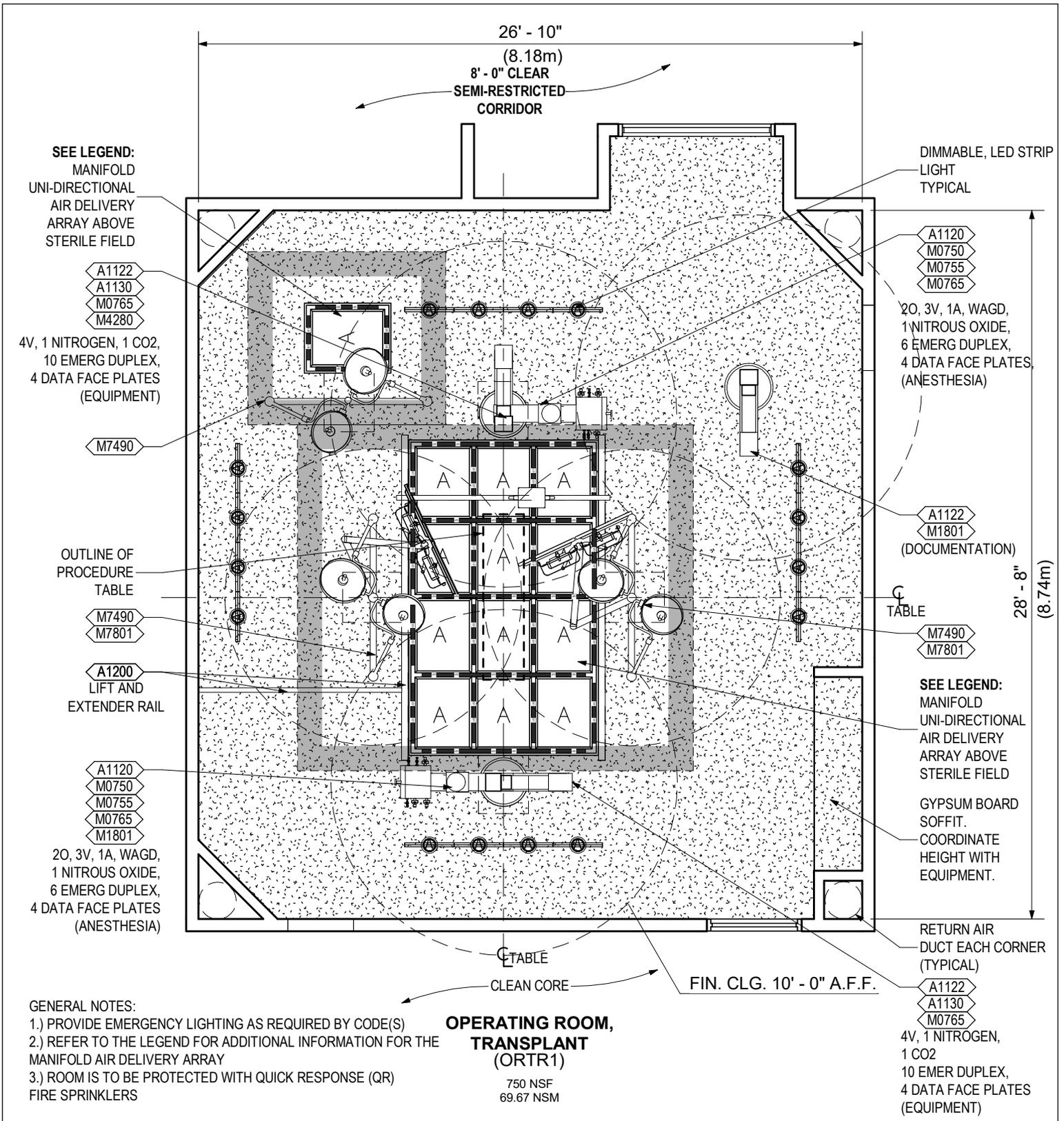


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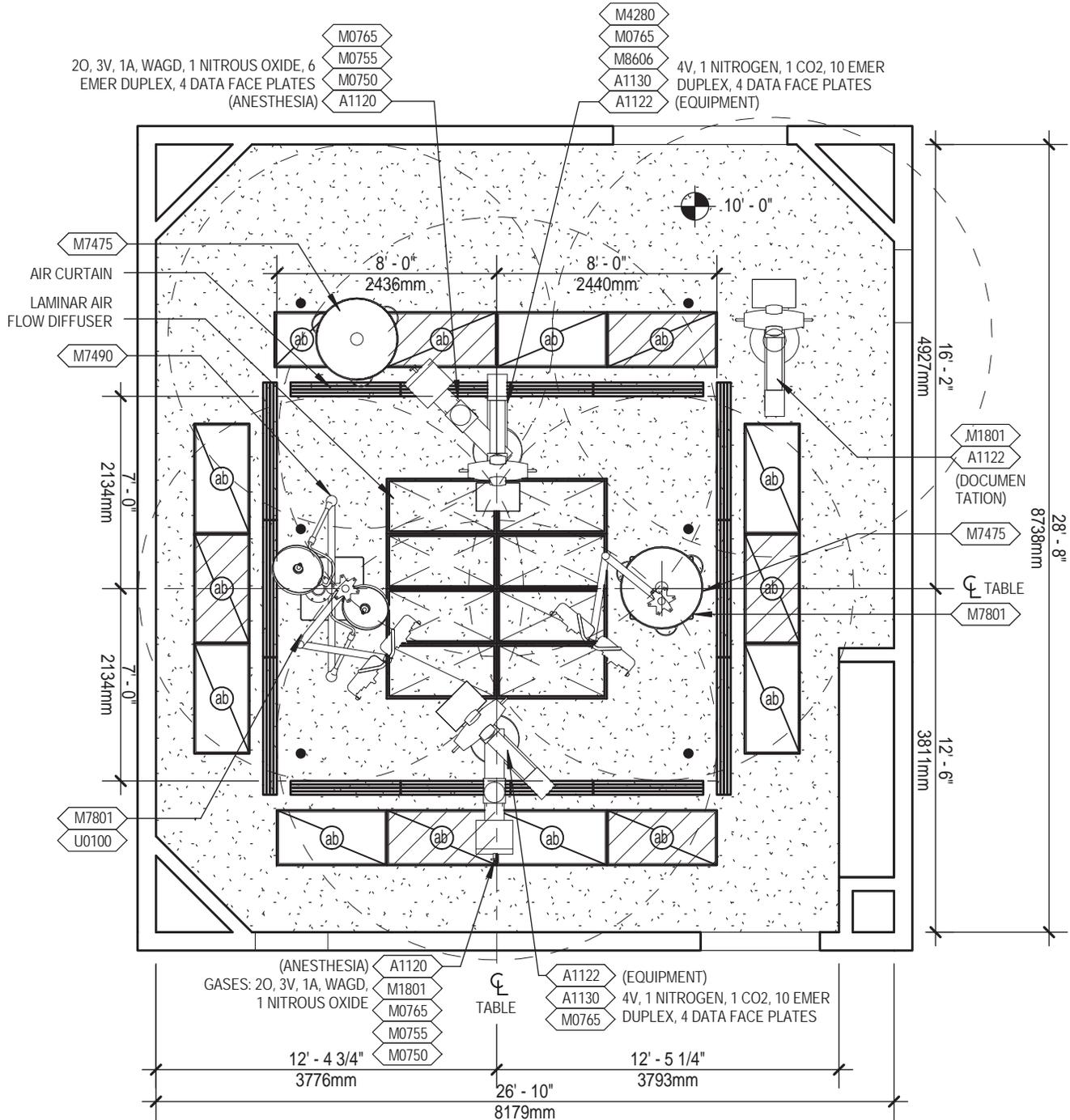
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SURGICAL AND ENDOVASCULAR SERVICES (ORTR1) OPERATING ROOM, TRANSPLANT REFLECTED CEILING PLAN (ALTERNATE OPTION)

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**Reflected Ceiling Plan**  
750 NSF / 69,7 NSM

**NOTE:** OPTIONAL REFLECTED CEILING PLAN IS AN ALTERNATIVE OPTION TO THE MANIFOLD UNI-DIRECTIONAL AIR DELIVERY SYSTEM. EQUIPMENT TAGS & REFERENCE NOTES MAY NOT BE FULLY COORDINATED WITH THE EQUIPMENT LIST.

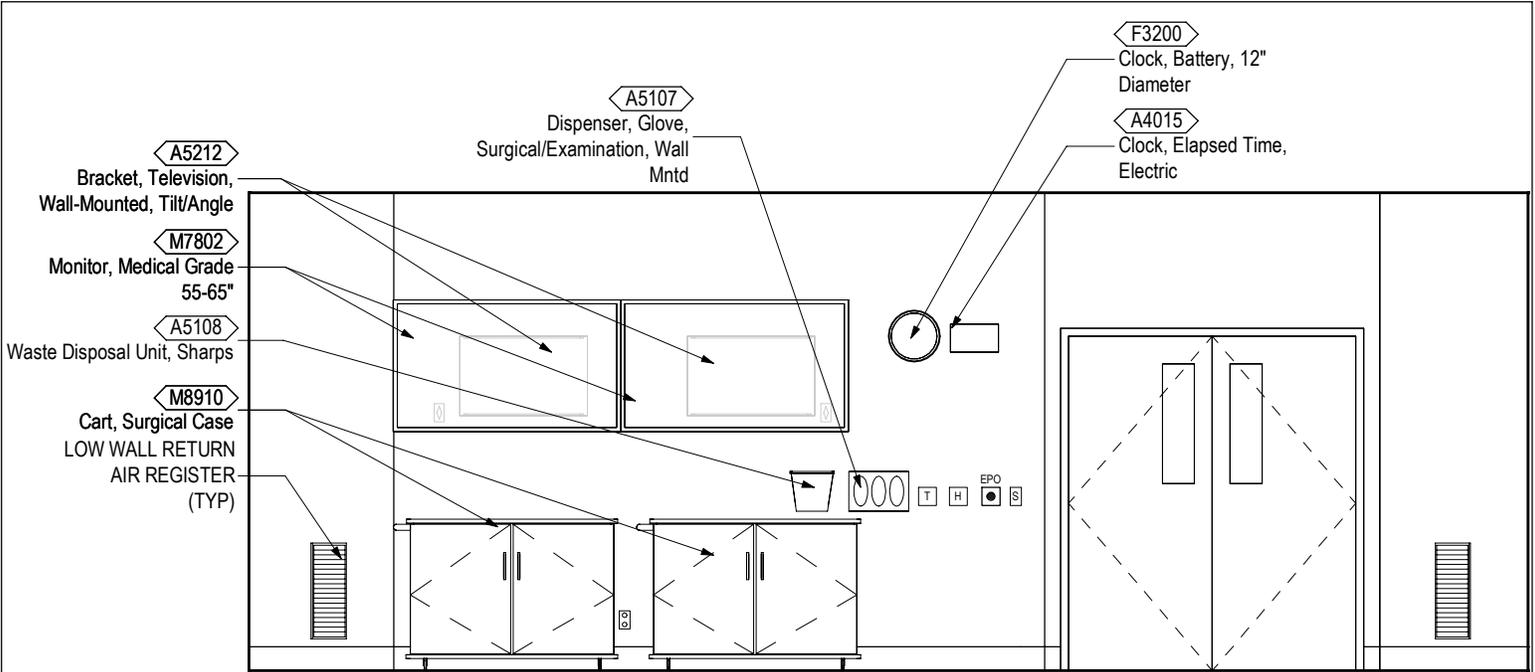
**4.12. OPERATING ROOM, TRANSPLANT (ORTR1)**JSN Legend

JSN DESCRIPTION

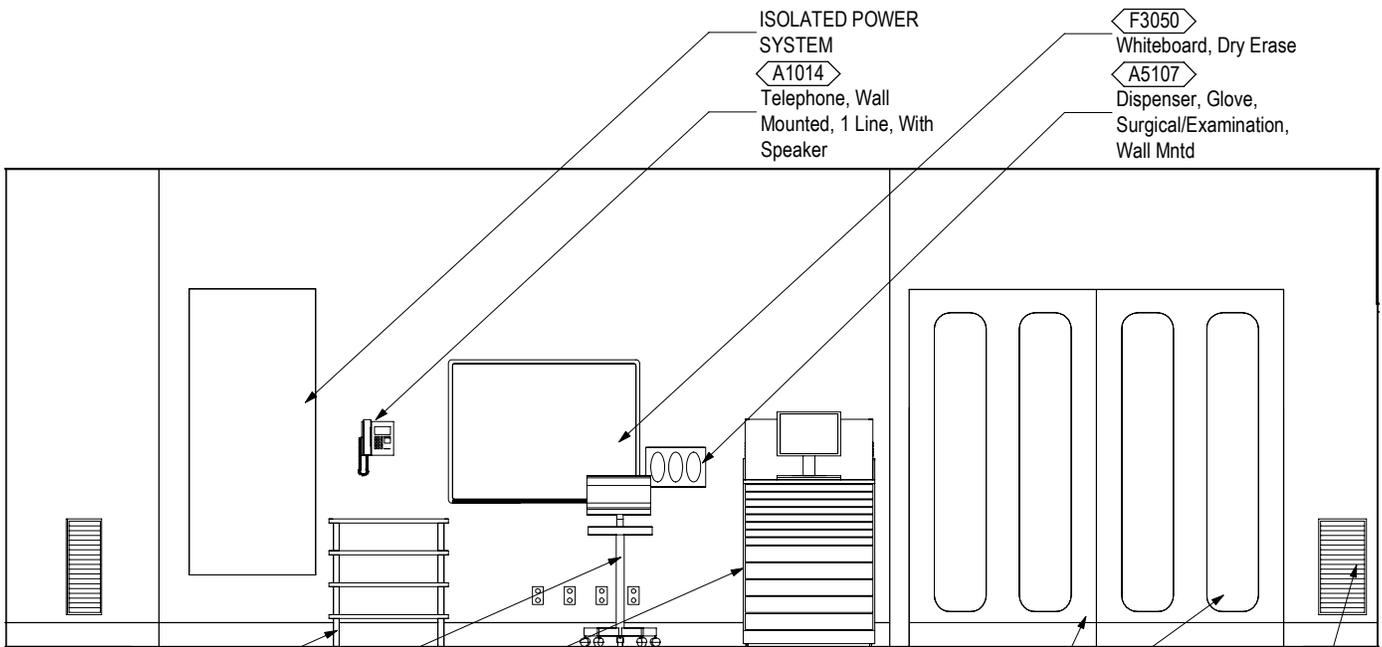
A1014	TELEPHONE, WALL MOUNTED, 1 LINE, WITH SPEAKER	M4280	PUMP, PNEUMATIC STOCKING/CUFF
A1120	COLUMN, SERVICE, PREFAB, SURGICAL, CEILING MOUNTED	M4287	IRRIGATION SYSTEM, SURGICAL
A1122	COLUMN, EQUIPMENT ARM, CEILING MOUNTED, SURGERY	M4645	PATIENT TRANSFER DEVICE
A1130	CABINET, CONTROL, NITROGEN	M4815	HYPO/HYPERTHERMIA UNIT, AUTOMATIC/MANUAL, MOBILE
A1200	LIFT SYSTEM, OVERHEAD, PATIENT RM	M4816	WARMING UNIT, PATIENT, AUTOMATIC/MANUAL, AIR
A4015	CLOCK, ELAPSED TIME, ELECTRIC	M4820	HEMODIALYSIS UNIT, MOBILE, W/ REVERSE OSMOSIS SYSTEM
A5104	CART, WASTE DISPOSAL, MOBILE W/ FOOT PEDAL	M5030	STOOL, SURGEON, REVOLVING
A5107	DISPENSER, GLOVE, SURGICAL/ EXAMINATION, WALL-MTD	M5512	LASER, SMOKE EVACUATOR
A5108	WASTE DISPOSAL UNIT, SHARPS	M7490	LIGHT, SURG, CEILING MTD, DUAL, UNEQUAL DIA HEADS
A5212	BRACKET, TELEVISION, WALL-MTD, TILT/ANGLE	M7650	DEFIBRILLATOR/MONITOR, ACUTE CARE
E0954	CART, EMERGENCY, MOBILE, 66"H x 32"W x 22"D	M7801	MONITOR, MEDICAL GRADE, 26"-42"
E0963	CART, GEN. STORAGE, MOBILE	M7802	MONITOR, MEDICAL GRADE, 55"-65"
F0355	FOOTSTOOL, STRAIGHT	M7818	MONITOR, TRANSPORT
F3050	WHITE BOARD, DRY ERASE	M7845	MONITOR, PHYSIOLOGICAL, BEDSIDE, 4 CHANNEL
F3200	CLOCK, BATTERY, 12" DIAMETER	M8551	LIGHT SOURCE, FIBEROPTIC HEADLAMP
L0221	ANALYZER, BLOOD, PORTABLE HAND HELD	M8606	ENDOSCOPY CART, FIBEROPTIC, W/ VIDEO ACCESSORIES
L1095	CELL SAVER	M8800	CART, ANESTHESIA
M0630	ANESTHESIA APPARATUS, 3 GAS	M8810	STAND, MAYO
M0750	FLOWMETER, AIR, CONNECT W/50 PSI SUPPLY	M8825	TABLE, INSTRUMENT/DRESSING, CRS, APPROX 36x20x34
M0755	FLOWMETER, OXYGEN, LOW FLOW	M8830	TABLE, INSTRUMENT/DRESSING, MOBILE
M0765	REGULATOR, VACUUM	M8900	CARRIAGE, PAIL, CRS, WITHOUT PAIL
M1801	COMPUTER, MICROPROCESSING, W/ FLAT PANEL MONITOR	M8905	PAIL, UTILITY, CRS, WITH CARRIAGE
M3070	HAMPER, LINEN, MOBILE, W/LID	M8910	CART, SURGICAL CASE
M3072	FRAME, INFECTIOUS WASTE BAG W/ LID	M8920	STAND, BASIN, CRS, MOBILE, DOUBLE
M3080	CABINET, INSTRUMENT, CRS, 2 GLASS DOOR, 6 SHELF	M8925	STAND, BASIN, CRS, MOBILE, SINGLE
M3109	ELECTROSURGICAL/COAGULATOR, ARGON PLASMA	M8940	STOOL, ANESTHESIA, WITH BACK
M3150	DISTRIBUTION SYSTEM, MEDICATION, AUTOMATIC	M8950	WARMER, BLOOD
M3175	ELECTROSURGICAL UNIT, DUAL OUTPUT	M8970	WARMER, BLOOD, HIGH VOLUME
M4250	PUMP SYRINGE, INFUSION	M9110	TABLE, OPERATING, 5 OR 6 SECTION, TRAUMA
M4255	STAND, IV, ADJUSTABLE	R4785	ICE MAKER, SURGICAL SLUSH
M4266	PUMP, VOLUMETRIC, INFUSION, MULTIPLE LINE	S9755	SUCTION SYSTEM, SURGICAL, MOBILE ROVER UNIT
		U0105	EXTRACORPOREAL SUPPORT SYSTEM
		X2105	SCANNER, ULTRASOUND, CARDIAC (ECHO)

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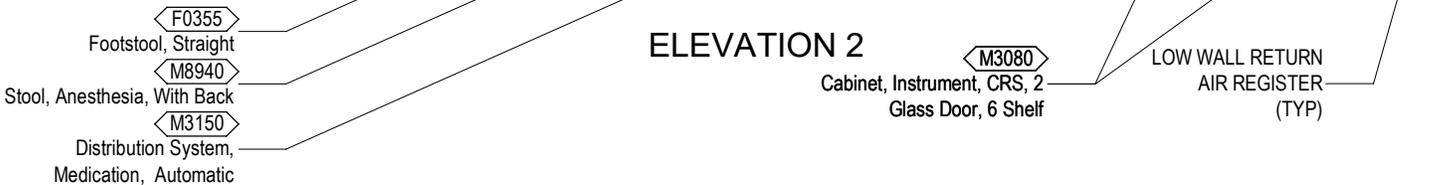
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ELEVATION 1



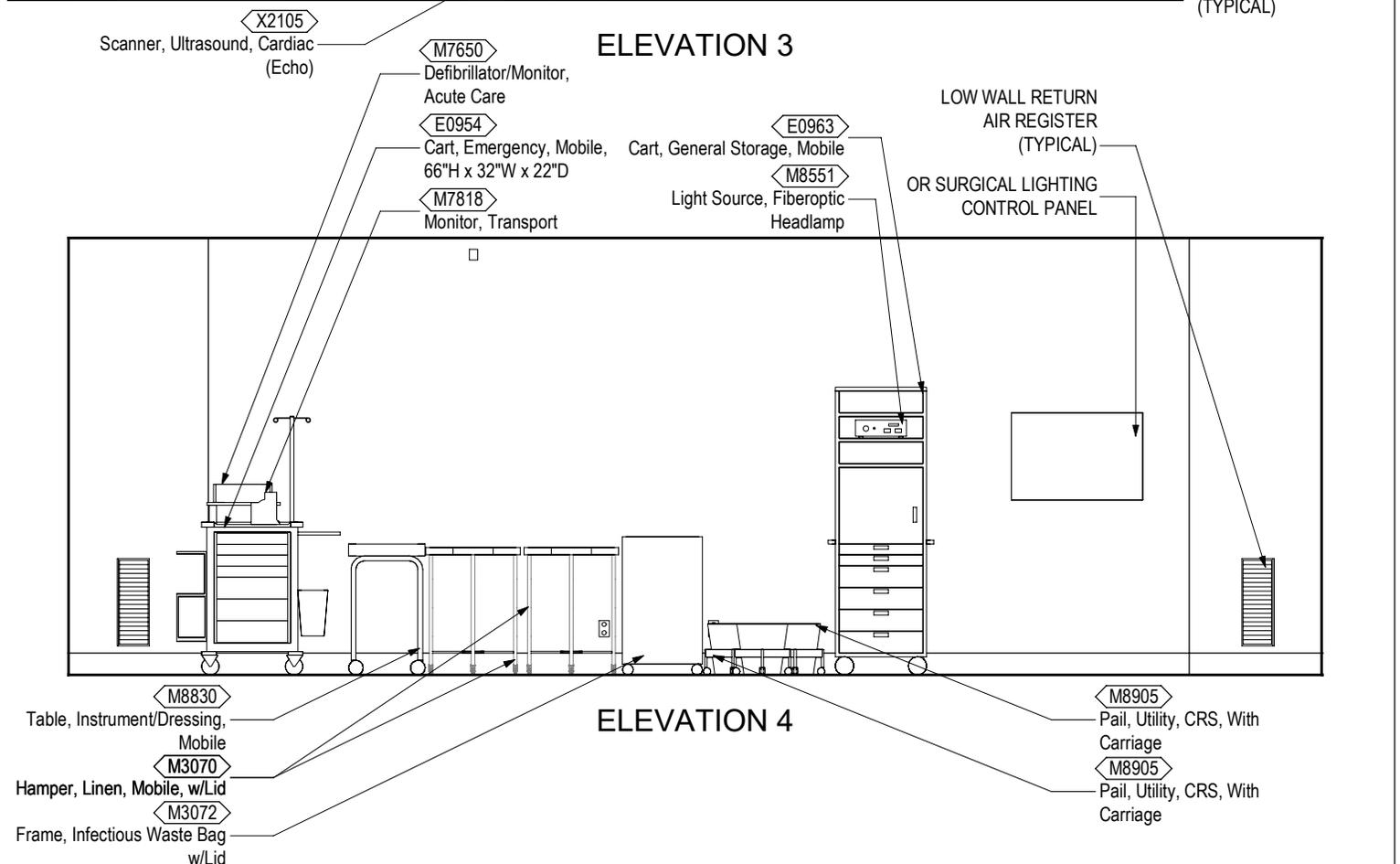
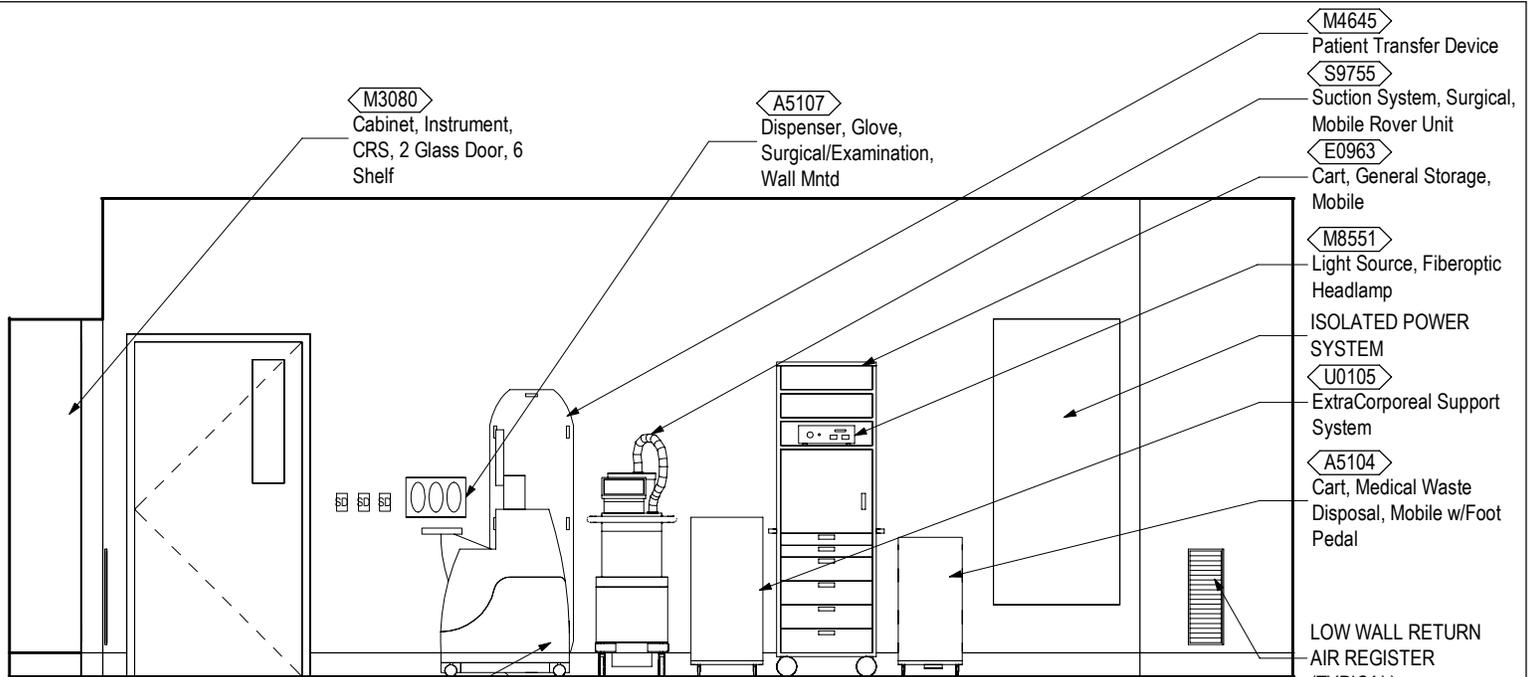
ELEVATION 2



DISCLAIMER: ROOM TEMPLATES ARE GRAPHICAL REPRESENTATIONS OF SELECTED ROOM TYPES THAT ILLUSTRATE VA PLANNING REQUIREMENTS FOR SPACE, ROOM CONTENTS, AND ROOM SPECIFIC ENGINEERING SYSTEMS. THEY PROVIDE TYPICAL CONFIGURATIONS, PLANNING CRITERIA, AND GENERAL TECHNICAL GUIDANCE, AND ARE NOT INTENDED TO BE PROJECT SPECIFIC REQUIREMENTS.

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SCALE: 1/4" = 1'-0"



**DISCLAIMER:** ROOM TEMPLATES ARE GRAPHICAL REPRESENTATIONS OF SELECTED ROOM TYPES THAT ILLUSTRATE VA PLANNING REQUIREMENTS FOR SPACE, ROOM CONTENTS, AND ROOM SPECIFIC ENGINEERING SYSTEMS. THEY PROVIDE TYPICAL CONFIGURATIONS, PLANNING CRITERIA, AND GENERAL TECHNICAL GUIDANCE, AND ARE NOT INTENDED TO BE PROJECT SPECIFIC REQUIREMENTS.

**4.12 OPERATING ROOM, TRANSPLANT (ORTR1)****Room Data Sheet****ARCHITECTURAL**

Ceiling Type:	Gypsum Wallboard (SC)
Ceiling Height:	10'-0" (3048 mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	RF Integral Base (min. 6"/152 mm)
Floor Finish:	Resinous Flooring (RF) Res 4
Slab Depression:	None
Sound Protection:	50 STC (to other room), 35 STC (to corridor)
Doors:	Double, Size 6'-0" x 7'-0" (1829 mm x 2133 mm) Wood w/ Narrow View Window; Single, Size 4'-0" x 7'-0" (1219 mm x 2133 mm) Wood w/ Small View Window

Special Requirement:

**Notes:**

- 1) Shielding is to be provided as it is determined by the Physicist on a per project basis.
- 2) Locate access panels as required to allow for the maintenance of surgical booms and lights in facilities without interstitial space. Min. size to be 24" x 24".
- 3) Cabinetry can be built in or free-standing.
- 4) Nominal wall thickness is shown at 8" (203 mm) to account for a variety of wall-mounted panels, such as isolation power unit panels, that require a thicker partition.
- 5) Include wall extensions at both sides of the scrub sink to protect the scrub sinks from cart and stretcher traffic in the semi-restricted corridor.
- 6) Coordinate structural supports, utility connections and other requirements for surgical lighting pendants with manufacturer.

7) Equipment and Anesthesia booms are duplicated to provide maximum flexibility. If duplicate booms are not desired, they can be omitted subject to approval by clinical leadership.

8) Facility will select number and types of scopes and other instrumentation as necessitated by the unique case load.

9) Endoscopy equipment can be located on a cart or on the equipment boom.

10) NSF provided for this space is the minimal acceptable NSF; contact Facilities Standards Service for any deviations.

**LIGHTING**

Refer to the VA Lighting Design Manual section 4.2.13 - Surgery/Operating Room - for lighting design consideration.

**POWER**

Normal Power: Connect selected receptacles and equipment to Normal power IPS.

Emergency Power: Connect selected receptacles and equipment to Critical Branch emergency IPS.

**Notes:**

- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
- 2) IPS Power & ground modules mounted at +24" AFF
- 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
- 4) Provide power connections for articulating utility columns.

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	

**Notes:**

- 1) Provide connections for articulating utility columns.
- 2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Rooms data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization.

**Notes:**

- 1) Refer to the latest version of the VA HVAC Design Manual for quantity and location of low air return grilles and ceiling diffusers.

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	Yes
Medical Vacuum	Yes
Oxygen	Yes
Special Requirement:	

**Notes:**

- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen, Nitrous Oxide, Carbon Dioxide
- 2) For gas quantities per boom refer to the reflected ceiling plan.
- 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project
- 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.12 OPERATING ROOM, TRANSPLANT (ORTR1)****Equipment List**

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A1014	Telephone, Wall Mounted, 1 Line, With Speaker	1	V/V	Telephone, wall mounted, 1 line, with speaker.
A1120	Column, Service, Prefab, Surgical, Ceiling Mounted	2	C/C	Prefabricated surgical service column. Strong 18 gauge stainless steel shell ceiling mounted unit with the following services: oxygen, nitrous oxide, nitrogen, medical air, medical vacuum, gas evacuation, electrical outlets, monitoring connectors, and IV holders. Specify type of column (fixed or retractable) and number of outlets required for each service. Size will vary with number of service outlets required. Designed to be used in the operating room, recovery and ICU-CCU rooms.
A1122	Column, Equipment Arm, Ceiling Mounted, Surgery	3	C/C	A ceiling mounted retractable equipment arm for use in the OR. Designed to provide equipment placement support, power receptacles including low-voltage panels, gas outlets and flat screen mounting for a surgical suite. Unit will provide a range of motion of up to 330 degrees with arm providing additional vertical movement. Units are custom configured with multiple options available. Price is based on a unit with two (double) retractable arms. Also available are units for use in anesthesia, ICU and ER.
A1130	Cabinet, Control, Nitrogen	2	C/C	Nitrogen control cabinet. Unit consists of supply cut-off valve, supply pressure gauge, pressure regulator (adjustable 0 to 200 PSI), outlet pressure gauge, nitrogen outlet and connection to surgical gas column. Specify recessed or surface mounting. Designed for powering surgical pneumatic tools.
A1200	Lift System, Overhead, Patient Room	1	V/C	An overhead rail system specifically designed for patient lifting and movement for a single bed patient room. The system will consist of recessed or ceiling mounted primary and secondary rails, lift motor with rolling carriage, patient harness or seat, and a hand controller or control box with charger. System will facilitate lifting and movement of patient to and from bed to gurney, chair or other requirement. Minimum lift capability is 550 pounds. Custom design of track layout by manufacturer is essential to meet individual facility requirements.
A4015	Clock, Elapsed Time, Electric	1	C/C	Elapsed time digital electric clock. Single display time that can be used either as a clock or elapsed time indicator. Clock consists of buttons to set minutes, and hours for the time. For use in operating and delivery room, and medical service columns. Analog or digital displays may be provided as specified by the user.
A5104	Cart, Medical Waste Disposal, Mobile w/Foot Pedal	1	V/V	Mobile molded cart with foot pedal, to house 18-24 gal sharps disposal container. Lid lift or slide opens easily with foot-operated pedal. Lid may remain closed when not in use to reduce exposure to contents. Ergonomic handle is telescopic. Heavy containers can be removed from the side with minimal lifting. Meets requirements of OSHA 29 CFR 1910.130.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	3	V/V	Examination three (Small Medium, Large) glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Hardware not included, Option 3 powder coated steel.
A5108	Waste Disposal Unit, Sharps	2	V/V	A container for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
A5212	Bracket, Television, Wall-Mounted, Tilt/Angle	2	V/V	A wall mounted, tilt/angled TV bracket for 37" to 80" TVs. Mount will be a universal and VESA compliant unit with a load capacity of up to 130 lbs.

## 4.12 ORTR1

JSN	NAME	QTY	ACO/INS	DESCRIPTION
E0954	Cart, Emergency, Mobile, 66"H x 32"W x 22"D	1	V/V	THIS TYPICAL INCLUDES: 1 Cart body, style-A narrow, w/raised edge top; 1 Accessory rail, side; 1 Accessory rail, back; 1 Defibrillator tray; 1 IV pole; 1 Breakaway bar; 1 Flip-up shelf; 1 Wastebasket; 1 Oxygen tank holder; 1 Electrical box-4 outlet; 1 Cord wrap; 4 Drawer, 3"H; 3 Drawer, 6"H; Drawer organizer bins.
E0963	Cart, General Storage, Mobile	2	V/V	Mobile General Storage Cart, approximately 72"H x 23"W x 22"D. THIS TYPICAL INCLUDES: Locker Storage Container on Wheels, w/Solid Door 3 Tray/Shelves; Drawers, 3"H; 4 Drawers, 6"H; 1 Tray/Shelf Divider Drawer Organizer Bins
F0355	Footstool, Straight	4	V/V	Step stool. Used to assist patients getting on and off exam or surgical tables. Fitted with electrically conductive rubber tips.
F3050	Whiteboard, Dry Erase	1	V/V	Whiteboard unit, approximately 36" H x 48" W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
F3200	Clock, Battery, 12" Diameter	1	V/V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
L0221	Analyzer, Blood, Portable, Hand Held	1	V/V	Handheld point-of-care testing analyzer. Utilizes single-use, disposable cartridges for diagnostic testing to include: Blood gases, electrolytes and chemistries, lactate, coagulation, hematology, and cardiac markers.
L1095	Cell Saver	1	V/V	Autologous blood recovery system, also known as a "Cell Saver." Used in the operating room and laboratory to wash extravascular blood free of debris, clots, etc., and to make the blood safe for re-infusion into the patient.
M0630	Anesthesia Apparatus, 3 Gas	1	V/V	Three gas anesthesia apparatus. Basic unit consists of steel cabinet with casters with one shallow, one medium, and one deep drawer, seven long scale eleven-inch flowmeters, five cylinder yokes, and telescoping absorber post. It includes two-canister model carbon dioxide absorber with inhalation and exhalation check valves, switch valve, switch valve elbow, sidearm Vernitrol, flow calculator, mounting kit, ventilator calculator, ventilator and an oxygen piping inlet. Also features nitrous oxide fail safe valve kit, aspirator kit, gas evacuator with vacuum and a flow meter safety cover. Used to dispense a mixture of gases during surgical procedures.
M0750	Flowmeter, Air, Connect w/50 PSI Supply	2	V/V	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Requires the appropriate adapter for connection to the wall outlet and fitting to connect to tubing. Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0755	Flowmeter, Oxygen, Low Flow	4	V/V	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Database pricing includes DISS fitting and DISS power outlet and wall adapter. Other fitting and adapter configurations are available.
M0765	Regulator, Vacuum	14	V/V	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required. To be used in delivery, neonatal, pediatrics or any area where suction is required. Database pricing reflects continuous regulators graduated to 200 mm Hg with a full line vacuum selection switch and DISS configured inlets and outlets.

## 4.12 ORTR1

JSN	NAME	QTY	ACO/INS	DESCRIPTION
M1801	Computer, Microprocessing, w/Flat Panel Monitor	2	V/V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
M3070	Hamper, Linen, Mobile, w/Lid	2	V/V	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters. For linen transport in hospitals and clinics.
M3072	Frame, Infectious Waste Bag w/Lid	1	V/V	Frame for an infectious waste collection bag. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Adjust to hold 18" or 25" trash bags. Mounted on ball bearing casters and includes permanently mounted hinged lid. Provides means of bagging infectious waste at point of waste generation.
M3080	Cabinet, Instrument, CRS, 2 Glass Door, 6 Shelf	2	V/V	Non-magnetic stainless steel instrument cabinet with two glass doors and six shelves (five adjustable). Cabinet body has a single storage compartment and seamless welded face. Shelf heights are adjustable on full length perforated strips mounted to the back and inside front cabinet corners. Cabinet is mounted on glides or casters. Cabinet may be covered by a sloping top.
M3109	Electrosurgical/Coagulator, Argon Plasma	1	V/V	An electrosurgical generator with an argon plasma coagulator and APC pulsed mode. This feature auto-regulates beam ignition and provides automatic dosing of power for increased control. The plug and play digital instrument recognition technology automatically configures the entire system to preprogrammed procedural parameters.
M3150	Distribution System, Medication, Automatic	1	V/V	An automated dispensing system that provides controlled dispensing, inventory and security. Size and cost will vary dependent on number of modules selected.
M3175	Electrosurgical Unit, Dual Output	1	V/V	Dual output electrosurgical unit. Solid state power source with foot switch jacks, monopolar and bipolar outputs, and four independent modes of operation. Used in the operating room or surgicenter as an alternative to the scalpel for cutting tissue.
M4250	Pump, Syringe, Infusion	2	V/V	The infusion syringe pump ensures highly accurate volume delivery and consistent flow for small volumes (<50 ml) of pharmacologic agents or thick feeding solutions. It shall be small, lightweight construction, making it transportable. Shall have menu-driven programming capable of flow rates (e.g. 0.1 or 1.0 mL/hr) that are intended for long-term bedside use and/or critical care patient transport, plunger positioning sensor, LCD display for easy viewing, volume limit programming to serve as a convenient cue of volume or dose delivery completion and multiple delivery modes for all applications requiring precisely controlled infusion rates. The infusion pump shall have automatic syringe size sensing which will give the flexibility to accept a wide range of syringe sizes (up to 60 mL) from different manufacturers. Shall be battery powered/AC adapter.
M4255	Stand, IV, Adjustable	2	V/V	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.
M4266	Pump, Volumetric, Infusion, Multiple Line	2	V/V	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.

## 4.12 ORTR1

JSN	NAME	QTY	ACO/INS	DESCRIPTION
M4280	Pump, Pneumatic Stocking/Cuff	1	V/V	Pneumatic stocking/cuff pump. Pump provides alternating pressure to pneumatic stockings for reduction of the threat of deep vein thrombophlebitis in post operative patients. May also be used in the CCU for rotating cuff therapy for reduction of peripheral circulation in congestive heart failure patients.
M4287	Irrigation System, Surgical	1	V/V	High flow surgical irrigation pump up 2.5l/min, available in single and double flow.
M4645	Patient Transfer Device	1	V/V	A patient transfer board designed to make lateral patient transfers safer for staff and be more comfortable for the patients. The board uses a smooth, low friction and static free surface to eliminate the need for metal rollers. The board has a soft foam core that makes them lightweight for ease of use and storage. The long board device also enables the transfer of a patient in the seated or Fowler position. The boards come in three sizes with the long board being foldable. The dimensions and price are for the long wide board.
M4815	Hypo/Hyperthermia Unit, Automatic/Manual, Mobile	1	V/V	Automatic/manual hypo/hyperthermia unit. Sealed refrigeration system. Microprocessor controlled with multiple alarm system constantly monitoring temperature and water levels. Cabinet type unit. Designed to regulate body temperature by application of water-filled hypothermia blankets.
M4816	Warming Unit, Patient, Automatic/Manual, Air	1	V/V	Automatic/manual patient warming unit. Unit delivers a flow of warmed air through a perforated plastic blanket. Used primarily for postoperative patients to speed recovery of normal body temperature.
M4820	Hemodialysis Unit, Mbl, w/Reverse Osmosis System	1	V/V	Mobile renal dialysis system with a reverse osmosis water purification unit. The system consists of three major components: the dialysate delivery system, the extracorporeal blood delivery circuit (blood pump) and the dialyzer. The system also has its own monitoring and control circuits with temperature controls. An alarm system is automatically activated when there is changes in pressure or in the existence of leaks. Multiple electrical circuits (one for the dialyzer, one for the reverse osmosis system) may be needed to power this equipment combination. This dialyzer is intended for self-contained use in intensive care or step down units which do not have the water purification machinery found in a hemodialysis clinic. See JSN M1715 for units used in a hemodialysis clinic.
M5030	Stool, Surgeon, Revolving	3	V/V	Revolving stool. Consists of a padded upholstered seat with height adjustment. Unit rotates and is mounted on ball bearing swivel casters. Designed for use in examinations, treatment, and surgical procedures.
M5512	Laser, Smoke Evacuator	1	V/V	Filtration system used in conjunction with laser operations to remove surgical laser plume. The unit includes a pneumatic foot switch, disposable 0.12 micron HEPA primary filters, a secondary 0.12 micron ULPA/carbon filter, disposable funnels, reducer fittings and connector hoses.
M7490	Light, Surg, Ceiling Mtd, Dual, Unequal Dia Heads	3	V/C	Dual head surgical light ceiling mounted from a single pole. Unit has two lamp heads of differing sizes mounted on individual swing arms. Unit features multiple lighting pods in each lamp head, deep cavity illumination, color-corrected light, intensity control and sterilizable handles. Refer to the manufacturers' specifications for minimum ceiling heights and installation data. The database height dimension below refers to the height of the lamp head itself. The width and depth measurements are the larger of the two sums of the swing arm length and the head diameter. For use in general purpose surgical suites.

## 4.12 ORTR1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M7650	Defibrillator/Monitor, Acute Care	1	V/V	Portable defibrillator/monitor for acute care includes biphasic defibrillator, pacing, SPO2, Interpretive 12-lead, NIBP monitoring, EtCO2 monitoring, Invasive pressure monitoring, Vital Sign monitoring, temperature probe, Fax transmission, PCMCIA Data Cards, Paddle accessories, and a color LCD.
M7801	Monitor, Medical Grade 26 - 42"	6	V/V	
M7802	Monitor, Medical Grade 55- 65"	2	V/V	LED HD monitor capable of displaying medical grade images. Monitor' size is 55 - 65".
M7818	Monitor, Transport	1	V/V	A light weight, rugged patient monitor for use during transport. Unit consists of a compact monitor with touchscreen display with up to 3 waveforms on a on a bright non-fading display. The unit measures ECG/respiration, NBP, SpO2, pressure, and temperature and CO2. Data can be transferred seamlessly throughout the continuum of care. Unit is approved for aeromedical use (US Army Airworthiness Certification and Evaluation (ACE) program. Battery run time of 3 hours before recharge.
M7845	Monitor, Physiological, Bedside, 4 Channel	1	V/V	4 channel bedside physiological monitor. The unit consist of a four-channel non-fade monochrome display monitor, an alarm system and printer-recording capabilities. The monitor has color coded controls and automatic calibration. The unit displays up to four waveforms simultaneously. The parameters to be monitored are user selectable. The monitor may be connected to a central monitoring station. The unit monitors patients in most acute care areas, step-down units, procedure rooms and emergency rooms.
M8551	Light Source, Fiberoptic Headlamp	2	V/V	Fiberoptic light source for surgical headlamps. This unit provides color corrected light for surgical procedures where photography is not required.
M8606	Endoscopy Cart, Fiberoptic, w/Video Accessories	1	V/V	Endoscopy cart with video and print capabilities for use with fiberoptic (direct vision) endoscopes. This cart does not work with videoscopes. System takes optical images from a single endoscope and directly records them or converts them to digital signals for recording. A typical system cart includes the cart, a light source, an insufflator, a suction unit, a heat probe unit, an electrosurgical apparatus, a digital camera converter or color video camera, a camera controller, a monitor, a video/DVD recorder and a color printer. This JSN does not include the endoscope; refer to the endoscopes at JSNs M8500-M8550. Each cart can support one or more types of endoscope and should be specifically tailored to its intended use(s). This cart can be configured to interface with a network endoscopy information management system; refer to JSN M8600. Database physical information and pricing is for a higher cost system containing one of each of the above components.
M8800	Cart, Anesthesia	1	V/V	Mobile anesthesia cart. The cart shall be built of stainless steel or other appropriate material and mounted on 4" casters for easy mobility. It shall be capable of being equipped with bottle holders, adjustable IV pole, storage drawers, shelves and a top bar/rail.
M8810	Stand, Mayo	2	V/V	Adjustable instrument table. Table is corrosion resistant stainless steel construction and is mounted on two casters with two skid rails. It has telescopic upright adjusts from 39 inches to 60 inches with automatic locking device, and removable 13"x19" instrument tray. Designed for use in operating and procedure rooms.
M8825	Table, Instrument/Dressing, CRS, approx. 36x20x34	2	V/V	Instrument and dressing table. Made of corrosion resistant stainless steel with a sound deadened top. Includes guard rail, shelf and two side-by-side drawers. The table is mounted on swivel, ball-bearing casters.

## 4.12 ORTR1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M8830	Table, Instrument/Dressing, Mobile	2	V/V	Mobile instrument/dressing table, approximately 34" H x 20" W x 16" D Corrosion resistant stainless steel mobile table with sound-deadening shelf and drawer. Unit is mounted on 2" casters. Designed for all purpose use in the hospital or clinic.
M8900	Carriage, Pail, CRS, Without Pail	3	V/V	Carriage, pail (kick bucket) CRS. Consists of a stainless steel ring type carriage mounted on ball bearing casters. Includes circular non-marring bumper. For use in the surgical operating room.
M8905	Pail, Utility, CRS, With Carriage	3	V/V	Utility pail (kick bucket). Shall be a stainless steel 12 quart bucket for use in surgical operating rooms.
M8910	Cart, Surgical Case	2	V/V	Surgical case cart. Unit consists of two hinged cabinet sections, each section equipped with two pull-out shelves with stops. The entire unit is mounted on four heavy duty conductive swivel casters. Used to transport surgical packs and supplies to surgery and soiled items back to central supply.
M8920	Stand, Basin, CRS, Mobile, Double	2	V/V	CRS, mobile, double basin stand with shelf. Stainless steel corrosion resistant frame constructed from two continuous inverted "U" shaped tubes, forming four legs and mounted on casters. Circular rings welded to top receive two removable 8 quart stainless steel basins. For open heart and other procedures.
M8925	Stand, Basin, CRS, Mobile, Single	2	V/V	Mobile single basin stand with shelf. The stand shall be constructed of tubular stainless steel and mounted on 2" swivel casters. Shall include a shelf and an 8 quart stainless steel basin. Intended for use in ORs and treatment areas.
M8940	Stool, Anesthesia, With Back	2	V/V	Anesthesia stool with back. All stainless steel with well-curved back panel and wide conductive seat. Designed for the anesthesiologist during surgical procedures.
M8950	Warmer, Blood	1	V/V	Unit consists of a temperature regulated water bath, circulating fluid, or dry heat with controls and an audible high temperature alarm. The warmer provides a stable environment for the controlled warming of blood or other fluids prior to being transfused to a patient.
M8970	Warmer, Blood, High Volume	1	V/V	Unit contains a proportional controller to regulate temperature in the heat exchanger and an audible high temperature alarm. Designed to provide a stable temperature for the controlled warming of blood or other fluids prior to being transfused to a patient. Unit may be a cuff type or circulating water heat exchanger.
M9110	Table, Operating, 5 or 6 Section, Trauma	1	V/V	Pedestal type, 5 or 6 section, operating table. Pedestal table, mounted on a solid base with casters and locks. Table top surface is fabricated from radio-translucent and conductive panels and is equipped with cassette tunnels in each of the table top sections. Table includes: Electro-hydraulic controls, side rail locking system, grounding receptacle and dual arm support section. It is designed for use in the operating room in a variety of surgical procedures. Table is configured to address the needs of trauma surgery.
R4785	Ice Maker, Surgical Slush	1	V/V	An automated surgical slush machine designed to produce a velvet soft slush to limit the likelihood of damaging tissue due to large or sharp ice particles during surgical procedures. Unit operates with a temperature range of 30 degrees F to 32 degrees F. The unit is also designed to operate quietly to not disrupt the OR environment. Casters allow for easy movement.
S9755	Suction System, Surgical, Mobile Rover Unit	1	V/V	Surgical fluid waste management system with powered IV pole and smoke evacuation. Portable waste collection unit, for use with Docking Station (specified separately). Dual canisters (one 4L and one 20L), two levels of suction: 2-21in/Hg, fluid readout, 3 different port sizes for smoke tubing.

## 4.12 ORTR1

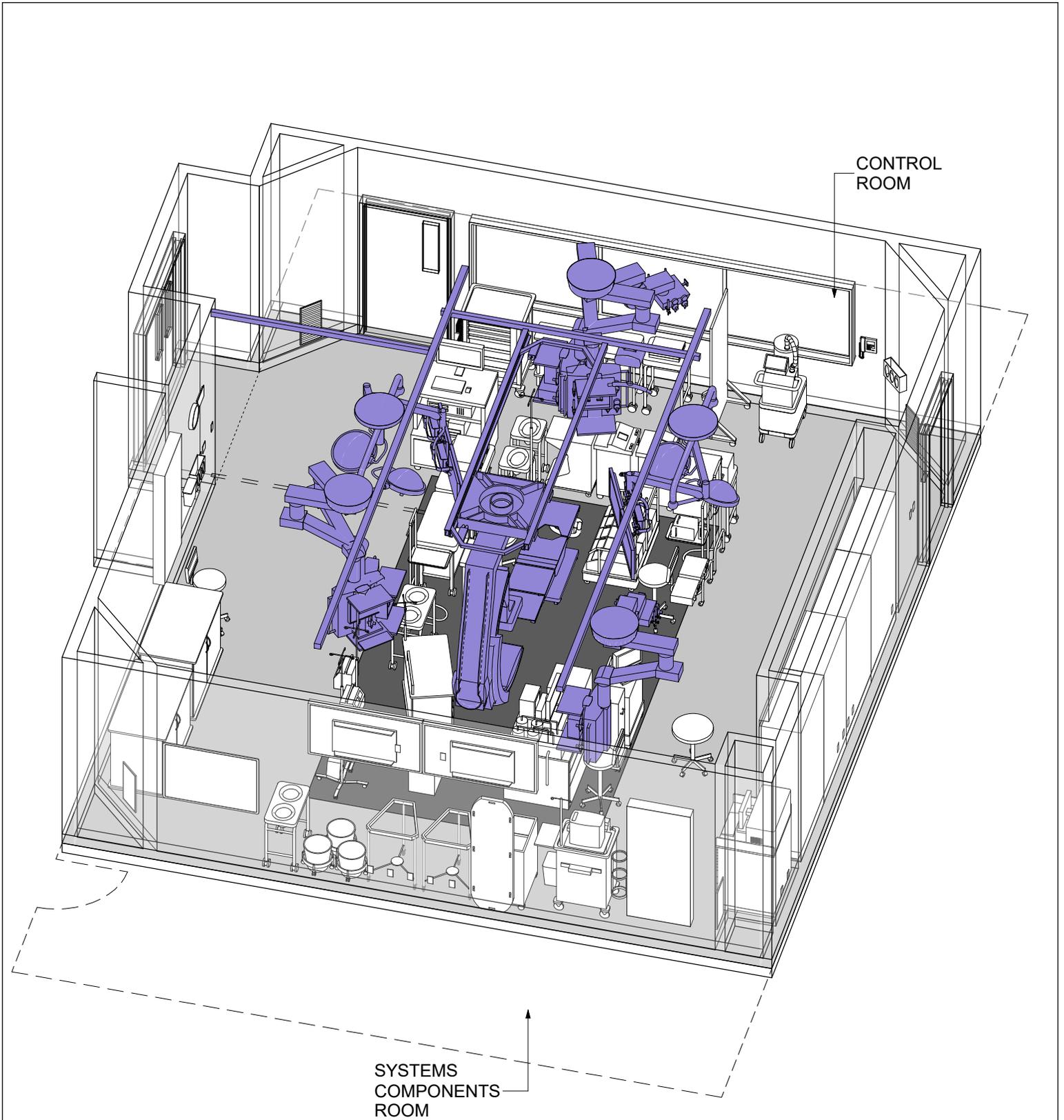
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
U0105	ExtraCorporeal Support System	1	V/V	ECHO is a device used to provide cardio pulmonary support on a temporary basis and assist oxygen to vital body systems. Provides oxygenation and carbon dioxide removal from the blood.
X2105	Scanner, Ultrasound, Cardiac (Echo)	1	V/V	High definition, diagnostic ultrasound system for Radiology, Cardiology, Vascular, ob-gyn, Perinatology, and Surgical imaging applications. The unit employs curved, phased and linear array imaging technology. The system supports colorflow, pulse, continuous wave imaging modalities. On board software measurement packages available for all imaging applications. The system is DICOM 3.0 compatible, for easy linkage to filmless image management systems and review stations. In addition, a full line of probes and conventional recording devices are available.



SURGICAL AND ENDOVASCULAR SERVICES (ORHY1) OPERATING ROOM, MONOPLANE HYBRID AXONOMETRIC

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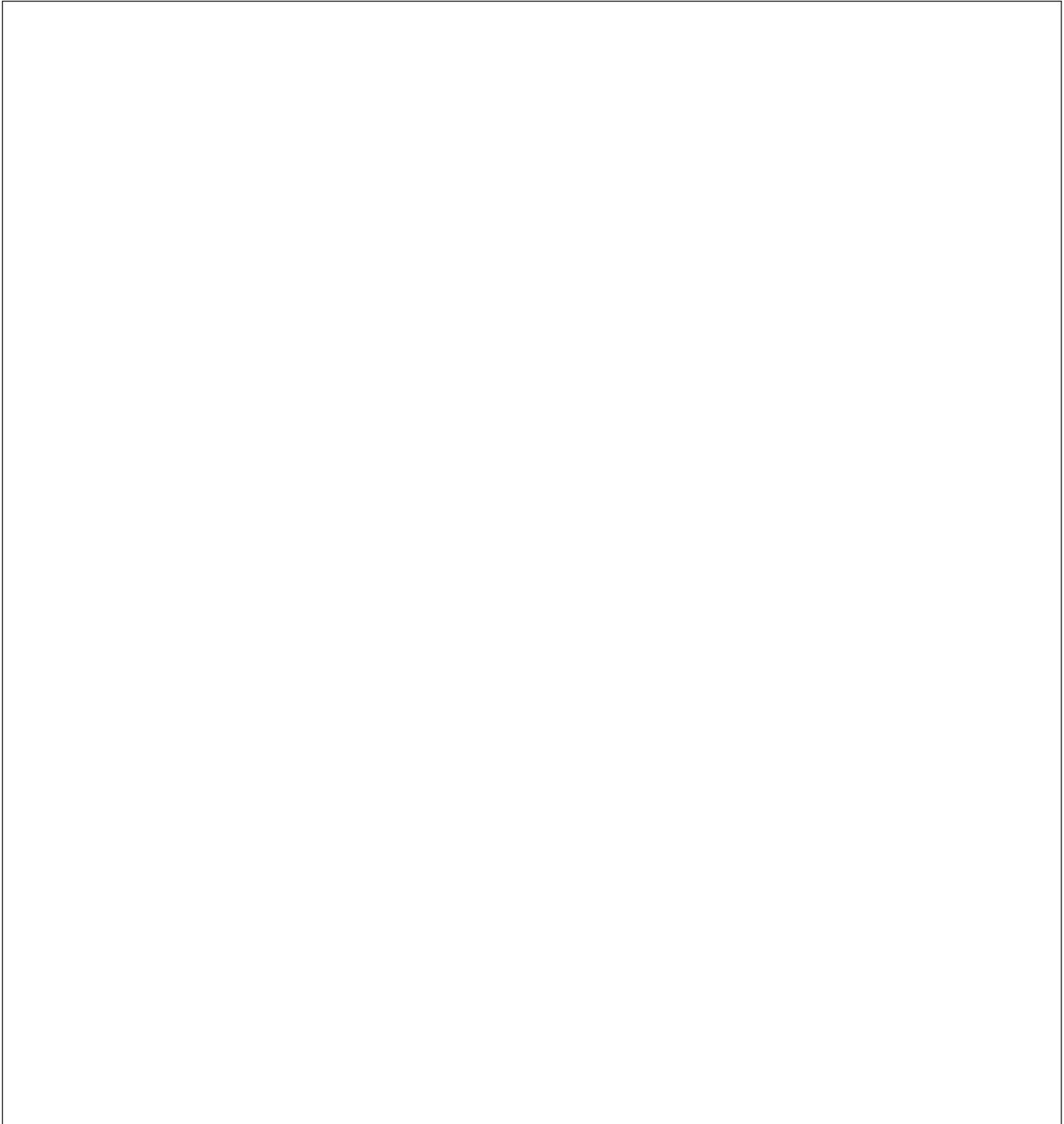


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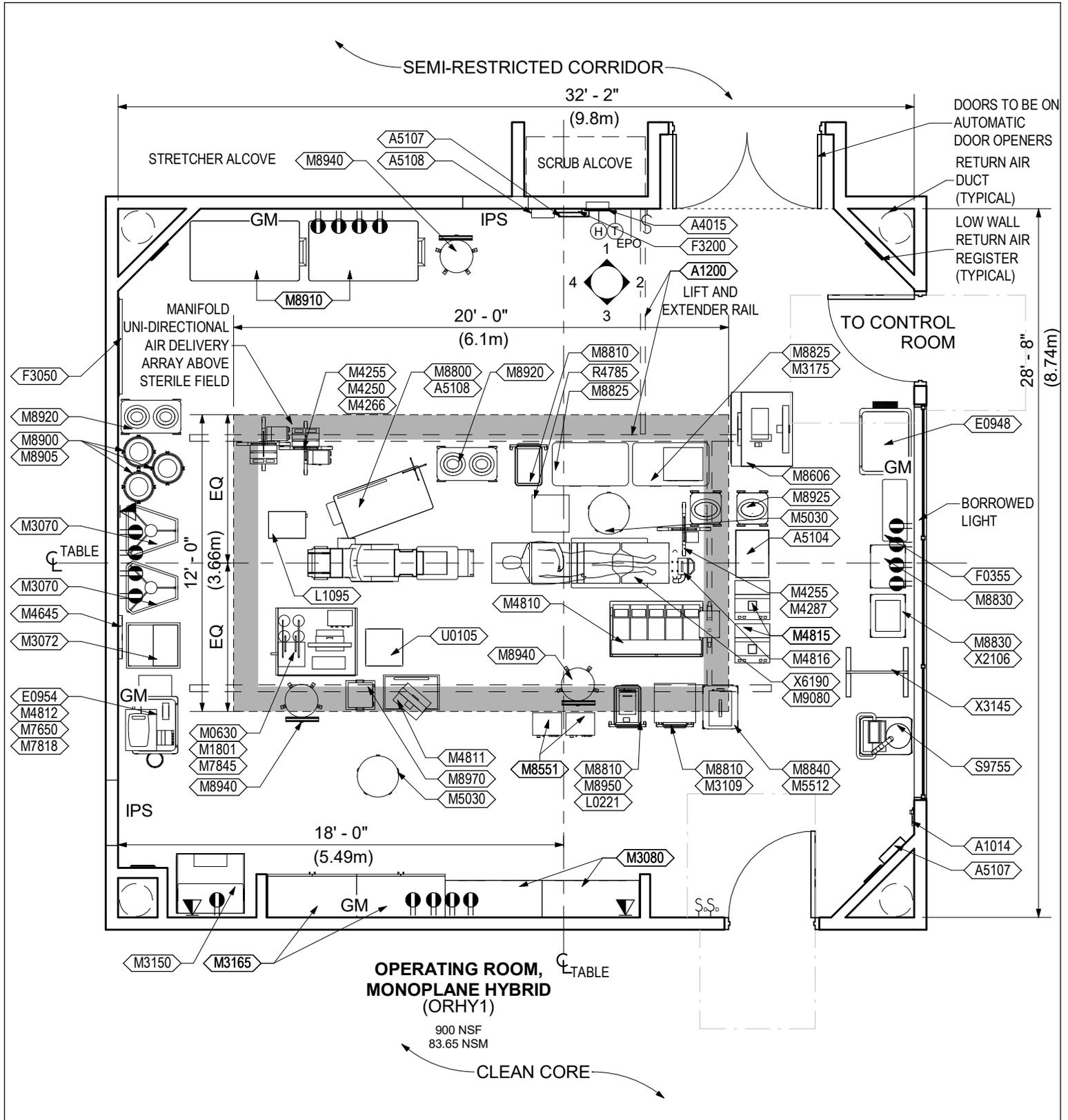




SURGICAL AND ENDOVASCULAR SERVICES (ORHY1) OPERATING ROOM, MONOPLANE HYBRID FLOOR PLAN

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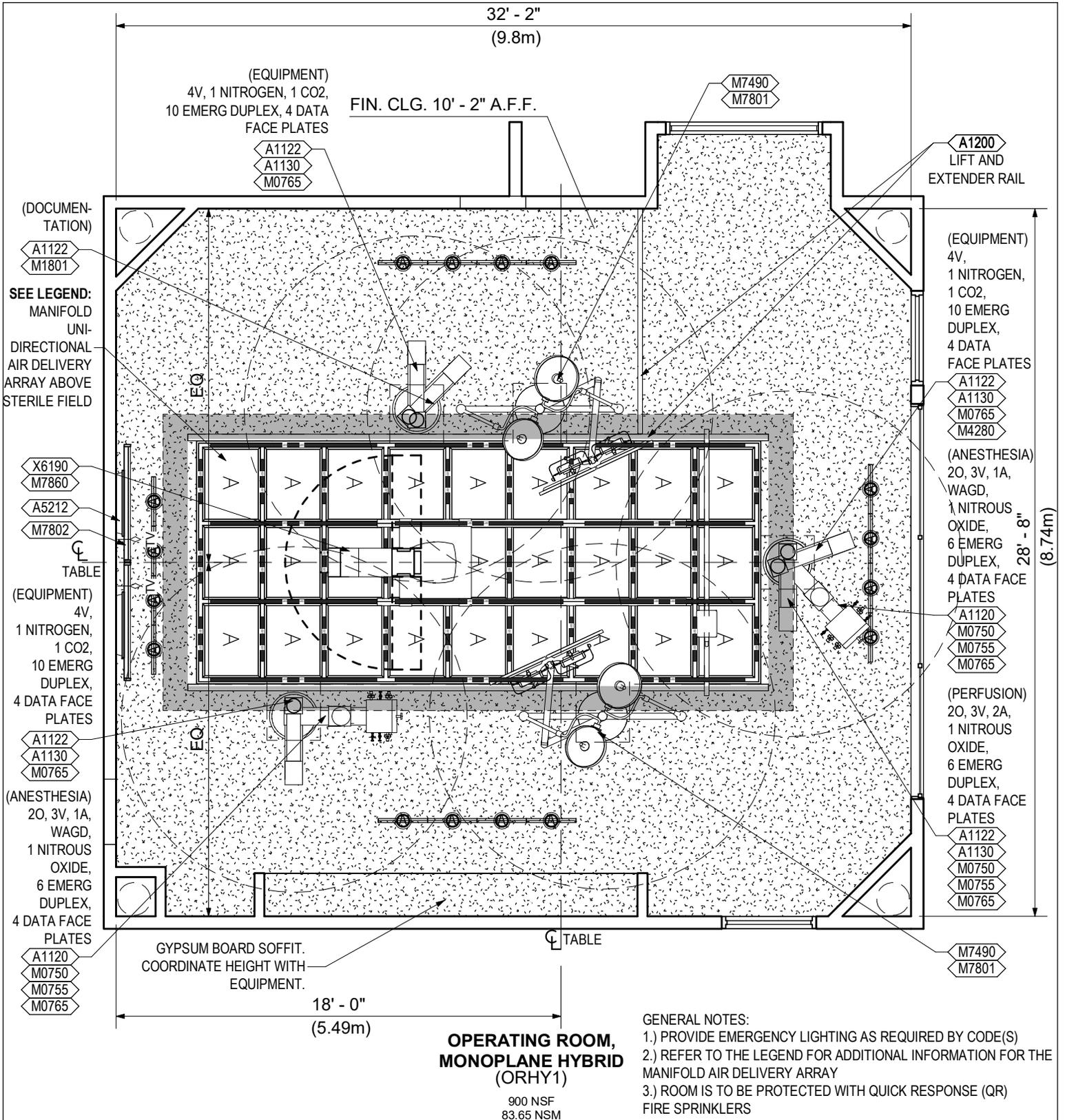
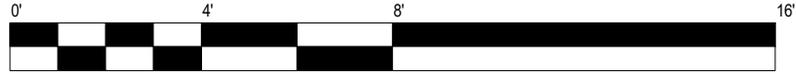




SURGICAL AND ENDOVASCULAR SERVICES (ORHY1) OPERATING ROOM, MONOPLANE HYBRID REFLECTED CEILING PLAN

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SCALE: 3/16" = 1'-0"

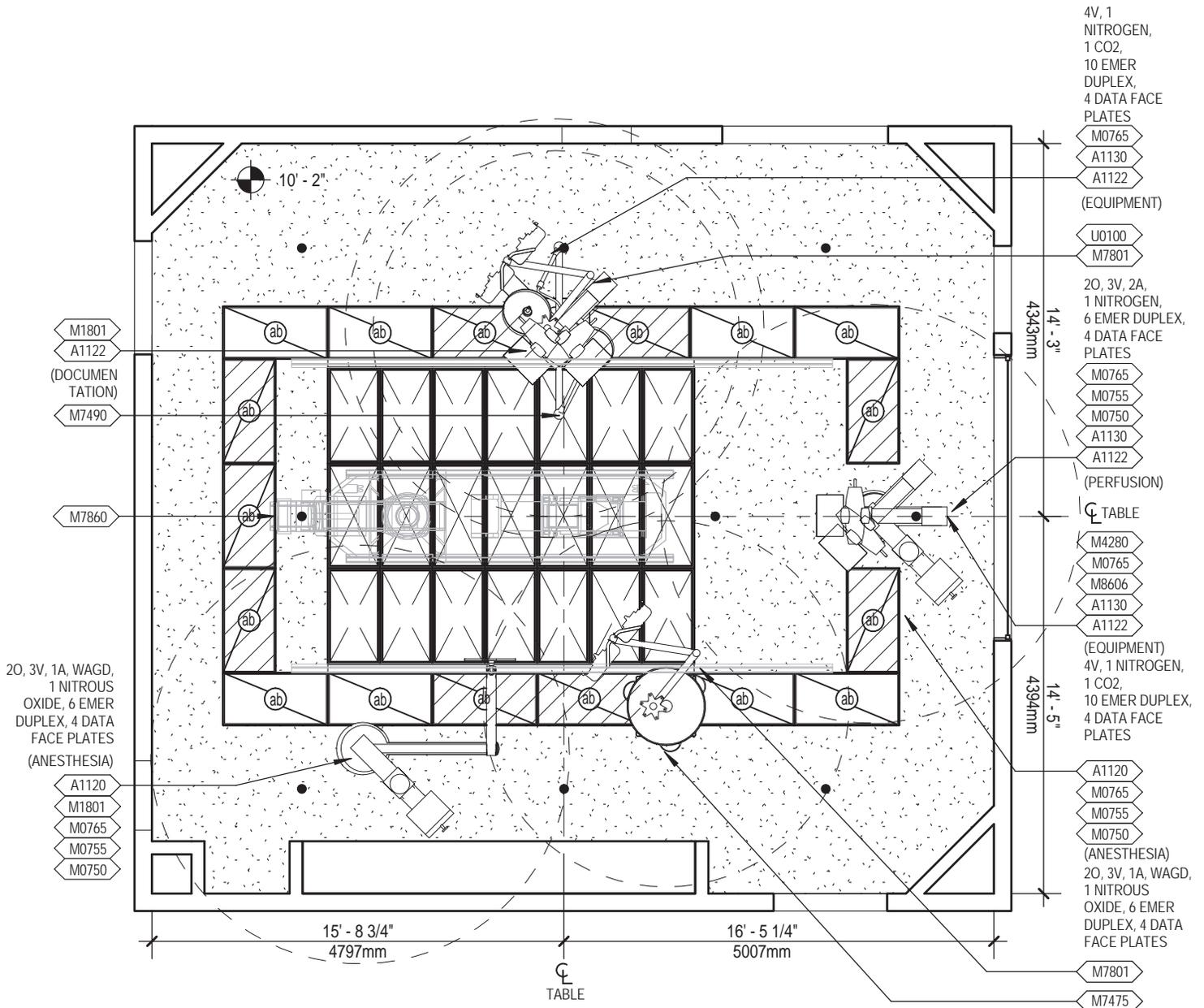




SURGICAL AND ENDOVASCULAR SERVICES (ORHY1) OPERATING ROOM, MONOPLANE HYBRID REFLECTED CEILING PLAN (ALTERNATE OPTION)

Plot Date: 8/31/2022 4:06:19 PM

SCALE: NOT TO SCALE



NOTE: REFER TO ROOM DATA SHEET FOR ACCESS PANELS

**Reflected Ceiling Plan**  
900 NSF / 83,7 NSM

NOTE: OPTIONAL REFLECTED CEILING PLAN IS AN ALTERNATIVE OPTION TO THE MANIFOLD UNI-DIRECTIONAL AIR DELIVERY SYSTEM. EQUIPMENT TAGS & REFERENCE NOTES MAY NOT BE FULLY COORDINATED WITH THE EQUIPMENT LIST.

**4.13. OPERATING ROOM, MONOPLANE HYBRID (ORHY1)****JSN Legend**

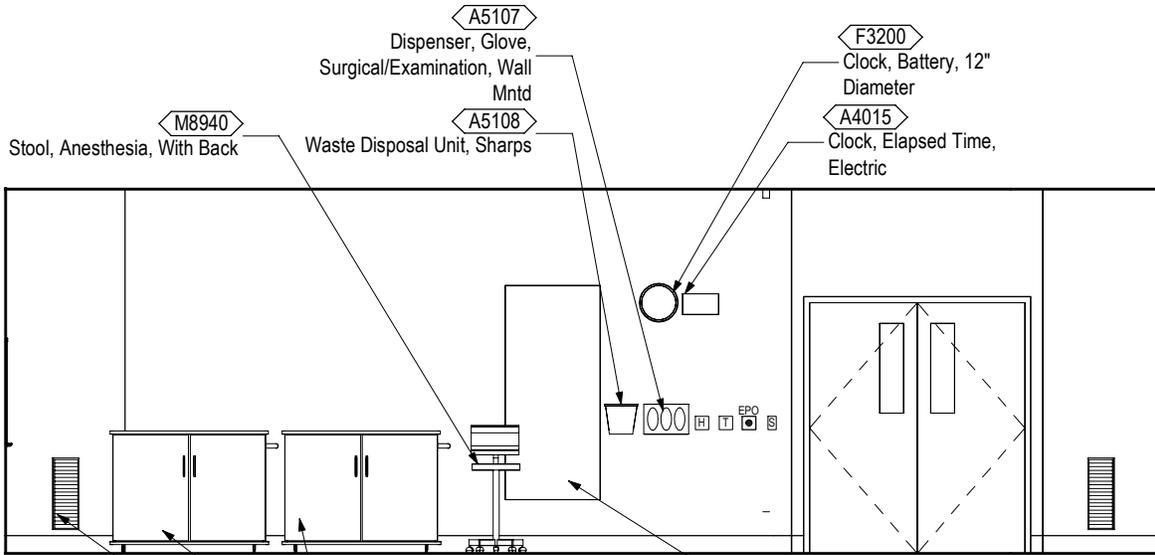
JSN	DESCRIPTION		
A1014	TELEPHONE, WALL MOUNTED, 1 LINE, WITH SPEAKER	M4645	PATIENT TRANSFER DEVICE
A1120	COLUMN, SERVICE, PREFAB, SURGICAL, CEILING MOUNTED	M4810	HEART/ LUNG MACHINE, BYPASS, MODULAR
A1122	COLUMN, EQUIPMENT ARM, CEILING MOUNTED, SURGERY	M4811	PUMP, INTRA-AORTIC, BALLOON
A1130	CABINET, CONTROL, NITROGEN	M4812	PACEMAKER, SINGLE CHAMBER, EXTERNAL, TEMPORARY
A1200	LIFT SYSTEM, OVERHEAD, PATIENT RM	M4815	HYPO/HYPERThERMIA UNIT, AUTOMATIC/MANUAL MOBILE
A4015	CLOCK, ELAPSED TIME, ELECTRIC	M4816	WARMING UNIT, PATIENT, AUTOMATIC/MANUAL, AIR
A5104	CART, MEDICAL WASTE DISPOSAL, MOBILE W/ FOOT PEDAL	M5030	STOOL, SURGEON, REVOLVING
A5107	DISPENSER, GLOVE, SURGICAL/ EXAMINATION, WALL MTND	M5512	LASER, SMOKE EVACUATOR
A5108	WASTE DISPOSAL UNIT, SHARPS	M7490	LIGHT, SURG, CEILING MTD, DUAL, UNEQUAL DIA HEADS
A5212	BRACKET, TELEVISION WALL MTD, TILT/ ANGLE	M7650	DEFIBRILLATOR/ MONITOR, ACUTE CARE
E0948	CART, GENERAL STORAGE, MOBILE, 42"H x 32"W x 22"D	M7801	MONITOR, MEDICAL GRADE, 26"-42"
E0954	CART, EMERGENCY, MOBILE, 66"H x 32"W x 22"D	M7802	MONITOR, MEDICAL GRADE, 55"-65"
F0355	FOOTSTOOL, STRAIGHT	M7818	MONITOR, TRANSPORT
F3050	WHITE BOARD, DRY ERASE	M7845	MONITOR, PHYSIOLOGICAL, BEDSIDE, 4 CHANNEL
F3200	CLOCK, BATTERY, 12" DIAMETER	M8551	LIGHT SOURCE, FIBEROPTIC HEADLAMP
L0221	ANALYZER, BLOOD, PORTABLE, HAND HELD	M8606	ENDOSCOPY CART, FIBEROPTIC, W/ VIDEO ACCESSORIES
L1095	CELL SAVER	M8800	CART, ANESTHESIA
M0630	ANESTHESIA APPARATUS, 3 GAS	M8810	STAND, MAYO
M0750	FLOWMETER, AIR, CONNECT W/ 50 PSI SUPPLY	M8825	TABLE, INSTRUMENT/DRESSING, CRS, APPROX 36x20x34
M0755	FLOWMETER, OXYGEN, LOW FLOW	M8830	TABLE, INSTRUMENT/DRESSING, MOBILE
M0765	REGULATOR, VACUUM	M8840	TABLE, BACK, INSTRUMENT/DRESSING
M1801	COMPUTER, MICROPROCESSING, W/ FLAT PANEL MONITOR	M8900	CARRIAGE, PAIL, CRS, WITHOUT PAIL
M3070	HAMPER, LINEN, MOBILE W/LID	M8905	PAIL, UTILITY, CRS, WITH CARRIAGE
M3072	FRAME, INFECTIOUS WASTE BAG W/LID	M8910	CART, SURGICAL CASE
M3080	CABINET, INSTRUMENT, CRS, 2 GLASS DOOR, 6 SHELF	M8920	STAND, BASIN, CRS, MOBILE, DOUBLE
M3109	ELECTROSURGICAL/COAGULATOR, ARGON PLASMA	M8925	STAND, BASIN, CRS, MOBILE, SINGLE
M3150	DISTRIBUTION SYSTEM, MEDICATION, AUTOMATIC	M8940	STOOL, ANESTHESIA, WITH BACK
M3165	CABINET, CATHETER STORAGE	M8950	WARMER, BLOOD
M3175	ELECTROSURGICAL UNIT, DUAL OUTPUT	M8970	WARMER, BLOOD, HIGH VOLUME
M4250	PUMP SYRINGE, INFUSION	M9080	TABLE, OPERATING, PEDESTAL, 5 SECTION
M4255	STAND, IV, ADJUSTABLE	R4785	ICE MAKER, SURGICAL SLUSH
M4266	PUMP, VOLUMETRIC, INFUSION, MULTIPLE LINE	S9755	SUCTION SYSTEM, SURGICAL, MOBILE ROVER UNIT
M4280	PUMP, PNEUMATIC STOCKING/CUFF	U0105	EXTRACORPOREAL SUPPORT SYSTEM
M4287	IRRIGATION SYSTEM, SURGICAL	X2106	SCANNER, ULTRASOUND, INTRA-CARDIAC, ECHO
		X3145	SCREEN, X-RAY, PROTECTIVE, MOBILE
		X6190	RADIOGRAPHIC/FLUORO UNIT, CARDIAC, 100 KW, DIGITAL



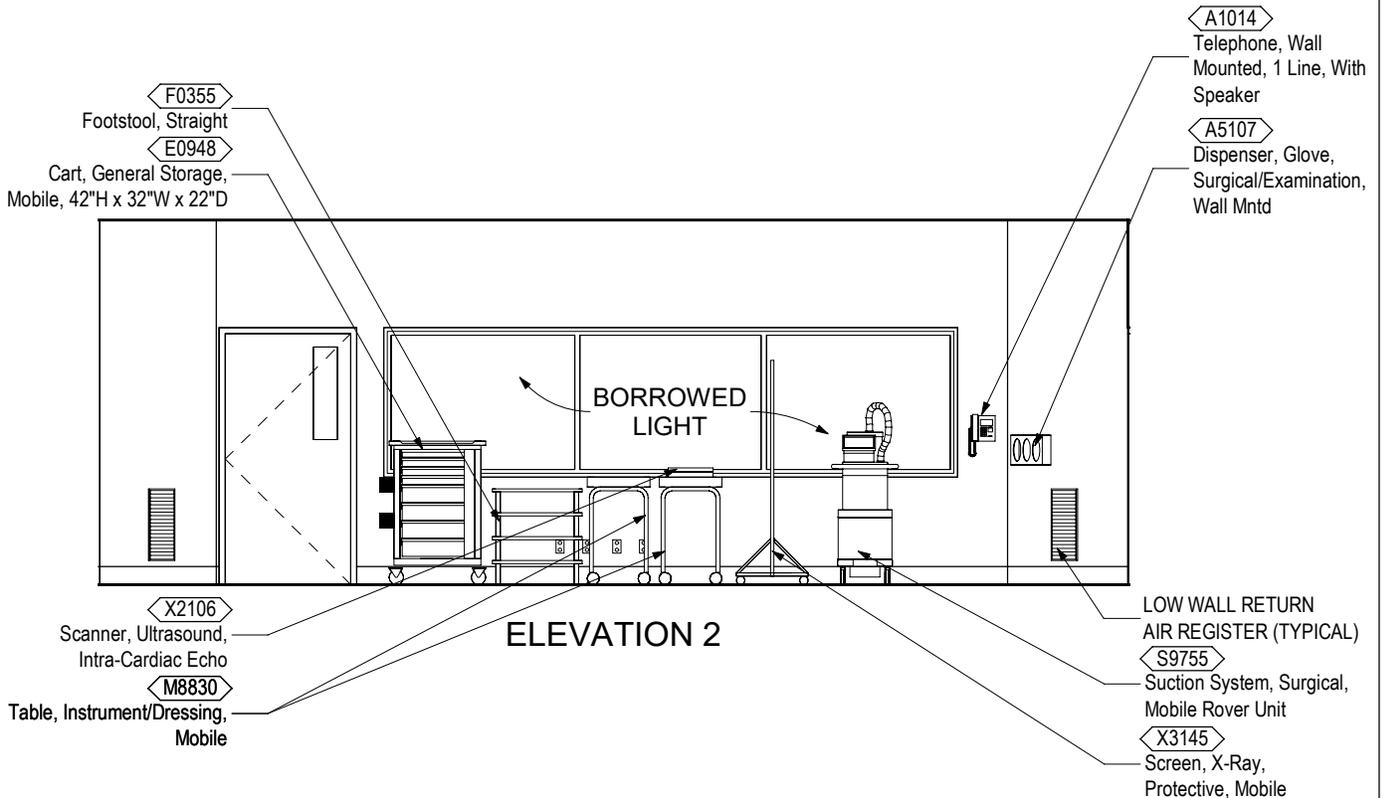
# SURGICAL AND ENDOVASCULAR SERVICES (ORHY1) OPERATING ROOM, MONOPLANE HYBRID ELEVATIONS

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ELEVATION 1

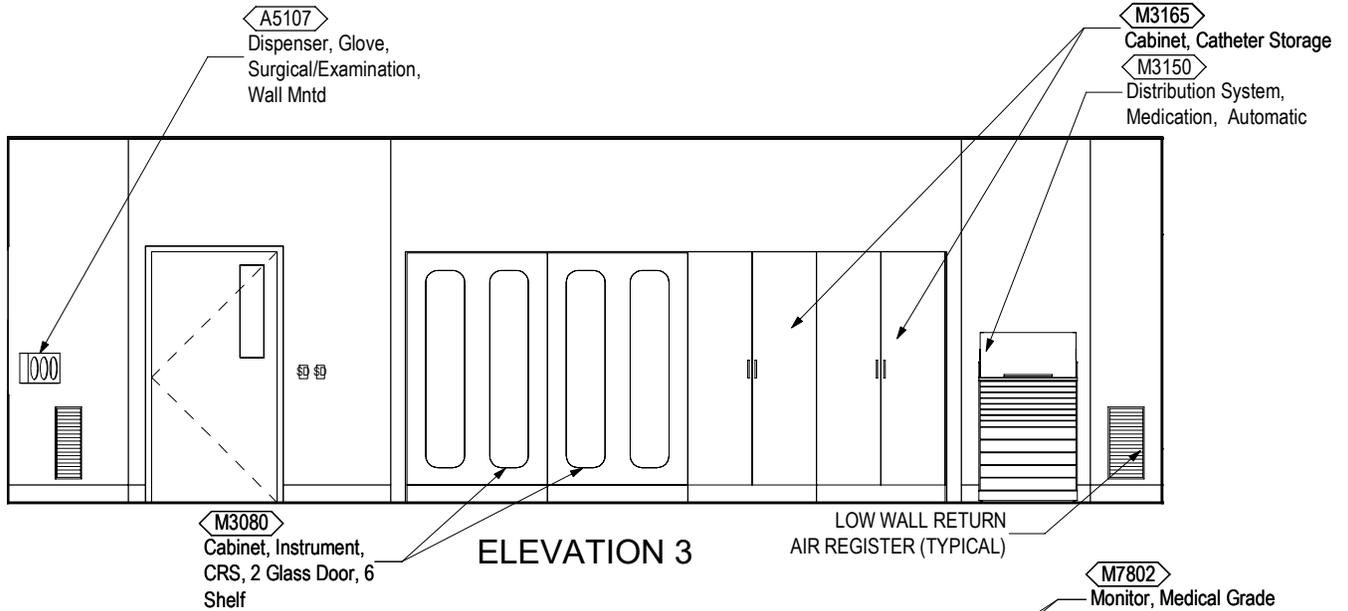


ELEVATION 2

**DISCLAIMER:** ROOM TEMPLATES ARE GRAPHICAL REPRESENTATIONS OF SELECTED ROOM TYPES THAT ILLUSTRATE VA PLANNING REQUIREMENTS FOR SPACE, ROOM CONTENTS, AND ROOM SPECIFIC ENGINEERING SYSTEMS. THEY PROVIDE TYPICAL CONFIGURATIONS, PLANNING CRITERIA, AND GENERAL TECHNICAL GUIDANCE, AND ARE NOT INTENDED TO BE PROJECT SPECIFIC REQUIREMENTS.

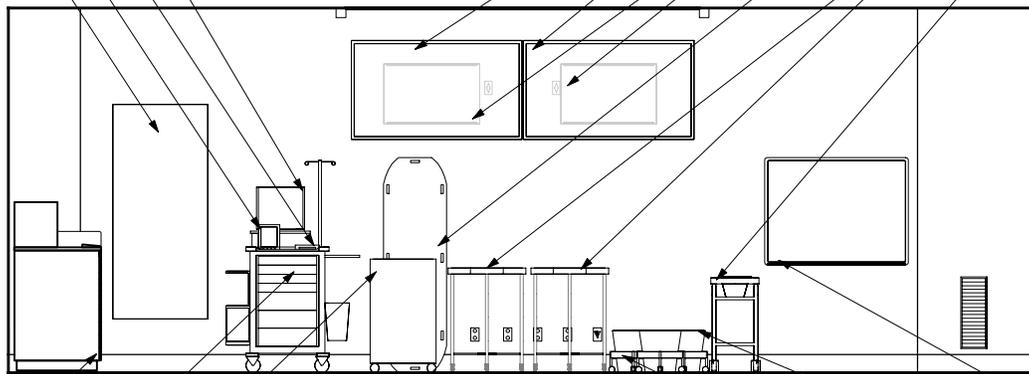
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SCALE: 3/16" = 1'-0"



ELEVATION 3

- M7650 Defibrillator/Monitor, Acute Care
- M4812 Pacemaker, Single Chamber, External, Temporary
- M7818 Monitor, Transport
- ISOLATED POWER SYSTEM
- M7802 Monitor, Medical Grade 55-65"
- A5212 Bracket, Television, Wall-Mounted, Tilt/Angle
- M4645 Patient Transfer Device
- M3070 Hamper, Linen, Mobile, w/Lid
- M8920 Stand, Basin, CRS, Mobile, Double



ELEVATION 4

- M3150 Distribution System, Medication, Automatic
- E0954 Cart, Emergency, Mobile, 66"H x 32"W x 22"D
- M3072 Frame, Infectious Waste Bag w/Lid
- F3050 Whiteboard, Dry Erase
- M8905 Pail, Utility, CRS, With Carriage
- M8900 Carriage, Pail, CRS, Without Pail

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**4.13 OPERATING ROOM, MONOPLANE HYBRID (ORHY1)****Room Data Sheet****ARCHITECTURAL**

Ceiling Type:	Gypsum Wallboard (SC)
Ceiling Height:	10'-0" (3048 mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	RF Integral Base (min. 6"/152 mm)
Floor Finish:	Resinous Flooring (RF) Res 4
Slab Depression:	As required by imaging modality manufacturer
Sound Protection:	50 STC (to other room), 35 STC (to corridor)
Doors:	Double, Size 6'-0" x 7'-0" (1829 mm x 2133 mm) Wood w/Narrow View Window; Single, Size 4'-0" x 7'-0" (1219 mm x 2133 mm) Wood w/ Small View Window
Special Requirement:	

**Notes:**

- 1) Shielding is to be provided in all walls, windows, and doors.
- 2) Locate access panels as required to allow for the maintenance of surgical booms and lights in facilities without interstitial space. Min. size to be 24" x 24".
- 3) Cabinetry can be built in or free-standing.
- 4) Nominal wall thickness is shown at 8" (203 mm) to account for a variety of wall-mounted panels, such as isolation power unit panels, that require a thicker partition.
- 5) Include wall extensions at both sides of the scrub sink to protect the scrub sinks from cart and stretcher traffic in the semi-restricted corridor.
- 6) Coordinate structural supports, utility connections and other requirements for surgical lighting pendants with manufacturer.

7) Equipment and Anesthesia booms are duplicated to provide maximum flexibility. If duplicate booms are not desired, they can be omitted subject to approval by clinical leadership.

8) Facility will select number and types of scopes and other instrumentation as necessitated by the unique case load.

9) Endoscopy equipment can be located on a cart or on the equipment boom.

10) NSF provided for this space is the minimal acceptable NSF; contact Facilities Standards Service for any deviations.

**LIGHTING**

Refer to the VA Lighting Design Manual section 4.2.13 - Surgery/Operating Room - for lighting design consideration.

**POWER**

Normal Power: Connect selected receptacles and equipment to Normal power IPS.

Emergency Power: Connect selected receptacles and equipment to Critical Branch emergency IPS.

**Notes:**

- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
- 2) IPS Power & ground modules mounted at +24" AFF
- 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
- 4) Provide power connections for articulating utility columns.

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No

Special Requirement:

**Notes:**

- 1) Provide connections for articulating utility columns.
- 2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization.

**Notes:**

- 1) Refer to the latest version of the VA HVAC Design Manual for quantity and location of low air return grilles and ceiling diffusers.
- 2) Room does not contain multiple slot diffusers and uses laminar flow perforated face outlets only for supply air
- 3) Suggested minimum laminar flow array over the entire sterile field area as imaging equipment gantry creates excessive turbulence. Mechanical design engineer shall be responsible to design the array in such manner as to minimize turbulence and to maintain the sterile aseptic field

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	Yes
Medical Vacuum	Yes
Oxygen	Yes
Special Requirement:	

**Notes:**

- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen, Nitrous Oxide, Carbon Dioxide
- 2) For gas quantities per boom refer to the reflected ceiling plan.
- 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project
- 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.13 OPERATING ROOM, MONOPLANE HYBRID (ORHY1)****Equipment List**

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A1014	Telephone, Wall Mounted, 1 Line, With Speaker	1	V/V	Telephone, wall mounted, 1 line, with speaker.
A1120	Column, Service, Prefab, Surgical, Ceiling Mounted	2	C/C	Prefabricated surgical service column. Strong 18 gauge stainless steel shell ceiling mounted unit with the following services: oxygen, nitrous oxide, nitrogen, medical air, medical vacuum, gas evacuation, electrical outlets, monitoring connectors, and IV holders. Specify type of column (fixed or retractable) and number of outlets required for each service. Size will vary with number of service outlets required. Designed to be used in the operating room, recovery and ICU-CCU rooms.
A1122	Column, Equipment Arm, Ceiling Mounted, Surgery	5	C/C	A ceiling mounted retractable equipment arm for use in the OR. Designed to provide equipment placement support, power receptacles including low-voltage panels, gas outlets and flat screen mounting for a surgical suite. Unit will provide a range of motion of up to 330 degrees with arm providing additional vertical movement. Units are custom configured with multiple options available. Price is based on a unit with two (double) retractable arms. Also available are units for use in anesthesia, ICU and ER.
A1130	Cabinet, Control, Nitrogen	4	C/C	Nitrogen control cabinet. Unit consists of supply cut-off valve, supply pressure gauge, pressure regulator (adjustable 0 to 200 PSI), outlet pressure gauge, nitrogen outlet and connection to surgical gas column. Specify recessed or surface mounting.; Designed for powering surgical pneumatic tools.
A1200	Lift System, Overhead, Patient Room	1	V/C	An overhead rail system specifically designed for patient lifting and movement for a single bed patient room. The system will consist of recessed or ceiling mounted primary and secondary rails, lift motor with rolling carriage, patient harness or seat, and a hand controller or control box with charger. System will facilitate lifting and movement of patient to and from bed to gurney, chair or other requirement. Minimum lift capability is 550 pounds. Custom design of track layout by manufacturer is essential to meet individual facility requirements.
A4015	Clock, Elapsed Time, Electric	1	C/C	Elapsed time digital electric clock. Single display time that can be used either as a clock or elapsed time indicator. Clock consists of buttons to set minutes, and hours for the time. For use in operating and delivery room, and medical service columns.; Analog or digital displays may be provided as specified by the user.
A5104	Cart, Medical Waste Disposal, Mobile w/Foot Pedal	1	V/V	Mobile molded cart with foot pedal, to house 18-24 gal sharps disposal container. Lid lift or slide opens easily with foot-operated pedal. Lid may remain closed when not in use to reduce exposure to contents. Ergonomic handle is telescopic. Heavy containers can be removed from the side with minimal lifting. Meets requirements of OSHA 29 CFR 1910.130.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	2	V/V	Examination three (Small Medium, Large) glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Hardware not included, Option 3 powder coated steel.
A5108	Waste Disposal Unit, Sharps	2	V/V	A container for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
A5212	Bracket, Television, Wall-Mounted, Tilt/Angle	2	V/V	A wall mounted, tilt/angled TV bracket for 37" to 80" TVs. Mount will be a universal and VESA compliant unit with a load capacity of up to 130 lbs.

## 4.13 ORHY1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
E0948	Cart, General Storage, Mobile, 42"H x 32"W x 22"D	1	V/V	THIS TYPICAL INCLUDES:; 1 Cart Body, Style-A Narrow, w/Raised Edge Top 2 Drawers, 3" H; 4 Drawers, 6" H; 1 Accessory Rail, Side Drawer Organizer Bins
E0954	Cart, Emergency, Mobile, 66"H x 32"W x 22"D	1	V/V	THIS TYPICAL INCLUDES:; 1 Cart body, style-A narrow, w/raised edge top; 1 Accessory rail, side; 1 Accessory rail, back; 1 Defibrillator tray; 1 IV pole; 1 Breakaway bar; 1 Flip-up shelf; 1 Wastebasket; 1 Oxygen tank holder; 1 Electrical box-4 outlet; 1 Cord wrap; 4 Drawer, 3"H; 3 Drawer, 6"H; Drawer organizer bins.
F0355	Footstool, Straight	4	V/V	Step stool. Used to assist patients getting on and off exam or surgical tables. Fitted with electrically conductive rubber tips.
F3050	Whiteboard, Dry Erase	1	V/V	Whiteboard unit, approximately 36" H x 48" W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
F3200	Clock, Battery, 12" Diameter	1	V/V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
L0221	Analyzer, Blood, Portable, Hand Held	1	V/V	Handheld point-of-care testing analyzer. Utilizes single-use, disposable cartridges for diagnostic testing to include: Blood gases, electrolytes and chemistries, lactate, coagulation, hematology, and cardiac markers.
L1095	Cell Saver	1	V/V	Autologous blood recovery system, also known as a "Cell Saver." Used in the operating room and laboratory to wash extravascular blood free of debris, clots, etc., and to make the blood safe for re-infusion into the patient.
M0630	Anesthesia Apparatus, 3 Gas	1	V/V	Three gas anesthesia apparatus. Basic unit consists of steel cabinet with casters with one shallow, one medium, and one deep drawer, seven long scale eleven-inch flowmeters, five cylinder yokes, and telescoping absorber post. It includes two-canister model carbon dioxide absorber with inhalation and exhalation check valves, switch valve, switch valve elbow, sidearm Vernitrol, flow calculator, mounting kit, ventilator calculator, ventilator and an oxygen piping inlet. Also features nitrous oxide fail safe valve kit, aspirator kit, gas evacuator with vacuum and a flow meter safety cover. Used to dispense a mixture of gases during surgical procedures.
M0750	Flowmeter, Air, Connect w/50 PSI Supply	4	V/V	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Requires the appropriate adapter for connection to the wall outlet and fitting to connect to tubing. Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0755	Flowmeter, Oxygen, Low Flow	6	V/V	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Database pricing includes DISS fitting and DISS power outlet and wall adapter. Other fitting and adapter configurations are available.
M0765	Regulator, Vacuum	21	V/V	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required. To be used in delivery, neonatal, pediatrics or any area where suction is required. Database pricing reflects continuous regulators graduated to 200 mm Hg with a full line vacuum selection switch and DISS configured inlets and outlets.

## 4.13 ORHY1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M1801	Computer, Microprocessing, w/Flat Panel Monitor	2	V/V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
M3070	Hamper, Linen, Mobile, w/Lid	2	V/V	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters. For linen transport in hospitals and clinics.
M3072	Frame, Infectious Waste Bag w/Lid	1	V/V	Frame for an infectious waste collection bag. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Adjust to hold 18" or 25" trash bags. Mounted on ball bearing casters and includes permanently mounted hinged lid. Provides means of bagging infectious waste at point of waste generation.
M3080	Cabinet, Instrument, CRS, 2 Glass Door, 6 Shelf	2	V/V	Non-magnetic stainless steel instrument cabinet with two glass doors and six shelves (five adjustable). Cabinet body has a single storage compartment and seamless welded face. Shelf heights are adjustable on full length perforated strips mounted to the back and inside front cabinet corners. Cabinet is mounted on glides or casters. Cabinet may be covered by a sloping top.
M3109	Electrosurgical/Coagulator, Argon Plasma	1	V/V	An electrosurgical generator with an argon plasma coagulator and APC pulsed mode. This feature auto-regulates beam ignition and provides automatic dosing of power for increased control. The plug and play digital instrument recognition technology automatically configures the entire system to preprogrammed procedural parameters.
M3150	Distribution System, Medication, Automatic	1	V/V	An automated dispensing system that provides controlled dispensing, inventory and security. Size and cost will vary dependent on number of modules selected.
M3165	Cabinet, Catheter Storage	2	V/V	A cabinet to be used for the hanging storage of catheters. Cabinet comes with adjustable laminate shelves, slide-out arms equipped with hangers to hold various size catheters, and doors. Door locks are an optional accessory.
M3175	Electrosurgical Unit, Dual Output	1	V/V	Dual output electrosurgical unit. Solid state power source with foot switch jacks, monopolar and bipolar outputs, and four independent modes of operation. Used in the operating room or surgicenter as an alternative to the scalpel for cutting tissue.
M4250	Pump, Syringe, Infusion	2	V/V	The infusion syringe pump ensures highly accurate volume delivery and consistent flow for small volumes (<50 ml) of pharmacologic agents or thick feeding solutions. It shall be small, lightweight construction, making it transportable. Shall have menu-driven programming capable of flow rates (e.g. 0.1 or 1.0 mL/hr) that are intended for long-term bedside use and/or critical care patient transport, plunger positioning sensor, LCD display for easy viewing, volume limit programming to serve as a convenient cue of volume or dose delivery completion and multiple delivery modes for all applications requiring precisely controlled infusion rates. The infusion pump shall have automatic syringe size sensing which will give the flexibility to accept a wide range of syringe sizes (up to 60 mL) from different manufacturers. Shall be battery powered/AC adapter.
M4255	Stand, IV, Adjustable	3	V/V	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.

## 4.13 ORHY1

JSN	NAME	QTY	ACO/INS	DESCRIPTION
M4266	Pump, Volumetric, Infusion, Multiple Line	2	V/V	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.
M4280	Pump, Pneumatic Stocking/Cuff	1	V/V	Pneumatic stocking/cuff pump. Pump provides alternating pressure to pneumatic stockings for reduction of the threat of deep vein thrombophlebitis in post operative patients. May also be used in the CCU for rotating cuff therapy for reduction of peripheral circulation in congestive heart failure patients.
M4287	Irrigation System, Surgical	1	V/V	High flow surgical irrigation pump up 2.5l/min, available in single and double flow.
M4645	Patient Transfer Device	1	V/V	A patient transfer board designed to make lateral patient transfers safer for staff and be more comfortable for the patients. The board uses a smooth, low friction and static free surface to eliminate the need for metal rollers. The board has a soft foam core that makes them lightweight for ease of use and storage. The long board device also enables the transfer of a patient in the seated or Fowler position. The boards come in three sizes with the long board being foldable. The dimensions and price are for the long wide board.
M4810	Heart/Lung Machine, Bypass, Modular	1	V/V	Modular by-pass heart lung machine. Unit consists of an arterial pump, a backup arterial pump, one or two suction pumps, a water mixer, and a backup battery pack. To include disposable components: oxygenator/heater exchanger, cardiotomy reservoir, blood filters, and tubing. Unit is designed to temporarily replace the function of the patients heart and lungs during open-heart surgery or any surgical procedure that requires isolation of the heart.
M4811	Pump, Intra-Aortic, Balloon	1	V/V	Intra-aortic balloon pump. Item is used to treat cardiogenic shock resulting from extensive myocardial injury or damage. The pump shall function from line or battery power and is to be a mobile unit. It contains physiological monitoring, pacing, and pumping capabilities. It requires minimal set-up time and has immediate pumping capability. Adjustments can be accomplished without interruption of pumping. The monitor can be mounted remotely for the clinicians convenience and permits viewing of both cardio-pulmonary bypass and intra-aortic balloon pump simultaneously. The pump is designed for use in the critical care unit, operating room, cardiac cath lab and during transport.
M4812	Pacemaker, Single Chamber, External, Temporary	1	V/V	A single chamber, external temporary pacemaker designed to provide acute therapeutic, prophylactic, and diagnostic pacing support. It is capable of operating in the demand or asynchronous modes and includes adjustable rate, output, and sensing controls. Battery operated.
M4815	Hypo/Hyperthermia Unit, Automatic/Manual, Mobile	2	V/V	Automatic/manual hypo/hyperthermia unit. Sealed refrigeration system. Microprocessor controlled with multiple alarm system constantly monitoring temperature and water levels. Cabinet type unit. Designed to regulate body temperature by application of water-filled hypothermia blankets.
M4816	Warming Unit, Patient, Automatic/Manual, Air	1	V/V	Automatic/manual patient warming unit. Unit delivers a flow of warmed air through a perforated plastic blanket. Used primarily for postoperative patients to speed recovery of normal body temperature.
M5030	Stool, Surgeon, Revolving	2	V/V	Revolving stool. Consists of a padded upholstered seat with height adjustment. Unit rotates and is mounted on ball bearing swivel casters. Designed for use in examinations, treatment, and surgical procedures.

## 4.13 ORHY1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M5512	Laser, Smoke Evacuator	1	V/V	Filtration system used in conjunction with laser operations to remove surgical laser plume. The unit includes a pneumatic foot switch, disposable 0.12 micron HEPA primary filters, a secondary 0.12 micron ULPA/carbon filter, disposable funnels, reducer fittings and connector hoses.
M7490	Light, Surg, Ceiling Mtd, Dual, Unequal Dia Heads	2	V/C	Dual head surgical light ceiling mounted from a single pole. Unit has two lamp heads of differing sizes mounted on individual swing arms. Unit features multiple lighting pods in each lamp head, deep cavity illumination, color-corrected light, intensity control and sterilizable handles. Refer to the manufacturers' specifications for minimum ceiling heights and installation data. The database height dimension below refers to the height of the lamp head itself. The width and depth measurements are the larger of the two sums of the swing arm length and the head diameter. For use in general purpose surgical suites.
M7650	Defibrillator/Monitor, Acute Care	1	V/V	Portable defibrillator/monitor for acute care includes biphasic defibrillator, pacing, SPO2, Interpretive 12-lead, NIBP monitoring, EtCO2 monitoring, Invasive pressure monitoring, Vital Sign monitoring, temperature probe, Fax transmission, PCMCIA Data Cards, Paddle accessories, and a color LCD.
M7801	Monitor, Medical Grade 26 - 42"	6	V/V	
M7802	Monitor, Medical Grade 55- 65"	2	V/V	LED HD monitor capable of displaying medical grade images. Monitor' size is 55 - 65".
M7818	Monitor, Transport	1	V/V	A light weight, rugged patient monitor for use during transport. Unit consists of a compact monitor with touchscreen display with up to 3 waveforms on a on a bright non-fading display. The unit measures ECG/respiration, NBP, SpO2, pressure, and; temperature and CO2. Data can be transferred seamlessly throughout the continuum of care. Unit is approved for aeromedical use (US Army Airworthiness Certification and Evaluation (ACE) program. Battery run time of 3 hours before recharge.
M7845	Monitor, Physiological, Bedside, 4 Channel	1	V/V	4 channel bedside physiological monitor. The unit consist of a four-channel non-fade monochrome display monitor, an alarm system and printer-recording capabilities. The monitor has color coded controls and automatic calibration. The unit displays up to four waveforms simultaneously. The parameters to be monitored are user selectable. The monitor may be connected to a central monitoring station. The unit monitors patients in most acute care areas, step-down units, procedure rooms and emergency rooms.
M8551	Light Source, Fiberoptic Headlamp	2	V/V	Fiberoptic light source for surgical headlamps. This unit provides color corrected light for surgical procedures where photography is not required.
M8606	Endoscopy Cart, Fiberoptic, w/Video Accessories	1	V/V	Endoscopy cart with video and print capabilities for use with fiberoptic (direct vision) endoscopes. This cart does not work with videoscopes. System takes optical images from a single endoscope and directly records them or converts them to digital signals for recording. A typical system cart includes the cart, a light source, an insufflator, a suction unit, a heat probe unit, an electrosurgical apparatus, a digital camera converter or color video camera, a camera controller, a monitor, a video/DVD recorder and a color printer. This JSN does not include the endoscope; refer to the endoscopes at JSNs; M8500-M8550. Each cart can support one or more types of endoscope and should be specifically tailored to its intended use(s). This cart can be configured to interface with a network endoscopy information management system; refer to JSN M8600. Database physical information and pricing is for a higher cost system containing one of each of the above components.

## 4.13 ORHY1

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M8800	Cart, Anesthesia	1	V/V	Mobile anesthesia cart. The cart shall be built of stainless steel or other appropriate material and mounted on 4" casters for easy mobility. It shall be capable of being equipped with bottle holders, adjustable IV pole, storage drawers, shelves and a top bar/rail.
M8810	Stand, Mayo	3	V/V	Adjustable instrument table. Table is corrosion resistant stainless steel construction and is mounted on two casters with two skid rails. It has telescopic upright adjusts from 39 inches to 60 inches with automatic locking device, and removable 13"x19" instrument tray. Designed for use in operating and procedure rooms.
M8825	Table, Instrument/Dressing, CRS, approx. 36x20x34	2	V/V	Instrument and dressing table. Made of corrosion resistant stainless steel with a sound deadened top. Includes guard rail, shelf and two side-by-side drawers. The table is mounted on swivel, ball-bearing casters.
M8830	Table, Instrument/Dressing, Mobile	2	V/V	Mobile instrument/dressing table, approximately 34" H x 20" W x 16" D Corrosion resistant stainless steel mobile table with sound-deadening shelf and drawer. Unit is mounted on 2" casters. Designed for all purpose use in the hospital or clinic.
M8840	Table, Back, Instrument/Dressing	1	V/V	A specialty back table for large cases such as orthopedics, spinal fusions, neuro and craniotomies. The table has a pneumatic tuck-away cantilevered shelf which can hold multiple trays and is angled for clear observation of instruments. It comes with 4" diameter heavy-duty ball bearing brake/swivel casters. Construction is all stainless steel.
M8900	Carriage, Pail, CRS, Without Pail	3	V/V	Carriage, pail (kick bucket) CRS. Consists of a stainless steel ring type carriage mounted on ball bearing casters. Includes circular non-marring bumper. For use in the surgical operating room.
M8905	Pail, Utility, CRS, With Carriage	3	V/V	Utility pail (kick bucket). Shall be a stainless steel 12 quart bucket for use in surgical operating rooms.
M8910	Cart, Surgical Case	2	V/V	Surgical case cart. Unit consists of two hinged cabinet sections, each section equipped with two pull-out shelves with stops. The entire unit is mounted on four heavy duty conductive swivel casters. Used to transport surgical packs and supplies to surgery and soiled items back to central supply.
M8920	Stand, Basin, CRS, Mobile, Double	2	V/V	CRS, mobile, double basin stand with shelf. Stainless steel corrosion resistant frame constructed from two continuous inverted "U" shaped tubes, forming four legs and mounted on casters. Circular rings welded to top receive two removable 8 quart stainless steel basins. For open heart and other procedures.
M8925	Stand, Basin, CRS, Mobile, Single	2	V/V	Mobile single basin stand with shelf. The stand shall be constructed of tubular stainless steel and mounted on 2" swivel casters. Shall include a shelf and an 8 quart stainless steel basin. Intended for use in ORs and treatment areas.
M8940	Stool, Anesthesia, With Back	3	V/V	Anesthesia stool with back. All stainless steel with well-curved back panel and wide conductive seat. Designed for the anesthesiologist during surgical procedures.
M8950	Warmer, Blood	1	V/V	Unit consists of a temperature regulated water bath, circulating fluid, or dry heat with controls and an audible high temperature alarm. The warmer provides a stable environment for the controlled warming of blood or other fluids prior to being transfused to a patient.
M8970	Warmer, Blood, High Volume	1	V/V	Unit contains a proportional controller to regulate temperature in the heat exchanger and an audible high temperature alarm. Designed to provide a stable temperature for the controlled warming of blood or other fluids prior to being transfused to a patient. Unit may be a cuff type or circulating water heat exchanger.

## 4.13 ORHY1

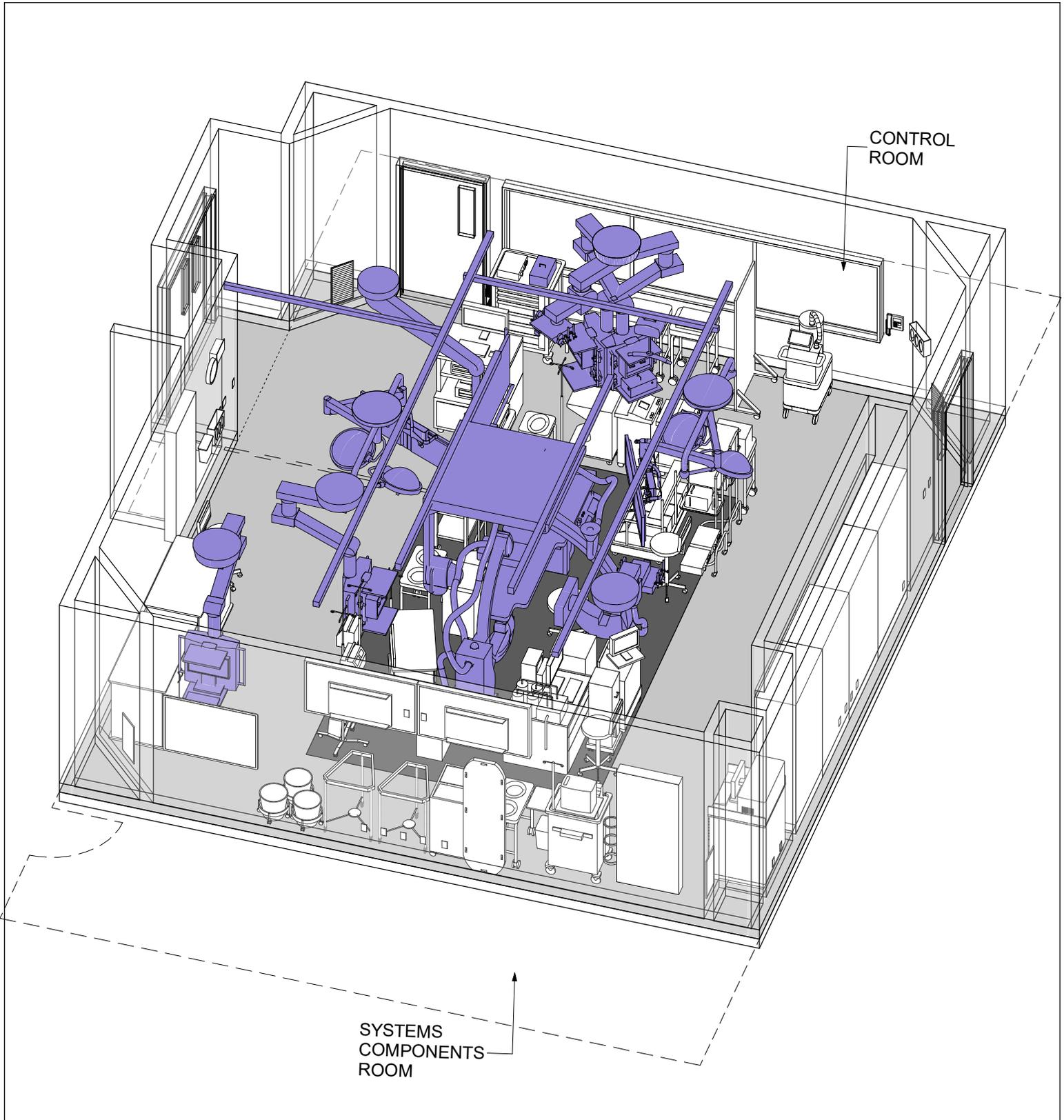
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M9080	Table, Operating, Pedestal, 5 Section	1	V/V	Pedestal type major operating table with 5 sections. Table is mounted on a solid base with casters and locks. Table top surface is fabricated from radio-translucent, conductive panels and the larger table sections are equipped with radiographic cassette tunnels. Table includes Electro-hydraulic controls, side rail locking system, kidney elevator, grounding receptacle and dual arm support section. Designed for use in the operating room in a variety of surgical procedures.
R4785	Ice Maker, Surgical Slush	1	V/V	An automated surgical slush machine designed to produce a velvet soft slush to limit the likelihood of damaging tissue due to large or sharp ice particles during surgical procedures. Unit operates with a temperature range of 30 degrees F to 32 degrees F. The unit is also designed to operate quietly to not disrupt the OR environment. Casters allow for easy movement.
S9755	Suction System, Surgical, Mobile Rover Unit	1	V/V	Surgical fluid waste management system with powered IV pole and smoke evacuation. Portable waste collection unit, for use with Docking Station (specified separately). Dual canisters (one 4L and one 20L), two levels of suction: 2-21in/Hg, fluid readout, 3 different port sizes for smoke tubing.
U0105	ExtraCorporeal Support System	1	V/V	ECHO is a device used to provide cardio pulmonary support on a temporary basis and assist oxygen to vital body systems. Provides oxygenation and carbon dioxide removal from the blood.
X2106	Scanner, Ultrasound, Intra-Cardiac Echo	1	V/V	A portable cardiovascular ultrasound with full diagnostic and monitoring capabilities. The unit employs phased-array transducer technology for 2D, color and Doppler imaging. It will have multiple focal zones to optimize image quality. The unit will have an integrated EchoPAC with data review, analysis, patient archive and reporting capabilities. It will have full DICOM connectivity with embedded raw data speeds allowing for post-exam quantitative analyses at the users convenience. The rechargeable battery will provide up to 1 hour of full scan operation.
X3145	Screen, X-Ray, Protective, Mobile	1	V/V	Mobile X-ray protective screen/barrier. The X-ray barrier provides optically-clear visibility while shielding medical personnel from scatter radiation. Its large clear Pb lead-plastic or acrylic window offers 0.5 mm lead-equivalent protection to the user's head and upper body. The unit is used for effective radiation protection of department personnel during vascular or other procedures. This unit can fit any application with its mobility.; Adjustable screens are also available.
X6190	Radiographic/Fluoro Unit, Cardiac, 100 kW, Digital	1	V/C	This system is specifically designed to perform biplane radiographic/fluoroscopic examinations in the Cardiology Department. On-line digital cardiac image processing will provide instant availability of images for review. This units characteristics and components include 100 kW micro-processor controlled X-ray generators, C-arm and U arm with 9â€ multi-field Image Intensifier, integrated X-ray tube unit and cine camera. The Digital Imaging for both the AP and Lateral planes shall consist of a computer, keyboard with acquisition, viewing monitor, and slave monitor. The system shall be DICOM 3.0 compatible, for easy linkage to filmless image management systems and review stations. It is recommended that the TV monitors be ceiling suspended. System to be procured with Cardiac Cath Lab computerized analysis/monitoring system.



# SURGICAL AND ENDOVASCULAR SERVICES (ORHY2) OPERATING ROOM, BIPLANE HYBRID AXONOMETRIC

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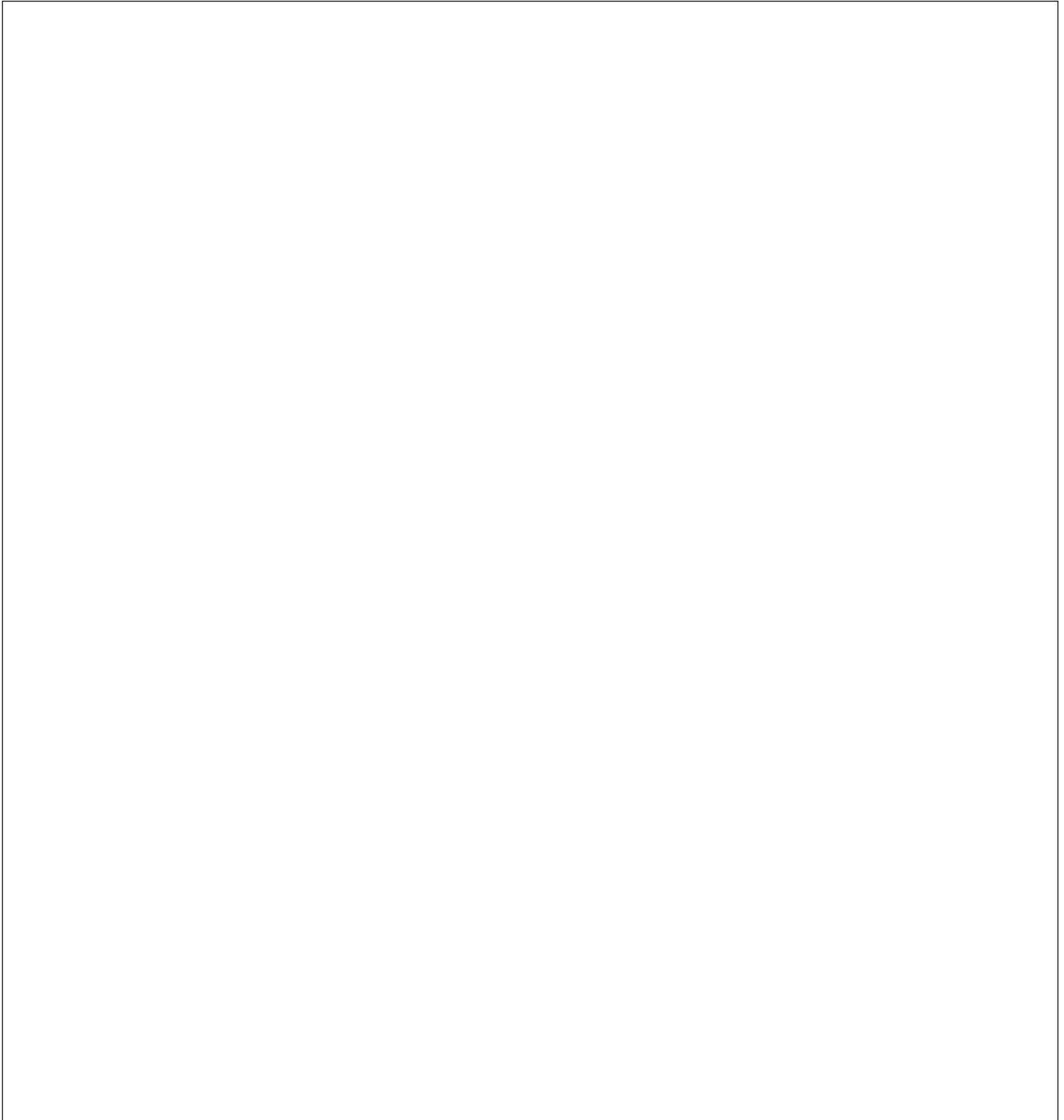


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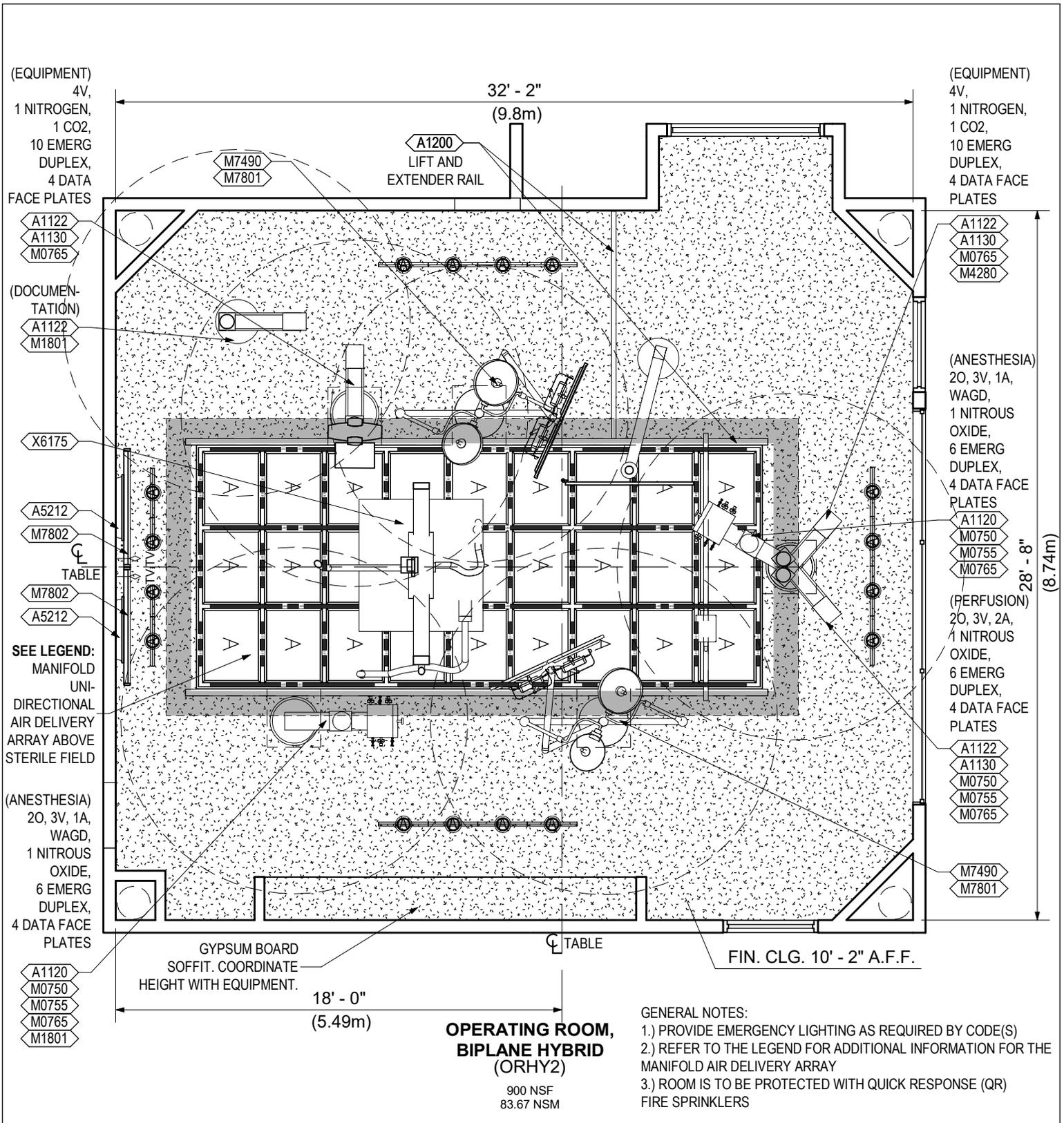




SURGICAL AND ENDOVASCULAR SERVICES (ORHY2) OPERATING ROOM, BIPLANE HYBRID REFLECTED CEILING PLAN

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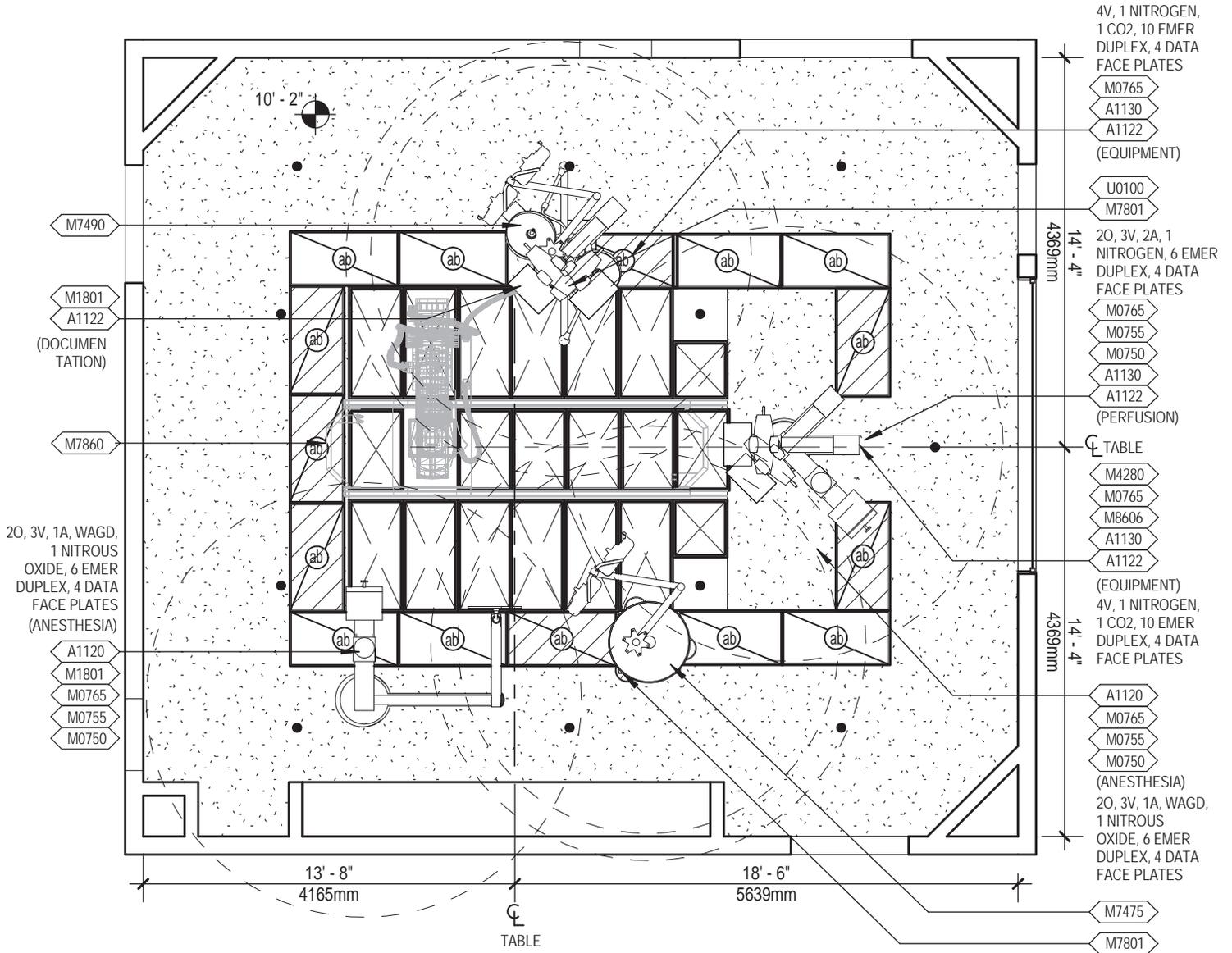
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SURGICAL AND ENDOVASCULAR SERVICES (ORHY2) OPERATING ROOM, BIPLANE HYBRID REFLECTED CEILING PLAN (ALTERNATE OPTION)

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NOTE: REFER TO ROOM DATA SHEET FOR ACCESS PANELS

Reflected Ceiling Plan  
900 NSF / 83,7 NSM

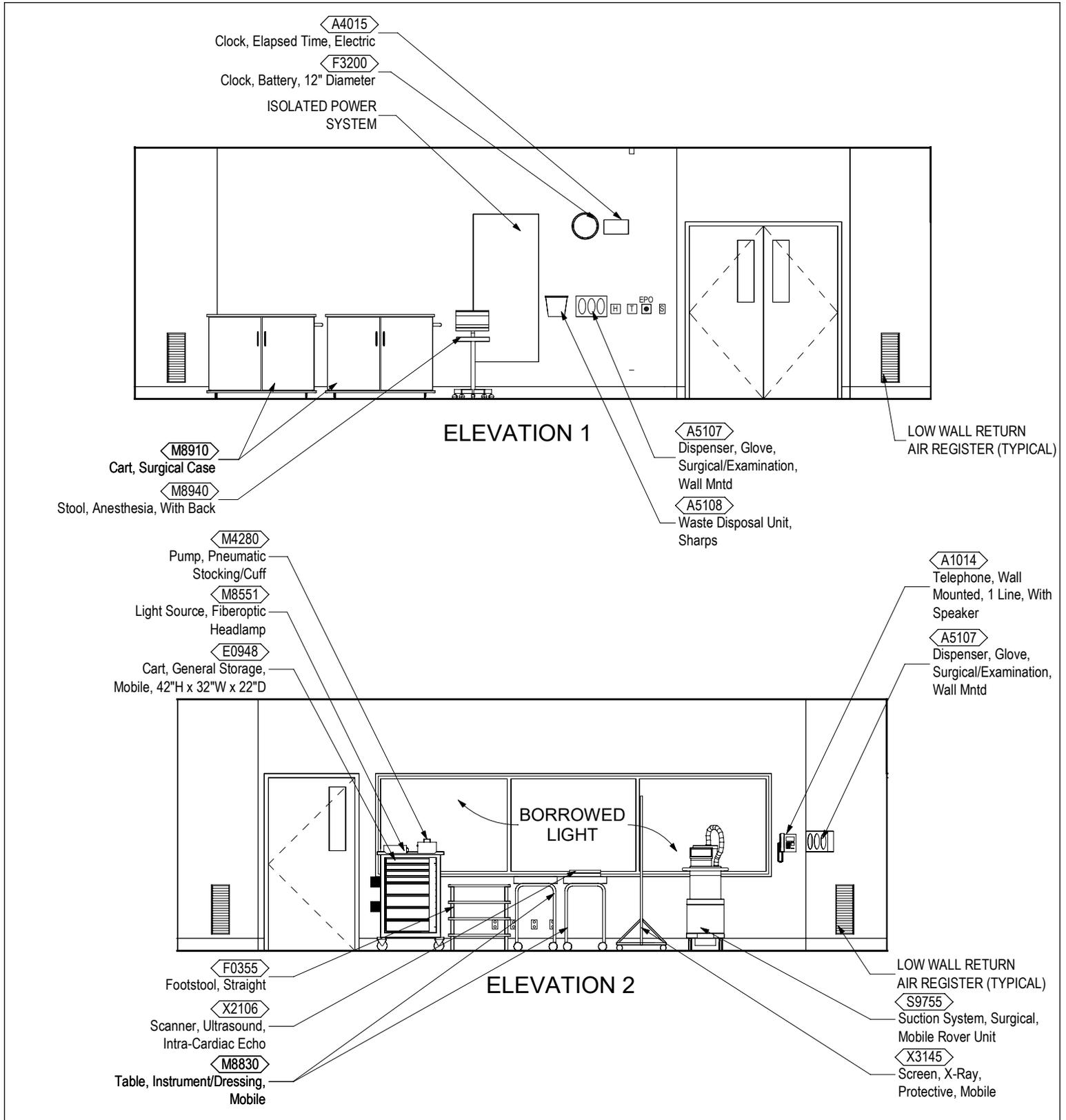
NOTE: OPTIONAL REFLECTED CEILING PLAN IS AN ALTERNATIVE OPTION TO THE MANIFOLD UNI-DIRECTIONAL AIR DELIVERY SYSTEM. EQUIPMENT TAGS & REFERENCE NOTES MAY NOT BE FULLY COORDINATED WITH THE EQUIPMENT LIST.

**4.14. OPERATING ROOM, BIPLANE HYBRID (ORHY2)****JSN Legend**

JSN	DESCRIPTION		
A1014	TELEPHONE, WALL MOUNTED, 1 LINE, WITH SPEAKER	M4645	PATIENT TRANSFER DEVICE
A1120	COLUMN, SERVICE, PREFAB, SURGICAL, CEILING MOUNTED	M4810	HEART/ LUNG MACHINE, BYPASS, MODULAR
A1122	COLUMN, EQUIPMENT ARM, CEILING MOUNTED, SURGERY	M4811	PUMP, INTRA-AORTIC, BALLOON
A1130	CABINET, CONTROL, NITROGEN	M4812	PACEMAKER, SINGLE CHAMBER, EXTERNAL, TEMPORARY
A1200	LIFT SYSTEM, OVERHEAD, PATIENT RM	M4815	HYPO/HYPERThERMIA UNIT, AUTOMATIC/MANUAL MOBILE
A4015	CLOCK, ELAPSED TIME, ELECTRIC	M4816	WARMING UNIT, PATIENT, AUTOMATIC/MANUAL, AIR
A5104	CART, MEDICAL WASTE DISPOSAL, MOBILE W/ FOOT PEDAL	M5030	STOOL, SURGEON, REVOLVING
A5107	DISPENSER, GLOVE, SURGICAL/ EXAMINATION, WALL MTND	M5512	LASER, SMOKE EVACUATOR
A5108	WASTE DISPOSAL UNIT, SHARPS	M7490	LIGHT, SURG, CEILING MTD, DUAL, UNEQUAL DIA HEADS
A5212	BRACKET, TELEVISION WALL MTD, TILT/ ANGLE	M7650	DEFIBRILLATOR/ MONITOR, ACUTE CARE
E0948	CART, GENERAL STORAGE, MOBILE, 42"H x 32"W x 22"D	M7801	MONITOR, MEDICAL GRADE, 26"-42"
E0954	CART, EMERGENCY, MOBILE, 66"H x 32"W x 22"D	M7802	MONITOR, MEDICAL GRADE, 55"-65"
F0355	FOOTSTOOL, STRAIGHT	M7818	MONITOR, TRANSPORT
F3050	WHITE BOARD, DRY ERASE	M7845	MONITOR, PHYSIOLOGICAL, BEDSIDE, 4 CHANNEL
F3200	CLOCK, BATTERY, 12" DIAMETER	M8551	LIGHT SOURCE, FIBEROPTIC HEADLAMP
L0221	ANALYZER, BLOOD, PORTABLE, HAND HELD	M8606	ENDOSCOPY CART, FIBEROPTIC, W/ VIDEO ACCESSORIES
L1095	CELL SAVER	M8800	CART, ANESTHESIA
M0630	ANESTHESIA APPARATUS, 3 GAS	M8810	STAND, MAYO
M0750	FLOWMETER, AIR, CONNECT W/ 50 PSI SUPPLY	M8825	TABLE, INSTRUMENT/DRESSING, CRS, APPROX 36x20x34
M0755	FLOWMETER, OXYGEN, LOW FLOW	M8830	TABLE, INSTRUMENT/DRESSING, MOBILE
M0765	REGULATOR, VACUUM	M8840	TABLE, BACK, INSTRUMENT/DRESSING
M1801	COMPUTER, MICROPROCESSING, W/ FLAT PANEL MONITOR	M8900	CARRIAGE, PAIL, CRS, WITHOUT PAIL
M3070	HAMPER, LINEN, MOBILE W/LID	M8905	PAIL, UTILITY, CRS, WITH CARRIAGE
M3072	FRAME, INFECTIOUS WASTE BAG W/LID	M8910	CART, SURGICAL CASE
M3080	CABINET, INSTRUMENT, CRS, 2 GLASS DOOR, 6 SHELF	M8920	STAND, BASIN, CRS, MOBILE, DOUBLE
M3109	ELECTROSURGICAL/COAGULATOR, ARGON PLASMA	M8925	STAND, BASIN, CRS, MOBILE, SINGLE
M3150	DISTRIBUTION SYSTEM, MEDICATION, AUTOMATIC	M8940	STOOL, ANESTHESIA, WITH BACK
M3165	CABINET, CATHETER STORAGE	M8950	WARMER, BLOOD
M3175	ELECTROSURGICAL UNIT, DUAL OUTPUT	M8970	WARMER, BLOOD, HIGH VOLUME
M4250	PUMP SYRINGE, INFUSION	M9080	TABLE, OPERATING, PEDESTAL, 5 SECTION
M4255	STAND, IV, ADJUSTABLE	R4785	ICE MAKER, SURGICAL SLUSH
M4266	PUMP, VOLUMETRIC, INFUSION, MULTIPLE LINE	S9755	SUCTION SYSTEM, SURGICAL, MOBILE ROVER UNIT
M4280	PUMP, PNEUMATIC STOCKING/CUFF	U0105	EXTRACORPOREAL SUPPORT SYSTEM
M4287	IRRIGATION SYSTEM, SURGICAL	X2106	SCANNER, ULTRASOUND, INTRA-CARDIAC, ECHO
		X3145	SCREEN, X-RAY, PROTECTIVE, MOBILE
		X6190	RADIOGRAPHIC/FLUORO UNIT, CARDIAC, 100 kW, DIGITAL

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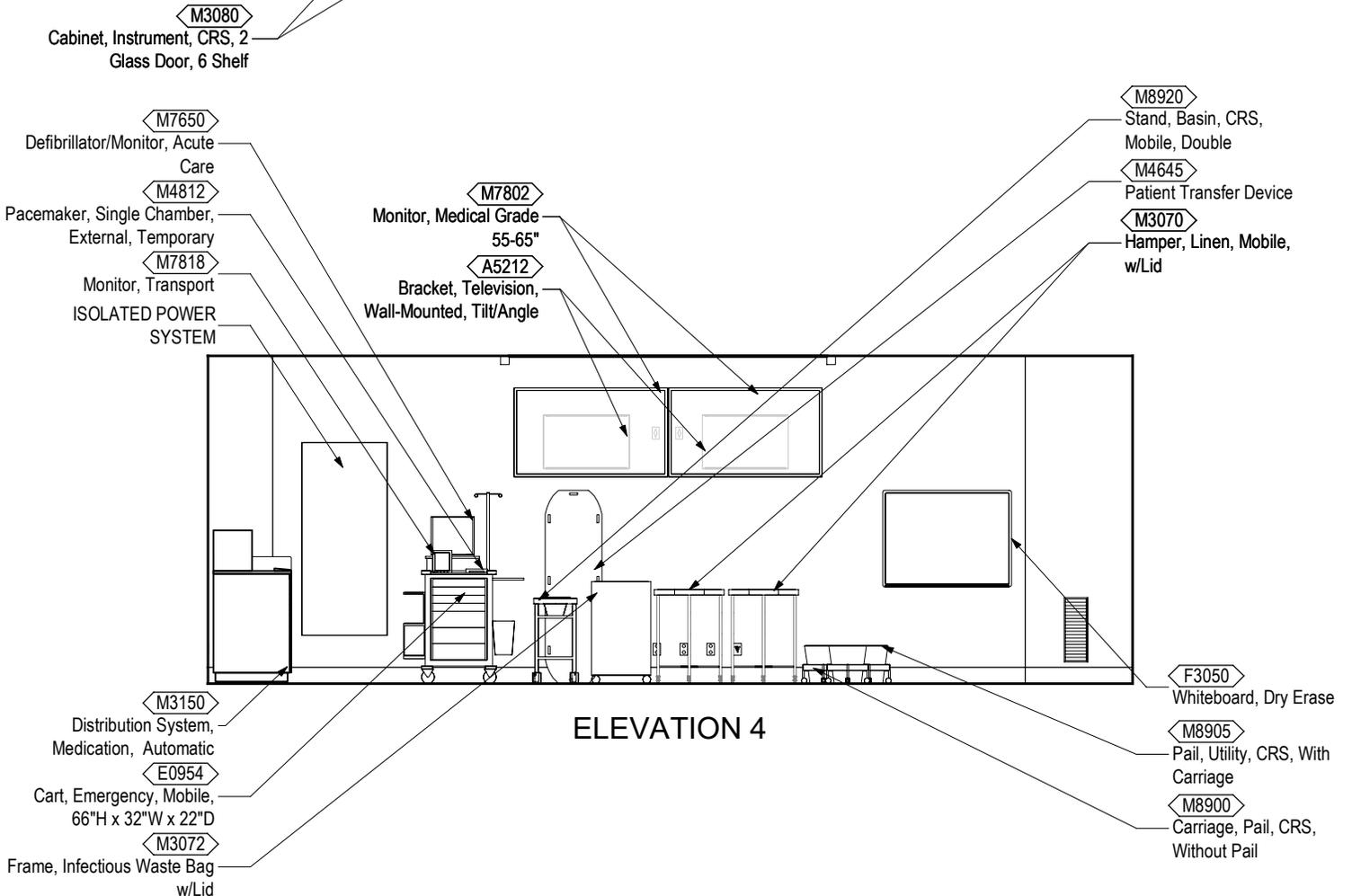
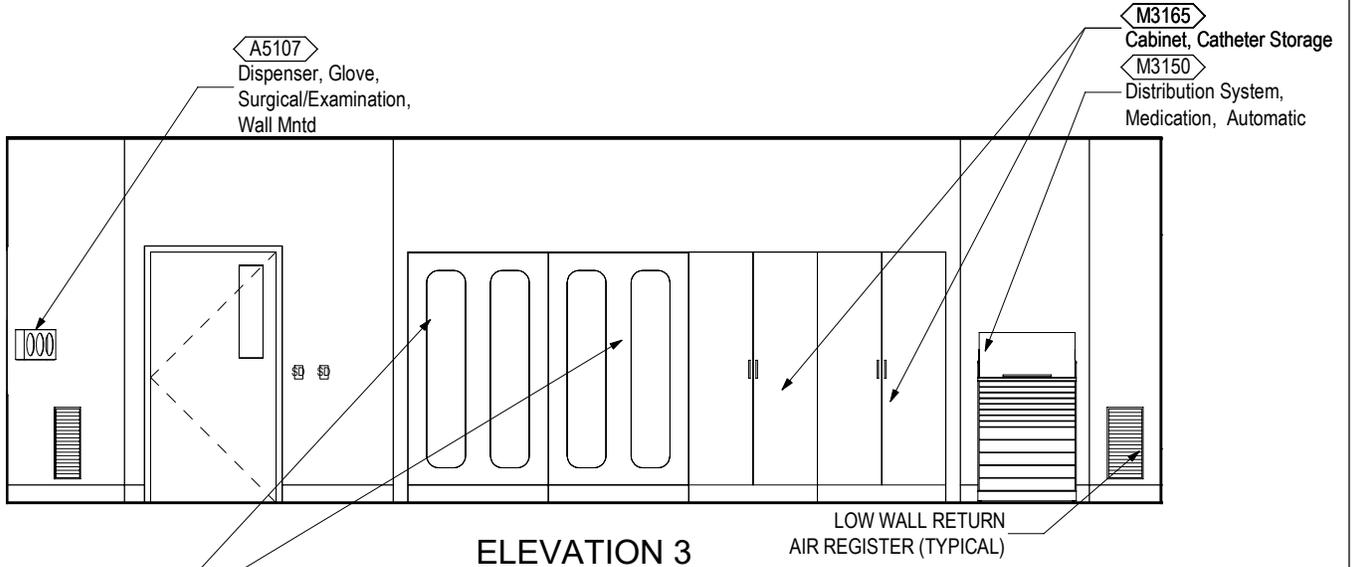


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**4.14 OPERATING ROOM, BIPLANE HYBRID (ORHY2)****Room Data Sheet****ARCHITECTURAL**

Ceiling Type:	Gypsum Wallboard (SC)
Ceiling Height:	10'-0" (3048 mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	RF Integral Base (min. 6"/152 mm)
Floor Finish:	Resinous Flooring (RF) Res 4
Slab Depression:	As required by imaging modality manufacturer
Sound Protection:	50 STC (to other room), 35 STC (to corridor)
Doors:	Double, Size 6'-0" x 7'-0" (1829 mm x 2133 mm) Wood w/Narrow View Window; Single, Size 4'-0" x 7'-0" (1219 mm x 2133 mm) Wood w/ Small View Window
Special Requirement:	

**Notes:**

- 1) Shielding is to be provided in all walls, windows, and doors.
- 2) Locate access panels as required to allow for the maintenance of surgical booms and lights in facilities without interstitial space. Min. size to be 24" x 24".
- 3) Cabinetry can be built in or free-standing.
- 4) Nominal wall thickness is shown at 8" (203 mm) to account for a variety of wall-mounted panels, such as isolation power unit panels, that require a thicker partition.
- 5) Include wall extensions at both sides of the scrub sink to protect the scrub sinks from cart and stretcher traffic in the semi-restricted corridor.
- 6) Coordinate structural supports, utility connections and other requirements for surgical lighting pendants with manufacturer.

7) Equipment and Anesthesia booms are duplicated to provide maximum flexibility. If duplicate booms are not desired, they can be omitted subject to approval by clinical leadership.

8) Facility will select number and types of scopes and other instrumentation as necessitated by the unique case load.

9) Endoscopy equipment can be located on a cart or on the equipment boom.

10) NSF provided for this space is the minimal acceptable NSF; contact Facilities Standards Service for any deviations.

**LIGHTING**

Refer to the VA Lighting Design Manual section 4.2.13 - Surgery/Operating Room - for lighting design consideration.

**POWER**

Normal Power: Connect selected receptacles and equipment to Normal power IPS.

Emergency Power: Connect selected receptacles and equipment to Critical Branch emergency IPS.

**Notes:**

- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
- 2) IPS Power & ground modules mounted at +24" AFF
- 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
- 4) Provide power connections for articulating utility columns.

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No

Special Requirement:

Notes:

- 1) Provide connections for articulating utility columns.
- 2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization.

Notes:

- 1) Refer to the latest version of the VA HVAC Design Manual for quantity and location of low air return grilles and ceiling diffusers.
- 2) Room does not contain multiple slot diffusers and uses laminar flow perforated face outlets only for supply air
- 3) Suggested minimum laminar flow array over the entire sterile field area as imaging equipment gantry creates excessive turbulence. Mechanical design engineer shall be responsible to design the array in such manner as to minimize turbulence and to maintain the sterile aseptic field

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	Yes
Medical Vacuum	Yes
Oxygen	Yes
Special Requirement:	

Notes:

- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen, Nitrous Oxide, Carbon Dioxide.
- 2) For gas quantities per boom refer to the reflected ceiling plan.
- 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project
- 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.14 OPERATING ROOM, BIPLANE HYBRID (ORHY2)****Equipment List**

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A1014	Telephone, Wall Mounted, 1 Line, With Speaker	1	V/V	Telephone, wall mounted, 1 line, with speaker.
A1120	Column, Service, Prefab, Surgical, Ceiling Mounted	2	C/C	Prefabricated surgical service column. Strong 18 gauge stainless steel shell ceiling mounted unit with the following services: oxygen, nitrous oxide, nitrogen, medical air, medical vacuum, gas evacuation, electrical outlets, monitoring connectors, and IV holders. Specify type of column (fixed or retractable) and number of outlets required for each service. Size will vary with number of service outlets required. Designed to be used in the operating room, recovery and ICU-CCU rooms.
A1122	Column, Equipment Arm, Ceiling Mounted, Surgery	4	C/C	A ceiling mounted retractable equipment arm for use in the OR. Designed to provide equipment placement support, power receptacles including low-voltage panels, gas outlets and flat screen mounting for a surgical suite. Unit will provide a range of motion of up to 330 degrees with arm providing additional vertical movement. Units are custom configured with multiple options available. Price is based on a unit with two (double) retractable arms. Also available are units for use in anesthesia, ICU and ER.
A1130	Cabinet, Control, Nitrogen	3	C/C	Nitrogen control cabinet. Unit consists of supply cut-off valve, supply pressure gauge, pressure regulator (adjustable 0 to 200 PSI), outlet pressure gauge, nitrogen outlet and connection to surgical gas column. Specify recessed or surface mounting. Designed for powering surgical pneumatic tools.
A1200	Lift System, Overhead, Patient Room	1	V/C	An overhead rail system specifically designed for patient lifting and movement for a single bed patient room. The system will consist of recessed or ceiling mounted primary and secondary rails, lift motor with rolling carriage, patient harness or seat, and a hand controller or control box with charger. System will facilitate lifting and movement of patient to and from bed to gurney, chair or other requirement. Minimum lift capability is 550 pounds. Custom design of track layout by manufacturer is essential to meet individual facility requirements.
A4015	Clock, Elapsed Time, Electric	1	C/C	Elapsed time digital electric clock. Single display time that can be used either as a clock or elapsed time indicator. Clock consists of buttons to set minutes, and hours for the time. For use in operating and delivery room, and medical service columns. Analog or digital displays may be provided as specified by the user.
A5104	Cart, Medical Waste Disposal, Mobile w/Foot Pedal	1	V/V	Mobile molded cart with foot pedal, to house 18-24 gal sharps disposal container. Lid lift or slide opens easily with foot-operated pedal. Lid may remain closed when not in use to reduce exposure to contents. Ergonomic handle is telescopic. Heavy containers can be removed from the side with minimal lifting. Meets requirements of OSHA 29 CFR 1910.130.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	2	V/V	Examination three (Small Medium, Large) glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Hardware not included, Option 3 powder coated steel.

## 4.14 ORHY2

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A5108	Waste Disposal Unit, Sharps	2	V/V	A container for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
A5212	Bracket, Television, Wall-Mounted, Tilt/Angle	2	V/V	A wall mounted, tilt/angled TV bracket for 37" to 80" TVs. Mount will be a universal and VESA compliant unit with a load capacity of up to 130 lbs.
E0948	Cart, General Storage, Mobile, 42"H x 32"W x 22"D	1	V/V	THIS TYPICAL INCLUDES:; 1 Cart Body, Style-A Narrow, w/Raised Edge Top 2 Drawers, 3" H; 4 Drawers, 6" H; 1 Accessory Rail, Side Drawer Organizer Bins
E0954	Cart, Emergency, Mobile, 66"H x 32"W x 22"D	1	V/V	THIS TYPICAL INCLUDES:; 1 Cart body, style-A narrow, w/raised edge top; 1 Accessory rail, side; 1 Accessory rail, back; 1 Defibrillator tray; 1 IV pole; 1 Breakaway bar; 1 Flip-up shelf; 1 Wastebasket; 1 Oxygen tank holder; 1 Electrical box-4 outlet; 1 Cord wrap; 4 Drawer, 3"H; 3 Drawer, 6"H; Drawer organizer bins.
F0355	Footstool, Straight	4	V/V	Step stool. Used to assist patients getting on and off exam or surgical tables. Fitted with electrically conductive rubber tips.
F3050	Whiteboard, Dry Erase	1	V/V	Whiteboard unit, approximately 36" H x 48" W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
F3200	Clock, Battery, 12" Diameter	1	V/V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
L0221	Analyzer, Blood, Portable, Hand Held	1	V/V	Handheld point-of-care testing analyzer. Utilizes single-use, disposable cartridges for diagnostic testing to include: Blood gases, electrolytes and chemistries, lactate, coagulation, hematology, and cardiac markers.
L1095	Cell Saver	1	V/V	Autologous blood recovery system, also known as a "Cell Saver." Used in the operating room and laboratory to wash extravascular blood free of debris, clots, etc., and to make the blood safe for re-infusion into the patient.
M0630	Anesthesia Apparatus, 3 Gas	1	V/V	Three gas anesthesia apparatus. Basic unit consists of steel cabinet with casters with one shallow, one medium, and one deep drawer, seven long scale eleven-inch flowmeters, five cylinder yokes, and telescoping absorber post. It includes two-canister model carbon dioxide absorber with inhalation and exhalation check valves, switch valve, switch valve elbow, sidearm Vernitrol, flow calculator, mounting kit, ventilator calculator, ventilator and an oxygen piping inlet. Also features nitrous oxide fail safe valve kit, aspirator kit, gas evacuator with vacuum and a flow meter safety cover. Used to dispense a mixture of gases during surgical procedures.
M0750	Flowmeter, Air, Connect w/50 PSI Supply	4	V/V	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Requires the appropriate adapter for connection to the wall outlet and fitting to connect to tubing. Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.

## 4.14 ORHY2

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M0755	Flowmeter, Oxygen, Low Flow	6	V/V	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Database pricing includes DISS fitting and DISS power outlet and wall adapter. Other fitting and adapter configurations are available.
M0765	Regulator, Vacuum	17	V/V	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required. To be used in delivery, neonatal, pediatrics or any area where suction is required. Database pricing reflects continuous regulators graduated to 200 mm Hg with a full line vacuum selection switch and DISS configured inlets and outlets.
M1801	Computer, Microprocessing, w/Flat Panel Monitor	2	V/V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x; CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
M3070	Hamper, Linen, Mobile, w/Lid	2	V/V	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters. For linen transport in hospitals and clinics.
M3072	Frame, Infectious Waste Bag w/Lid	1	V/V	Frame for an infectious waste collection bag. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Adjust to hold 18" or 25" trash bags. Mounted on ball bearing casters and includes permanently mounted hinged lid. Provides means of bagging infectious waste at point of waste generation.
M3080	Cabinet, Instrument, CRS, 2 Glass Door, 6 Shelf	2	V/V	Non-magnetic stainless steel instrument cabinet with two glass doors and six shelves (five adjustable). Cabinet body has a single storage compartment and seamless welded face. Shelf heights are adjustable on full length perforated strips mounted to the back and inside front cabinet corners. Cabinet is mounted on glides or casters. Cabinet may be covered by a sloping top.
M3109	Electrosurgical/Coagulator, Argon Plasma	1	V/V	An electrosurgical generator with an argon plasma coagulator and APC pulsed mode. This feature auto-regulates beam ignition and provides automatic dosing of power for increased control. The plug and play digital instrument recognition technology automatically configures the entire system to preprogrammed procedural parameters.
M3150	Distribution System, Medication, Automatic	1	V/V	An automated dispensing system that provides controlled dispensing, inventory and security. Size and cost will vary dependent on number of modules selected.
M3165	Cabinet, Catheter Storage	2	V/V	A cabinet to be used for the hanging storage of catheters. Cabinet comes with adjustable laminate shelves, slide-out arms equipped with hangers to hold various size catheters, and doors. Door locks are an optional accessory.
M3175	Electrosurgical Unit, Dual Output	1	V/V	Dual output electrosurgical unit. Solid state power source with foot switch jacks, monopolar and bipolar outputs, and four independent modes of operation. Used in the operating room or surgicenter as an alternative to the scalpel for cutting tissue.

## 4.14 ORHY2

JSN	NAME	QTY	ACO/INS	DESCRIPTION
M4250	Pump, Syringe, Infusion	2	V/V	The infusion syringe pump ensures highly accurate volume delivery and consistent flow for small volumes (<50 ml) of pharmacologic agents or thick feeding solutions. It shall be small, lightweight construction, making it transportable. Shall have menu-driven programming capable of flow rates (e.g. 0.1 or 1.0 mL/hr) that are intended for long-term bedside use and/or critical care patient transport, plunger positioning sensor, LCD display for easy viewing, volume limit programming to serve as a convenient cue of volume or dose delivery completion and multiple delivery modes for all applications requiring precisely controlled infusion rates. The infusion pump shall have automatic syringe size sensing which will give the flexibility to accept a wide range of syringe sizes (up to 60 mL) from different manufacturers. Shall be battery powered/AC adapter.
M4255	Stand, IV, Adjustable	3	V/V	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.
M4266	Pump, Volumetric, Infusion, Multiple Line	2	V/V	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.
M4280	Pump, Pneumatic Stocking/Cuff	2	V/V	Pneumatic stocking/cuff pump. Pump provides alternating pressure to pneumatic stockings for reduction of the threat of deep vein thrombophlebitis in post operative patients. May also be used in the CCU for rotating cuff therapy for reduction of peripheral circulation in congestive heart failure patients.
M4287	Irrigation System, Surgical	1	V/V	High flow surgical irrigation pump up 2.5l/min, available in single and double flow.
M4645	Patient Transfer Device	1	V/V	A patient transfer board designed to make lateral patient transfers safer for staff and be more comfortable for the patients. The board uses a smooth, low friction and static free surface to eliminate the need for metal rollers. The board has a soft foam core that makes them lightweight for ease of use and storage. The long board device also enables the transfer of a patient in the seated or Fowler position. The boards come in three sizes with the long board being foldable. The dimensions and price are for the long wide board.
M4810	Heart/Lung Machine, Bypass, Modular	1	V/V	Modular by-pass heart lung machine. Unit consists of an arterial pump, a backup arterial pump, one or two suction pumps, a water mixer, and a backup battery pack. To include disposable components: oxygenator/heater exchanger, cardiotomy reservoir, blood filters, and tubing. Unit is designed to temporarily replace the function of the patients heart and lungs during open-heart surgery or any surgical procedure that requires isolation of the heart.

## 4.14 ORHY2

JSN	NAME	QTY	ACO/INS	DESCRIPTION
M4811	Pump, Intra-Aortic, Balloon	1	V/V	Intra-aortic balloon pump. Item is used to treat cardiogenic shock resulting from extensive myocardial injury or damage. The pump shall function from line or battery power and is to be a mobile unit. It contains physiological monitoring, pacing, and pumping capabilities. It requires minimal set-up time and has immediate pumping capability. Adjustments can be accomplished without interruption of pumping. The monitor can be mounted remotely for the clinicians convenience and permits viewing of both cardio-pulmonary bypass and intra-aortic balloon pump simultaneously. The pump is designed for use in the critical care unit, operating room, cardiac cath lab and during transport.
M4812	Pacemaker, Single Chamber, External, Temporary	1	V/V	A single chamber, external temporary pacemaker designed to provide acute therapeutic, prophylactic, and diagnostic pacing support. It is capable of operating in the demand or asynchronous modes and includes adjustable rate, output, and sensing controls. Battery operated.
M4815	Hypo/Hyperthermia Unit, Automatic/Manual, Mobile	2	V/V	Automatic/manual hypo/hyperthermia unit. Sealed refrigeration system. Microprocessor controlled with multiple alarm system constantly monitoring temperature and water levels. Cabinet type unit. Designed to regulate body temperature by application of water-filled hypothermia blankets.
M4816	Warming Unit, Patient, Automatic/Manual, Air	1	V/V	Automatic/manual patient warming unit. Unit delivers a flow of warmed air through a perforated plastic blanket. Used primarily for postoperative patients to speed recovery of normal body temperature.
M5030	Stool, Surgeon, Revolving	2	V/V	Revolving stool. Consists of a padded upholstered seat with height adjustment. Unit rotates and is mounted on ball bearing swivel casters. Designed for use in examinations, treatment, and surgical procedures.
M5512	Laser, Smoke Evacuator	1	V/V	Filtration system used in conjunction with laser operations to remove surgical laser plume. The unit includes a pneumatic foot switch, disposable 0.12 micron HEPA primary filters, a secondary 0.12 micron ULPA/carbon filter, disposable funnels, reducer fittings and connector hoses.
M7490	Light, Surg, Ceiling Mtd, Dual, Unequal Dia Heads	2	V/C	Dual head surgical light ceiling mounted from a single pole. Unit has two lamp heads of differing sizes mounted on individual swing arms. Unit features multiple lighting pods in each lamp head, deep cavity illumination, color-corrected light, intensity control and sterilizable handles. Refer to the manufacturers' specifications for minimum ceiling heights and installation data. The database height dimension below refers to the height of the lamp head itself. The width and depth measurements are the larger of the two sums of the swing arm length and the head diameter. For use in general purpose surgical suites.
M7650	Defibrillator/Monitor, Acute Care	1	V/V	Portable defibrillator/monitor for acute care includes biphasic defibrillator, pacing, SPO2, Interpretive 12-lead, NIBP monitoring, EtCO2 monitoring, Invasive pressure monitoring, Vital Sign monitoring, temperature probe, Fax transmission, PCMCIA Data Cards, Paddle accessories, and a color LCD.
M7801	Monitor, Medical Grade 26 - 42"	6	V/V	
M7802	Monitor, Medical Grade 55- 65"	2	V/V	LED HD monitor capable of displaying medical grade images. Monitor size is 55 - 65".

## 4.14 ORHY2

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M7818	Monitor, Transport	1	V/V	A light weight, rugged patient monitor for use during transport. Unit consists of a compact monitor with touchscreen display with up to 3 waveforms on a on a bright non-fading display. The unit measures ECG/respiration, NBP, SpO2, pressure, and temperature and CO2. Data can be transferred seamlessly throughout the continuum of care. Unit is approved for aeromedical use (US Army Airworthiness Certification and Evaluation (ACE) program. Battery run time of 3 hours before recharge.
M7845	Monitor, Physiological, Bedside, 4 Channel	1	V/V	4 channel bedside physiological monitor. The unit consist of a four-channel non-fade monochrome display monitor, an alarm system and printer-recording capabilities. The monitor has color coded controls and automatic calibration. The unit displays up to four waveforms simultaneously. The parameters to be monitored are user selectable. The monitor may be connected to a central monitoring station. The unit monitors patients in most acute care areas, step-down units, procedure rooms and emergency rooms.
M8551	Light Source, Fiberoptic Headlamp	3	V/V	Fiberoptic light source for surgical headlamps. This unit provides color corrected light for surgical procedures where photography is not required.
M8606	Endoscopy Cart, Fiberoptic, w/Video Accessories	1	V/V	Endoscopy cart with video and print capabilities for use with fiberoptic (direct vision) endoscopes. This cart does not work with videoscopes. System takes optical images from a single endoscope and directly records them or converts them to digital signals for recording. A typical system cart includes the cart, a light source, an insufflator, a suction unit, a heat probe unit, an electrosurgical apparatus, a digital camera converter or color video camera, a camera controller, a monitor, a video/DVD recorder and a color printer. This JSN does not include the endoscope; refer to the endoscopes at JSNs M8500-M8550. Each cart can support one or more types of endoscope and should be specifically tailored to its intended use(s). This cart can be configured to interface with a network endoscopy information management system; refer to JSN M8600. Database physical information and pricing is for a higher cost system containing one of each of the above components.
M8800	Cart, Anesthesia	1	V/V	Mobile anesthesia cart. The cart shall be built of stainless steel or other appropriate material and mounted on 4" casters for easy mobility. It shall be capable of being equipped with bottle holders, adjustable IV pole, storage drawers, shelves and a top bar/rail.
M8810	Stand, Mayo	3	V/V	Adjustable instrument table. Table is corrosion resistant stainless steel construction and is mounted on two casters with two skid rails. It has telescopic upright adjusts from 39 inches to 60 inches with automatic locking device, and removable 13"x19" instrument tray. Designed for use in operating and procedure rooms.
M8825	Table, Instrument/Dressing, CRS, approx. 36x20x34	2	V/V	Instrument and dressing table. Made of corrosion resistant stainless steel with a sound deadened top. Includes guard rail, shelf and two side-by-side drawers. The table is mounted on swivel,; ball-bearing casters.
M8830	Table, Instrument/Dressing, Mobile	2	V/V	Mobile instrument/dressing table, approximately 34" H x 20" W x 16" D Corrosion resistant stainless steel mobile table with sound-deadening shelf and drawer. Unit is mounted on 2" casters. Designed for all purpose use in the hospital or clinic.

## 4.14 ORHY2

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M8840	Table, Back, Instrument/Dressing	1	V/V	A specialty back table for large cases such as orthopedics, spinal fusions, neuro and craniotomies. The table has a pneumatic tuck-away cantilevered shelf which can hold multiple trays and is angled for clear observation of instruments. It comes with 4" diameter heavy-duty ball bearing brake/swivel casters. Construction is all stainless steel.
M8900	Carriage, Pail, CRS, Without Pail	3	V/V	Carriage, pail (kick bucket) CRS. Consists of a stainless steel ring type carriage mounted on ball bearing casters. Includes circular non-marring bumper. For use in the surgical operating room.
M8905	Pail, Utility, CRS, With Carriage	3	V/V	Utility pail (kick bucket). Shall be a stainless steel 12 quart bucket for use in surgical operating rooms.
M8910	Cart, Surgical Case	2	V/V	Surgical case cart. Unit consists of two hinged cabinet sections, each section equipped with two pull-out shelves with stops. The entire unit is mounted on four heavy duty conductive swivel casters. Used to transport surgical packs and supplies to surgery and soiled items back to central supply.
M8920	Stand, Basin, CRS, Mobile, Double	2	V/V	CRS, mobile, double basin stand with shelf. Stainless steel corrosion resistant frame constructed from two continuous inverted "U" shaped tubes, forming four legs and mounted on casters.; Circular rings welded to top receive two removable 8 quart stainless steel basins. For open heart and other procedures.
M8925	Stand, Basin, CRS, Mobile, Single	2	V/V	Mobile single basin stand with shelf. The stand shall be constructed of tubular stainless steel and mounted on 2" swivel casters. Shall include a shelf and an 8 quart stainless steel basin. Intended for use in ORs and treatment areas.
M8940	Stool, Anesthesia, With Back	3	V/V	Anesthesia stool with back. All stainless steel with well-curved back panel and wide conductive seat. Designed for the anesthesiologist during surgical procedures.
M8950	Warmer, Blood	1	V/V	Unit consists of a temperature regulated water bath, circulating fluid, or dry heat with controls and an audible high temperature alarm. The warmer provides a stable environment for the controlled warming of blood or other fluids prior to being transfused to a patient.
M8970	Warmer, Blood, High Volume	1	V/V	Unit contains a proportional controller to regulate temperature in the heat exchanger and an audible high temperature alarm. Designed to provide a stable temperature for the controlled warming of blood or other fluids prior to being transfused to a patient. Unit may be a cuff type or circulating water heat exchanger.
M9080	Table, Operating, Pedestal, 5 Section	1	V/V	Pedestal type major operating table with 5 sections. Table is mounted on a solid base with casters and locks. Table top surface is fabricated from radio-translucent, conductive panels and the larger table sections are equipped with radiographic cassette tunnels. Table includes Electro-hydraulic controls, side rail locking system, kidney elevator, grounding receptacle and dual arm support section. Designed for use in the operating room in a variety of surgical procedures.
R4785	Ice Maker, Surgical Slush	1	V/V	An automated surgical slush machine designed to produce a velvet soft slush to limit the likelihood of damaging tissue due to large or sharp ice particles during surgical procedures. Unit operates with a temperature range of 30 degrees F to 32 degrees F. The unit is also designed to operate quietly to not disrupt the OR environment. Casters allow for easy movement.

## 4.14 ORHY2

JSN	NAME	QTY	ACO/INS	DESCRIPTION
S9755	Suction System, Surgical, Mobile Rover Unit	1	V/V	Surgical fluid waste management system with powered IV pole and smoke evacuation. Portable waste collection unit, for use with Docking Station (specified separately). Dual canisters (one 4L and one 20L), two levels of suction: 2-21in/Hg, fluid readout, 3 different port sizes for smoke tubing.
U0105	ExtraCorporeal Support System	1	V/V	ECHO is a device used to provide cardio pulmonary support on a temporary basis and assist oxygen to vital body systems. Provides oxygenation and carbon dioxide removal from the blood.
X2106	Scanner, Ultrasound, Intra-Cardiac Echo	1	V/V	A portable cardiovascular ultrasound with full diagnostic and monitoring capabilities. The unit employs phased-array transducer technology for 2D, color and Doppler imaging. It will have multiple focal zones to optimize image quality. The unit will have an integrated EchoPAC with data review, analysis, patient archive and reporting capabilities. It will have full DICOM connectivity with embedded raw data speeds allowing for post-exam quantitative analyses at the users convenience. The rechargeable battery will provide up to 1 hour of full scan operation.
X3145	Screen, X-Ray, Protective, Mobile	1	V/V	Mobile X-ray protective screen/barrier. The X-ray barrier provides optically-clear visibility while shielding medical personnel from scatter radiation. Its large clear Pb lead-plastic or acrylic window offers 0.5 mm lead-equivalent protection to the user's head and upper body. The unit is used for effective radiation protection of department personnel during vascular or other procedures. This unit can fit any application with its mobility. Adjustable screens are also available.
X6175	Radiographic/Fluoro Unit, Angio, Biplane, Digital	1	V/C	This system is specifically designed to perform biplane radiographic/fluoroscopic examinations in the Special Procedures Department. On-line digital angio image processing will provide instant availability of images for review. This units characteristics and components include: 100 kW micro-processor controlled X-ray generators, C-arm and U arm with 9â€ multi-field Image Intensifier, integrated X-ray tube unit. The Digital Spot Imaging for both the AP and Lateral planes shall consist of a computer, keyboard with acquisition and viewing monitor and a slave monitor.; The system shall be DICOM 3.0 compatible, for easy linkage to filmless image management systems and review stations. It is recommended that the TV monitors be ceiling suspended.



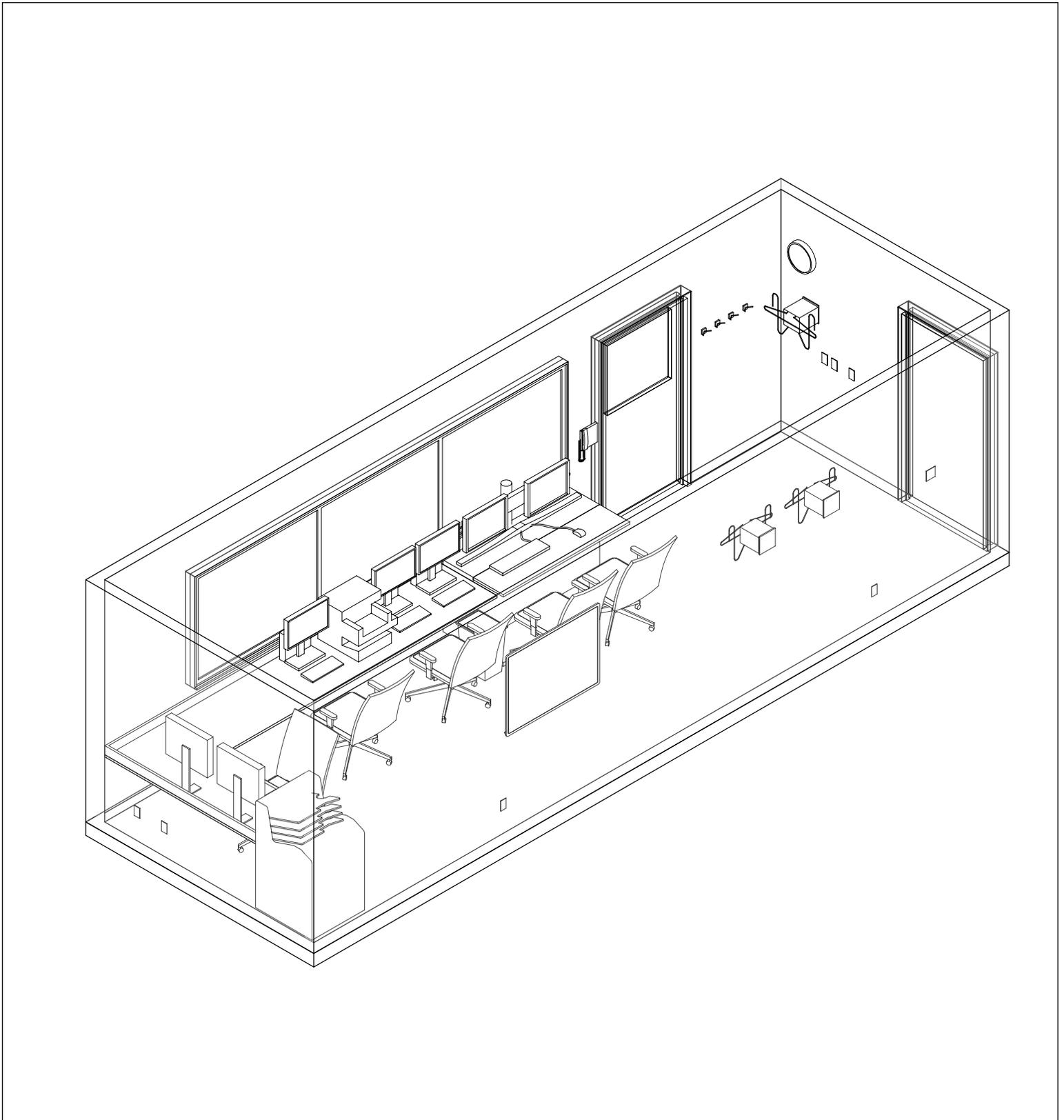
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SURGICAL AND ENDOVASCULAR SERVICES  
(ORHC1) CONTROL ROOM, HYBRID OR, CATHETERIZATION LAB  
ELECTROPHYSIOLOGY LAB, INTERVENTIONAL RAD LAB, VASCULAR LAB  
AXONOMETRIC

4.15 ORHC1

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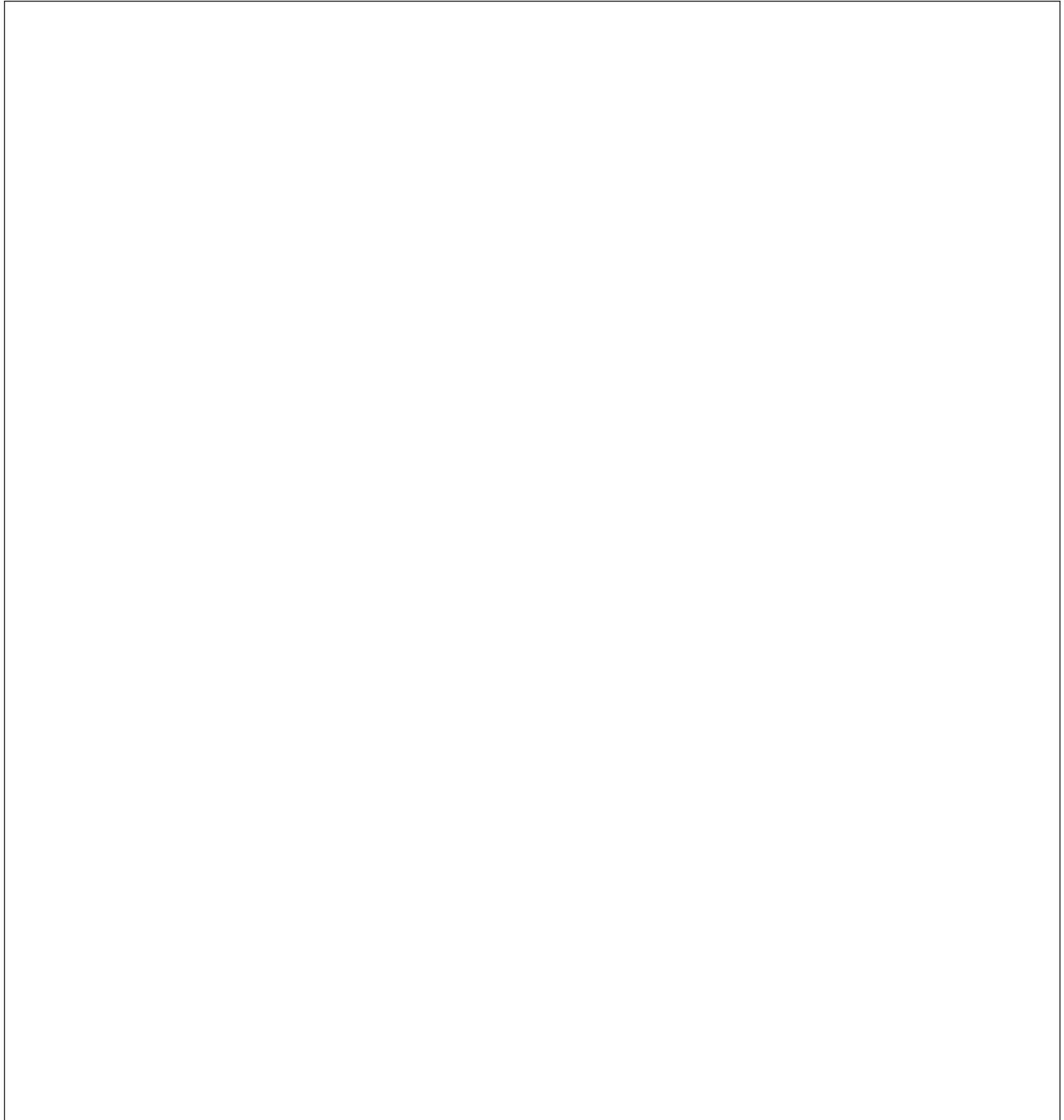


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SURGICAL AND ENDOVASCULAR SERVICES 4.15 ORHC1  
(ORHC1) CONTROL ROOM, HYBRID OR, CATHETERIZATION LAB  
ELECTROPHYSIOLOGY LAB, INTERVENTIONAL RAD LAB, VASCULAR LAB  
INTERACTIVE 3D PDF

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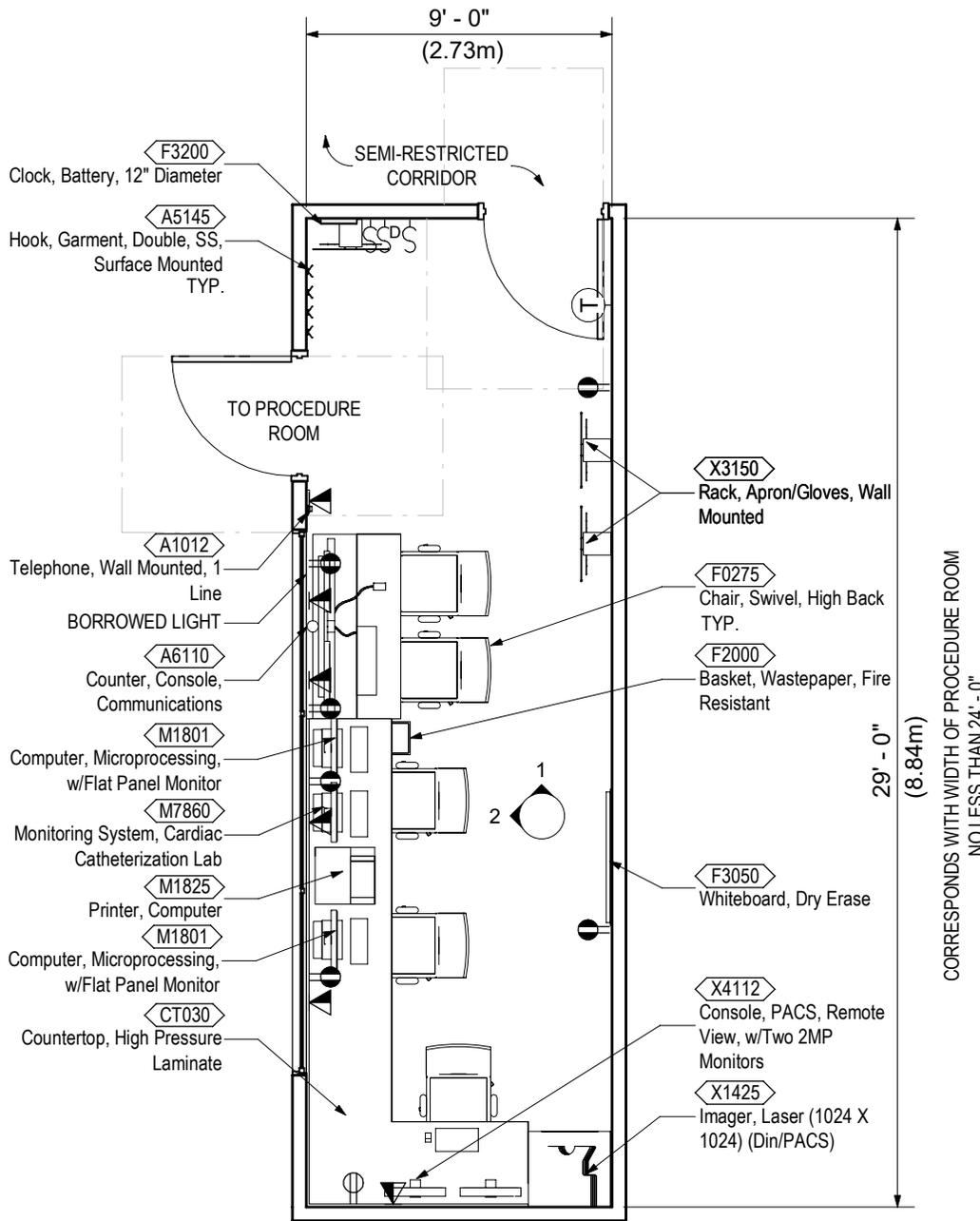
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SCALE: 3/16" = 1'-0"



**CONTROL ROOM,  
 HYBRID OR, CATH LAB,  
 EP LAB, IR LAB AND  
 VASCULAR LAB  
 (ORHC1)**

CONSULT MANUFACTURE WALL REINFORCEMENT SPECIFICATIONS  
 FOR OBJECT: X3150 - RACK, APRON/GLOVES, WALL MOUNTED.

260 NSF  
 24.16 NSM

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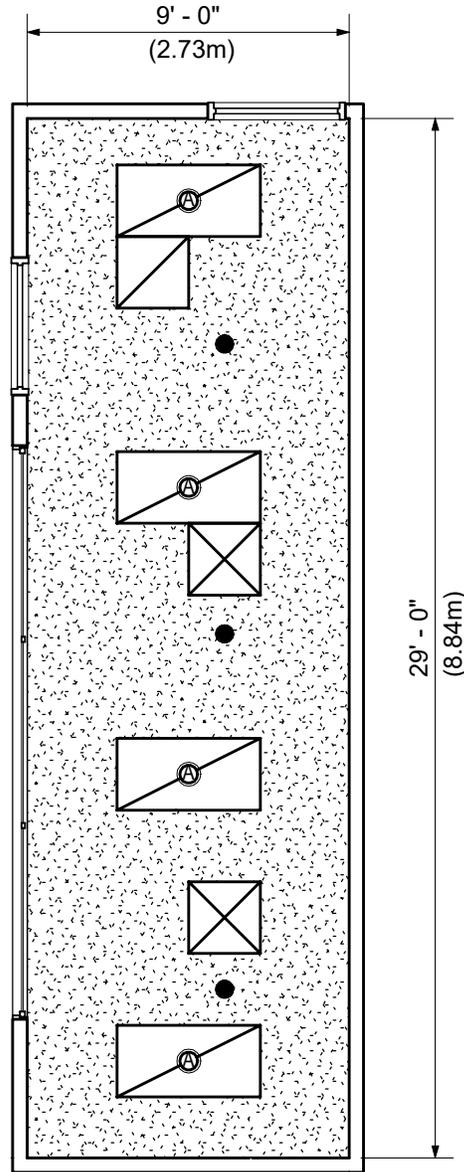


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SURGICAL AND ENDOVASCULAR SERVICES  
(ORHC1) CONTROL ROOM, HYBRID OR, CATHETERIZATION LAB  
ELECTROPHYSIOLOGY LAB, INTERVENTIONAL RAD LAB, VASCULAR LAB  
REFLECTED CEILING PLAN

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SCALE: 3/16" = 1'-0"



**CONTROL ROOM,  
HYBRID OR, CATH LAB,  
EP LAB, IR LAB AND  
VASCULAR LAB  
(ORHC1)**

260 NSF  
24.16 NSM

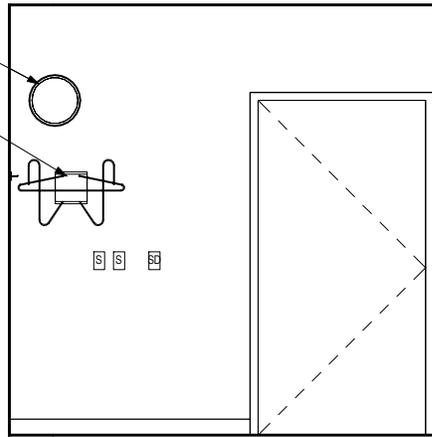
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SCALE: 1/4" = 1'-0"



- F3200  
Clock, Battery, 12" Diameter
- X3150  
Rack, Apron/Gloves, Wall Mounted

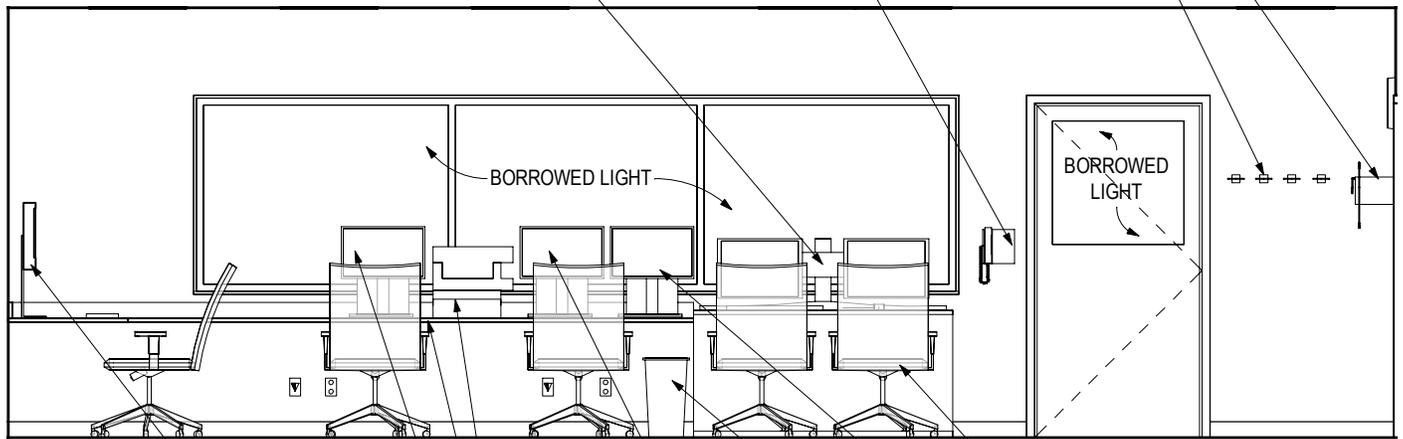


ELEVATION 1

- A6110  
Counter, Console, Communications

- A1012  
Telephone, Wall Mounted, 1 Line

- X3150  
Rack, Apron/Gloves, Wall Mounted
- A5145  
Hook, Garment, Double, SS, Surface Mounted TYP.



ELEVATION 2

- X4112  
Console, PACS, Remote View, w/Two 2MP Monitors

- M1825  
Printer, Computer
- CT030  
Countertop, High Pressure Laminate
- M1801  
Computer, Microprocessing, w/Flat Panel Monitor

- M7860  
Monitoring System, Cardiac Catheterization Lab

- F0275  
Chair, Swivel, High Back
- M1801  
Computer, Microprocessing, w/Flat Panel Monitor
- F2000  
Basket, Wastepaper, Fire Resistant

**DISCLAIMER:** ROOM TEMPLATES ARE GRAPHICAL REPRESENTATIONS OF SELECTED ROOM TYPES THAT ILLUSTRATE VA PLANNING REQUIREMENTS FOR SPACE, ROOM CONTENTS, AND ROOM SPECIFIC ENGINEERING SYSTEMS. THEY PROVIDE TYPICAL CONFIGURATIONS, PLANNING CRITERIA, AND GENERAL TECHNICAL GUIDANCE, AND ARE NOT INTENDED TO BE PROJECT SPECIFIC REQUIREMENTS.

**4.15 CONTROL ROOM, HYBRID OR (ORHC1)**Room Data Sheet**ARCHITECTURAL**

Ceiling Type:	Gypsum Wallboard (SC)
Ceiling Height:	9'-0" (2700 mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	RF Integral Base (min. 6"/152 mm)
Floor Finish:	Resinous Flooring
Slab Depression:	None
Sound Protection:	None
Doors:	Single, Size 3'-0" x 7'-0" (914 mm x 2133 mm) Wood
Special Requirement:	

Notes:

- 1) Shielding is to be provided in the wall to the hybrid operating room.
- 2) Consult with equipment manufacturer for countertop requirements.

**LIGHTING**

Refer to the VA Lighting Design Manual section 4.2.13 – Surgery/Operating Room – Design Parameter – Control Room - for lighting design consideration.

**POWER**

Normal Power:	To be connected to selected receptacles and equipment.
Emergency Power:	Critical branch of the EES to be connected to selected receptacles and equipment.

Notes:

- 1) Provide a duplex receptacle per computer and location connected to Emergency.
- 2) Provide convenience duplex receptacle on normal power.

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	No
Intercom:	No
Motion Intrusion Detection (MID):	No
Nurse Call:	No
Code Blue:	
Public Address:	Yes
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Conferencing (VTEL):	No

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Controls & Communication Center Room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	No
Medical Vacuum	No
Oxygen	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Light Hazard

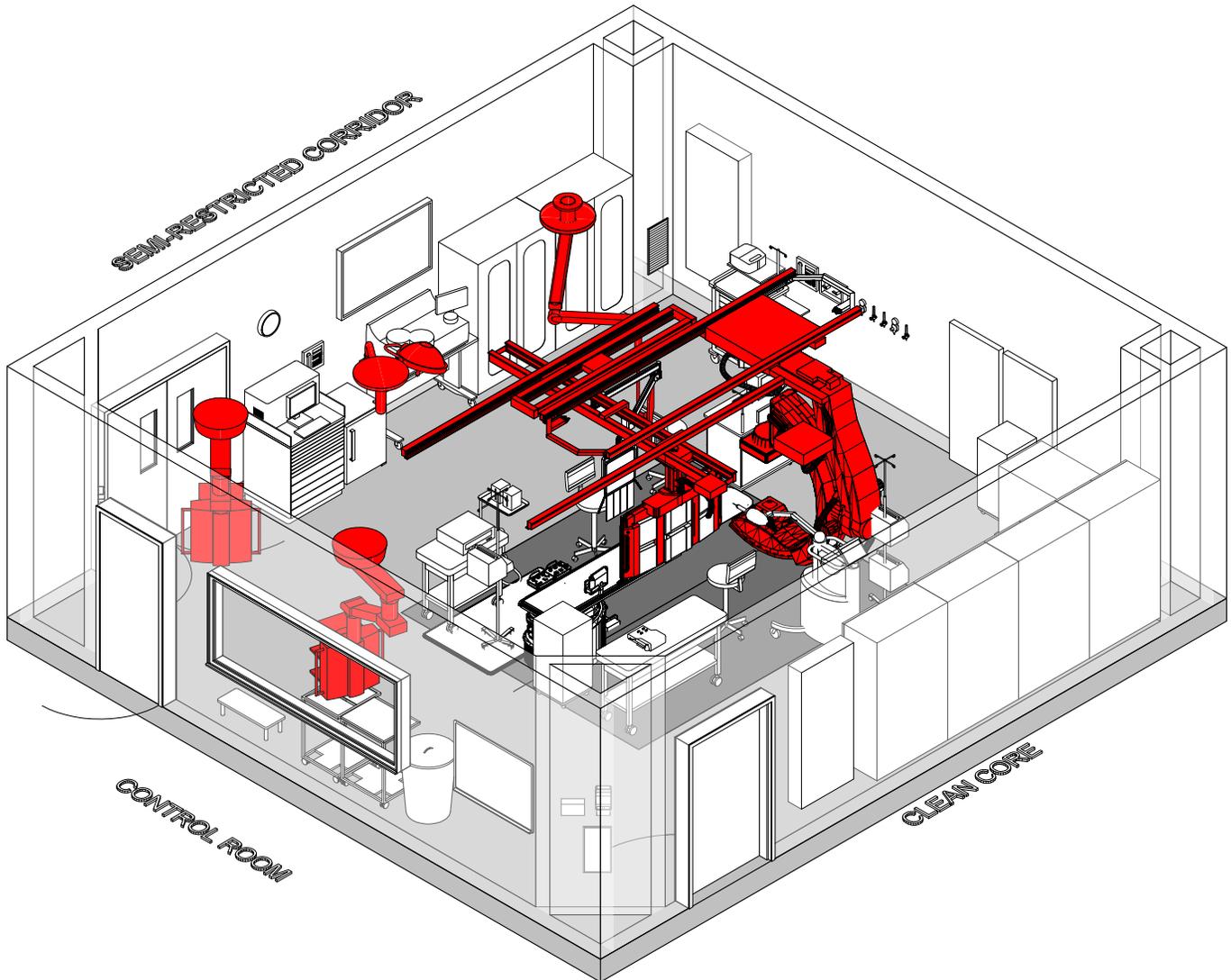
**4.15 CONTROL ROOM, HYBRID OR (ORHC1)**Equipment List

JSN	NAME	QTY	ACO/INS	DESCRIPTION
A1012	Telephone, Wall Mounted, 1 Line	1	V/V	Telephone, wall mounted, 1 line.
A5145	Hook, Garment, Double, SS, Surface Mounted	4	C/C	A surface mounted, satin finish stainless steel, double garment hook. Equipped with a concealed mounting bracket that is secured to a concealed wall plate. For general purpose use throughout the facility to hang various items of apparel.
A6110	Counter, Console, Communications	1	C/C	Counter, console, communications. Consists of one 18" wide base cabinet with two drawers and file drawer, one 30" wide pencil drawer and one 18" wide base cabinet with four drawers. The countertop shall be a composition of wood particle core with plastic laminate surface having a hard smooth surface finish, standard thickness of 1" and a 4" butt backsplash/curb.
CT030	Countertop, High Pressure Laminate	2	C/C	High pressure laminate countertop (composition of wood particle core with plastic laminate surface) having a hard smooth surface finish, standard thickness of 1", and a 4" butt backsplash/curb. Also referred to as a work surface or work top. Available in a wide choice of colors, patterns, and depths. Used in general purpose areas requiring a basic work surface arrangement with limited heat resistance and poor chemical resistance. Pricing based upon a 24" depth.
F0275	Chair, Swivel, High Back	5	V/V	Highback contemporary swivel chair, 41" high X 23" wide X 23" deep with five (5) caster swivel base and arms. Chair may be used at desks or in conference rooms. Back and seat are foam padded and upholstered with either woven textile fabric or vinyl.
F2000	Basket, Wastepaper, Fire Resistant	1	V/V	Wastepaper basket, fire resistant, approximately 40 quart capacity. This unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations. Size and shape varies depending on the application and manufacturer selected.
F3050	Whiteboard, Dry Erase	1	V/V	Whiteboard unit, approximately 36" H x 48" W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
F3200	Clock, Battery, 12" Diameter	1	V/V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
M1801	Computer, Microprocessing, w/Flat Panel Monitor	2	V/V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
M1825	Printer, Computer	1	V/V	High resolution computer printer with a variety of type styles and sheet/envelope feeder trays. Database information reflects network ready, medium duty office style laser printers. Other types of printers (bubble jet, dot matrix, line or plotter) as well as light or heavy use capabilities are available.

## 4.15 ORHC1

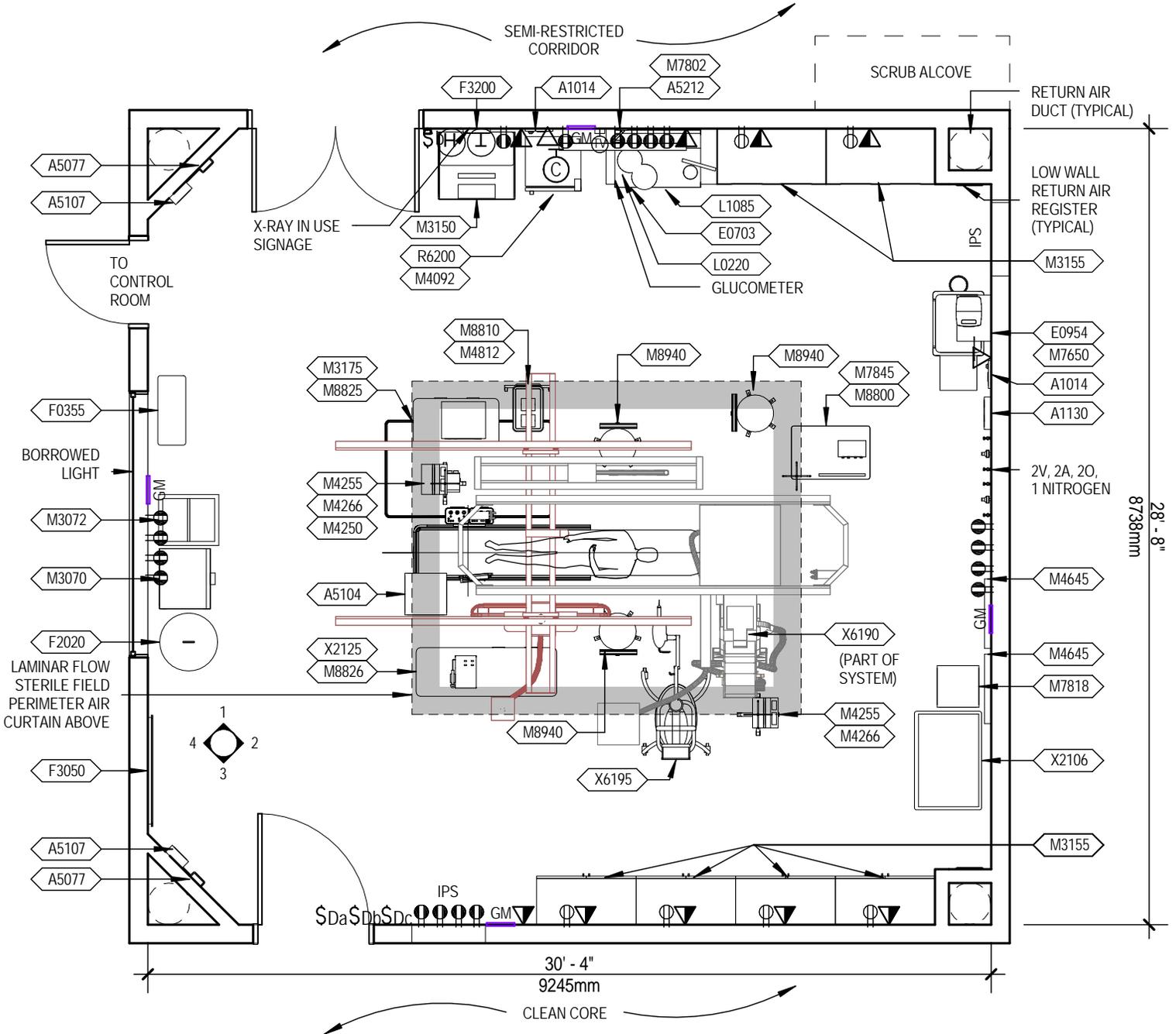
JSN	NAME	QTY	ACO/INS	DESCRIPTION
M7860	Monitoring System, Cardiac Catheterization Lab	1	V/V	Computerized monitoring system for use in cardiac catheterization labs, electrophysiology labs and cardio-thoracic operating rooms. The system can display up to 32 different waveforms simultaneously, perform calculations of hemodynamic parameters, valve areas and cardiac output, archive procedure results and accept inputs from a variety of monitoring devices. The installed system can also include remote monitors/terminals and additional workstations and may interface with hospital-wide physiological monitoring or clinical information systems. The system includes several configurations in different locations. Database physical dimensions reflect the largest of these work centers. The estimated total 20 amp electrical requirements will be spread across several circuits in several locations. The system price varies greatly on the size and sophistication of the end user's requirements.
X1425	Imager, Laser (1024 X 1024) (Din/PACS)	1	V/V	Laser imager. Solid state laser that provides high resolution images of superior quality and accuracy. An infrared laser beam is scanned across each film by a precision rotating polygon, while correcting optics focus and control the beam's intensity. Can be interfaced to as many as eight (8) modalities with interface kit. For use with digital output imaging modalities.
X3150	Rack, Apron/Gloves, Wall Mounted	3	C/C	Apron and gloves rack. This is a wall unit which holds aprons and gloves. The body is heavy gauge steel finish in gray or green baked enamel, glove and apron holding arms are aluminum. The unit's convenient on wall storage will prolong the useful life of your protection aprons by helping prevent damage to internal components.
X4112	Console, PACS, Remote View, w/Two 2MP Monitors	1	V/V	Two monitor remote viewing station for picture archiving and retrieval (PACS) system. This station is for use by providers inside or outside of radiology to review images. Station includes local image storage, image manipulation, and simultaneous display of multiple images on two 1200 x 1600 image display monitors. Images are stored on a resident hard disk and roll off the disk as more recent images are sent to the station. Provider may request images from the PACS. Unit must be connected to the PACS by LAN for image and result receipt. This station is for use in areas like radiologist's offices and the E.R. where a more comprehensive system is required. Console must be DICOM compliant. Input may be by keyboard, mouse, trackball or voice activated commands.

**4.16. CARDIAC CATHETERIZATION LABORATORY (XCCE1)  
INTERVENTIONAL RADIOLOGY (IR) LABORATORY (XACR1)  
VASCULAR SURGERY LABORATORY (OPVL1)**

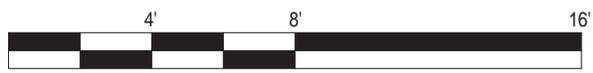


Axonometric  
850 NSF / 79,0 NSM

**4.16. CARDIAC CATHETERIZATION LABORATORY (XCCE1)  
INTERVENTIONAL RADIOLOGY (IR) LABORATORY (XACR1)**



SCALE: 3/16" = 1'-0"



**Floor Plan**  
850 NSF / 79,0 NSM

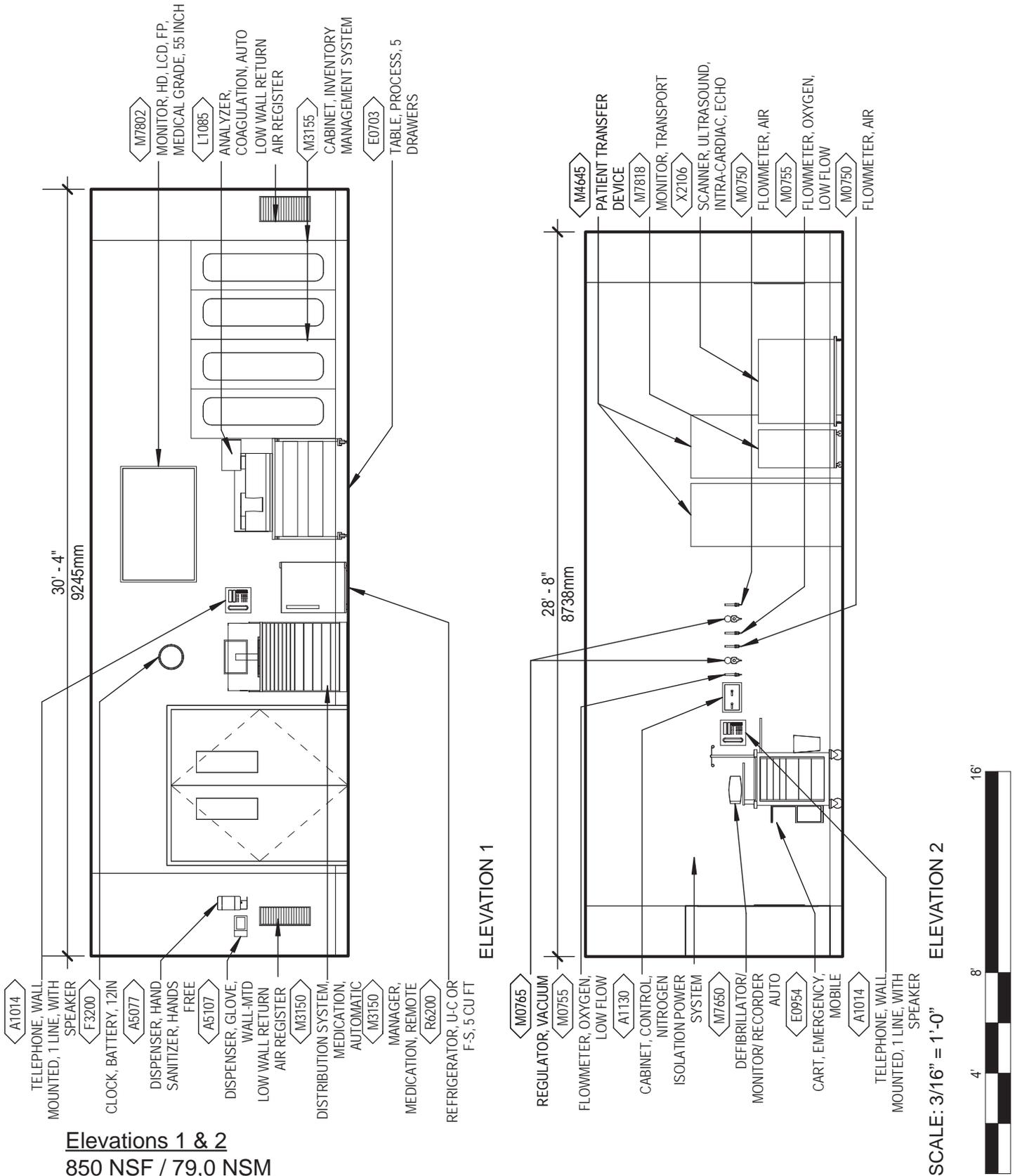


#### 4.16. CARDIAC CATHETERIZATION LABORATORY (XCCE1) INTERVENTIONAL RADIOLOGY (IR) LABORATORY (XACR1)

##### JSN Legend

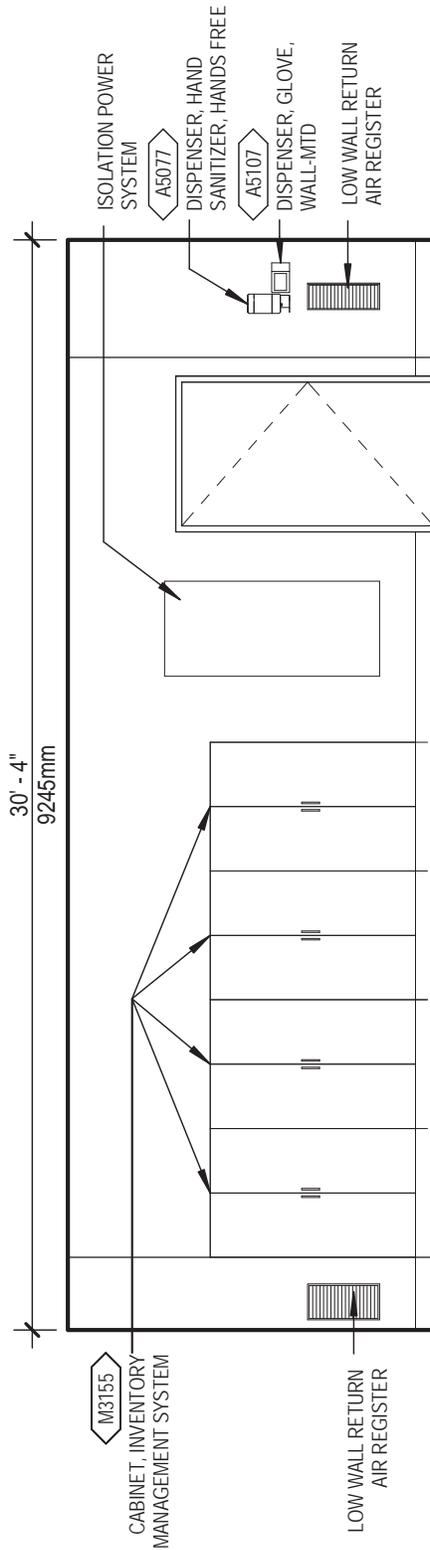
JSN	DESCRIPTION	
		M7802 MONITOR, HD, LCD, FP, MEDICAL GRADE, 55 INCH
A1014	TELEPHONE, WALL MOUNTED, 1 LINE, WITH SPEAKER	M7818 MONITOR, TRANSPORT
A1122	COLUMN, EQUIPMENT ARM, CEILING MOUNTED, SURGERY	M7860 MONITORING SYSTEM, CARDIAC CATHETERIZATION LAB
A1130	CABINET, CONTROL, NITROGEN	M8800 CART, ANESTHESIA
A5077	DISPENSER, HAND SANITIZER, HANDS FREE	M8810 STAND, MAYO
A5104	CART, WASTE DISPOSAL, MOBILE W/ FOOT PEDAL	M8825 TABLE, INSTRUMENT/DRESSING
A5107	DISPENSER, GLOVE, WALL-MTD	M8826 TABLE, INSTRUMENT/DRESSING CRS, 60X24X34
A5212	BRACKET, TELEVISION, WALL-MTD, TILT/ANGLE	M8940 STOOL, ANESTHESIA, WITH BACK
E0703	TABLE, PROCESS, 5 DRAWERS	R6200 REFRIGERATOR, U/C OR F/S, 5 CU FT
E0954	CART, EMERGENCY, MOBILE	U0100 OR INTEGRATION
F0355	FOOTSTOOL, STRAIGHT	X2106 SCANNER, ULTRASOUND, INTRA-CARDIAC ECHO
F2020	CAN, TRASH, 44 GALLON	X2125 SCANNER, ULTRASOUND, PORTABLE
F3050	WHITE BOARD, DRY ERASE	X6190 RADIOGRAPHIC/FLOURO UNIT, CARDIAC, 100kW, DIGITAL
F3200	CLOCK, BATTERY, 12IN	X6195 INJECTOR, ANGIOGRAPHIC
L0220	ANALYZER, HEMOGLOBIN, PORTABLE, HAND HELD	
L1085	ANALYZER, COAGULATION, AUTO	
M0750	FLOWMETER, AIR"	
M0755	FLOWMETER, OXYGEN, LOW FLOW	
M0765	REGULATOR, VACUUM	
M1801	COMPUTER, MICROPROCESSING W/ FLAT PANEL MONITOR	
M3070	HAMPER, LINEN	
M3072	FRAME, INFECTIOUS WASTE BAG W/LID	
M3150	DISTRIBUTION SYSTEM, MEDICATION, AUTOMATIC	
M3155	CABINET, INVENTORY MANAGEMENT SYSTEM	
M3175	ELECTROSURGICAL UNIT, DUAL OUPUT	
M4250	PUMP SYRINGE, INFUSION	
M4255	STAND IV	
M4266	PUMP, VOLUMETRIC, INFUSION, MULTIPLE LINES	
M4645	PATIENT TRANSFER DEVICE	
M4812	PACEMAKER, SINGLE CHAMBER, ETERNAL, TEMPORARY	
M7480	LIGHT, SURGICAL, CEILING, SINGLE, MEDIUM	
M7650	DEFIBRILLATOR/ MONITOR/ RECORDER AUTO	
M7801	MONITOR, HD, LCD, FP, MEDICAL GRADE, 26 INCH	

**4.16. CARDIAC CATHETERIZATION LABORATORY (XCCE1)  
INTERVENTIONAL RADIOLOGY (IR) LABORATORY (XACR1)**

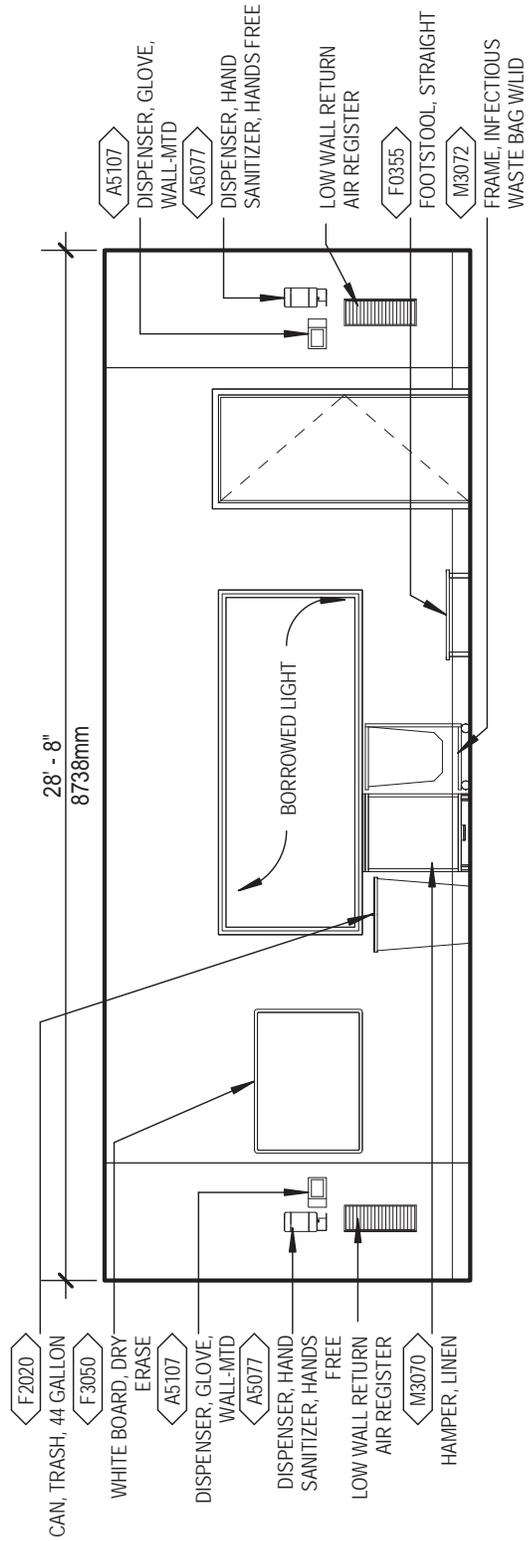


**Elevations 1 & 2**  
850 NSF / 79,0 NSM

**4.16. CARDIAC CATHETERIZATION LABORATORY (XCCE1)  
INTERVENTIONAL RADIOLOGY (IR) LABORATORY (XACR1)**



ELEVATION 3



ELEVATION 4

SCALE: 3/16" = 1'-0"



Elevations 3 & 4  
850 NSF / 79,0 NSM

## 4.16. CARDIAC CATHETERIZATION LABORATORY (XCCE1) INTERVENTIONAL RADIOLOGY (IR) LABORATORY (XACR1)

### Room Data Sheet

#### ARCHITECTURAL

Ceiling Type:	Gypsum Wallboard (SC)
Ceiling Height:	10'-2" (3048 mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	RF Integral Base (min. 6"/152 mm)
Floor Finish:	Resinous Flooring
Slab Depression:	As required by imaging modality manufacturer
Sound Protection:	50 STC (to other room), 35 STC (to corridor)
Doors:	Double, Size 6'-0" x 7'-0" (1829 mm x 2133 mm) Wood w/ Narrow View Window; Single, Size 4'-0" x 7'-0" (1219 mm x 2133 mm) Wood w/ Small View Window

Special Requirement:

#### Notes:

- 1) Shielding is to be provided in all walls, windows and doors.
- 2) Locate access panels as required to allow for the maintenance of surgical booms and lights in facilities without interstitial space. Min. size to be 24" x 24".
- 3) Nominal wall thickness is shown at 8" (203 mm) to account for a variety of wall-mounted panels, such as isolation power unit panels, that require a thicker partition.
- 4) Include wall extensions at both sides of the scrub sink to protect the scrub sinks from cart and stretcher traffic in the semi-restricted corridor.
- 5) Coordinate structural supports, utility connections and other requirements for surgical lighting pendants with manufacturer.
- 6) Facility will select number and types of scopes and other instrumentation as necessitated by the unique case load.

7) Wall-mounted gases are to be located away from the parking space for the Radiographic/Fluoro Unit. This location will vary by manufacturer and model.

8) A toe view of the table is most desirable from the control room. When space constraints require a different configuration, a lateral view is to be pursued. Care should be taken to locate the monitor bank away from the view window. In a typical equipment configuration this places the patient's right side next to the window to the Control Room.

9) X-Ray in use signs are to be mounted above all doors into the room.

10) Lead apron storage is to be located in the path of staff travel. Suggested locations are inside the control room and in the semi-restricted corridor just outside the room's doors.

11) NSF provided for this space is the minimal acceptable NSF; contact Facilities Standards Services for any deviations.

#### LIGHTING

Refer to the VA Lighting Design Manual section 4.2.13 - Surgery/Operating Room - for lighting design consideration.

## 4.16. CARDIAC CATHETERIZATION LABORATORY (XCCE1) INTERVENTIONAL RADIOLOGY (IR) LABORATORY (XACR1)

### Room Data Sheet (continued)

Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No

Special Requirement:

#### Notes:

1) Provide connections for articulating utility columns.

2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

### POWER

Normal Power:	Connect selected receptacles and equipment to Normal power IPS.
Emergency Power:	Connect selected receptacles and equipment to Critical Branch emergency IPS.

#### Notes:

- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
- 2) IPS Power & ground modules mounted at +24" AFF
- 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
- 4) Provide power connections for articulating utility columns.

### HEATING, VENTILATING AND AIR CONDITIONING

General Requirement: Refer to data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization

#### Notes:

- 1) Refer to the HVAC Design Manual for number and location of low air return grilles.
- 2) Room does not contain multiple slot diffusers and uses laminar flow perforated face outlets only for supply air.
- 3) Suggested minimum laminar flow array over the entire sterile field area as imaging equipment gantry creates excessive turbulence. Mechanical design engineer shall be responsible to design the array in such manner as to minimize turbulence and to maintain the sterile aseptic field.

### COMMUNICATIONS

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes

#### 4.16. CARDIAC CATHETERIZATION LABORATORY (XCCE1) INTERVENTIONAL RADIOLOGY (IR) LABORATORY (XACR1)

##### Room Data Sheet (continued)

###### **PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	Yes (4)
Medical Vacuum	Yes (4)
Oxygen	Yes (4)
Special Requirement:	

###### Notes:

- 1) For gas quantities per boom refer to the reflected ceiling plan.
- 2) Provide Nitrogen (2).
- 3) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the room it serves.

###### **FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

#### 4.16. CARDIAC CATHETERIZATION LABORATORY (XCCE1) INTERVENTIONAL RADIOLOGY (IR) LABORATORY (XACR1)

##### Equipment List

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A1014	Telephone, Wall Mounted, 1 Line, With Speaker	1	C / C	Telephone, wall mounted, 1 line, with speaker.
A1122	Column, Equipment Arm, Ceiling Mounted, Surgery	2	C / C	A ceiling mounted retractable equipment arm for use in the OR. Designed to provide equipment placement support, power receptacles including low-voltage panels, gas outlets and flat screen mounting for a surgical suite. Unit will provide a range of motion of up to 330 degrees with arm providing additional vertical movement. Units are custom configured with multiple options available. Price is based on a unit with two (double) retractable arms. Also available are units for use in anesthesia, ICU and ER.
A1130	Cabinet, Control, Nitrogen	2	C / C	Nitrogen control cabinet. Unit consists of supply cut-off valve, supply pressure gauge, pressure regulator (adjustable 0 to 200 PSI), outlet pressure gauge, nitrogen outlet and connection to surgical gas column. Specify recessed or surface mounting. Designed for powering surgical pneumatic tools.
A5077	Dispenser, Hand Sanitizer, Hands-Free	2	V / V	A touch free wall-mounted hand sanitizer dispenser. For use throughout a healthcare facility. Unit does not include the sanitizing liquid. Units are battery operated.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	2	V / V	Examination glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Provided with wall bracket to facilitate mounting and demounting.
A5212	Bracket, Television, Wall-Mounted, Tilt/ Angle	1	V / V	A wall mounted, tilt/angled TV bracket for 37" to 80" TVs. Mount will be a universal and VESA compliant unit with a load capacity of up to 130 lbs.
E0703	Table, Process, Adj Height, 5 Drawer, 48"W x 24"D	1	V / V	Height adjustable table. The table top is available in a plastic laminate or chemical resistant material (Chem-Surf). Casters or glides are options with some tables. All tables will accept various storage components underneath. These work surfaces are available in 24" or 30" depth. THIS TYPICAL INCLUDES: 1 height adjustable table; 1 storage frame; 3 drawers, 3"H; 1 drawer, 6"H; 1 drawer, 9"H and drawer organizer bins.

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
E0954	Cart, Emergency, Mobile, 66"H x 32"W x 22"D	1	V / V	THIS TYPICAL INCLUDES: 1 Cart body, style-A narrow, w/raised edge top 1 Accessory rail, side 1 Accessory rail, back 1 Defibrillator tray 1 IV pole 1 Breakaway bar 1 Flip-up shelf 1 Wastebasket 1 Oxygen tank holder 1 Electrical box-4 outlet 1 Cord wrap 4 Drawer, 3"H 3 Drawer, 6"H Drawer organizer bins.
F0355	Footstool, Straight	1	V / V	Step stool. Used to assist patients getting on and off exam or surgical tables. Fitted with electrically conductive rubber tips.
F2020	Can, Trash, 44 Gallon	1	V / V	Forty four (44) gallon trash can, 32" high X 24" diameter, with lid. Used to collect and transport refuse from a point of origin to point of disposal (example: from soiled utility or a nursing unit to the trash compactor at housekeeping).
F3050	Whiteboard, Dry Erase	1	C / C	Whiteboard unit, approximately 36" H x 48" W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
F3200	Clock, Battery, 12" Diameter	1	V / V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
L0220	Analyzer, Hemoglobin, Portable, Hand Held	1	V / V	A portable, hand held analyzer for testing hemoglobin. The analyzer will achieve precision and accuracy comparable to a central laboratory. The unit will be battery operated.
L1085	Analyzer, Coagulation, Automatic	1	V / V	Automatic coagulation analyzer. The unit performs on-site blood coagulation tests, prothrombin time (PT), and partial thromboplastin time (PTT) tests on whole blood or plasma samples. The analyzer employs both single and duplicating or stat testing capabilities.

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M0750	Flowmeter, Air, Connect w/50 PSI Supply	4	V / V	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Requires the appropriate adapter for connection to the wall outlet and fitting to connect to tubing. Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0755	Flowmeter, Oxygen, Low Flow	4	V / V	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Database pricing includes DISS fitting and DISS power outlet and wall adapter. Other fitting and adapter configurations are available.
M0765	Regulator, Vacuum	4	V / V	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required. To be used in delivery, neonatal, pediatrics or any area where suction is required. Database pricing reflects continuous regulators graduated to 200 mm Hg with a full line vacuum selection switch and DISS configured inlets and outlets.
M1801	Computer, Microprocessing, w/Flat Panel Monitor	1	V / V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
M3070	Hamper, Linen, Mobile, w/Lid	1	V / V	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters. For linen transport in hospitals and clinics.
M3072	Frame, Infectious Waste Bag w/Lid	1	V / V	Frame for an infectious waste collection bag. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Adjust to hold 18" or 25" trash bags. Mounted on ball bearing casters and includes permanently mounted hinged lid. Provides means of bagging infectious waste at point of waste generation.
M3150	Distribution System, Medication, Automatic	1	V / V	An automated dispensing system that provides controlled dispensing, inventory and security. Size and cost will vary dependent on number of modules selected.

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M3155	Cabinet, Inventory Management System	6	V / V	Inventory Management System Supply Cabinet configurable, with or without wheels, half or full height .
M3175	Electrosurgical Unit, Dual Output	1	V / V	Dual output electrosurgical unit. Solid state power source with foot switch jacks, monopolar and bipolar outputs, and four independent modes of operation. Used in the operating room or surgicenter as an alternative to the scalpel for cutting tissue.
M4250	Pump, Syringe, Infusion	1	V / V	The infusion syringe pump ensures highly accurate volume delivery and consistent flow for small volumes (<50 ml) of pharmacologic agents or thick feeding solutions. It shall be small, lightweight construction, making it transportable. Shall have menu-driven programming capable of flow rates (e.g. 0.1 or 1.0 mL/hr) that are intended for long-term bedside use and/or critical care patient transport, plunger positioning sensor, LCD display for easy viewing, volume limit programming to serve as a convenient cue of volume or dose delivery completion and multiple delivery modes for all applications requiring precisely controlled infusion rates. The infusion pump shall have automatic syringe size sensing which will give the flexibility to accept a wide range of syringe sizes (up to 60 mL) from different manufacturers. Shall be battery powered/AC adapter.
M4255	Stand, IV, Adjustable	2	V / V	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.
M4266	Pump, Volumetric, Infusion, Multiple Line	2	V / V	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.
M4645	Patient Transfer Device	2	V / V	A patient transfer board designed to make lateral patient transfers safer for staff and be more comfortable for the patients. The board uses a smooth, low friction and static free surface to eliminate the need for metal rollers. The board has a soft foam core that makes them lightweight for ease of use and storage. The long board device also enables the transfer of a patient in the seated or Fowler position. The boards come in three sizes with the long board being foldable. The dimensions and price are for the long wide board.

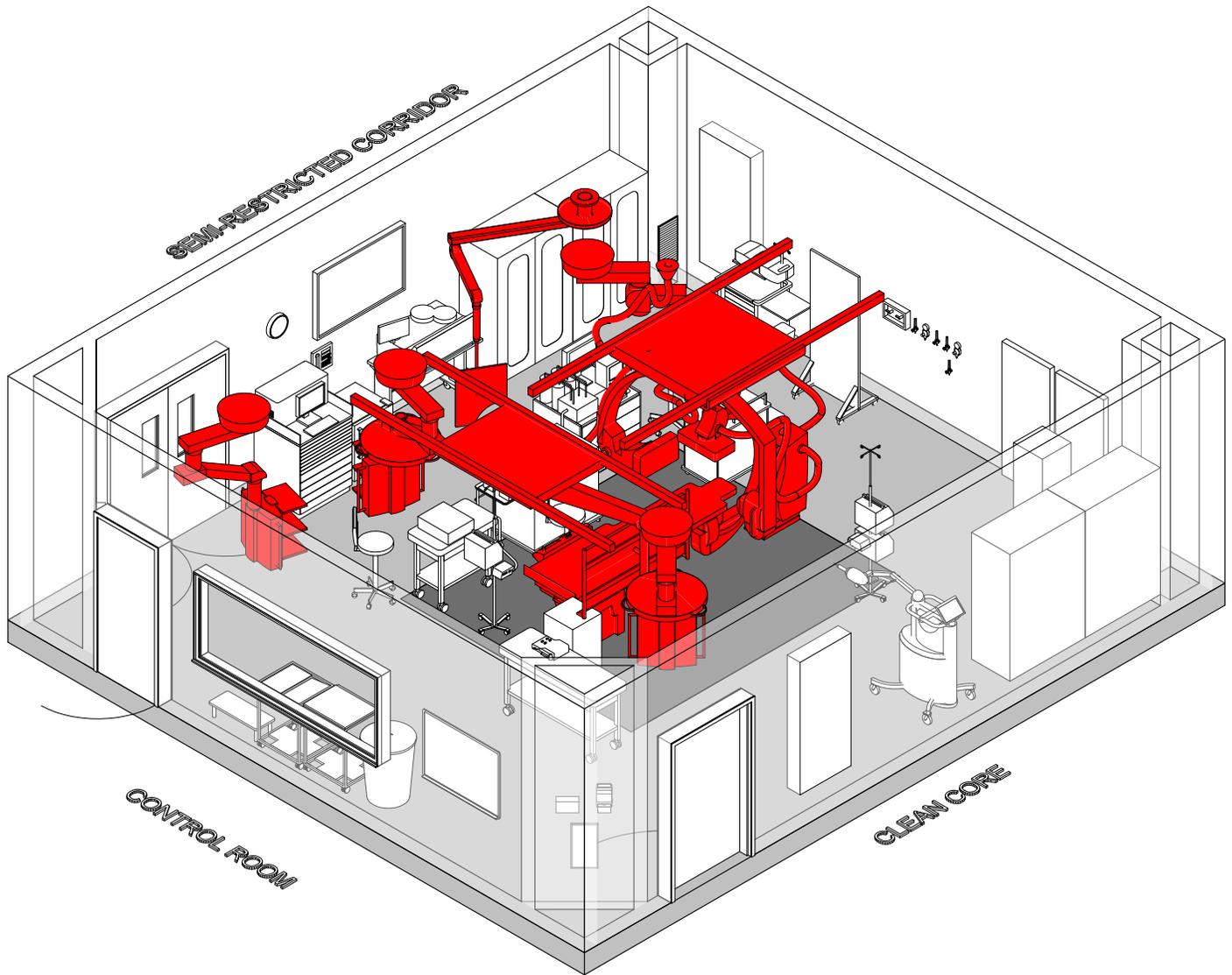
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M4812	Pacemaker, Single Chamber, External, Temporary	2	V / V	A single chamber, external temporary pacemaker designed to provide acute therapeutic, prophylactic, and diagnostic pacing support. It is capable of operating in the demand or asynchronous modes and includes adjustable rate, output, and sensing controls. Battery operated.
M7480	Light, Surgical, Ceiling Mounted, Single, Medium	1	C / C	Single ceiling mounted surgical light with a light head diameter generally between 21" and 30" depending on the manufacturer. The light is mounted from a pole extending down from the ceiling and then from a pivotal arm assembly that rotates 360 degrees. It includes a variable intensity control and sterile focus handle. The minimum ceiling height for most models is 8'-9"; check the manufacturers' specific recommendations. The database height dimension below refers to the lamp head housing itself. Width and depth are the length of the swing arm plus the diameter of the light head. This light can be used for both minor and major surgical procedures.
M7650	Defibrillator/Monitor, Acute Care	1	V / V	Portable defibrillator/monitor for acute care includes biphasic defibrillator, pacing, SPO2, Interpretive 12-lead, NIBP monitoring, EtCO2 monitoring, Invasive pressure monitoring, Vital Sign monitoring, temperature probe, Fax transmission, PCMCIA Data Cards, Paddle accessories, and a color LCD.
M7801	Monitor, HD, LCD, FP, Medical Grade, 26 inch	4	V / V	High Definition Monitor for Integration into OR System. Located as part of Light or Boom system or to be wall mounted. 26" Monitor mounted on boom arms or off of Ceiling mounted arms. Exact configuration of the Monitor, inputs and outputs should be verified that it meets project requirements.
M7802	Monitor, HD, LCD, FP, Medical Grade, 55 inch	1	V / V	High Definition Monitor for Integration into OR System. Located as part of Light or Boom system or to be wall mounted. 55" Monitor Wall Mounted. Exact configuration of the Monitor, inputs and outputs should be verified that it meets project requirements.
M7818	Monitor, Transport	1	V / V	A light weight, rugged patient monitor for use during transport. Unit consists of a compact monitor with touchscreen display with up to 3 waveforms on a on a bright non-fading display. The unit measures ECG/ respiration, NBP, SpO2, pressure, and temperature and CO2. Data can be transferred seamlessly throughout the continuum of care. Unit is approved for aeromedical use (US Army Airworthiness Certification and Evaluation (ACE) program. Battery run time of 3 hours before recharge.

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M7845	Monitor, Physiological, Bedside, 4 Channel	1	V / V	4 channel bedside physiological monitor. The unit consist of a four-channel non-fade monochrome display monitor, an alarm system and printer-recording capabilities. The monitor has color coded controls and automatic calibration. The unit displays up to four waveforms simultaneously. The parameters to be monitored are user selectable. The monitor may be connected to a central monitoring station. The unit monitors patients in most acute care areas, step-down units, procedure rooms and emergency rooms.
M7860	Monitoring System, Cardiac Catheterization Lab	1	V / V	Computerized monitoring system for use in cardiac catheterization labs and cardio-thoracic operating rooms. The system can display up to 32 different waveforms simultaneously, perform calculations of hemodynamic parameters, valve areas and cardiac output, archive procedure results and accept inputs from a variety of monitoring devices. The installed system can also include remote monitors/terminals and additional workstations and may interface with hospital-wide physiological monitoring or clinical information systems. The system includes several configurations in different locations. Database physical dimensions reflect the largest of these work centers. The estimated total 20 amp electrical requirements will be spread across several circuits in several locations. The system price varies greatly on the size and sophistication of the end user's requirements.
M8800	Cart, Anesthesia	1	V / V	Mobile anesthesia cart. The cart shall be built of stainless steel or other appropriate material and mounted on 4" casters for easy mobility. It shall be capable of being equipped with bottle holders, adjustable IV pole, storage drawers, shelves and a top bar/rail.
M8810	Stand, Mayo	1	V / V	Adjustable instrument table. Table is corrosion resistant stainless steel construction and is mounted on two casters with two skid rails. It has telescopic upright adjusts from 39 inches to 60 inches with automatic locking device, and removable 13"x19" instrument tray. Designed for use in operating and procedure rooms.
M8825	Table, Instrument/Dressing, CRS, approx. 36x20x34	1	V / V	Instrument and dressing table. Made of corrosion resistant stainless steel with a sound deadened top. Includes guard rail, shelf and two side-by-side drawers. The table is mounted on swivel, ball-bearing casters.
M8826	Table, Instrument/Dressing CRS, approx 60 x 24 x 34	1	V / V	Stainless steel instrument table with shelf and 3" rubber, double ball bearing casters.

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M8940	Stool, Anesthesia, With Back	3	V / V	Anesthesia stool with back. All stainless steel with well-curved back panel and wide conductive seat. Designed for the anesthesiologist during surgical procedures.
R6200	Refrigerator, U/C or F/S, 5 Cu Ft	1	V / V	Utility refrigerator approximately 35" H x 24" W x 26" D. The unit has a two tray ice cube cooling system. The refrigerator fits standard architectural dimensions for undercounter installation. The unit is perfect for use in nurses' station, wards, and laboratories, pharmacies or wherever space is limited.
S9755	Suction System, Surgical, Mobile Rover Unit	1	V / V	One-handed disposal. Lids lift or slide open easily with foot-operated pedal. Lids may remain closed when not in use to reduce exposure to contents and Type 1 violations. Ergonomic handle is telescopic when transporting and retractable when stationary. Heavy containers can be removed from the side with minimal lifting. OSHA 29 CFR 1910.130, "During use, sharps disposal containers must be maintained upright throughout use".
U0100	Integrated Operating Room System, Allowance	1	V / V	Allowance for Integrated System for each Operating Room, Hybrid Operating Room. Cath Lab or EP room. Requirements are defined on a project by project basis. Integration provides visual image, patient information and communication management. Integration can also include the control of some equipment settings and environment settings such as lighting.
X2106	Scanner, Ultrasound, Intra-Cardiac Echo	1	V / V	A portable cardiovascular ultrasound with full diagnostic and monitoring capabilities. The unit employs phased-array transducer technology for 2D, color and Doppler imaging. It will have multiple focal zones to optimize image quality. The unit will have an integrated EchoPAC with data review, analysis, patient archive and reporting capabilities. It will have full DICOM connectivity with embedded raw data speeds allowing for post-exam quantitative analyses at the users convenience. The rechargeable battery will provide up to 1 hour of full scan operation.
X2125	Scanner, Ultrasound, Portable	1	V / V	A portable diagnostic ultrasound scanner system configured for various applications, ease-of-use and high performance for enhanced efficiency and accuracy. The scanner is applicable for use in a wide variety of hospital and office environments including ER, breast surgery, anesthesia, vascular, interventional radiology and critical care. The system features a high quality color doppler ultrasound for imaging.

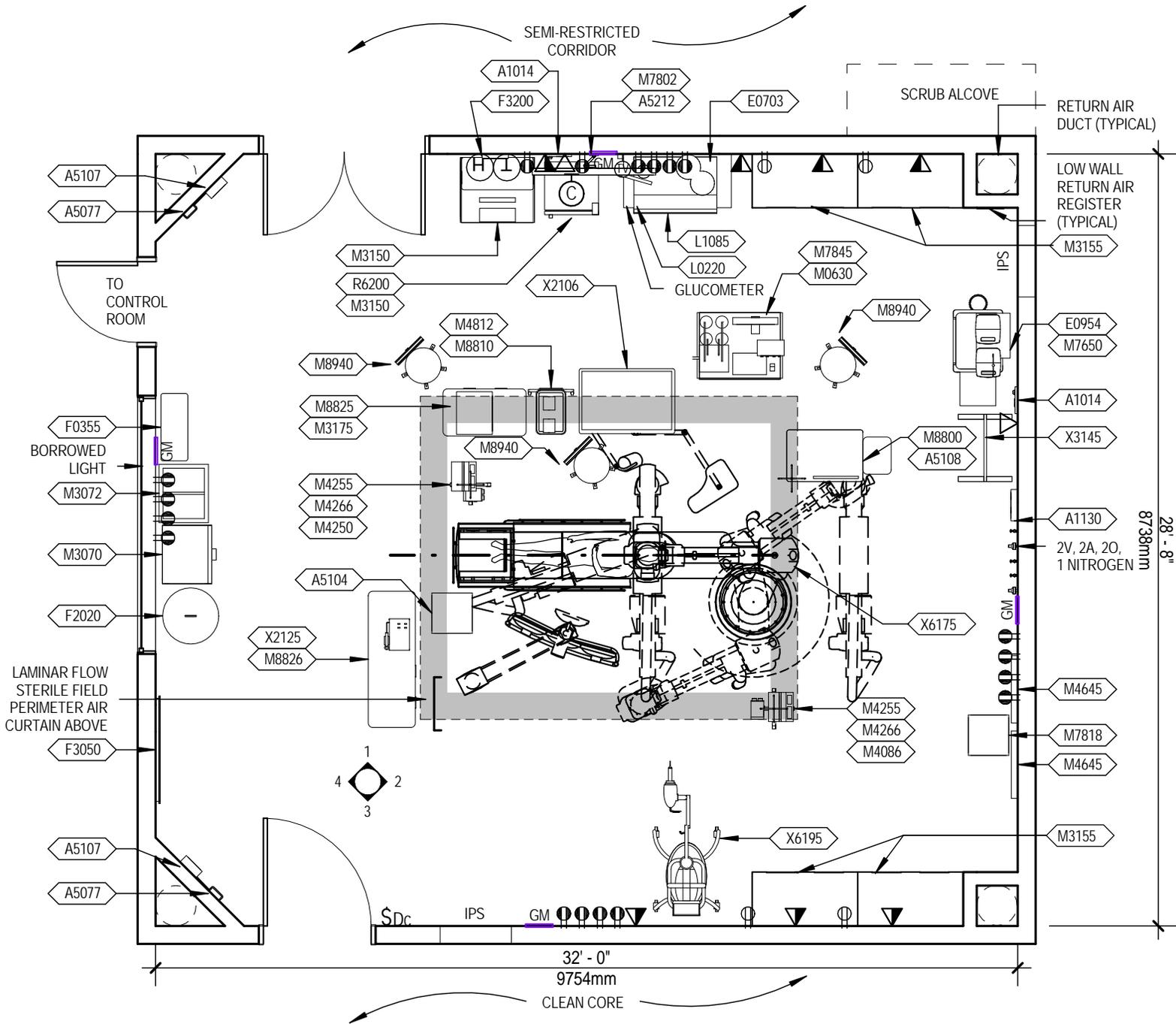
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
X6190	Radiographic/Fluoro Unit, Cardiac, 100 kW, Digital	1	V / V	This system is specifically designed to perform bi-plane radiographic/fluoroscopic examinations in the Cardiology Department. On-line digital cardiac image processing will provide instant availability of images for review. This units characteristics and components include 100 kW micro-processor controlled X-ray generators, C-arm and U arm with 9" multi-field Image Intensifier, integrated X-ray tube unit and cine camera. The Digital Imaging for both the AP and Lateral planes shall consists of a computer, keyboard with acquisition, viewing monitor, and slave monitor. The system shall be DICOM 3.0 compatible, for easy linkage to filmless image management systems and review stations. It is recommended that the TV monitors be ceiling suspended. System to be procured with Cardiac Cath Lab computerized analysis/monitoring system.
X6195	Injector, Angiographic	1	V / V	Angiographic injector. This unit is a specialized radiographic procedure that provides sharp, well-defined visual images of the vascular anatomy. The injector introduces a vision radiopaque fluid (contrast medium) into an artery or vein through a small catheter, making vessels contrast with their more radiolucent surrounding. The unit incorporates an electromechanical or pneumatic driven syringe to deliver the contrast medium. The syringe assemblies consist of an electric motor connected to a jackscrew that moves the syringe piston into or out of the syringe barrel. The unit is used in hospitals with radiographic procedures. Specify if unit is to be pedestal, ceiling, wall or table mounted when ordering.

### 4.17. PROCEDURE ROOM, ELECTROPHYSIOLOGY (XCEP1)



Axonometric  
900 NSF / 83,7 NSM

### 4.17. PROCEDURE ROOM, ELECTROPHYSIOLOGY (XCEP1)

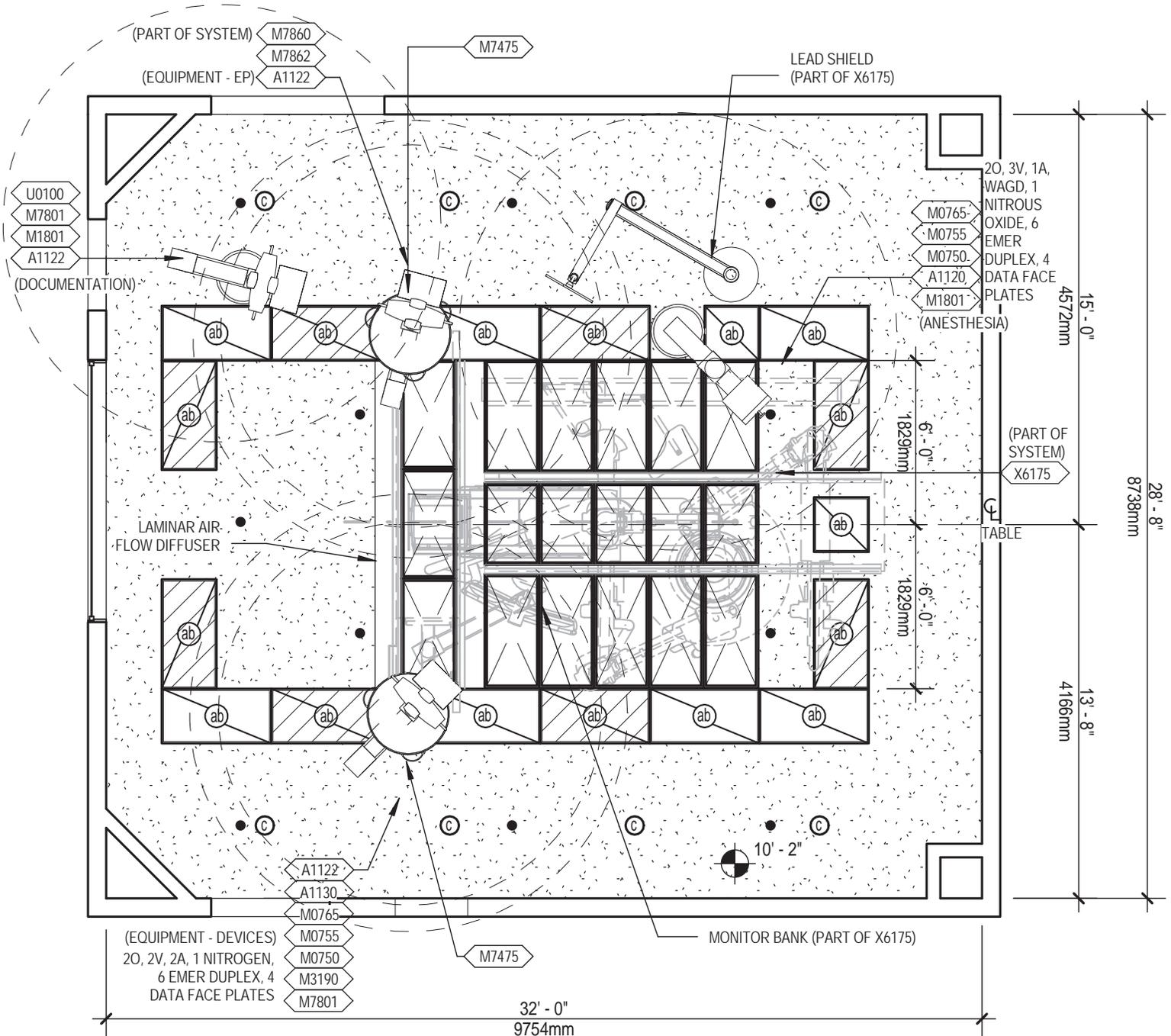


SCALE: 3/16" = 1'-0"



Floor Plan  
900 NSF / 83,7 NSM

4.17. PROCEDURE ROOM, ELECTROPHYSIOLOGY (XCEP1)



SCALE: 3/16" = 1'-0"

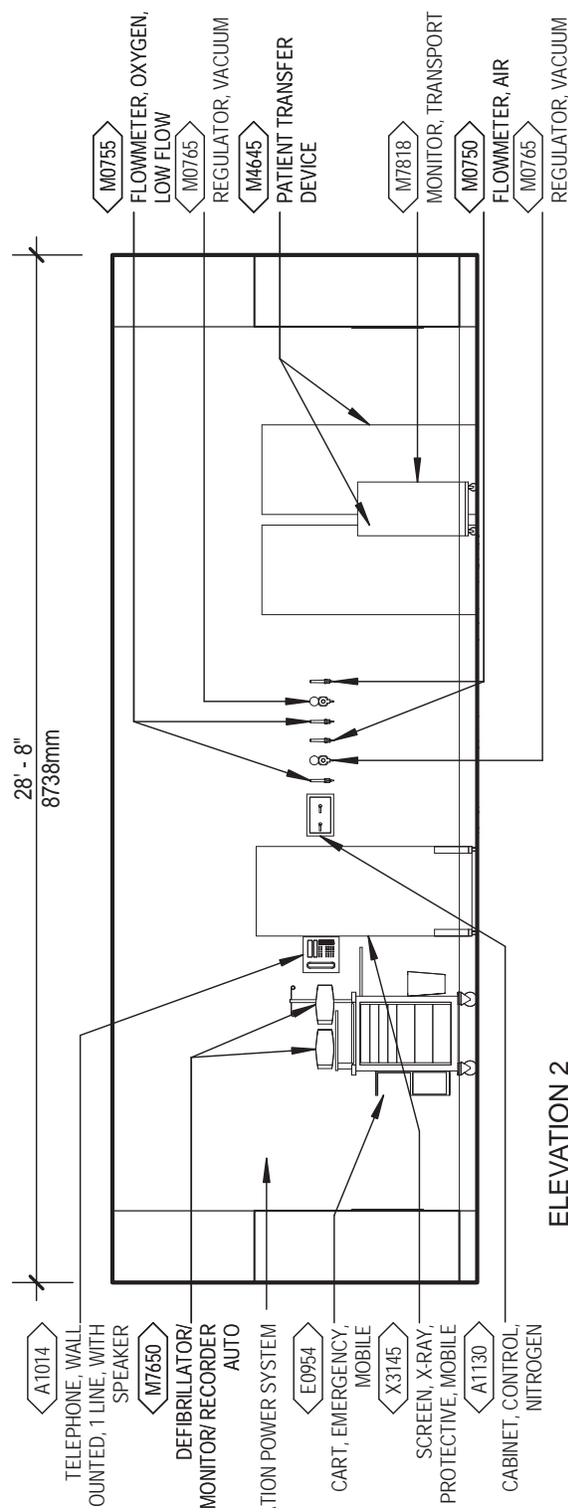
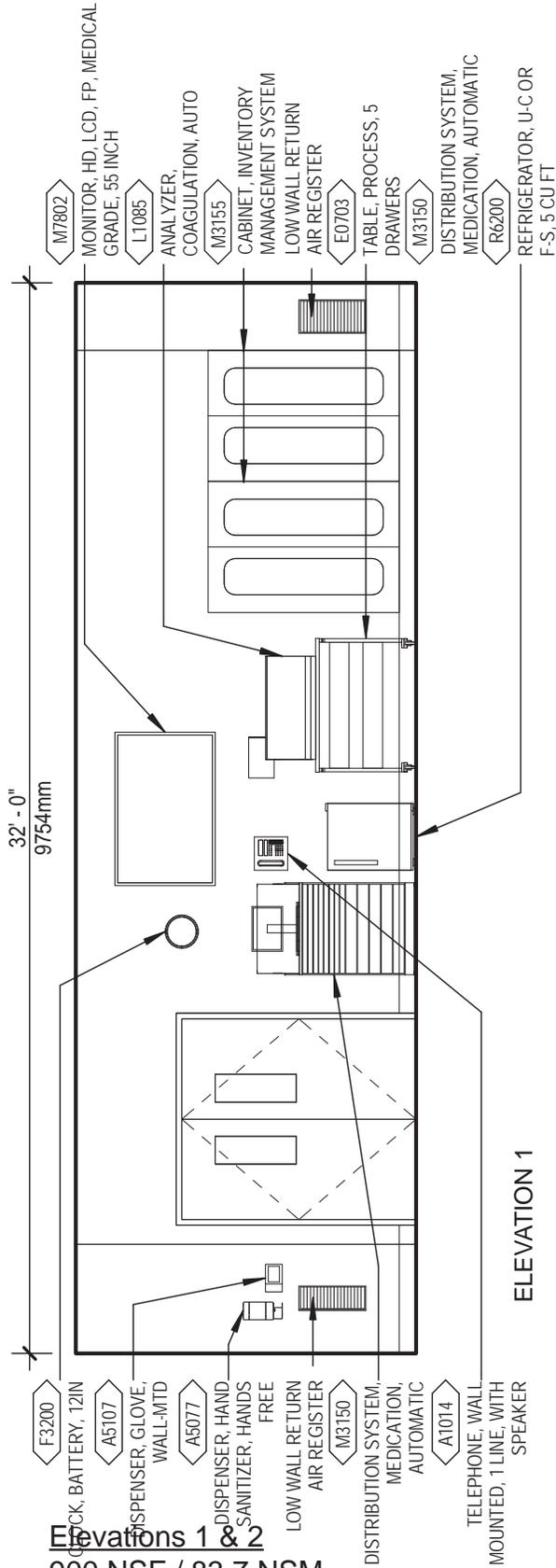


Reflected Ceiling Plan  
 900 NSF / 83,7 NSM

**4.17. PROCEDURE ROOM, ELECTROPHYSIOLOGY (XCEP1)**JSN Legend

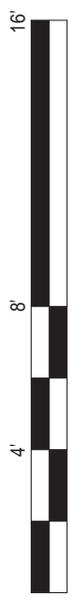
JSN	DESCRIPTION		
		M4806	CONTROLLER, HEART PUMP CATHETER
A1012	TELEPHONE, WALL MOUNTED, 1 LINE	M4812	PACEMAKER, SINGLE CHAMBER, EXTERNAL, TEMPORARY
A1014	TELEPHONE, WALL MOUNTED, 1 LINE, WITH SPEAKER	M7480	LIGHT, SURGICAL, CEILING MTD, SINGLE, MEDIUM
A1120	COLUMN, SERVICE, PREFAB, SURGICAL, CEILING MOUNTED	M7650	DEFIBRILLATOR/ MONITOR/ RECORDER AUTO
A1122	COLUMN, EQUIPMENT ARM, CEILING MOUNTED, SURGERY	M7801	MONITOR, HD, LCD, FP, MEDICAL GRADE, 26 INCH
A1130	CABINET, CONTROL, NITROGEN	M7802	MONITOR, HD, LCD, FP, MEDICAL GRADE, 55 INCH
A5077	DISPENSER, HAND SANITIZER, HANDSFREE	M7818	MONITOR, TRANSPORT
A5104	CART, WASTE DISPOSAL, MOBILE W/ FOOT PEDAL	M7860	MONITORING SYSTEM, CARDIAC CATHETERIZATION LAB
A5106	WASTE DISPOSAL UNIT, SHARPS W/ GLOVE DISPENSER	M7862	NAVIGATION SYSTEM, ELECTROPHYSIOLOGY MAPPING
A5107	DISPENSER, GLOVE, WALL-MTD	M8800	CART, ANESTHESIA
A5212	BRACKET, TELEVISION, WALL-MTD, TILT/ANGLE	M8825	TABLE, INSTRUMENT/DRESSING
E0954	CART, EMERGENCY, MOBILE	M8826	TABLE, INSTRUMENT/DRESSING CRS, 60X24X34
F0355	FOOTSTOOL, STRAIGHT	M8940	STOOL, ANESTHESIA, WITH BACK
F2020	CAN, TRASH, 44 GALLON	R6200	REFRIGERATOR, U-C OR F-S, 5 CU FT
F3050	WHITE BOARD, DRY ERASE	U0100	OR INTEGRATION
F3200	CLOCK, BATTERY, 12IN	X2106	SCANNER, ULTRASOUND, INTRA-CARDIAC ECHO
L0220	ANALYZER, HEMOGLOBIN, PORTABLE, HAND HELD	X2125	SCANNER, ULTRASOUND, PORTABLE
L1085	ANALYZER, COAGULATION, AUTO	X3145	SCREEN, X-RAY, PROTECTIVE, MOBILE
M0630	ANESTHESIA APPARATUS, 3 GAS	X6175	RADIOGRAPHIC/FLUORO UNIT, ANGIO, BIPLANE, DIGITAL
M0750	FLOWMETER, AIR	X6195	INJECTOR, ANGIOGRAPHIC
M0755	FLOWMETER, OXYGEN, LOW FLOW		
M0765	REGULATOR, VACUUM		
M1801	COMPUTER, MICROPROCESSING W/FLAT PANEL MONITOR		
M3070	HAMPER, LINEN		
M3072	FRAME, INFECTIOUS WASTE BAG WLID		
M3150	DISTRIBUTION SYSTEM, MEDICATION, AUTOMATIC		
M3155	CABINET, INVENTORY MANAGEMENT SYSTEM		
M3175	ELECTROSURGICAL UNIT, DUAL OUTPUT		
M3190	GENERATOR, RF CARDIAC ABLATION		
M4250	PUMP SYRINGE, INFUSION		
M4255	STAND IV		
M4266	PUMP, VOLUMETRIC, INFUSION, MULTIPLE LINES		
M4645	PATIENT TRANSFER DEVICE		

4.17. PROCEDURE ROOM, ELECTROPHYSIOLOGY (XCEP1)

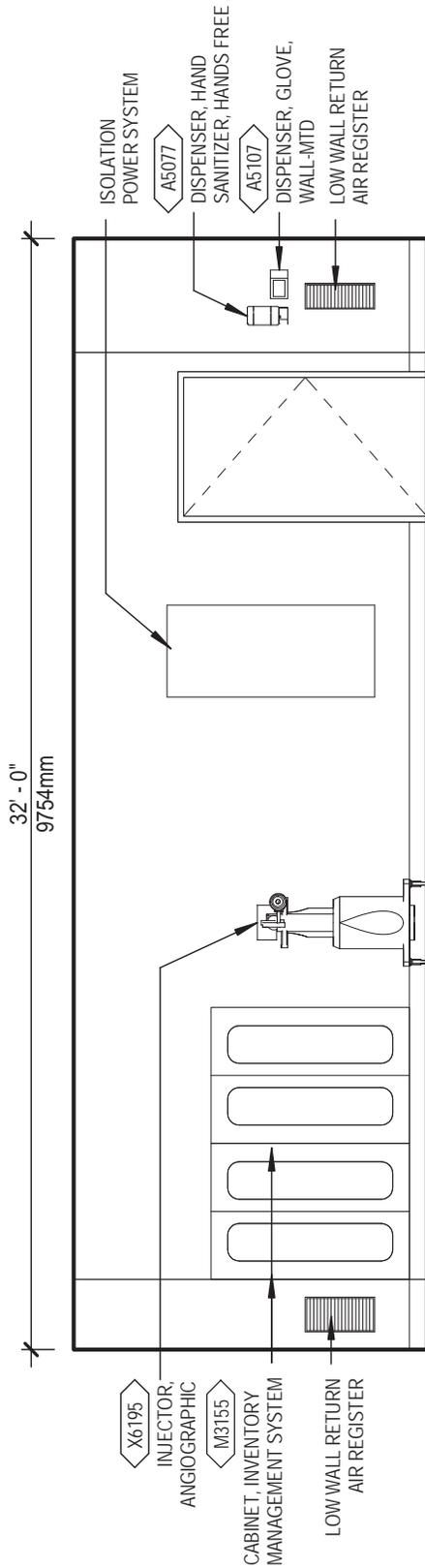


Elevations 1 & 2  
900 NSF / 83,7 NSM

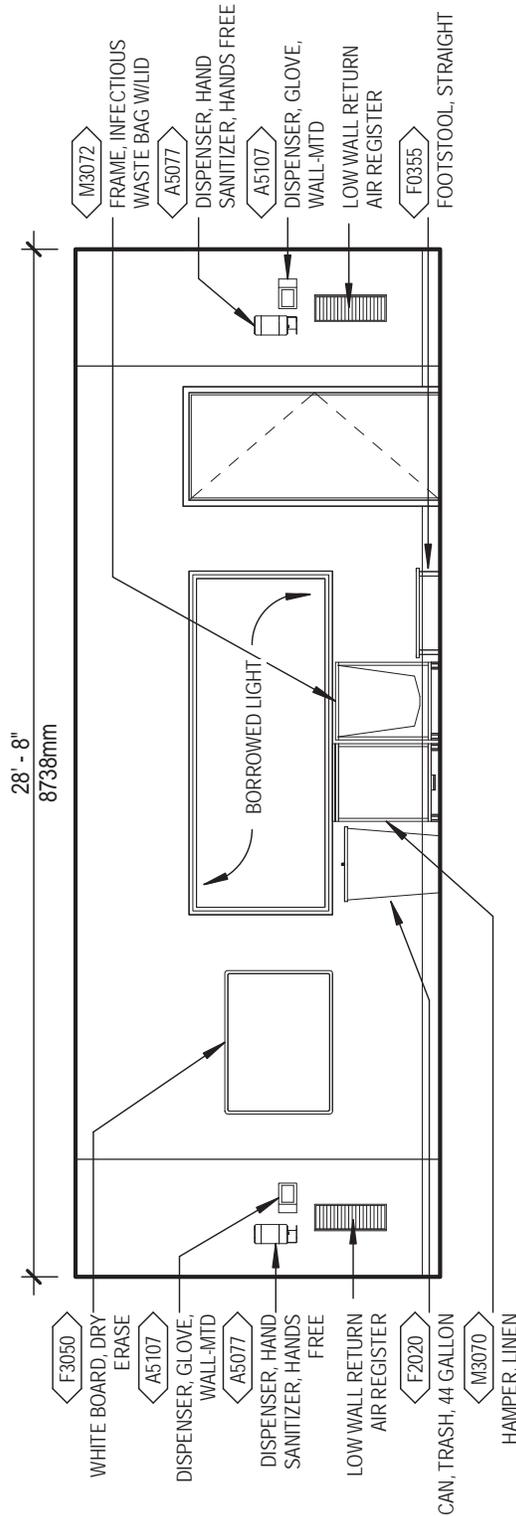
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4.17. PROCEDURE ROOM, ELECTROPHYSIOLOGY (XCEP1)



ELEVATION 3



ELEVATION 4

SCALE: 3/16" = 1'-0"



Elevations 3 & 4  
900 NSF / 83,7 NSM

**4.17. PROCEDURE ROOM, ELECTROPHYSIOLOGY (XCEP1)****Room Data Sheet****ARCHITECTURAL**

Ceiling Type:	Gypsum Wallboard (SC)
Ceiling Height:	10'-2" (3048 mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	RF Integral Base (min. 6"/152 mm)
Floor Finish:	Resinous Flooring
Slab Depression:	As required by imaging modality manufacturer
Sound Protection:	50 STC (to other room), 35 STC (to corridor)
Doors:	Double, Size 6'-0" x 7'-0" (1829 mm x 2133 mm) Wood w/ Narrow View Window; Single, Size 4'-0" x 7'-0" (1219 mm x 2133 mm) Wood w/ Small View Window

Special Requirement:

Notes:

- 1) Shielding is to be provided in all walls, windows and doors.
- 2) Locate access panels as required to allow for the maintenance of surgical booms and lights in facilities without interstitial space. Min. size to be 24" x 24".
- 3) Nominal wall thickness is shown at 8" (203 mm) to account for a variety of wall-mounted panels, such as isolation power unit panels, that require a thicker partition.
- 4) Include wall extensions at both sides of the scrub sink to protect the scrub sinks from cart and stretcher traffic in the semi-restricted corridor.
- 5) Coordinate structural supports, utility connections and other requirements for surgical lighting pendants with manufacturer.
- 6) Facility will select number and types of scopes and other instrumentation as necessitated by the unique case load.

7) 2 equipment booms can help keep EP items and devices separate. The facility can choose to locate both of these on the same boom if desired; a single boom is to be located for reach to either side of the table.

8) Consideration for cable management is to be given in locating connection boxes and outlets. Cables coiled on the floor shall be minimized to ease cleaning and maintain the aseptic environment.

9) Wall-mounted gases are to be located away from the parking space for the Radiographic/Fluoro Unit. This location will vary by manufacturer and model.

10) A toe view of the table is most desirable from the control room. When space constraints require a different configuration, an angled view is to be pursued. Care should be taken to locate the monitor bank away from the view window. In a typical equipment configuration this places the patient's right side next to the window to the Control Room.

11) X-Ray in use signs are to be mounted above all doors into the room.

12) Lead apron storage is to be located in the path of staff travel. Suggested locations are inside the control room and in the semi-restricted corridor just outside the room's doors.

13) This room supports implant cases and EP procedures. If additional procedures are projected for this room consideration shall be given to any additional equipment that may become necessary, for example a perfusion boom.

14) NSF provided for this space is the minimal acceptable NSF; contact Facilities Standards Services for any deviations.

**4.17. PROCEDURE ROOM, ELECTROPHYSIOLOGY (XCEP1)****Room Data Sheet (continued)****LIGHTING**

Refer to the VA Lighting Design Manual section 4.2.13 - Surgery/Operating Room - for lighting design consideration.

**Notes:**

- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
- 2) IPS Power & ground modules mounted at +24" AFF
- 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
- 4) Provide power connections for articulating utility columns.

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No

Special Requirement:

**Notes:**

- 1) Provide connections for articulating utility columns.
- 2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**POWER**

Normal Power:	Connect selected receptacles and equipment to Normal power IPS.
Emergency Power:	Connect selected receptacles and equipment to Critical Branch emergency IPS.

**4.17. PROCEDURE ROOM, ELECTROPHYSIOLOGY (XCEP1)****Room Data Sheet (continued)****HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization

Notes:

- 1) Refer to the HVAC Design Manual for number and location of low air return grilles.
- 2) Room does not contain multiple slot diffusers and uses laminar flow perforated face outlets only for supply air.
- 3) Suggested minimum laminar flow array over the entire sterile field area as imaging equipment gantry creates excessive turbulence. Mechanical design engineer shall be responsible to design the array in such manner as to minimize turbulence and to maintain the sterile aseptic field.

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	Yes (5)
Medical Vacuum	Yes (7)
Oxygen	Yes (6)

Special Requirement:

Notes:

- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen (2), Nitrous Oxide (1).
- 2) For gas quantities per boom refer to the reflected ceiling plan.
- 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project
- 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.17. PROCEDURE ROOM, ELECTROPHYSIOLOGY (XCEP1)**Equipment List

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
A1014	Telephone, Wall Mounted, 1 Line, With Speaker	2	C / C	Telephone, wall mounted, 1 line, with speaker.
A1120	Column, Service, Prefab, Surgical, Ceiling Mounted	1	C / C	Prefabricated surgical service column. Strong 18 gauge stainless steel shell ceiling mounted unit with the following services: oxygen, nitrous oxide, nitrogen, medical air, medical vacuum, gas evacuation, electrical outlets, monitoring connectors, and IV holders. Specify type of column (fixed or retractable) and number of outlets required for each service. Size will vary with number of service outlets required. Designed to be used in the operating room, recovery and ICU-CCU rooms.
A1122	Column, Equipment Arm, Ceiling Mounted, Surgery	3	C / C	A ceiling mounted retractable equipment arm for use in the OR. Designed to provide equipment placement support, power receptacles including low-voltage panels, gas outlets and flat screen mounting for a surgical suite. Unit will provide a range of motion of up to 330 degrees with arm providing additional vertical movement. Units are custom configured with multiple options available. Price is based on a unit with two (double) retractable arms. Also available are units for use in anesthesia, ICU and ER.
A1130	Cabinet, Control, Nitrogen	2	C / C	Nitrogen control cabinet. Unit consists of supply cut-off valve, supply pressure gauge, pressure regulator (adjustable 0 to 200 PSI), outlet pressure gauge, nitrogen outlet and connection to surgical gas column. Specify recessed or surface mounting. Designed for powering surgical pneumatic tools.
A5077	Dispenser, Hand Sanitizer, Hands-Free	2	V / V	A touch free wall-mounted hand sanitizer dispenser. For use throughout a healthcare facility. Unit does not include the sanitizing liquid. Units are battery operated.
A5104	Cart, Waste Disposal, Mobile w/Foot Pedal	1	V / V	One-handed disposal. Lids lift or slide open easily with foot-operated pedal. Lids may remain closed when not in use to reduce exposure to contents and Type 1 violations. Ergonomic handle is telescopic when transporting and retractable when stationary. Heavy containers can be removed from the side with minimal lifting. OSHA 29 CFR 1910.130, "During use, sharps disposal containers must be maintained upright throughout use".

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	2	V / V	Examination glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Provided with wall bracket to facilitate mounting and demounting.
A5108	Waste Disposal Unit, Sharps	1	V / V	A container for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
A5212	Bracket, Television, Wall-Mounted, Tilt/Angle	1	V / V	A wall mounted, tilt/angled TV bracket for 37" to 80" TVs. Mount will be a universal and VESA compliant unit with a load capacity of up to 130 lbs.
E0703	Table, Process, Adj Height, 5 Drawer, 48"W x 24"D	1	V / V	Height adjustable table. The table top is available in a plastic laminate or chemical resistant material (Chem-Surf). Casters or glides are options with some tables. All tables will accept various storage components underneath. These work surfaces are available in 24" or 30" depth. THIS TYPICAL INCLUDES: 1 height adjustable table; 1 storage frame; 3 drawers, 3"H; 1 drawer, 6"H; 1 drawer, 9"H and drawer organizer bins.
E0954	Cart, Emergency, Mobile, 66"H x 32"W x 22"D	1	V / V	THIS TYPICAL INCLUDES: 1 Cart body, style-A narrow, w/raised edge top 1 Accessory rail, side 1 Accessory rail, back 1 Defibrillator tray 1 IV pole 1 Breakaway bar 1 Flip-up shelf 1 Wastebasket 1 Oxygen tank holder 1 Electrical box-4 outlet 1 Cord wrap 4 Drawer, 3"H 3 Drawer, 6"H Drawer organizer bins.
F0355	Footstool, Straight	1	V / V	Step stool. Used to assist patients getting on and off exam or surgical tables. Fitted with electrically conductive rubber tips.
F2020	Can, Trash, 44 Gallon	1	V / V	Forty four (44) gallon trash can, 32" high X 24" diameter, with lid. Used to collect and transport refuse from a point of origin to point of disposal (example: from soiled utility or a nursing unit to the trash compactor at housekeeping).

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
F3050	Whiteboard, Dry Erase	1	C / C	Whiteboard unit, approximately 36" H x 48" W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
F3200	Clock, Battery, 12" Diameter	1	V / V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
L0220	Analyzer, Hemoglobin, Portable, Hand Held	1	V / V	A portable, hand held analyzer for testing hemoglobin. The analyzer will achieve precision and accuracy comparable to a central laboratory. The unit will be battery operated.
L1085	Analyzer, Coagulation, Automatic	1	V / V	Automatic coagulation analyzer. The unit performs on-site blood coagulation tests, prothrombin time (PT), and partial thromboplastin time (PTT) tests on whole blood or plasma samples. The analyzer employs both single and duplicating or stat testing capabilities.
M0630	Anesthesia Apparatus, 3 Gas	1	V / V	Three gas anesthesia apparatus. Basic unit consists of steel cabinet with casters with one shallow, one medium, and one deep drawer, seven long scale eleven-inch flowmeters, five cylinder yokes, and telescoping absorber post. It includes two-canister model carbon dioxide absorber with inhalation and exhalation check valves, switch valve, switch valve elbow, sidearm Vernitrol, flow calculator, mounting kit, ventilator calculator, ventilator and an oxygen piping inlet. Also features nitrous oxide fail safe valve kit, aspirator kit, gas evacuator with vacuum and a flow meter safety cover. Used to dispense a mixture of gases during surgical procedures.
M0750	Flowmeter, Air, Connect w/50 PSI Supply	5	V / V	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Requires the appropriate adapter for connection to the wall outlet and fitting to connect to tubing. Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0755	Flowmeter, Oxygen, Low Flow	6	V / V	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Database pricing includes DISS fitting and DISS power outlet and wall adapter. Other fitting and adapter configurations are available.

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M0765	Regulator, Vacuum	7	V / V	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required. To be used in delivery, neonatal, pediatrics or any area where suction is required. Database pricing reflects continuous regulators graduated to 200 mm Hg with a full line vacuum selection switch and DISS configured inlets and outlets.
M1801	Computer, Microprocessing, w/Flat Panel Monitor	2	V / V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
M3070	Hamper, Linen, Mobile, w/Lid	1	V / V	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters. For linen transport in hospitals and clinics.
M3072	Frame, Infectious Waste Bag w/Lid	1	V / V	Frame for an infectious waste collection bag. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Adjust to hold 18" or 25" trash bags. Mounted on ball bearing casters and includes permanently mounted hinged lid. Provides means of bagging infectious waste at point of waste generation.
M3150	Distribution System, Medication, Automatic	1	V / V	An automated dispensing system that provides controlled dispensing, inventory and security. Size and cost will vary dependent on number of modules selected.
M3155	Cabinet, Inventory Management System	4	V / V	Inventory Management System Supply Cabinet configurable, with or without wheels, half or full height.
M3175	Electrosurgical Unit, Dual Output	1	V / V	Dual output electrosurgical unit. Solid state power source with foot switch jacks, monopolar and bipolar outputs, and four independent modes of operation. Used in the operating room or surgicenter as an alternative to the scalpel for cutting tissue.
M3190	Generator, RF Cardiac Ablation	1	V / V	Radio-Frequency Generator for use in Cardiac Ablation

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M4250	Pump, Syringe, Infusion	1	V / V	The infusion syringe pump ensures highly accurate volume delivery and consistent flow for small volumes (<50 ml) of pharmacologic agents or thick feeding solutions. It shall be small, lightweight construction, making it transportable. Shall have menu-driven programming capable of flow rates (e.g. 0.1 or 1.0 mL/hr) that are intended for long-term bedside use and/or critical care patient transport, plunger positioning sensor, LCD display for easy viewing, volume limit programming to serve as a convenient cue of volume or dose delivery completion and multiple delivery modes for all applications requiring precisely controlled infusion rates. The infusion pump shall have automatic syringe size sensing which will give the flexibility to accept a wide range of syringe sizes (up to 60 mL) from different manufacturers. Shall be battery powered/AC adapter.
M4255	Stand, IV, Adjustable	2	V / V	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.
M4266	Pump, Volumetric, Infusion, Multiple Line	2	V / V	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.
M4645	Patient Transfer Device	2	V / V	A patient transfer board designed to make lateral patient transfers safer for staff and be more comfortable for the patients. The board uses a smooth, low friction and static free surface to eliminate the need for metal rollers. The board has a soft foam core that makes them lightweight for ease of use and storage. The long board device also enables the transfer of a patient in the seated or Fowler position. The boards come in three sizes with the long board being foldable. The dimensions and price are for the long wide board.
M4806	Controller, Heart Pump Catheter	1	V / V	Control console for percutaneous ventricular assist system. Features a 10 Inch high resolution display. It controls the special catheter performance, monitors for alarms, and displays real time hemodynamic and catheter position information. Integrated purge system automatically sets the purge flow to maintain the purge pressure. Can be powered by AC power or can operate on internal battery power for at least 60 minutes when fully charged.

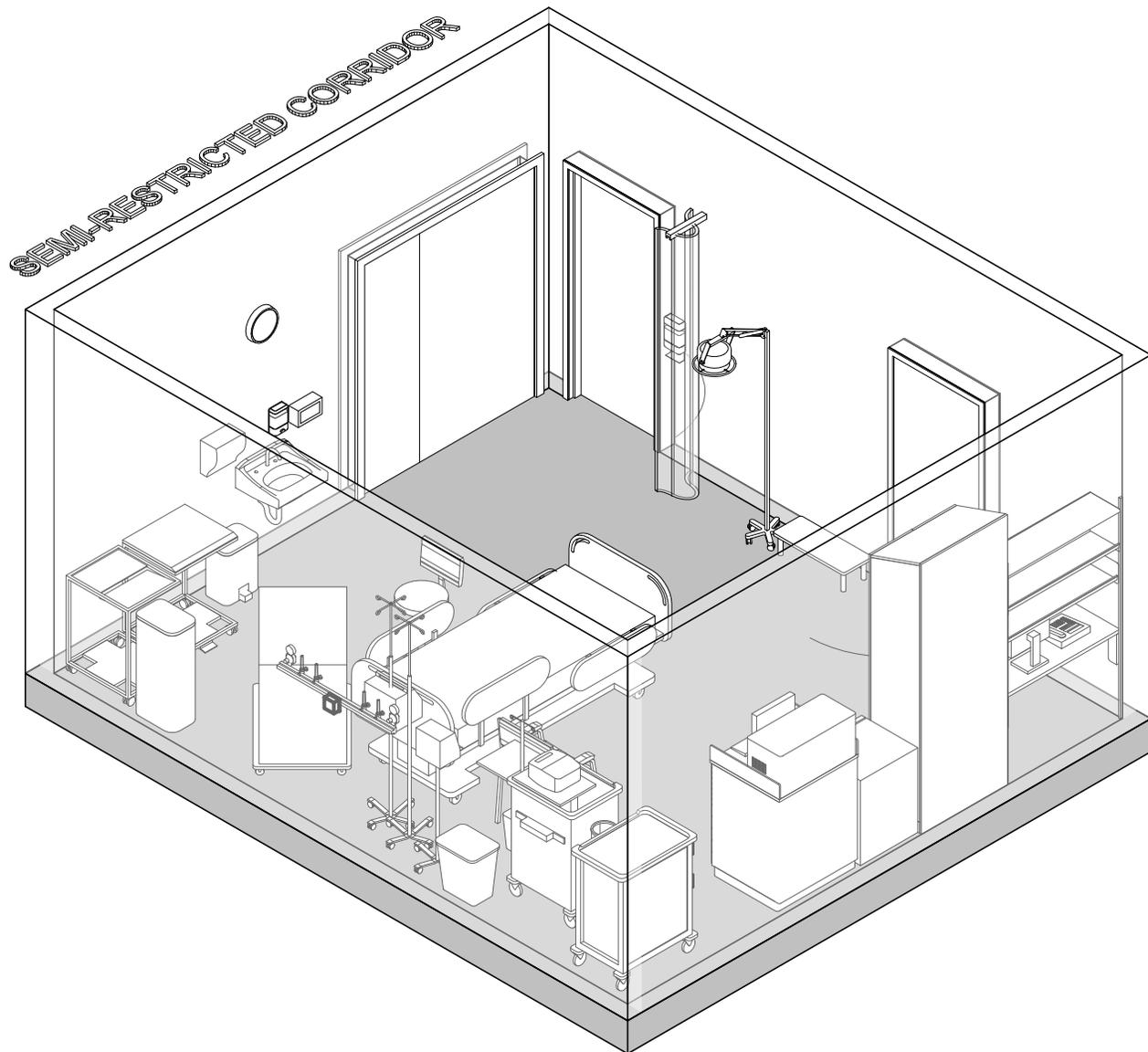
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M4812	Pacemaker, Single Chamber, External, Temporary	2	V / V	A single chamber, external temporary pacemaker designed to provide acute therapeutic, prophylactic, and diagnostic pacing support. It is capable of operating in the demand or asynchronous modes and includes adjustable rate, output, and sensing controls. Battery operated.
M7475	Light, Surgical, Ceiling Mounted, Single, Large	2	C / C	Ceiling mounted surgical light generally 30-34" or larger in diameter depending on manufacturer. Light head is suspended from the ceiling by a mounting plate and pole. Light head contains several individual pods each with its own light source. Unit also has a detachable sterilizable handle. Minimum ceiling height for most models is 8'-9"; check the manufacturers' specific recommendations. Height dimension below refers to the height of the lamp housing. Width and depth are the length of the swing arm plus the light head diameter. This light is suitable for dual site surgery.
M7650	Defibrillator/Monitor, Acute Care	2	V / V	Portable defibrillator/monitor for acute care includes biphasic defibrillator, pacing, SPO2, Interpretive 12-lead, NIBP monitoring, EtCO2 monitoring, Invasive pressure monitoring, Vital Sign monitoring, temperature probe, Fax transmission, PCMCIA Data Cards, Paddle accessories, and a color LCD.
M7801	Monitor, HD, LCD, FP, Medical Grade, 26 inch	4	V / V	High Definition Monitor for Integration into OR System. Located as part of Light or Boom system or to be wall mounted. 26" Monitor mounted on boom arms or off of Ceiling mounted arms. Exact configuration of the Monitor, inputs and outputs should be verified that it meets project requirements.
M7802	Monitor, HD, LCD, FP, Medical Grade, 55 inch	1	V / V	High Definition Monitor for Integration into OR System. Located as part of Light or Boom system or to be wall mounted. 55" Monitor Wall Mounted. Exact configuration of the Monitor, inputs and outputs should be verified that it meets project requirements.
M7818	Monitor, Transport	1	V / V	A light weight, rugged patient monitor for use during transport. Unit consists of a compact monitor with touchscreen display with up to 3 waveforms on a on a bright non-fading display. The unit measures ECG/ respiration, NBP, SpO2, pressure, and temperature and CO2. Data can be transferred seamlessly throughout the continuum of care. Unit is approved for aeromedical use (US Army Airworthiness Certification and Evaluation (ACE) program. Battery run time of 3 hours before recharge.

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M7845	Monitor, Physiological, Bedside, 4 Channel	1	V / V	4 channel bedside physiological monitor. The unit consist of a four-channel non-fade monochrome display monitor, an alarm system and printer-recording capabilities. The monitor has color coded controls and automatic calibration. The unit displays up to four waveforms simultaneously. The parameters to be monitored are user selectable. The monitor may be connected to a central monitoring station. The unit monitors patients in most acute care areas, step-down units, procedure rooms and emergency rooms.
M7860	Monitoring System, Cardiac Catheterization Lab	1	V / V	EP/Hemodynamic Cardiac Cath Lab computer information System. Multiple component system comprised of workstation, CPU, CD Rom drive, Floppy disc drive, Magnetic Optical disc drive for storage of patient data, Integrated Electronic Box (IEB) for the distribution of wall power to peripherals, Laser Jet Printer, 2-Local Monitors, 1 or more remote Monitors for Patient bedside, CLab plus amplifiers, modem keyboard, mouse, isolation transformer and patient stimulator.
M7862	Navigation System, Electrophysiology Mapping	1	V / V	Electrophysiology Mapping and Surgical Navigation System. Visualization of individual anatomic variations via 3D scans or maps, continuously visible catheter icon, visual assessment of ablation line of block and gap. System consists of computer workstation & monitor, COM unit, Patient Interface Unit, foot pedal, grounding cable, power supply cord, optical and patient cables. Configuration and Pricing may vary depending on system actually purchased.
M8800	Cart, Anesthesia	1	V / V	Mobile anesthesia cart. The cart shall be built of stainless steel or other appropriate material and mounted on 4" casters for easy mobility. It shall be capable of being equipped with bottle holders, adjustable IV pole, storage drawers, shelves and a top bar/rail.
M8810	Stand, Mayo	1	V / V	Adjustable instrument table. Table is corrosion resistant stainless steel construction and is mounted on two casters with two skid rails. It has telescopic upright adjusts from 39 inches to 60 inches with automatic locking device, and removable 13"x19" instrument tray. Designed for use in operating and procedure rooms.
M8825	Table, Instrument/Dressing, CRS, approx. 36x20x34	1	V / V	Instrument and dressing table. Made of corrosion resistant stainless steel with a sound deadened top. Includes guard rail, shelf and two side-by-side drawers. The table is mounted on swivel, ball-bearing casters.
M8826	Table, Instrument/Dressing CRS, approx 60 x 24 x 34	1	V / V	Stainless steel instrument table with shelf and 3" rubber, double ball bearing casters.

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M8940	Stool, Anesthesia, With Back	3	V / V	Anesthesia stool with back. All stainless steel with well-curved back panel and wide conductive seat. Designed for the anesthesiologist during surgical procedures.
R6200	Refrigerator, U/C or F/S, 5 Cu Ft	1	V / V	Utility refrigerator approximately 35" H x 24" W x 26" D. The unit has a two tray ice cube cooling system. The refrigerator fits standard architectural dimensions for undercounter installation. The unit is perfect for use in nurses' station, wards, and laboratories, pharmacies or wherever space is limited.
U0100	Integrated Operating Room System, Allowance	1	V / V	Allowance for Integrated System for each Operating Room, Hybrid Operating Room, Cath Lab or EP room. Requirements are defined on a project by project basis. Integration provides visual image, patient information and communication management. Integration can also include the control of some equipment settings and environment settings such as lighting.
X2106	Scanner, Ultrasound, Intra-Cardiac Echo	1	V / V	A portable cardiovascular ultrasound with full diagnostic and monitoring capabilities. The unit employs phased-array transducer technology for 2D, color and Doppler imaging. It will have multiple focal zones to optimize image quality. The unit will have an integrated EchoPAC with data review, analysis, patient archive and reporting capabilities. It will have full DICOM connectivity with embedded raw data speeds allowing for post-exam quantitative analyses at the users convenience. The rechargeable battery will provide up to 1 hour of full scan operation.
X2125	Scanner, Ultrasound, Portable	1	V / V	A portable diagnostic ultrasound scanner system configured for various applications, ease-of-use and high performance for enhanced efficiency and accuracy. The scanner is applicable for use in a wide variety of hospital and office environments including ER, breast surgery, anesthesia, vascular, interventional radiology and critical care. The system features a high quality color doppler ultrasound for imaging.
X3145	Screen, X-Ray, Protective, Mobile	1	V / V	Mobile X-ray protective screen/barrier. The X-ray barrier provides optically-clear visibility while shielding medical personnel from scatter radiation. Its large clear Pb lead-plastic or acrylic window offers 0.5 mm lead-equivalent protection to the user's head and upper body. The unit is used for effective radiation protection of department personnel during vascular or other procedures. This unit can fit any application with its mobility. Adjustable screens are also available.

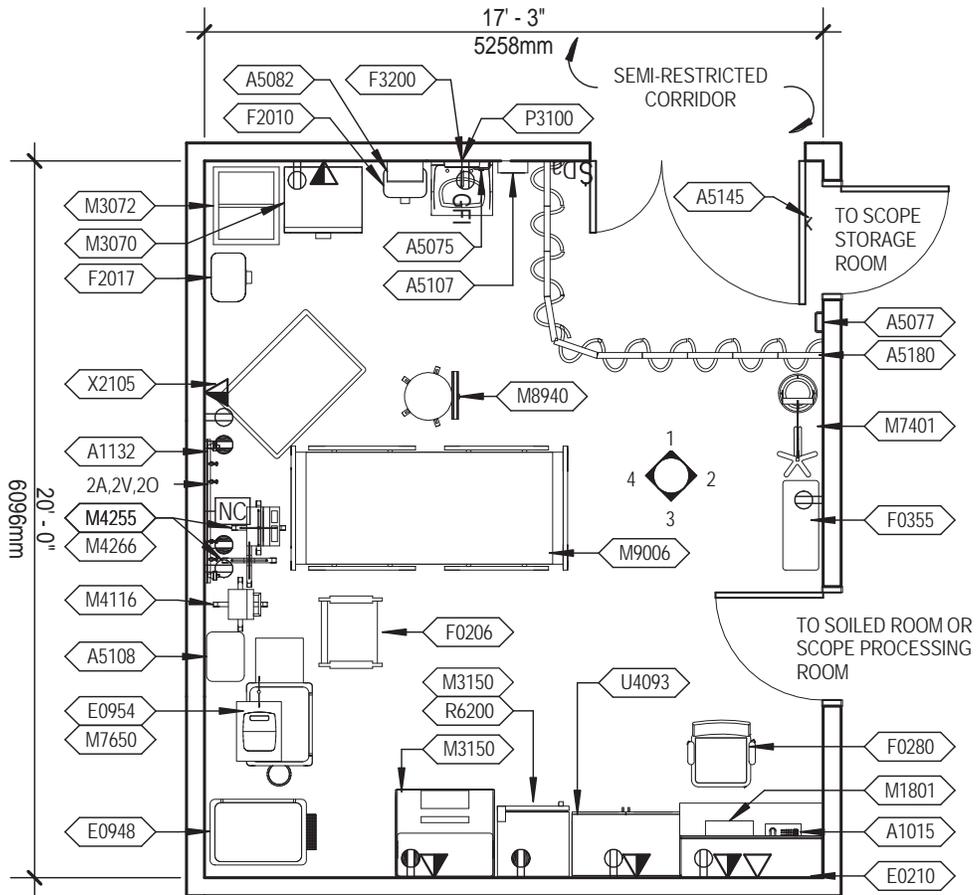
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
X6175	Radiographic/Fluoro Unit, Angio, Biplane, Digital	1	V / V	This system is specifically designed to perform biplane radiographic/fluoroscopic examinations in the Special Procedures Department. On-line digital angio image processing will provide instant availability of images for review. This units characteristics and components include: 100 kW micro-processor controlled X-ray generators, C-arm and U arm with 9" multi-field Image Intensifier, integrated X-ray tube unit. The Digital Spot Imaging for both the AP and Lateral planes shall consist of a computer, keyboard with acquisition and viewing monitor and a slave monitor. The system shall be DICOM 3.0 compatible, for easy linkage to filmless image management systems and review stations. It is recommended that the TV monitors be ceiling suspended.
X6195	Injector, Angiographic	1	V / V	Angiographic injector. This unit is a specialized radiographic procedure that provides sharp, well-defined visual images of the vascular anatomy. The injector introduces a vision radiopaque fluid (contrast medium) into an artery or vein through a small catheter, making vessels contrast with their more radiolucent surrounding. The unit incorporates an electromechanical or pneumatic driven syringe to deliver the contrast medium. The syringe assemblies consist of an electric motor connected to a jackscrew that moves the syringe piston into or out of the syringe barrel. The unit is used in hospitals with radiographic procedures. Specify if unit is to be pedestal, ceiling, wall or table mounted when ordering.

### 4.18. TRANSESOPHAGEAL ECHOCARDIOGRAPH (TEE) PROCEDURE ROOM (TRTE1)

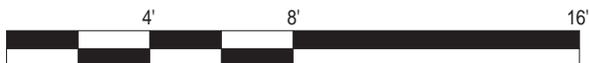


Axonometric  
350 NSF / 32,6 NSM

### 4.18. TRANSESOPHAGEAL ECHOCARDIOGRAPH (TEE) PROCEDURE ROOM (TRTE1)

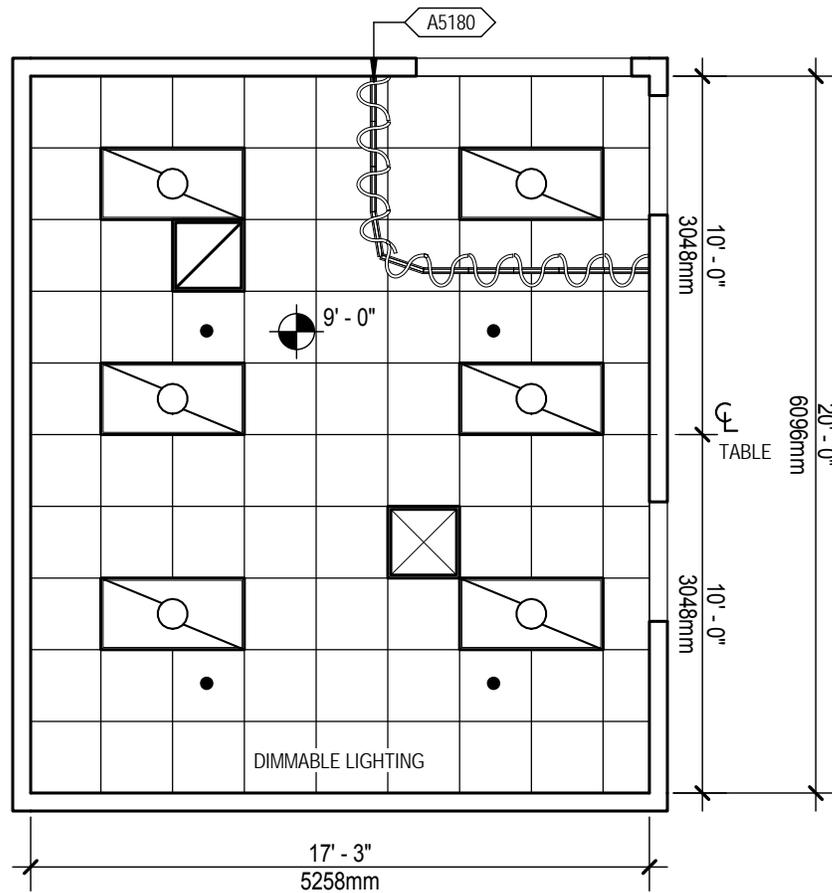


SCALE: 3/16" = 1'-0"



Floor Plan  
350 NSF / 32,6 NSM

**4.18. TRANSESOPHAGEAL ECHOCARDIOGRAPH (TEE) PROCEDURE ROOM (TRTE1)**



SCALE: 3/16" = 1'-0"

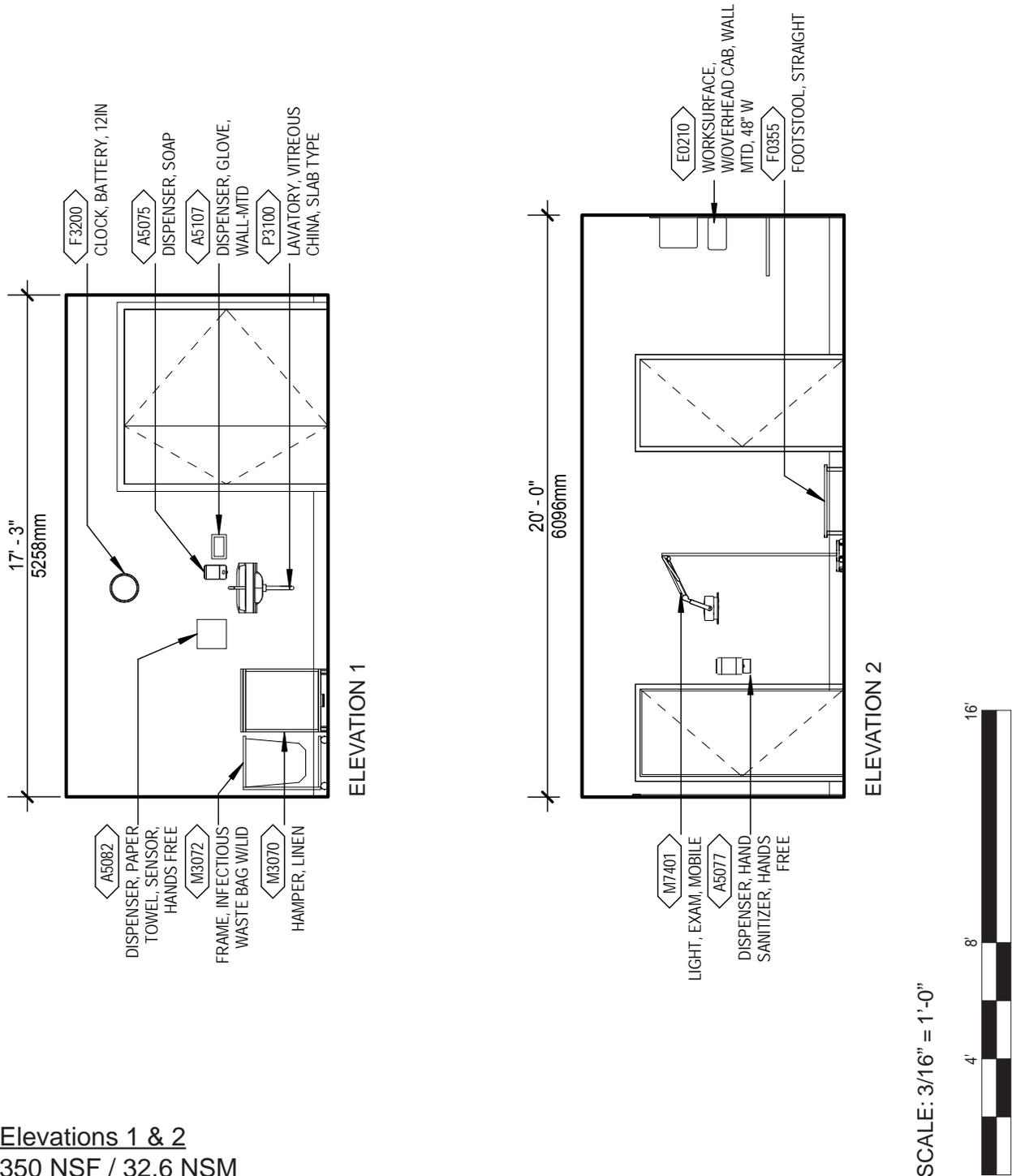


Reflected Ceiling Plan  
350 NSF / 32,6 NSM

**4.18. TRANSESOPHAGEAL ECHOCARDIOGRAPH (TEE)****PROCEDURE ROOM (TRTE1)**JSN Legend

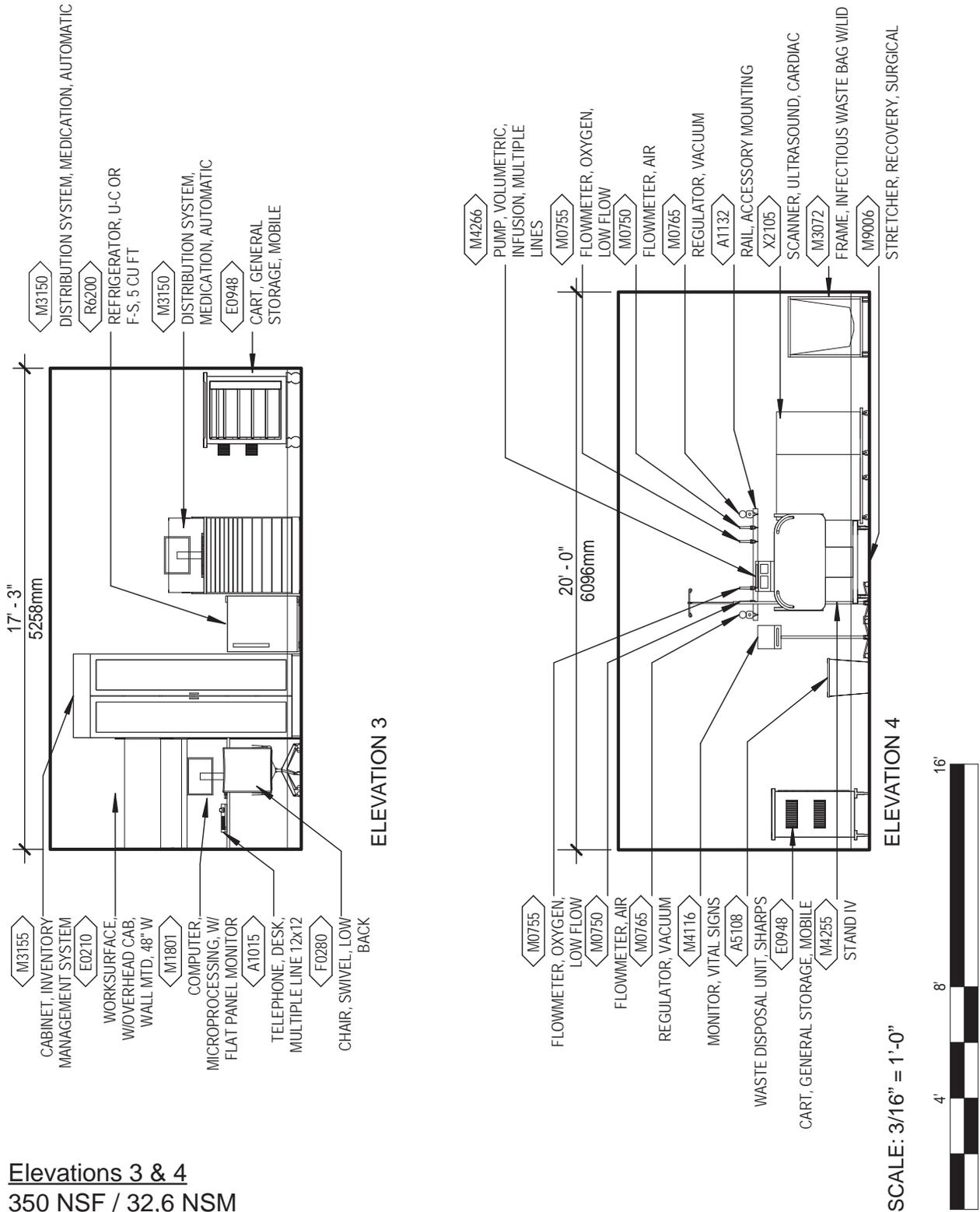
JSN	DESCRIPTION	
		M3155 CABINET, INVENTORY MANAGEMENT SYSTEM
A1015	TELEPHONE, DESK, MULTIPLE LINE12x12	X2105 SCANNER, ULTRASOUND, CARDIAC
A1132	RAIL, ACCESSORY MOUNTING	
A5075	DISPENSER, SOAP	
A5077	DISPENSER, HAND SANITIZER, HANDS FREE	
A5082	DISPENSER, PAPER TOWEL, SENSOR, HANDS FREE	
A5107	DISPENSER, GLOVE, WALL-MTD	
A5108	WASTE DISPOSAL UNIT, SHARPS	
A5145	HOOK, GARMENT, DOUBLE	
A5180	TRACK, CUBICLE, SURFACE MOUNTED, WITH CURTAIN	
E0210	WORKSURFACE, W/OVERHEAD CAB, WALL MTD, 48" W	
E0948	CART, GENERAL STORAGE, MOBILE	
E0954	CART, EMERGENCY, MOBILE	
F0206	CHAIR, SIDE, BARIATRIC, WITH ARMS	
F0280	CHAIR, SWIVEL, LOW BACK	
F0355	FOOTSTOOL, STRAIGHT	
F2010	BASKET, WASTEPAPER, STEP-ON	
F2017	WASTE RECEPTACLE, 24 GAL	
F3200	CLOCK, BATTERY, 12IN	
M0750	FLOWMETER, AIR	
M0755	FLOWMETER, OXYGEN, LOW FLOW	
M0765	REGULATOR, VACUUM	
M1801	COMPUTER, MICROPROCESSING, W/ FLAT PANEL MONITOR	
M3070	HAMPER, LINEN	
M3150	DISTRIBUTION SYSTEM, MEDICATION, AUTOMATIC	
M4116	MONITOR, VITAL SIGNS	
M4255	STAND IV	
M4266	PUMP, VOLUMETRIC, INFUSION, MULTIPLE LINES	
M4701	LIGHT, EXAM, MOBILE, SPOTLIGHT, MOBILE STAND	
M7650	DEFIBRILLATOR/ MONITOR/ RECORDER AUTO	
M9006	STRETCHER, RECOVERY, SURGICAL	
P3100	LAVATORY, VITREOUS CHINA, SLAB TYPE	
R6200	REFRIGERATOR, U-C OR F-S, 5 CU FT	
M3150	DISTRIBUTION SYSTEM, MEDICATION, AUTOMATIC	

### 4.18. TRANSESOPHAGEAL ECHOCARDIOGRAPH (TEE) PROCEDURE ROOM (TRTE1)



Elevations 1 & 2  
350 NSF / 32,6 NSM

### 4.18. TRANSESOPHAGEAL ECHOCARDIOGRAPH (TEE) PROCEDURE ROOM (TRTE1)



Elevations 3 & 4  
350 NSF / 32,6 NSM

## 4.18. TRANSESOPHAGEAL ECHOCARDIOGRAPH (TEE) PROCEDURE ROOM (TRTE1)

### Room Data Sheet

#### ARCHITECTURAL

Ceiling Type:	Acoustical Ceiling Tile (SP)
Ceiling Height:	9'-0" (2700mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	WSF Integral Base (min. 6" / 152 mm)
Floor Finish:	Welded Seam Sheet Flooring
Slab Depression:	None
Sound Protection:	50 STC (to other room), 35 STC (to corridor)
Doors:	Double, Size 6'-0" x 7'-0" (1829 mm x 2133 mm) Wood w/ Narrow View Window; Single, Size 4'-0" x 7'-0" (1219 mm x 2133 mm) Wood w/ Small View Window

Special Requirement:

#### Notes:

- 1) Facility will select number and types of scopes and other instrumentation as necessitated by the unique case load.
- 2) Scope Cleaning can occur in SPD or in the Equipment Cleaning Room. Facility to select adjacency of this room to either the Equipment Cleaning Room or a Soiled Hold Room, where scopes can be stored until pick-up and processing by SPD.

#### LIGHTING

Refer to the VA Lighting Design Manual section 4.2.5 - Procedure Room - for lighting design consideration.

#### POWER

Normal Power:	To be connected to selected receptacles and equipment.
Emergency Power:	Critical branch of the EES to be connected to selected receptacles and equipment.

**4.18. TRANSESOPHAGEAL ECHOCARDIOGRAPH (TEE)****PROCEDURE ROOM (TRTE1)**Room Data Sheet (continued)**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Light Hazard

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	

Notes:**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to the current version of the VA HVAC Design Manual for temperatures, humidity range, room air change requirements, and pressurization.

**PLUMBING AND MEDICAL GASES**

Cold Water:	Yes
Hot Water:	Yes
Waste:	Yes
Reagent Grade Water:	No
Medical Air	Yes (2)
Medical Vacuum	Yes (2)
Oxygen	Yes (2)

**4.18. TRANSESOPHAGEAL ECHOCARDIOGRAPH (TEE)****PROCEDURE ROOM (TRTE1)**Equipment List

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
A1015	Telephone, Desk, Multiple Line	1	C / C	Telephone, desk, multiple line.
A1132	Rail, Accessory Mounting, Length As Required	1	V / V	Horizontal mounting rail will consist of lock mounting devices capable of; supporting up to 75 pounds each, being repositioned, and mounting and dismounting of equipment without the use of tools. The rail must be capable of supporting medical equipment and accessories normally found in exam or patient rooms. The rail system must be capable of mounting and dismounting equipment without leaving or creating new holes in the finished surface of the wall.
A5075	Dispenser, Soap, Disposable	1	V / V	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
A5077	Dispenser, Hand Sanitizer, Hands-Free	1	V / V	A touch free wall-mounted hand sanitizer dispenser. For use throughout a healthcare facility. Unit does not include the sanitizing liquid. Units are battery operated.
A5082	Dispenser, Paper Towel, Sensor, Hands Free	1	C / C	A surface mounted, sensor activated, automatic, roll paper towel dispenser. The unit dispenses a paper towel automatically only when hands are placed in position below the dispenser for maximum sanitation and hygiene. May include adjustable settings for sheet length, time delay, and sensor range. Unit is battery operated or with optional AC power adapter.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	1	V / V	Examination glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Provided with wall bracket to facilitate mounting and demounting.
A5108	Waste Disposal Unit, Sharps	1	V / V	A container for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
A5145	Hook, Garment, Double, SS, Surface Mounted	1	C / C	A surface mounted, satin finish stainless steel, double garment hook. Equipped with a concealed mounting bracket that is secured to a concealed wall plate. For general purpose use throughout the facility to hang various items of apparel.

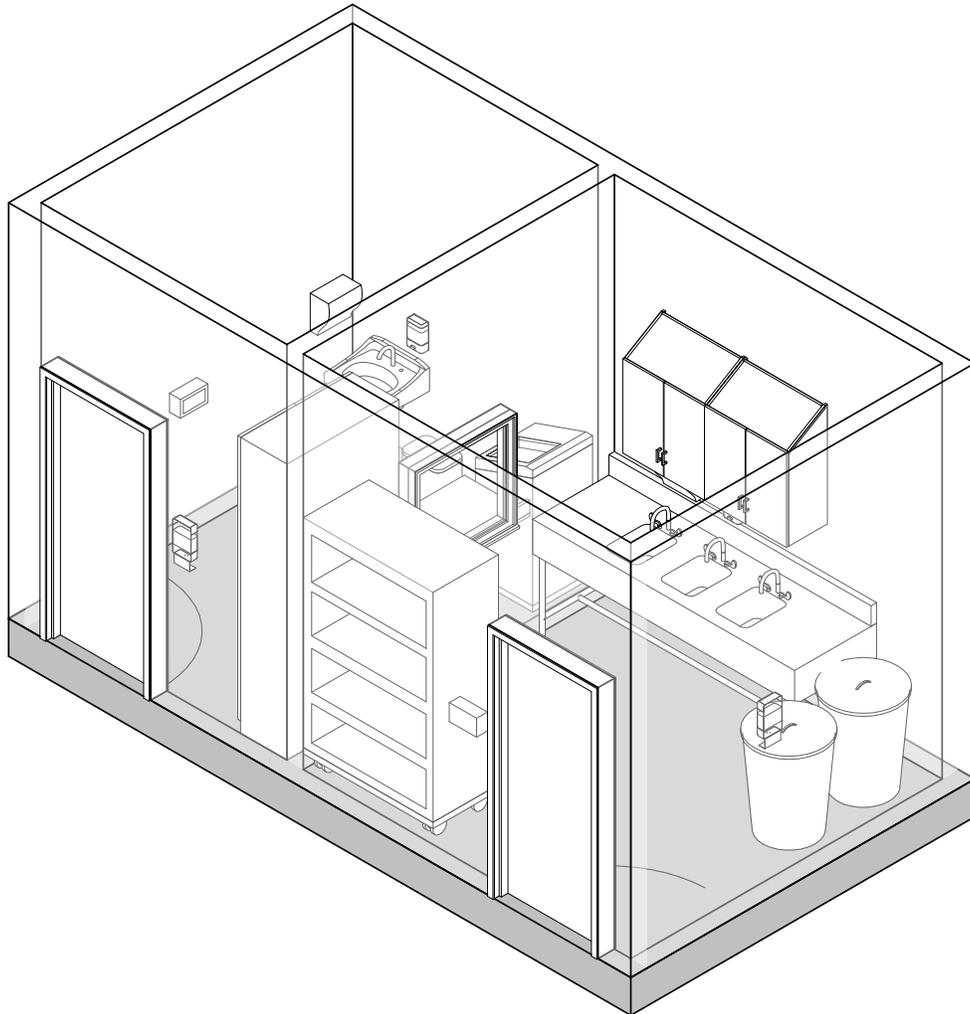
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A5180	Track, Cubicle, Surface Mounted, With Curtain	10	C / C	Surface mounted cubicle track, with curtain. Track constructed of thick extruded aluminum. Equipped with self lubricating carriers, beaded drop chain hooks, and flame resistant curtain. To include removable end caps. Designed to be suspended around patient areas where privacy is needed. Price listed is per foot of the track, curtains to be priced per quote.
E0210	Worksurface, w/Overhead Cab, Wall Mtd, 48" W	1	V / V	THIS TYPICAL INCLUDES: 2 Vertical Hanging Strips 1 Lockable Flipper Unit 1 Shelf, Storage/Display 1 Light 1 Cantilevered Work Surface
E0948	Cart, General Storage, Mobile, 42"H x 32"W x 22"D	1	V / V	THIS TYPICAL INCLUDES: 1 Cart Body, Style-A Narrow, w/Raised Edge Top 2 Drawers, 3" H 4 Drawers, 6" H 1 Accessory Rail, Side Drawer Organizer Bins
E0954	Cart, Emergency, Mobile, 66"H x 32"W x 22"D	1	V / V	THIS TYPICAL INCLUDES: 1 Cart body, style-A narrow, w/raised edge top 1 Accessory rail, side 1 Accessory rail, back 1 Defibrillator tray 1 IV pole 1 Breakaway bar 1 Flip-up shelf 1 Wastebasket 1 Oxygen tank holder 1 Electrical box-4 outlet 1 Cord wrap 4 Drawer, 3"H 3 Drawer, 6"H Drawer organizer bins.
F0206	Chair, Side, Bariatric, With Arms	1	V / V	A bariatric side chair with arms for use in a waiting room, lobby or other patient area. Chair will have a padded seat and back and have a capacity of 800 pounds.
F0280	Chair, Swivel, Low Back	1	V / V	Low back contemporary swivel chair, 37" high X 25" wide X 31" deep with a five (5) caster swivel base, arms and foam padded seat and back upholstered with either woven textile fabric or vinyl.
F0355	Footstool, Straight	1	V / V	Step stool. Used to assist patients getting on and off exam or surgical tables. Fitted with electrically conductive rubber tips.
F2010	Basket, Wastepaper, Step-On	1	V / V	"Step-on" wastepaper basket with inner liner and foot pedal activated flip top.

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
F2017	Waste Receptacle, 24 GAL	1	V / V	Rectangular steel waste receptacle with step-on lid and 24 gallon capacity. The receptacle is used to collect and temporarily store small quantities of paper refuse. Can be used in restrooms, patient areas, laboratories, pharmacies, etc.
F3200	Clock, Battery, 12" Diameter	1	V / V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
M0750	Flowmeter, Air, Connect w/50 PSI Supply	2	V / V	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Requires the appropriate adapter for connection to the wall outlet and fitting to connect to tubing. Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0755	Flowmeter, Oxygen, Low Flow	2	V / V	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Database pricing includes DISS fitting and DISS power outlet and wall adapter. Other fitting and adapter configurations are available.
M0765	Regulator, Vacuum	2	V / V	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required. To be used in delivery, neonatal, pediatrics or any area where suction is required. Database pricing reflects continuous regulators graduated to 200 mm Hg with a full line vacuum selection switch and DISS configured inlets and outlets.
M1801	Computer, Microprocessing, w/Flat Panel Monitor	1	V / V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
M3070	Hamper, Linen, Mobile, w/Lid	1	V / V	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters. For linen transport in hospitals and clinics.

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M3072	Frame, Infectious Waste Bag w/Lid	1	V / V	Frame for an infectious waste collection bag. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Adjust to hold 18" or 25" trash bags. Mounted on ball bearing casters and includes permanently mounted hinged lid. Provides means of bagging infectious waste at point of waste generation.
M3150	Distribution System, Medication, Automatic	1	V / V	An automated dispensing system that provides controlled dispensing, inventory and security. Size and cost will vary dependent on number of modules selected.
M3155	Cabinet, Inventory Management System	1	V / V	Inventory Management System Supply Cabinet configurable, with or without wheels, half or full height.
M4116	Monitor, Vital Signs	1	V / V	Electronic sphygmomanometer. LCD displays non-invasive blood pressure, pulse rate and temperature. Used in hospitals and clinics. Includes an optional mobile stand.
M4255	Stand, IV, Adjustable	2	V / V	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.
M4266	Pump, Volumetric, Infusion, Multiple Line	2	V / V	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.
M7401	Light, Exam, Mobile, Spotlight, Mobile Stand	1	V / V	The exam light shall be a mobile floor unit. The light will be a halogen bulb or LED that can produce a continuous and homogeneous spot of light adjustable from 5 to 9 inches in diameter from a set distance. The light intensity shall be a minimum of 750 foot-candles at a distance of 16 inches and have a color temperature of 3,200 degrees Kelvin. The unit will consist of an arm or sleeve of approximately 45 inches in length to allow for easy arm rotation and arm movement up and down. The unit shall be mounted on a caster base for easy movement.
M7650	Defibrillator/Monitor, Acute Care	1	V / V	Portable defibrillator/monitor for acute care includes biphasic defibrillator, pacing, SPO2, Interpretive 12-lead, NIBP monitoring, EtCO2 monitoring, Invasive pressure monitoring, Vital Sign monitoring, temperature probe, Fax transmission, PCMCIA Data Cards, Paddle accessories, and a color LCD.

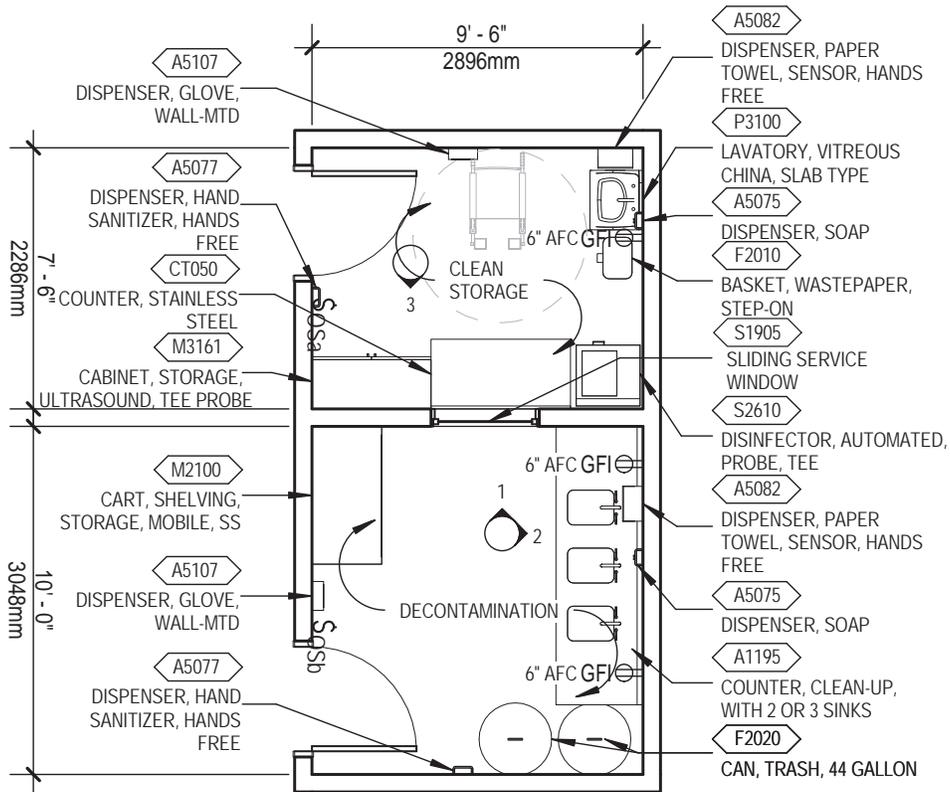
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M9006	Table, Ultrasound, Mobile, Echocardiology	1	V / V	Mobile exam table designed for ultrasound and echocardiology examinations. Table has an extra wide top with a 500 lb patient capacity, suitable for bariatric patients. Height range from 23" low to accommodate wheelchair transfers and those with ambulatory difficulties to a high of 39". Table includes motorized height adjustment, Fowler position, Trendelenburg and auto level adjustment.
P3100	Lavatory, Vitreous China, Slab Type	1	C / C	Wall mounted, slab type, vitreous china, lavatory (approximate bowl size 7"x15"x10") with: faucet holes on 4" centers; gooseneck spout; wrist blade handles; and grid strainer. It shall be suitable for use in clinics, offices, washrooms or patient care area.
R6200	Refrigerator, U/C or F/S, 5 Cu Ft	1	V / V	Utility refrigerator approximately 35" H x 24" W x 26" D. The unit has a two tray ice cube cooling system. The refrigerator fits standard architectural dimensions for undercounter installation. The unit is perfect for use in nurses' station, wards, and laboratories, pharmacies or wherever space is limited.
X2105	Scanner, Ultrasound, Cardiac (Echo)	1	V / V	High definition, diagnostic ultrasound system for Radiology, Cardiology, Vascular, ob-gyn, Perinatology, and Surgical imaging applications. The unit employs curved, phased and linear array imaging technology. The system supports colorflow, pulse, continuous wave imaging modalities. On board software measurement packages available for all imaging applications. The system is DICOM 3.0 compatible, for easy linkage to filmless image management systems and review stations. In addition, a full line of probes and conventional recording devices are available.

**4.19. DECONTAMINATION, TEE PROBE (TRTE2)  
STORAGE, CLEAN TEE PROBE (TRTE3)**



Axonometric  
165 NSF / 15,5 NSM

**4.19. DECONTAMINATION, TEE PROBE (TRTE2)  
STORAGE, CLEAN TEE PROBE (TRTE3)**

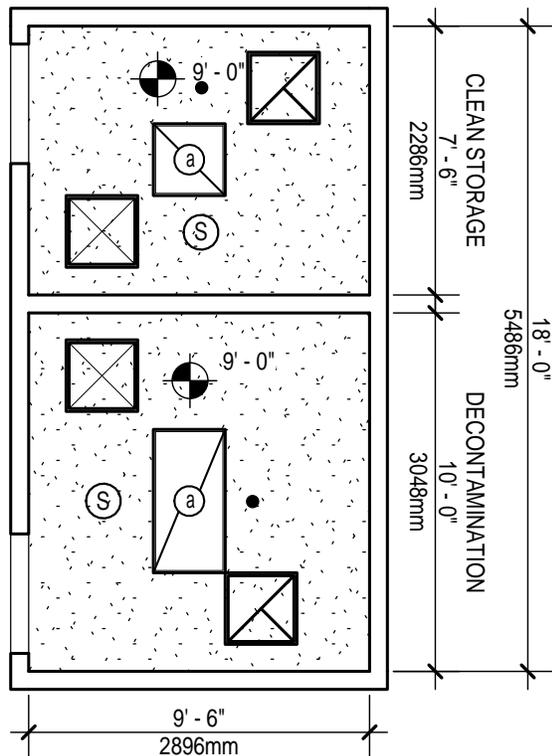


SCALE: 3/16" = 1'-0"



Floor Plan  
165 NSF / 15,5 NSM

**4.19. DECONTAMINATION, TEE PROBE (TRTE2)  
STORAGE, CLEAN TEE PROBE (TRTE3)**

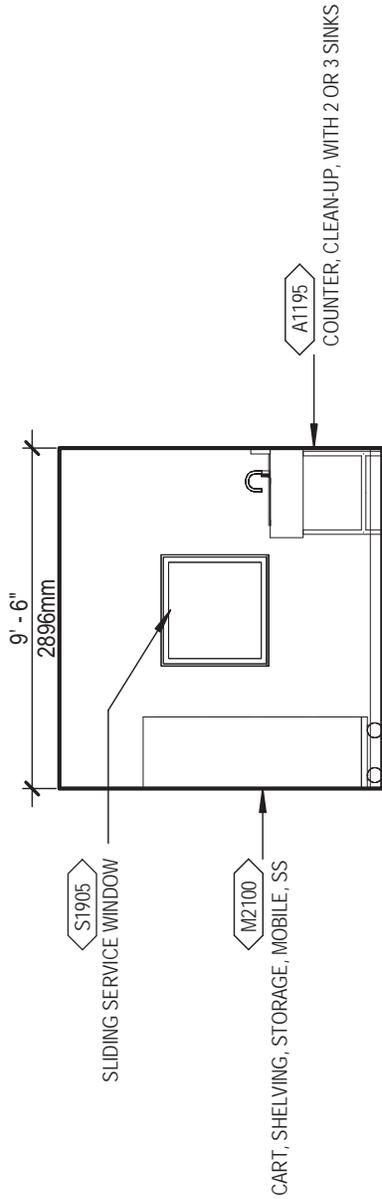


SCALE: 3/16" = 1'-0"

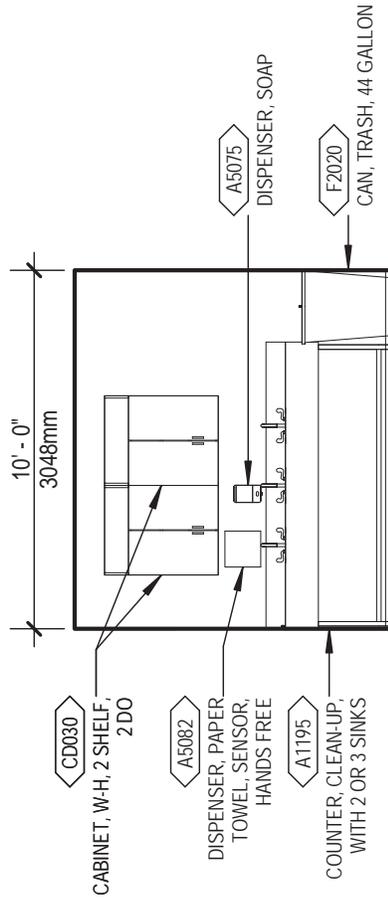


Reflected Ceiling Plan  
165 NSF / 15,5 NSM

**4.19. DECONTAMINATION, TEE PROBE (TRTE2)  
STORAGE, CLEAN TEE PROBE (TRTE3)**



ELEVATION 1

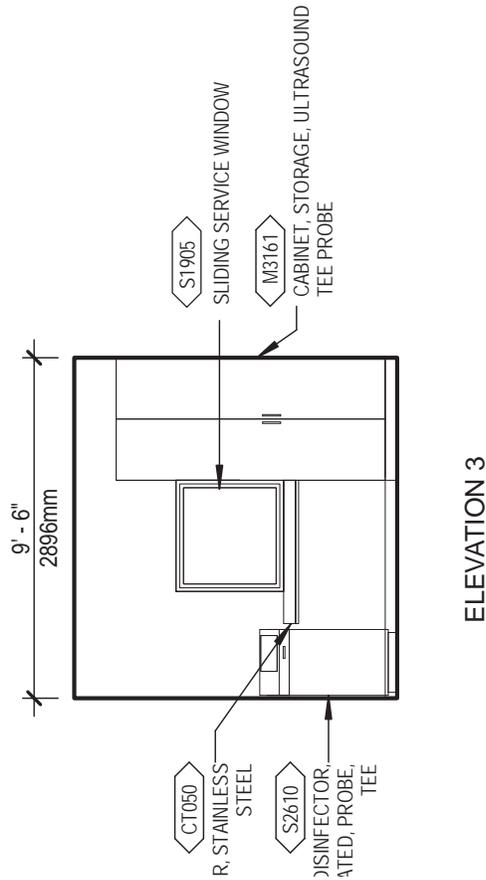


ELEVATION 2

Elevations 1 & 2  
165 NSF / 15,5 NSM



### 4.19. DECONTAMINATION, TEE PROBE (TRTE2) STORAGE, CLEAN TEE PROBE (TRTE3)



ELEVATION 3

Elevation 3  
165 NSF / 15,5 NSM



## 4.19. DECONTAMINATION, TEE PROBE (TRTE2) STORAGE, CLEAN TEE PROBE (TRTE3)

### Room Data Sheet

#### ARCHITECTURAL

Ceiling Type:	Gypsum Wallboard (SC)
Ceiling Height:	9'-0" (2700mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	Resilient Base
Floor Finish:	Rubber Flooring, Welded Seam Sheet Flooring
Slab Depression:	None
Sound Protection:	None
Doors:	Single, Size 3'-0" x 7'-0" (914 mm x 2133 mm) Wood

#### LIGHTING

Refer to the VA Lighting Design Manual section 4.2.14 - Surgical Corridor and Scrub Area - for lighting design consideration.

#### POWER

Normal Power:	To be connected to selected receptacles and equipment.
Emergency Power:	Critical branch of the EES to be connected to selected receptacles and equipment.

#### COMMUNICATIONS

Data:	No
Telephone:	No
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	No
Intercom:	No
Motion Intrusion Detection (MID):	No
Nurse Call:	No
Code Blue:	No
Public Address:	Yes
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	No

#### HEATING, VENTILATING AND AIR CONDITIONING

General Requirement: Refer to Soiled Holding/ Disposal Room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization

Special Requirement:

#### Notes:

- 1) Provide exhaust for each room.
- 2) Both rooms are negative pressure relative to semi-restricted corridor.

**4.19. DECONTAMINATION, TEE PROBE (TRTE2)  
STORAGE, CLEAN TEE PROBE (TRTE3)**Room Data Sheet (continued)**PLUMBING AND MEDICAL GASES**

Cold Water:	Yes
Hot Water:	Yes
Waste:	Yes
Reagent Grade Water:	No
Medical Air	No
Medical Vacuum	No
Oxygen	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Light Hazard

**4.19. DECONTAMINATION, TEE PROBE (TRTE2)**Equipment List

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
A1195	Counter, Cleanup, With 2 or 3 Sinks	1	C / C	Two or three sink cleanup counter. Unit is constructed of type 304 corrosion resistant stainless steel. It consists of three sinks 14"W X 16"H X 10"D, hot and cold water faucet, and pre-rinse spray hose. Equipped with channel reinforced drainboards, and backsplash, and supported by tubular stainless steel legs. Unit is designed for use in control sterile supply decontamination areas.
A5075	Dispenser, Soap, Disposable	1	V / V	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
A5077	Dispenser, Hand Sanitizer, Hands-Free	1	V / V	A touch free wall-mounted hand sanitizer dispenser. For use throughout a healthcare facility. Unit does not include the sanitizing liquid. Units are battery operated.
A5082	Dispenser, Paper Towel, Sensor, Hands Free	1	C / C	A surface mounted, sensor activated, automatic, roll paper towel dispenser. The unit dispenses a paper towel automatically only when hands are placed in position below the dispenser for maximum sanitation and hygiene. May include adjustable settings for sheet length, time delay, and sensor range. Unit is battery operated or with optional AC power adapter.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	1	V / V	Examination glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Provided with wall bracket to facilitate mounting and demounting.
CD030	Cabinet, W/H, 2 Shelf, 2 DO, Sloping Top, 38x30x13	2	C / C	Wall hung steel cabinet with two adjustable shelves, solid hinged doors, and sloping top. Also referred to as a solid hinged double door wall case. For general purpose use throughout the facility.
F2020	Can, Trash, 44 Gallon	2	V / V	Forty four (44) gallon trash can, 32" high X 24" diameter, with lid. Used to collect and transport refuse from a point of origin to point of disposal (example: from soiled utility or a nursing unit to the trash compactor at housekeeping).
M2100	Cart, Shelving, Storage, Mobile, SS	1	V / V	Mobile storage shelving cart 72" X 48" X 24" with four shelves. Constructed with corrosion resistant stainless steel and mounted on swivel casters. Designed for large carrying capacity and distribution of items from a central source. Options include wire or solid shelves, oversize casters, ledges, rods, tabs, dividers, drawers and bins as well as back and side enclosures. Casters add 6" to equivalent standing shelf height.

**4.19. STORAGE, CLEAN TEE PROBE (TRTE3)**Equipment List

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
A5075	Dispenser, Soap, Disposable	1	V / V	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
A5077	Dispenser, Hand Sanitizer, Hands-Free	1	V / V	A touch free wall-mounted hand sanitizer dispenser. For use throughout a healthcare facility. Unit does not include the sanitizing liquid. Units are battery operated.
A5082	Dispenser, Paper Towel, Sensor, Hands Free	1	C / C	A surface mounted, sensor activated, automatic, roll paper towel dispenser. The unit dispenses a paper towel automatically only when hands are placed in position below the dispenser for maximum sanitation and hygiene. May include adjustable settings for sheet length, time delay, and sensor range. Unit is battery operated or with optional AC power adapter.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	1	V / V	Examination glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Provided with wall bracket to facilitate mounting and demounting.
CT050	Countertop, Stainless Steel	4	C / C	Stainless steel countertop (composition of heavy-gauge Type No. 304 stainless steel) having a smooth satin finish and integral 4" backsplash/curb. Also referred to as a corrosion-resistant steel work surface or work top. Available in various depths. Used in areas where excellent ease of cleaning, abrasion resistance, bacteria resistance, impact resistance, load capacity and moisture resistance, are of concern. Pricing based upon a 24" depth.
F2010	Basket, Wastepaper, Step-On	1	V / V	"Step-on" wastepaper basket with inner liner and foot pedal activated flip top.
M3161	Cabinet, Storage, Ultrasound, TEE Probe	1	V / V	TEE probe storage cabinet is designed for storing disinfected TEE probes. Specially designed cabinet has the capacity to hold 3 TEE probes.
P3100	Lavatory, Vitreous China, Slab Type	1	C / C	Wall mounted, slab type, vitreous china, lavatory (approximate bowl size 7"x15"x10") with: faucet holes on 4" centers; gooseneck spout; wrist blade handles; and grid strainer. It shall be suitable for use in clinics, offices, washrooms or patient care area.
S1905	Sliding Service Window	1	C / C	A pass-through window assembly for moving decontaminated products between the decontamination area and the clean area. The assembly consists of a verticle sliding pass-through window.
S2610	Disinfector, Automated, Probe, TEE	1	V / V	Disinfector provides high level disinfection of transesophageal (TEE) echocardiogram ultrasound probe. Microprocessor-controlled and with printout verifying cycle information.

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#### 4.20. RESCINDED

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**4.20. RESCINDED**

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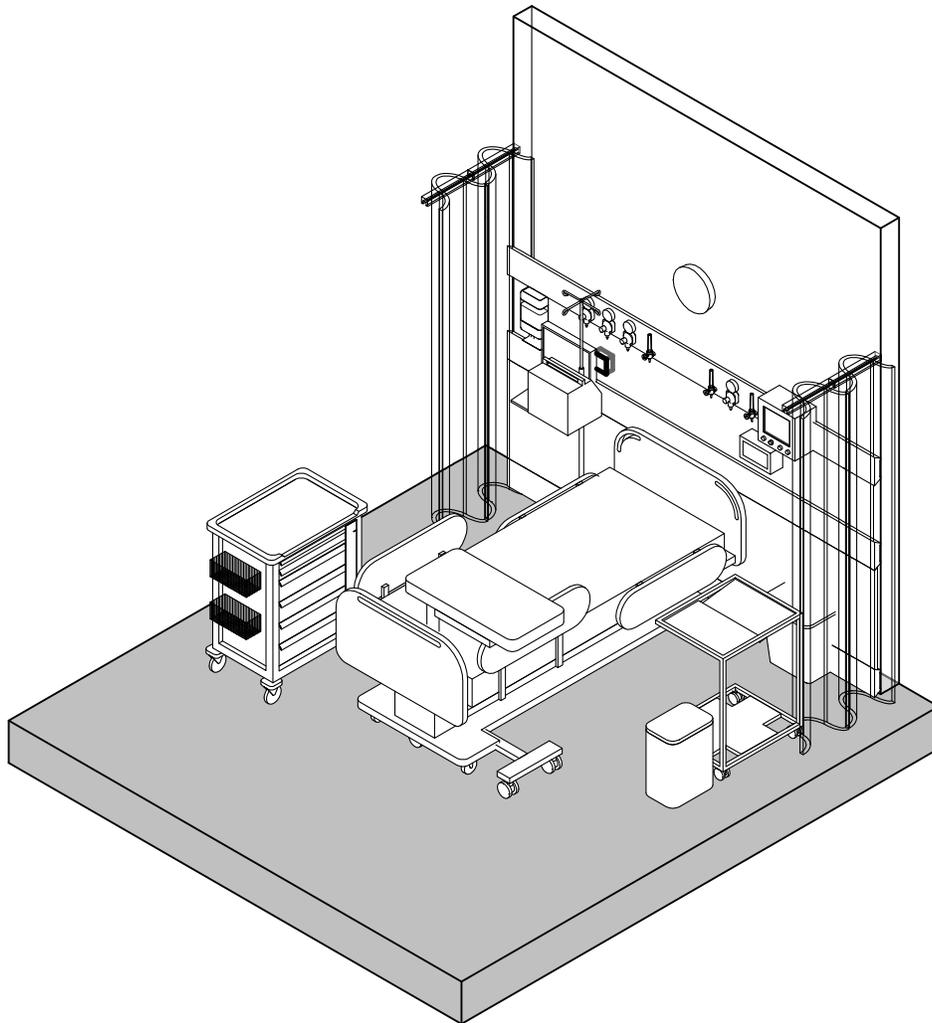
#### 4.20. RESCINDED

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**4.20. RESCINDED**

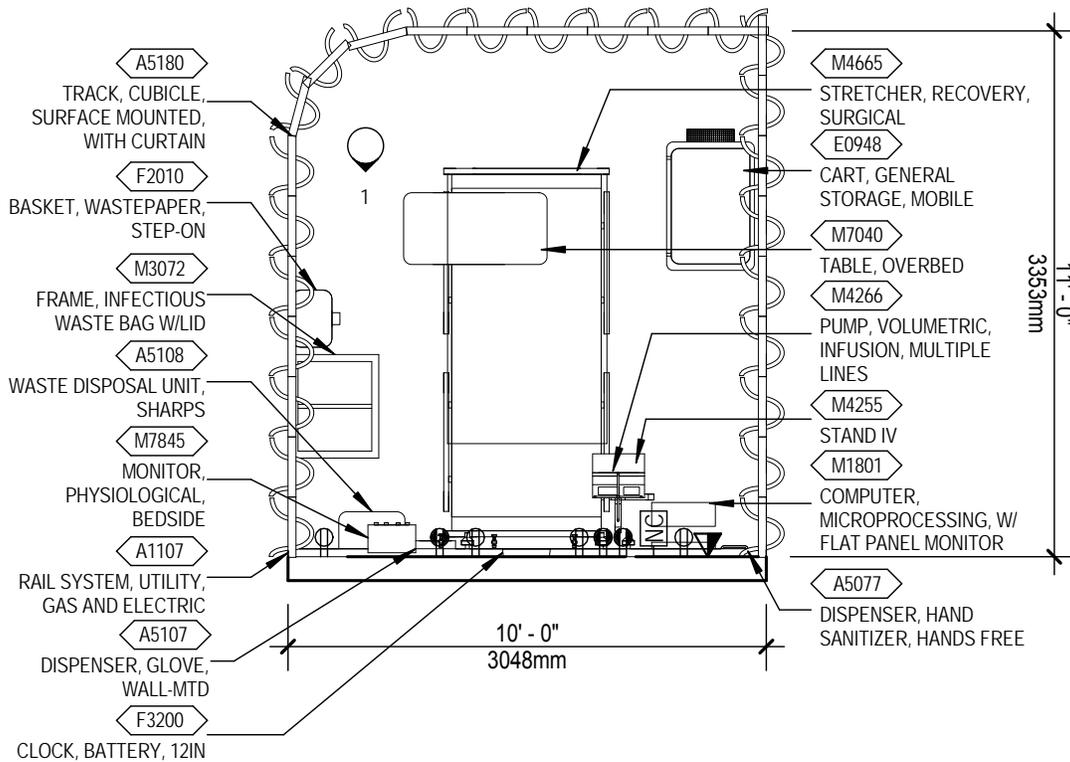
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### 4.21. PATIENT BAY, PACU / PHASE I RECOVERY (RRBP1)



Axonometric  
110 NSF / 10,3 NSM

4.21. PATIENT BAY, PACU / PHASE I RECOVERY (RRBP1)

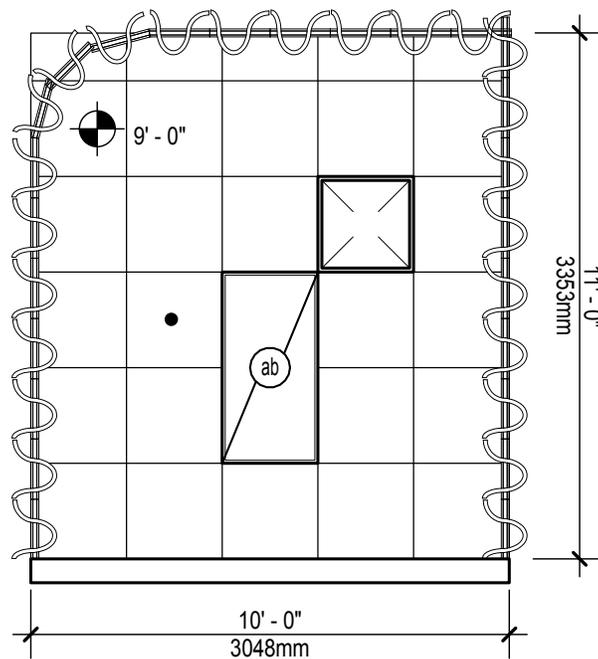


SCALE: 1/4" = 1'-0"



Floor Plan  
110 NSF / 10,3 NSM

### 4.21. PATIENT BAY, PACU / PHASE I RECOVERY (RRBP1)

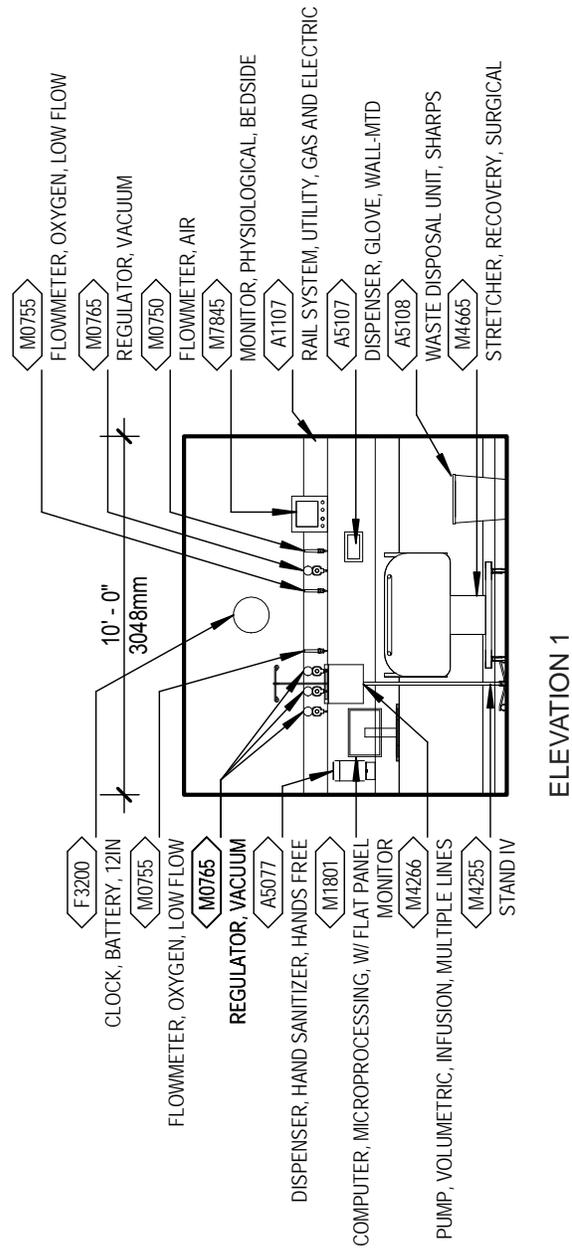


SCALE: 1/4" = 1'-0"



Reflected Ceiling Plan  
110 NSF / 10,3 NSM

4.21. PATIENT BAY, PACU / PHASE I RECOVERY (RRBP1)



SCALE: 3/16" = 1'-0"



Elevation 1  
110 NSF / 10,3 NSM

**4.21. PATIENT BAY, PACU / PHASE I RECOVERY (RRBP1)****Room Data Sheet****ARCHITECTURAL**

Ceiling Type:	Acoustical Ceiling Tile (SP)
Ceiling Height:	9'-0" (2700mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	WSF Integral Base (min. 6" / 152 mm)
Floor Finish:	Welded Seam Sheet Flooring
Slab Depression:	None
Sound Protection:	35 STC (Room)/ None (Bay)
Doors:	Sliding Glass Door, Size 8'-0" x 7'-0" (2438 mm x 2133 mm) ; Single, Size 3'-0" x 7'-0" (914 mm x 2133 mm) Wood w/ Half View Window

Special Requirement:

**Notes:**

- 1) Verify with life safety requirements that sliding glass doors can break out of the room
- 2) Sliding door and footwall can be omitted to create an open patient cubicle if desired by the facility

**LIGHTING**

Refer to the VA Lighting Design Manual section 4.2.15 - Pre-Operative and Post-Anesthetic Care (PACU) - for lighting design consideration.

**POWER**

Normal Power:	To be connected to selected receptacles and equipment.
Emergency Power:	Critical branch of the EES to be connected to selected receptacles and equipment.

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	No
Intercom:	No
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No

**4.21. PATIENT BAY, PACU / PHASE I RECOVERY (RRBP1)**Room Data Sheet (continued)

Security Surveillance Television (SSTV): No  
 VA Satellite TV: No  
 Video Teleconferencing (VTEL): No

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Post Anesthesia Care Unit (PACU) room data sheet in the current version of the VA HVAC Design Manual for temperatures, humidity range, room air change requirements, and pressurization.

**PLUMBING AND MEDICAL GASES**

Cold Water: Yes  
 Hot Water: Yes  
 Waste: Yes  
 Reagent Grade Water: No  
 Medical Air: Yes  
 Medical Vacuum: Yes  
 Oxygen: Yes

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm: Yes  
 Sprinkler: Yes  
 Hazard Type:

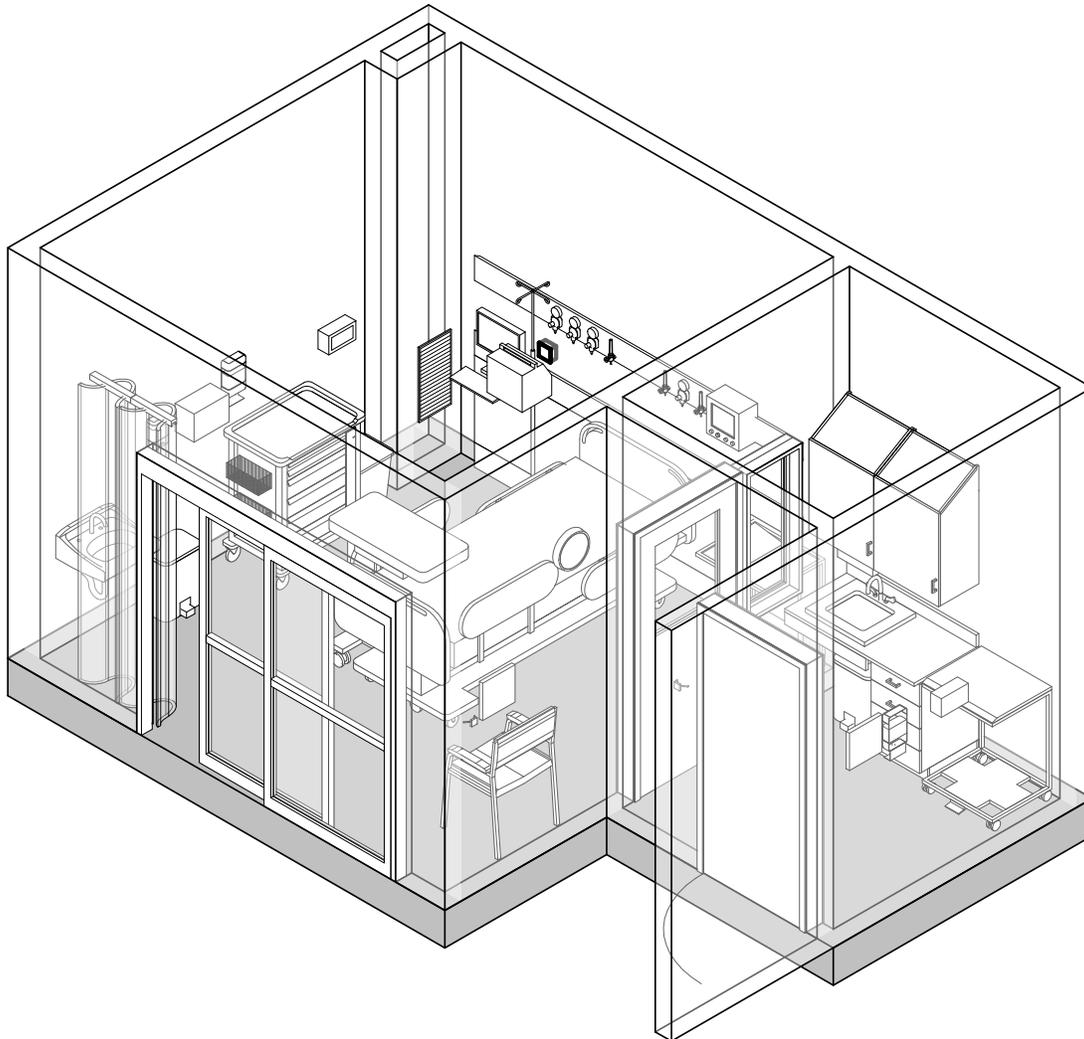
**4.21. PATIENT BAY, PACU / PHASE I RECOVERY (RRBP1)**Equipment List

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
A1107	Rail System , Utility, Gas and Electric	1	C / C	The headwall rail system shall consist of three horizontal rails mounted to the patient room headwall to provide utilities and patient services to support ancillary equipment to include gas and vacuum. The rail system must be capable of quickly adding or relocating medical gases services and be able to accept new equipment, provide physical support to equipment, brackets, shelves and other patient support items.
A5077	Dispenser, Hand Sanitizer, Hands-Free	1	V / V	A touch free wall-mounted hand sanitizer dispenser. For use throughout a healthcare facility. Unit does not include the sanitizing liquid. Units are battery operated.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	1	V / V	Examination glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Provided with wall bracket to facilitate mounting and demounting.
A5108	Waste Disposal Unit, Sharps	1	V / V	A container for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
A5180	Track, Cubicle, Surface Mounted, With Curtain	32	C / C	Surface mounted cubicle track, with curtain. Track constructed of thick extruded aluminum. Equipped with self lubricating carriers, beaded drop chain hooks, and flame resistant curtain. To include removable end caps. Designed to be suspended around patient areas where privacy is needed. Price listed is per foot of the track, curtains to be priced per quote.
E0948	Cart, General Storage, Mobile, 42"H x 32"W x 22"D	1	V / V	THIS TYPICAL INCLUDES: 1 Cart Body, Style-A Narrow, w/Raised Edge Top 2 Drawers, 3" H 4 Drawers, 6" H 1 Accessory Rail, Side Drawer Organizer Bins
F2010	Basket, Wastepaper, Step-On	1	V / V	"Step-on" wastepaper basket with inner liner and foot pedal activated flip top.
F3200	Clock, Battery, 12" Diameter	1	V / V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M0750	Flowmeter, Air, Connect w/50 PSI Supply	1	V / V	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Requires the appropriate adapter for connection to the wall outlet and fitting to connect to tubing. Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0755	Flowmeter, Oxygen, Low Flow	2	V / V	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Database pricing includes DISS fitting and DISS power outlet and wall adapter. Other fitting and adapter configurations are available.
M0765	Regulator, Vacuum	4	V / V	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required. To be used in delivery, neonatal, pediatrics or any area where suction is required. Database pricing reflects continuous regulators graduated to 200 mm Hg with a full line vacuum selection switch and DISS configured inlets and outlets.
M1801	Computer, Microprocessing, w/Flat Panel Monitor	1	V / V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
M3072	Frame, Infectious Waste Bag w/Lid	1	V / V	Frame for an infectious waste collection bag. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Adjust to hold 18" or 25" trash bags. Mounted on ball bearing casters and includes permanently mounted hinged lid. Provides means of bagging infectious waste at point of waste generation.
M4255	Stand, IV, Adjustable	1	V / V	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.

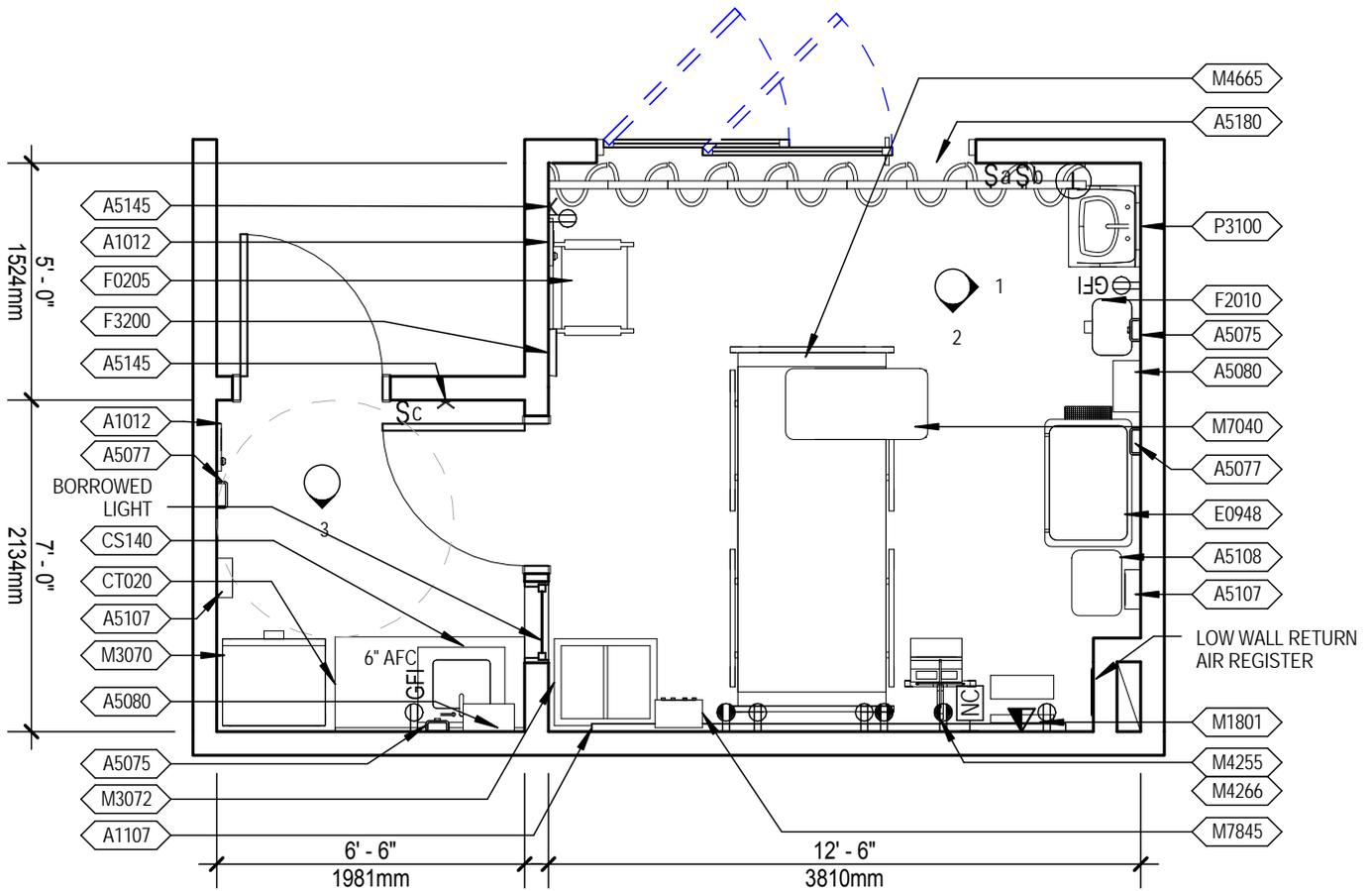
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M4266	Pump, Volumetric, Infusion, Multiple Line	1	V / V	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.
M4665	Stretcher, Recovery, Surgical	1	V / V	Recovery/surgical stretcher. Strong I-beam construction type unit. The height is adjustable with manual backrest and crank operated knee catch. Stainless or painted steel top and chassis. Features 8" or 10" conductive casters, with lock and brake, folding, tuck-away chrome side-rails and IV stand and a flame retardant antibacterial mattress. Designed for operating room transport or recovery applications.
M7040	Table, Overbed	1	V / V	Overbed table. Adjustable height table constructed of heavy gauge steel. Mounted on 2" diameter twin swivel casters with bumper caps. Table top is constructed with a high pressure plastic laminated surface that resists chipping, scratching, and staining. It includes a vanity tray and a mirror. Table is designed for use over bed, wheelchair or large chair.
M7845	Monitor, Physiological, Bedside, 4 Channel	1	V / V	4 channel bedside physiological monitor. The unit consist of a four-channel non-fade monochrome display monitor, an alarm system and printer-recording capabilities. The monitor has color coded controls and automatic calibration. The unit displays up to four waveforms simultaneously. The parameters to be monitored are user selectable. The monitor may be connected to a central monitoring station. The unit monitors patients in most acute care areas, step-down units, procedure rooms and emergency rooms.

### 4.22. AIRBORNE INFECTION ISOLATION (AII), PATIENT ROOM PACU / PHASE I RECOVERY (RRIR1)



Axonometric  
150 NSF / 14,0 NSM

**4.22. AIRBORNE INFECTION ISOLATION (AII), PATIENT ROOM  
PACU / PHASE I RECOVERY (RRIR1)**

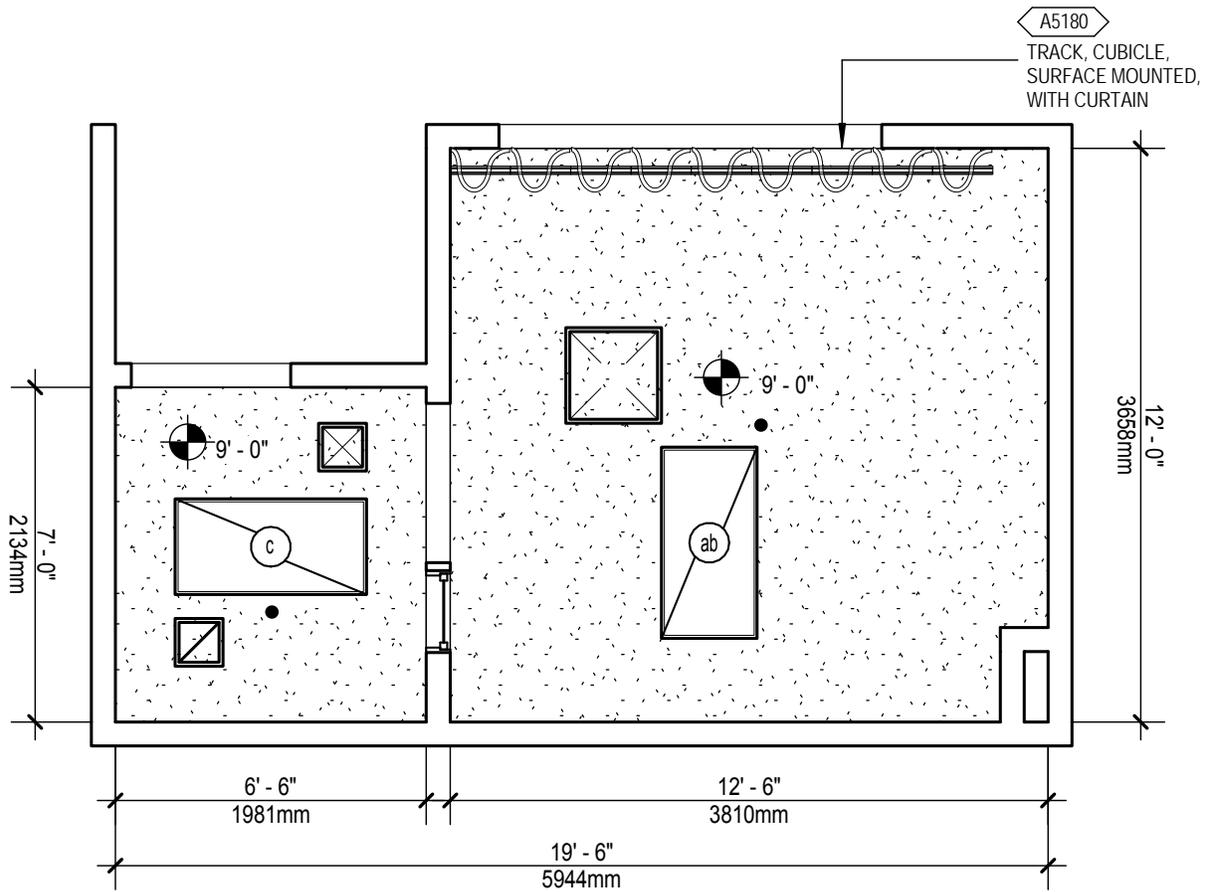


SCALE: 1/4" = 1'-0"



**Floor Plan**  
150 NSF / 14,0 NSM

### 4.22. AIRBORNE INFECTION ISOLATION (AII), PATIENT ROOM PACU / PHASE I RECOVERY (RRIR1)



SCALE: 1/4" = 1'-0"



Reflected Ceiling Plan  
150 NSF / 14,0 NSM

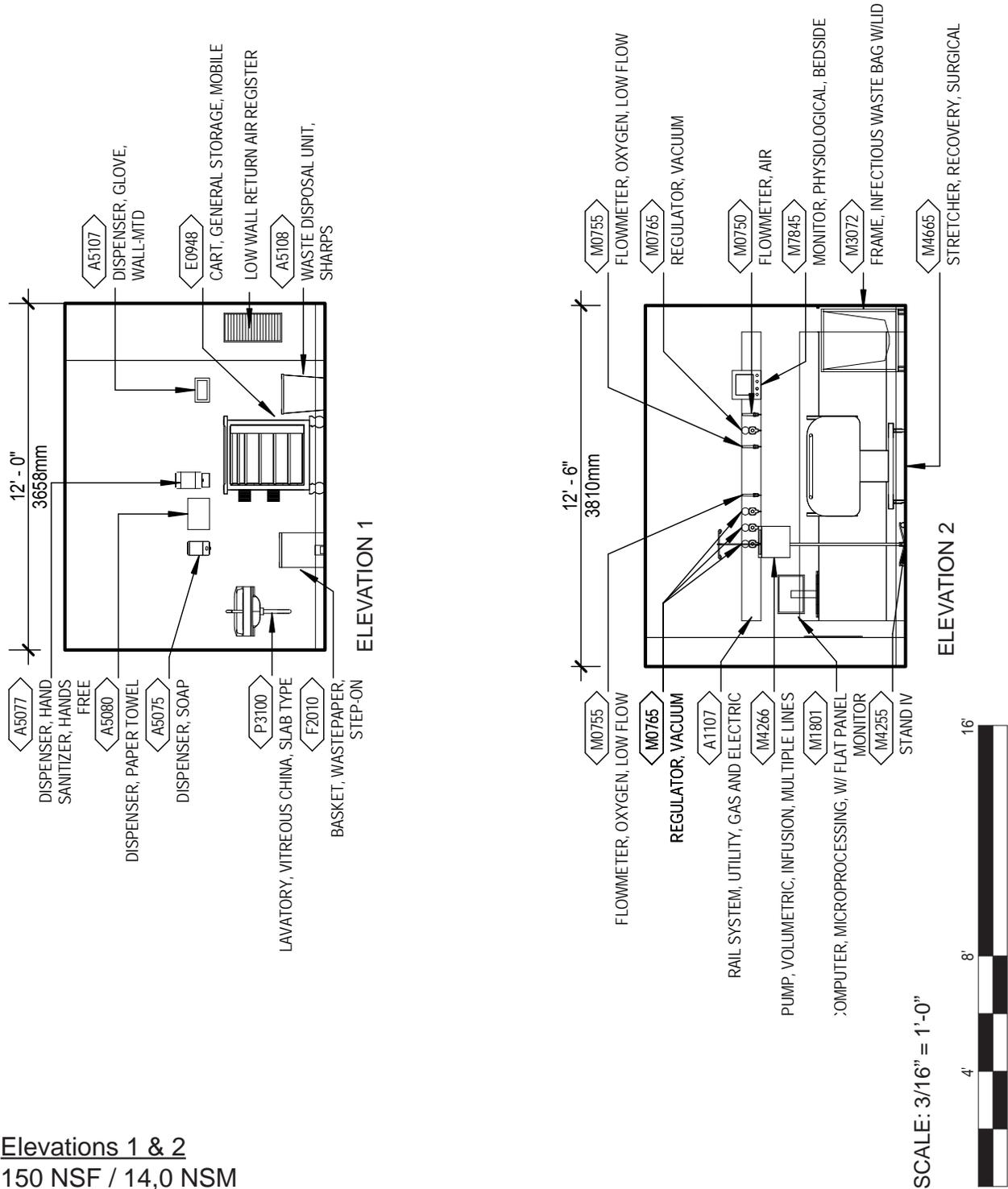
## 4.22. AIRBORNE INFECTION ISOLATION (AII), PATIENT ROOM PACU / PHASE I RECOVERY (RRIR1)

### JSN Legend

JSN DESCRIPTION

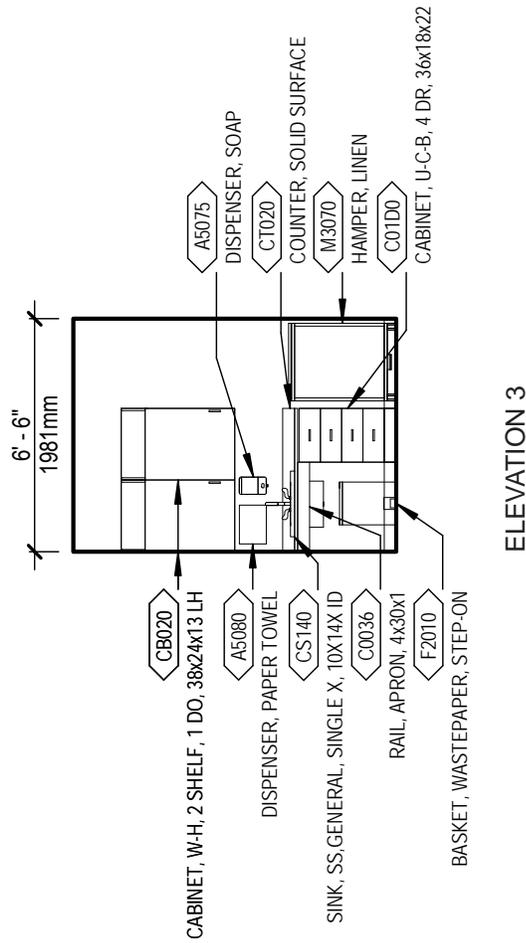
A1012 TELEPHONE, WALL MOUNTED, 1 LINE  
 A1107 RAIL SYSTEM, UTILITY, GAS  
 AND ELECTRIC  
 A5075 DISPENSER, SOAP  
 A5077 DISPENSER, HAND SANITIZER,  
 HANDS FREE  
 A5080 DISPENSER, PAPER TOWEL  
 A5107 DISPENSER, GLOVE, WALL-MTD  
 A5108 WASTE DISPOSAL UNIT, SHARPS  
 A5145 HOOK, GARMENT, DOUBLE  
 A5180 TRACK, CUBICLE, SURFACE  
 MOUNTED, WITH CURTAIN  
 CS140 SINK, SS, GENERAL, SINGLE X,  
 10X14X ID  
 E0948 CART, GENERAL STORAGE, MOBILE  
 F0205 SIDE CHAIR WITH ARMS  
 F2010 BASKET, WASTEPAPER, STEP-ON  
 F3200 CLOCK, BATTERY, 12IN  
 M0750 FLOWMETER, AIR  
 M0755 FLOWMETER, OXYGEN, LOW FLOW  
 M0765 REGULATOR, VACUUM  
 M1801 COMPUTER, MICROPROCESSING,  
 W/ FLAT PANEL MONITOR  
 M3070 HAMPER, LINEN  
 M3072 FRAME, INFECTIOUS WASTE BAG  
 W/LID  
 M4255 STAND IV, ADJUSTABLE  
 M4266 PUMP, VOLUMETRIC, INFUSION,  
 MULTIPLE LINES  
 M4665 STRETCHER, RECOVERY, SURGICAL  
 M7040 TABLE, OVERBED  
 M7845 MONITOR, PHYSIOLOGICAL, BEDSIDE,  
 4 CHANNEL  
 P3100 LAVATORY, VITREOUS CHINA,  
 SLAB TYPE

**4.22. AIRBORNE INFECTION ISOLATION (AII), PATIENT ROOM  
PACU / PHASE I RECOVERY (RRIR1)**



Elevations 1 & 2  
150 NSF / 14,0 NSM

4.22. AIRBORNE INFECTION ISOLATION (AII), PATIENT ROOM  
 PACU / PHASE I RECOVERY (RRIR1)



ELEVATION 3

Elevation 3  
 150 NSF / 14,0 NSM



## 4.22. AIRBORNE INFECTION ISOLATION (AII), PATIENT ROOM PACU / PHASE I RECOVERY (RRIR1)

### Room Data Sheet

#### ARCHITECTURAL

Ceiling Type:	Acoustical Ceiling Tile (SP)
Ceiling Height:	9'-0" (2700mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	WSF Integral Base (min. 6" / 152 mm)
Floor Finish:	Welded Seam Sheet Flooring
Slab Depression:	None
Sound Protection:	35 STC (Room)/ None (Bay)
Doors:	Sliding Glass Door, Size 8'-0" x 7'-0" (2438 mm x 2133 mm) ; Single, Size 3'-0" x 7'-0" (914 mm x 2133 mm) Wood w/ Half View Window

Special Requirement:

#### Notes:

1) Verify with life safety requirements that sliding glass doors can break out of the room

#### LIGHTING

Refer to the VA Lighting Design Manual section 4.2.15 - Pre-Operative and Post-Anesthetic Care (PACU) - for lighting design consideration.

#### POWER

Normal Power:	To be connected to selected receptacles and equipment.
Emergency Power:	Critical branch of the EES to be connected to selected receptacles and equipment.

#### COMMUNICATIONS

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	No
Intercom:	No
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No

## 4.22. AIRBORNE INFECTION ISOLATION (AII), PATIENT ROOM PACU / PHASE I RECOVERY (RRIR1)

### Room Data Sheet (continued)

#### HEATING, VENTILATING AND AIR CONDITIONING

General Requirement: Refer to Post Anesthesia Care Unit (PACU) room data sheet in the current version of the VA HVAC Design Manual for temperatures, humidity range, room air change requirements, and pressurization.

Special Requirement:

#### Notes:

- 1) Provide negative pressure for isolation room.
- 2) Provide low wall return air grille in patient area.

#### PLUMBING AND MEDICAL GASES

Cold Water:	Yes
Hot Water:	Yes
Waste:	Yes
Reagent Grade Water:	No
Medical Air	Yes
Medical Vacuum	Yes
Oxygen	Yes

#### FIRE PROTECTION AND LIFE SAFETY

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Light Hazard

**4.22. AIRBORNE INFECTION ISOLATION (AII), PATIENT ROOM****PACU / PHASE I RECOVERY (RRIR1)**Equipment List

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
A1012	Telephone, Wall Mounted, 1 Line	1	C / C	Telephone, wall mounted, 1 line.
A1107	Rail System , Utility, Gas and Electric	1	C / C	The headwall rail system shall consist of three horizontal rails mounted to the patient room headwall to provide utilities and patient services to support ancillary equipment to include gas and vacuum. The rail system must be capable of quickly adding or relocating medical gases services and be able to accept new equipment, provide physical support to equipment, brackets, shelves and other patient support items.
A5075	Dispenser, Soap, Disposable	1	V / V	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
A5077	Dispenser, Hand Sanitizer, Hands-Free	1	V / V	A touch free wall-mounted hand sanitizer dispenser. For use throughout a healthcare facility. Unit does not include the sanitizing liquid. Units are battery operated.
A5080	Dispenser, Paper Towel, SS, Surface Mounted	1	C / C	A surface mounted, satin finish stainless steel, single-fold, paper towel dispenser. Dispenser features: tumbler lock; front hinged at bottom; and refill indicator slot. Minimum capacity 400 single-fold paper towels. For general purpose use throughout the facility.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	1	V / V	Examination glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Provided with wall bracket to facilitate mounting and demounting.
A5108	Waste Disposal Unit, Sharps	1	V / V	A container for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
A5145	Hook, Garment, Double, SS, Surface Mounted	1	C / C	A surface mounted, satin finish stainless steel, double garment hook. Equipped with a concealed mounting bracket that is secured to a concealed wall plate. For general purpose use throughout the facility to hang various items of apparel.
A5180	Track, Cubicle, Surface Mounted, With Curtain	12	C / C	Surface mounted cubicle track, with curtain. Track constructed of thick extruded aluminum. Equipped with self lubricating carriers, beaded drop chain hooks, and flame resistant curtain. To include removable end caps. Designed to be suspended around patient areas where privacy is needed. Price listed is per foot of the track, curtains to be priced per quote.

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
E0948	Cart, General Storage, Mobile, 42"H x 32"W x 22"D	1	V / V	THIS TYPICAL INCLUDES: 1 Cart Body, Style-A Narrow, w/Raised Edge Top 2 Drawers, 3" H 4 Drawers, 6" H 1 Accessory Rail, Side Drawer Organizer Bins
F0205	Chair, Side With Arms	1	V / V	Upholstered side chair, 32" high X 21" wide X 23" deep with arms, padded seats and padded backs. Seat height is a minimum of 17". Available with or without sled base.
F2010	Basket, Wastepaper, Step-On	1	V / V	"Step-on" wastepaper basket with inner liner and foot pedal activated flip top.
F3200	Clock, Battery, 12" Diameter	1	V / V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
M0750	Flowmeter, Air, Connect w/50 PSI Supply	1	V / V	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Requires the appropriate adapter for connection to the wall outlet and fitting to connect to tubing. Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0755	Flowmeter, Oxygen, Low Flow	2	V / V	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Database pricing includes DISS fitting and DISS power outlet and wall adapter. Other fitting and adapter configurations are available.
M0765	Regulator, Vacuum	4	V / V	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required. To be used in delivery, neonatal, pediatrics or any area where suction is required. Database pricing reflects continuous regulators graduated to 200 mm Hg with a full line vacuum selection switch and DISS configured inlets and outlets.

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M1801	Computer, Microprocessing, w/Flat Panel Monitor	1	V / V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
M3072	Frame, Infectious Waste Bag w/Lid	1	V / V	Frame for an infectious waste collection bag. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Adjust to hold 18" or 25" trash bags. Mounted on ball bearing casters and includes permanently mounted hinged lid. Provides means of bagging infectious waste at point of waste generation.
M4255	Stand, IV, Adjustable	1	V / V	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.
M4266	Pump, Volumetric, Infusion, Multiple Line	1	V / V	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.
M4665	Stretcher, Recovery, Surgical	1	V / V	Recovery/surgical stretcher. Strong I-beam construction type unit. The height is adjustable with manual backrest and crank operated knee catch. Stainless or painted steel top and chassis. Features 8" or 10" conductive casters, with lock and brake, folding, tuck-away chrome side-rails and IV stand and a flame retardant antibacterial mattress. Designed for operating room transport or recovery applications.
M7040	Table, Overbed	1	V / V	Overbed table. Adjustable height table constructed of heavy gauge steel. Mounted on 2" diameter twin swivel casters with bumper caps. Table top is constructed with a high pressure plastic laminated surface that resists chipping, scratching, and staining. It includes a vanity tray and a mirror. Table is designed for use over bed, wheelchair or large chair.

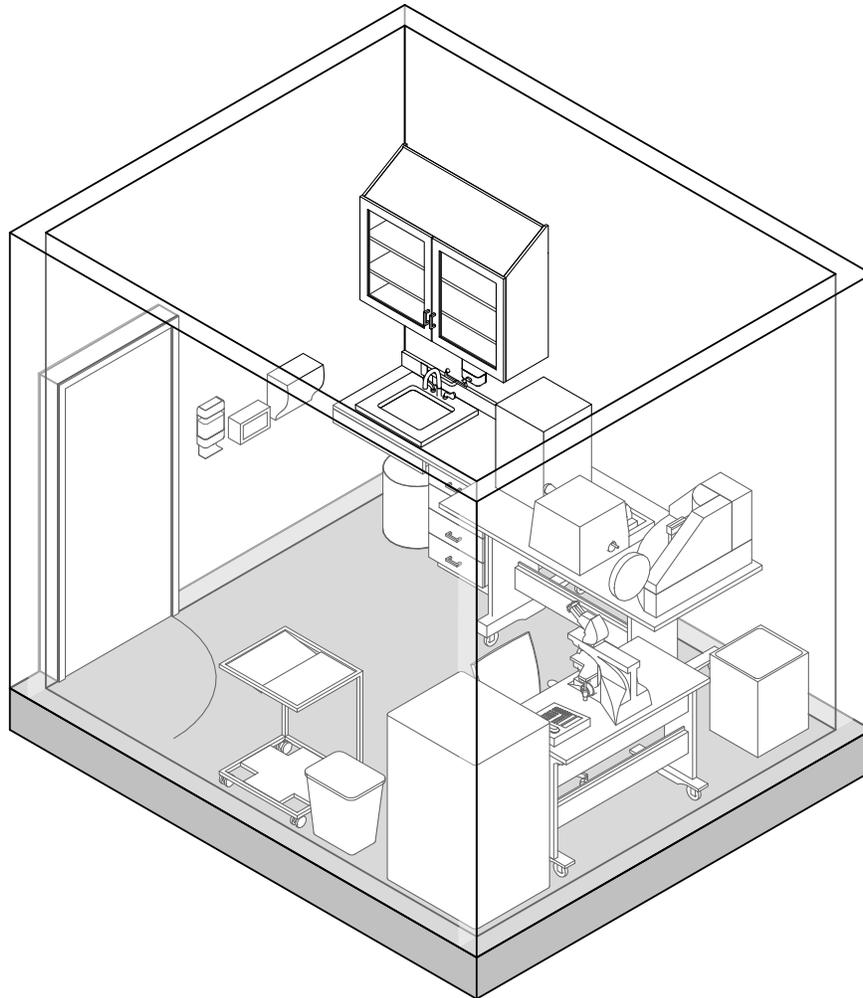
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M7845	Monitor, Physiological, Bedside, 4 Channel	1	V / V	4 channel bedside physiological monitor. The unit consist of a four-channel non-fade monochrome display monitor, an alarm system and printer-recording capabilities. The monitor has color coded controls and automatic calibration. The unit displays up to four waveforms simultaneously. The parameters to be monitored are user selectable. The monitor may be connected to a central monitoring station. The unit monitors patients in most acute care areas, step-down units, procedure rooms and emergency rooms.
P3100	Lavatory, Vitreous China, Slab Type	1	C / C	Wall mounted, slab type, vitreous china, lavatory (approximate bowl size 7"x15"x10") with: faucet holes on 4" centers; gooseneck spout; wrist blade handles; and grid strainer. It shall be suitable for use in clinics, offices, washrooms or patient care area.

**4.22. AIRBORNE INFECTION ISOLATION (AII), PATIENT ROOM****PACU / PHASE I RECOVERY (RRIR1)**Equipment List (Anteroom)

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
A1012	Telephone, Wall Mounted, 1 Line	1	C / C	Telephone, wall mounted, 1 line.
A5075	Dispenser, Soap, Disposable	1	V / V	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
A5077	Dispenser, Hand Sanitizer, Hands-Free	1	V / V	A touch free wall-mounted hand sanitizer dispenser. For use throughout a healthcare facility. Unit does not include the sanitizing liquid. Units are battery operated.
A5080	Dispenser, Paper Towel, SS, Surface Mounted	1	C / C	A surface mounted, satin finish stainless steel, single-fold, paper towel dispenser. Dispenser features: tumbler lock; front hinged at bottom; and refill indicator slot. Minimum capacity 400 single-fold paper towels. For general purpose use throughout the facility.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	1	V / V	Examination glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Provided with wall bracket to facilitate mounting and demounting.
A5145	Hook, Garment, Double, SS, Surface Mounted	1	C / C	A surface mounted, satin finish stainless steel, double garment hook. Equipped with a concealed mounting bracket that is secured to a concealed wall plate. For general purpose use throughout the facility to hang various items of apparel.
C0036	Rail, Apron, 4x30x1	1	C / C	Apron rail. Also referred to as an apron front, apron panel, or knee space rail. Used to close in front knee space area and/or provide work surface support between two steel base cabinets or a steel base cabinet and wall. Apron rails should be ordered in pairs to provide both front and rear work surface support. Constructed of steel.
C01D0	Cabinet, U/C/B, 4 Drawer, 36x18x22	1	C / C	Standing height under counter base cabinet with four full width drawers of equal height. Also referred to as a drawer cabinet. For general purpose use throughout the facility.
CB020	Cabinet, W/H, 2 Shelf, 1 DO, Sloping Top, 38x24x13	3	C / C	Wall hung cabinet with two adjustable shelves, solid right or left-hinged door (appropriate door hinge configuration to be indicated on equipment elevation drawings), and sloping top. Also referred to as a solid hinged single door case. For general purpose use throughout the facility.

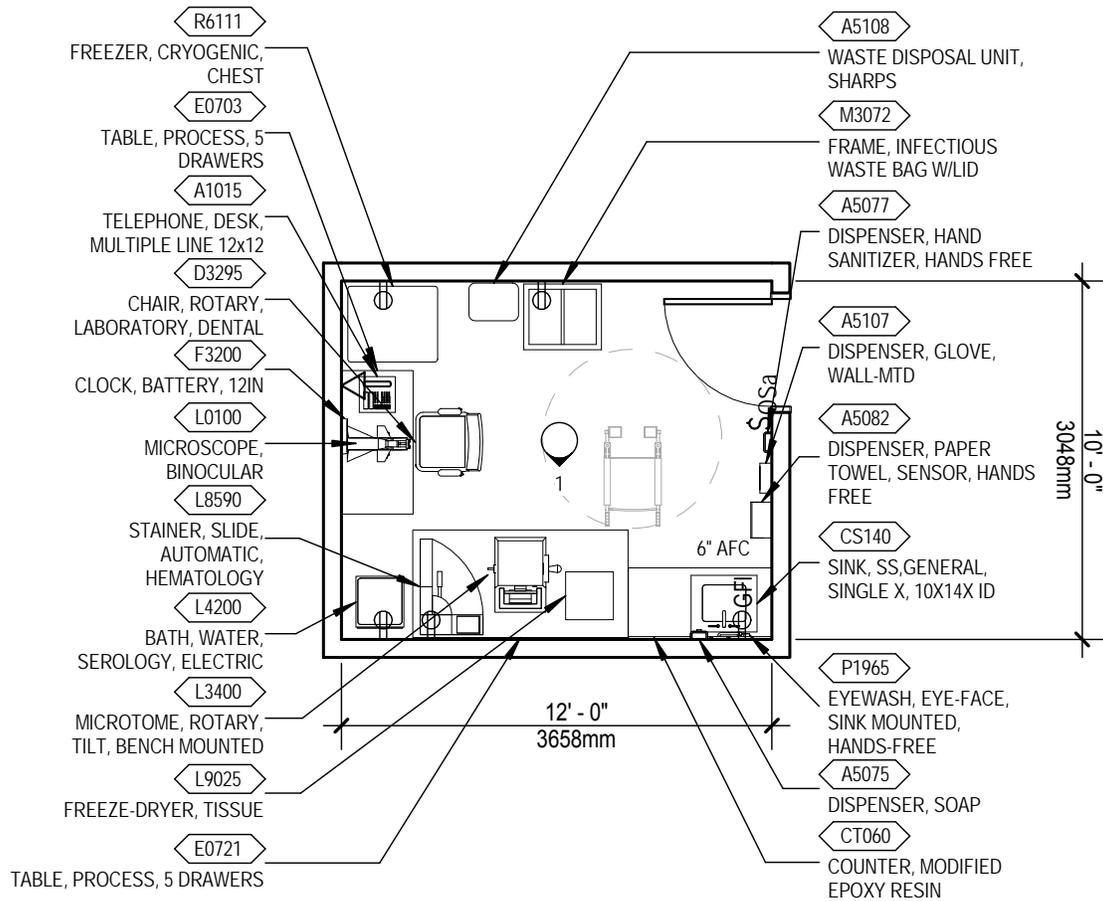
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
CS140	Sink, SS, Single Compartment, 10x14x16 ID	1	C / C	Single compartment stainless steel sink, drop-in, self-rimming, ledge-type, connected with a drain and provided with a mixing faucet. It shall also be provided with punched fixture holes on 4" center, integral back ledge to accommodate deck-mounted fixtures, brushed/polished interior and top surfaces, and sound deadened. Recommended for use in suspended or U/C/B sink cabinets having a high plastic laminate or Chemsurf laminate countertop/work surface. Coordinate actual outside sink dimensions with the actual clear dimension of cabinet specified to ensure that they are compatible. For general purpose use throughout the facility.
CT020	Countertop, Solid Surface	4	C / C	A solid, nonporous countertop with a smooth seamless appearance. Easy to clean and maintain and with proper cleaning does not support the growth of mold. An acrylic-based solid surface product. Standard thickness of 1", and a 4" butt backsplash/curb. Also referred to as a work surface or work top. Available in a choice of colors and depths. Used in lab and other hospital areas requiring optimum physical and chemical resisting properties.
F2010	Basket, Wastepaper, Step-On	1	V / V	"Step-on" wastepaper basket with inner liner and foot pedal activated flip top.
M3070	Hamper, Linen, Mo- bile, w/Lid	1	V / V	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters. For linen transport in hospitals and clinics.

### 4.23. LABORATORY, FROZEN SECTION (LBUL1)



Axonometric  
120 NSF / 11,2 NSM

4.23. LABORATORY, FROZEN SECTION (LBUL1)

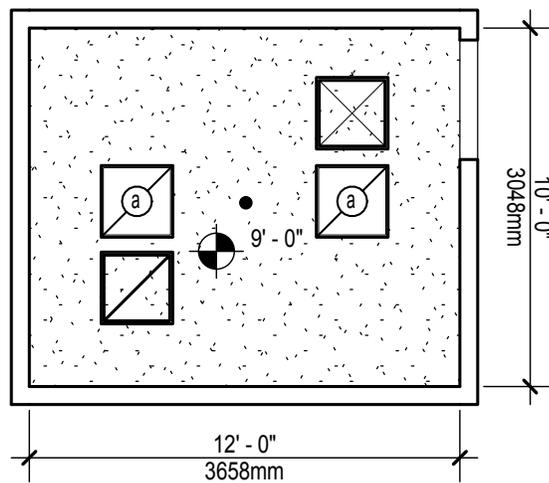


SCALE: 3/16" = 1'-0"



Floor Plan  
120 NSF / 11,2 NSM

### 4.23. LABORATORY, FROZEN SECTION (LBUL1)

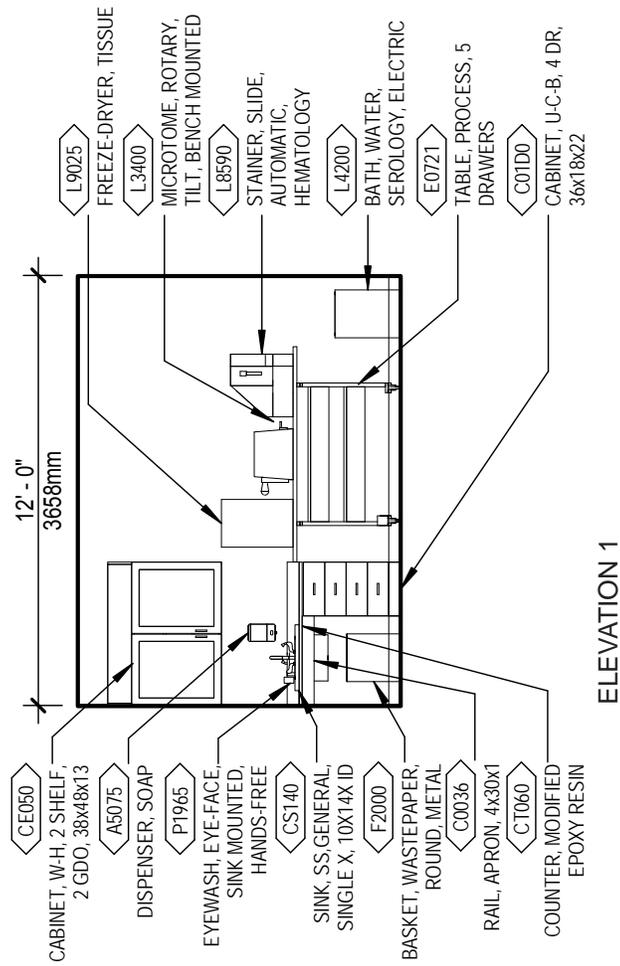


SCALE: 3/16" = 1'-0"



Reflected Ceiling Plan  
120 NSF / 11,2 NSM

4.23. LABORATORY, FROZEN SECTION (LBUL1)



SCALE: 3/16" = 1'-0"



Elevation 1  
120 NSF / 11,2 NSM

**4.23. LABORATORY, FROZEN SECTION (LBUL1)****Room Data Sheet****ARCHITECTURAL**

Ceiling Type:	Gypsum Wallboard (SC)
Ceiling Height:	9'-0" (2700mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	Resilient Base
Floor Finish:	Resinous Flooring, Welded Seam Sheet Flooring
Slab Depression:	None Special
Sound Protection:	None
Doors:	Single Door, Size 3'-0" x 7'-0" (914 mm x 2133 mm) Wood

**LIGHTING**

Refer to the VA Lighting Design Manual section 4.2.4 - Laboratory - for lighting design consideration.

**POWER**

Normal Power:	To be connected to selected receptacles and equipment.
Emergency Power:	Critical branch of the EES to be connected to selected receptacles and equipment.

**Notes:**

- 1) Connect lab equipment to Critical Branch of the EES.

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	No
Code Blue:	No
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	No

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Frozen Section Laboratories room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization.

**4.23. LABORATORY, FROZEN SECTION (LBUL1)**Room Data Sheet (continued)**PLUMBING AND MEDICAL GASES**

Cold Water:	Yes
Hot Water:	Yes
Waste:	Yes
Reagent Grade Water:	No
Medical Air	No
Medical Vacuum	No
Oxygen	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Light Hazard

**4.23. LABORATORY, FROZEN SECTION (LBUL1)**Equipment List

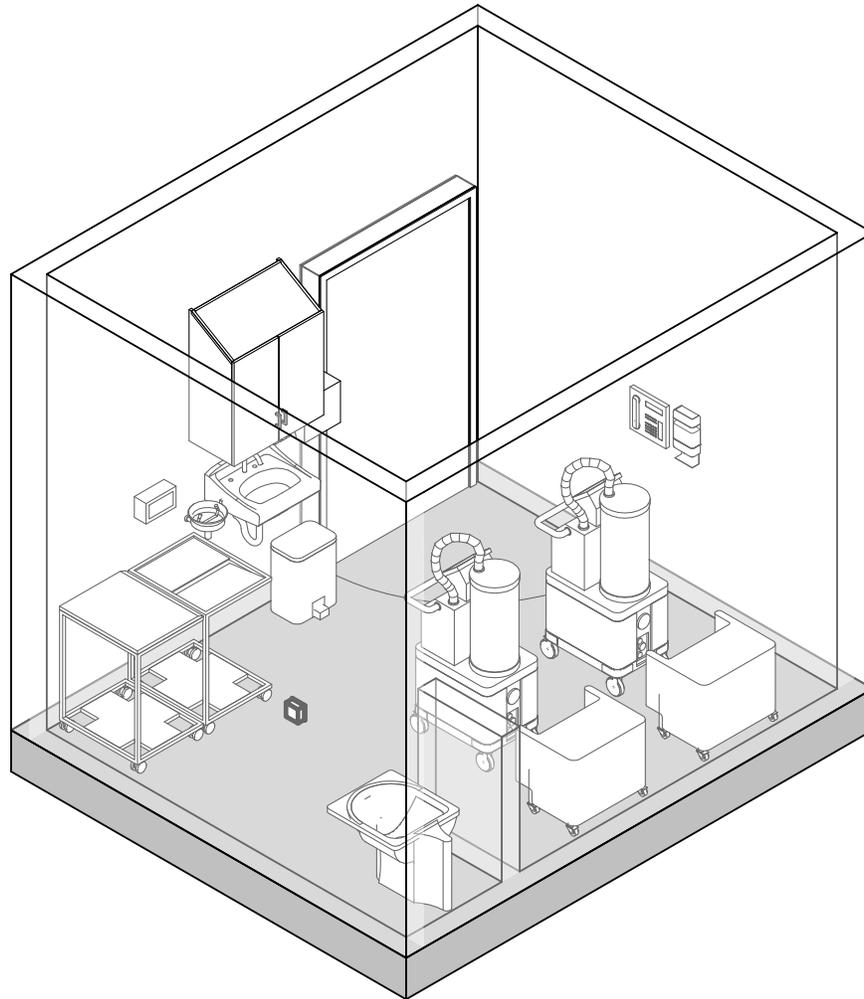
<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
A1015	Telephone, Desk, Multiple Line	1	C / C	Telephone, desk, multiple line.
A5075	Dispenser, Soap, Disposable	1	V / V	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
A5077	Dispenser, Hand Sanitizer, Hands-Free	1	V / V	A touch free wall-mounted hand sanitizer dispenser. For use throughout a healthcare facility. Unit does not include the sanitizing liquid. Units are battery operated.
A5082	Dispenser, Paper Towel, Sensor, Hands Free	1	C / C	A surface mounted, sensor activated, automatic, roll paper towel dispenser. The unit dispenses a paper towel automatically only when hands are placed in position below the dispenser for maximum sanitation and hygiene. May include adjustable settings for sheet length, time delay, and sensor range. Unit is battery operated or with optional AC power adapter.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	1	V / V	Examination glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Provided with wall bracket to facilitate mounting and demounting.
A5108	Waste Disposal Unit, Sharps	1	V / V	A container for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
C0036	Rail, Apron, 4x30x1	1	C / C	Apron rail. Also referred to as an apron front, apron panel, or knee space rail. Used to close in front knee space area and/or provide work surface support between two steel base cabinets or a steel base cabinet and wall. Apron rails should be ordered in pairs to provide both front and rear work surface support. Constructed of steel.
C01D0	Cabinet, U/C/B, 4 Drawer, 36x18x22	1	C / C	Standing height under counter base cabinet with four full width drawers of equal height. Also referred to as a drawer cabinet. For general purpose use throughout the facility.
CE050	Cabinet, W/H, 2 SH, 2 GDO, Sloping Top, 38x48x13	1	C / C	Wall hung cabinet with two adjustable shelves, framed-glass hinged doors, and sloping top. Also referred to as a framed-glass hinged double door wall case. For general purpose use throughout the facility.

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
CS140	Sink, SS, Single Compartment, 10x14x16 ID	1	C / C	Single compartment stainless steel sink, drop-in, self-rimming, ledge-type, connected with a drain and provided with a mixing faucet. It shall also be provided with punched fixture holes on 4" center, integral back ledge to accommodate deck-mounted fixtures, brushed/polished interior and top surfaces, and sound deadened. Recommended for use in suspended or U/C/B sink cabinets having a high plastic laminate or Chemsurf laminate countertop/work surface. Coordinate actual outside sink dimensions with the actual clear dimension of cabinet specified to ensure that they are compatible. For general purpose use throughout the facility.
CT060	Countertop, Modified Epoxy Resin	4	C / C	Modified epoxy resin countertop (composition of molded epoxy resins and inert materials) having a low sheen surface finish, standard thickness of 1", and a 4" butt backsplash/curb. Also referred to as a work surface or work top. Available in a choice of colors and depths. Used in lab areas requiring optimum physical and chemical resisting properties.
D3295	Chair, Rotary, Laboratory, Dental	1	V / V	Rotary dental laboratory chair. The chair is used by technicians while working at a bench. Chairs also have casters and an adjustable backrest.
E0703	Table, Process, Adj Height, 5 Drawer, 48"W x 24"D	1	V / V	Height adjustable table. The table top is available in a plastic laminate or chemical resistant material (Chem-Surf). Casters or glides are options with some tables. All tables will accept various storage components underneath. These work surfaces are available in 24" or 30" depth. THIS TYPICAL INCLUDES: 1 height adjustable table; 1 storage frame; 3 drawers, 3"H; 1 drawer, 6"H; 1 drawer, 9"H and drawer organizer bins.
E0721	Table, Process, Adj Height, 10 Drawer, 72"W x 36"D	1	V / V	THIS TYPICAL INCLUDES: 1 Height Adjustable Table 4 Storage Frames 2 Drawers, 3"H; 6 Drawers, 6"H; 2 Drawers, 9"H; Drawer organizer bins
F2000	Basket, Wastepaper, Round, Metal	1	V / V	Round wastepaper basket, approximately 18" high X 16" diameter. This metal unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations.

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
F3200	Clock, Battery, 12" Diameter	1	V / V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
L0100	Microscope, Binocular	1	V / V	Binocular microscope. Equipped with plan achromatic objectives to suit work in brightfield, phase contrast, darkfield, photomicrography, dual viewing and projection screen. Microscope has a high light intensity, 100 watt halogen lamp, for constant color temperature and illumination, a three step variable transformer, focusable aspheric abbe condenser system; heat absorbing glass; centerable field diaphragm; two built-in filter turrets permitting a combination of selective light balancing and color compensating filters. Other components/features include a swing-in condenser, 4X objective, quadruple nosepiece, 10X wide field eyepieces and a graduated stage. Other observation tubes can be added. It is used in laboratories for cell counting and other observation techniques.
L3400	Microtome, Rotary, Tilt, Bench Mounted	1	V / V	Bench mounted tilting rotary microtome. The unit's features include horizontal advancement, a feed indicator and selection dial that provide settings from 1 to 30 microns, a quick change holder system that allows the use of different holders, an angle adjustment from 0 to 15 degrees and a hand wheel that allows speed control without backflash. Used for histological techniques and slide preparation.
L4200	Bath, Water, Serology, Electric	1	V / V	Serological water bath. It operates in the temperature range of 60 to 100 degrees centigrade. It has a corrosion-proof stainless steel water tank with a 3 gallon capacity. Models have drain spouts for easy emptying of media. Used to provide a controlled temperature environment for the preparation of samples for study.
L8590	Stainer, Immunostaining System	1	V / V	Automated immunostaining system for the staining of formalin-fixed, paraffin-embedded tissues, frozen sections, cytopins, cell smears and fine needle aspirates, using a variety of reagents.
L9025	Freeze-Dryer, Tissue	1	V / V	Freeze dryer. The maximum low temperature of the unit is -54 degrees centigrade. The unit has a built in electronic vacuum gauge and is built of epoxy-coated steel for chemical resistance, includes vacuum pump. Used for laboratory specimen preparations. Capable of collecting 12 liters of ice before defrosting, remove up to 8 liters of water in 24 hours. Various options are available such as stopping tray, manifolds and glassware.

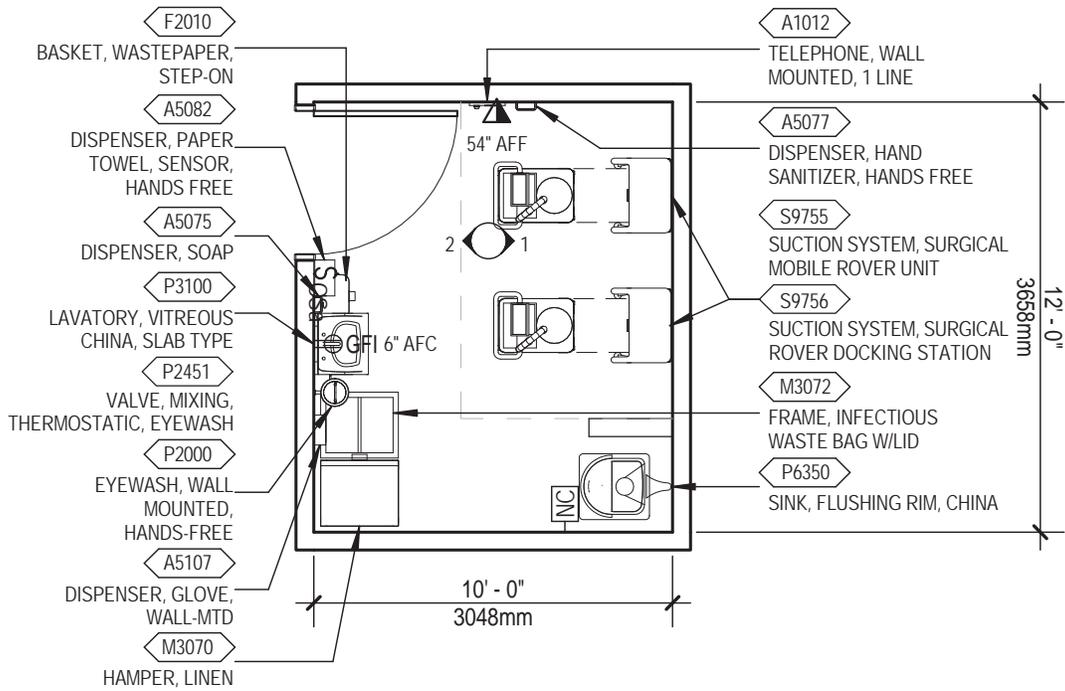
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M3072	Frame, Infectious Waste Bag w/Lid	1	V / V	Frame for an infectious waste collection bag. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Adjust to hold 18" or 25" trash bags. Mounted on ball bearing casters and includes permanently mounted hinged lid. Provides means of bagging infectious waste at point of waste generation.
P1965	Eyewash, Eye/Face, Sink Mounted, Hands-free	1	C / C	A sink mounted eyewash station. The unit is designed for emergency eye and face rinsing from soft flow dual spray-heads. The Flow must be activated by the single momentary action and remain on until terminated.
R6111	Freezer, Cryogenic, Chest	1	V / V	Cryogenic freezer. This is a chest type unit that will maintain uniform temperatures to -140 and -150 degrees centigrade. It shall have a microprocessor control system, key-operated master switch for power and alarm, washable, reusable condenser filter to maintain peak operating efficiency and full-function safety system. The cabinet shall have a convenient size lid handle and lid locking provision to prohibit unauthorized access. The refrigerant shall be non-flammable and preferably CFC-free.

### 4.24. UTILITY ROOM, SURGICAL SOILED (USCL7)



Axonometric  
120 NSF / 11,2 NSM

4.24. UTILITY ROOM, SURGICAL SOILED (USCL7)

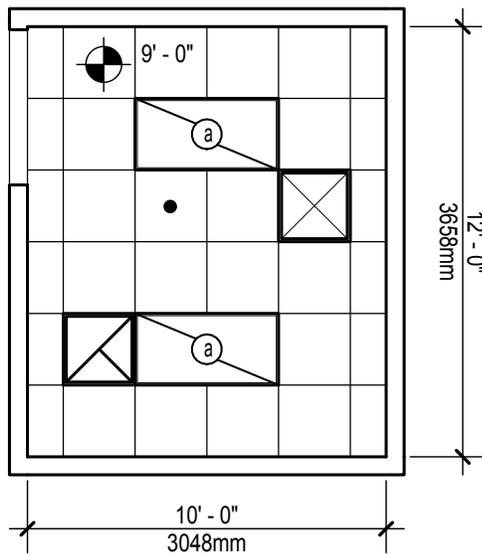


SCALE: 3/16" = 1'-0"



Floor Plan  
120 NSF / 11,2 NSM

### 4.24. UTILITY ROOM, SURGICAL SOILED (USCL7)

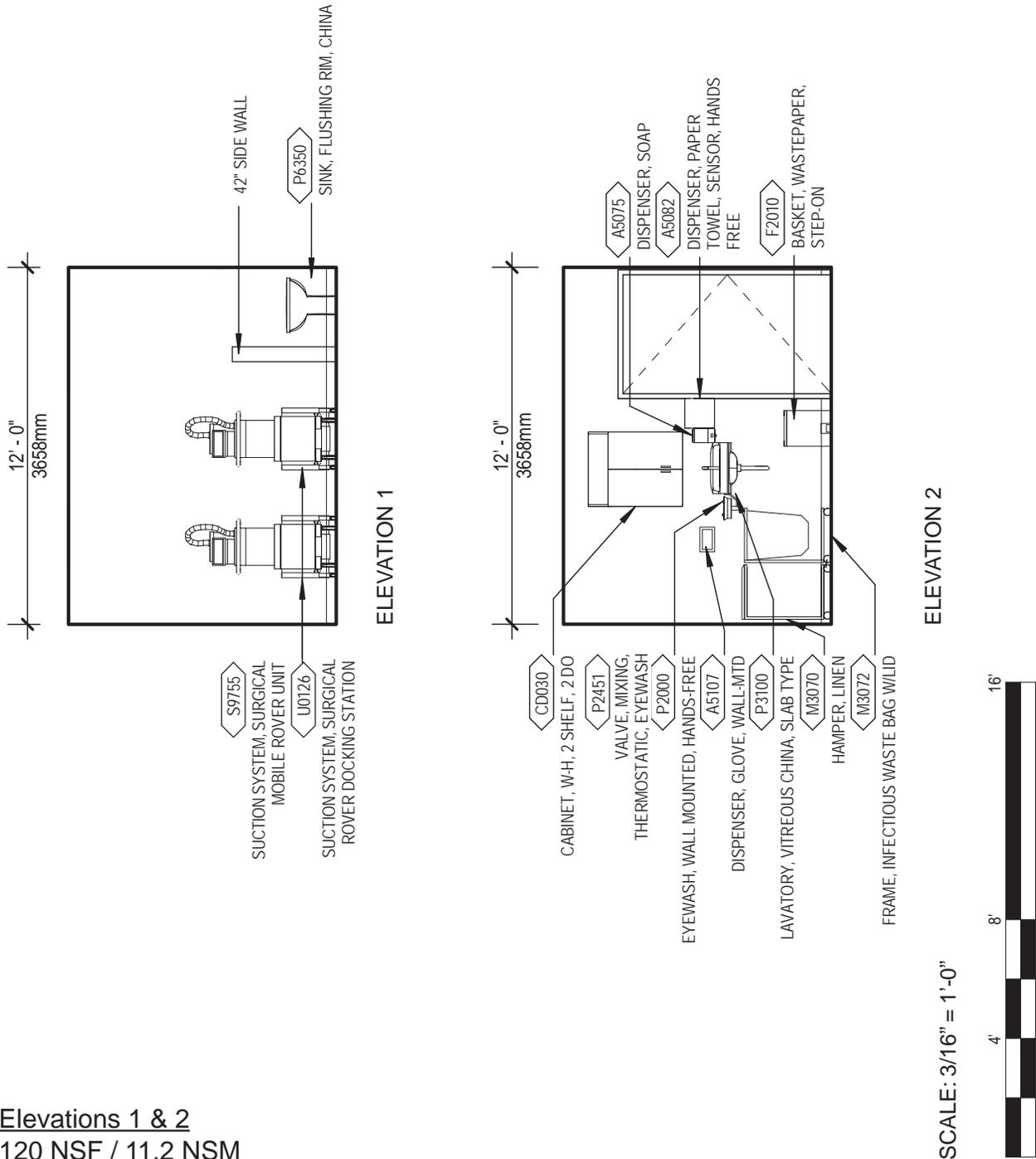


SCALE: 3/16" = 1'-0"



Reflected Ceiling Plan  
120 NSF / 11,2 NSM

4.24. UTILITY ROOM, SURGICAL SOILED (USCL7)



Elevations 1 & 2  
120 NSF / 11,2 NSM

**4.24. UTILITY ROOM, SURGICAL SOILED (USCL7)**Room Data Sheet**ARCHITECTURAL**

Ceiling Type:	Gypsum Wallboard (SC)
Ceiling Height:	9'-0" (2700mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (Epoxy)
Wainscot:	
Base:	Resilient Base
Floor Finish:	Resinous Flooring, Welded Seam Sheet Flooring
Slab Depression:	None Special
Sound Protection:	None
Doors:	Single Door, Size 3'-0" x 7'-0" (914 mm x 2133 mm) Wood

**LIGHTING**

Refer to the VA Lighting Design Manual section 7.3 - Soiled Utility Room - for lighting design consideration.

**POWER**

Normal Power:	To be connected to selected receptacles and equipment.
Emergency Power:	Not required.

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	No
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Conferencing (VTEL):	No

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Soiled Holding/ Disposal Room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements and pressurization.

**4.24. UTILITY ROOM, SURGICAL SOILED (USCL7)**Room Data Sheet (continued)**PLUMBING AND MEDICAL GASES**

Cold Water:	Yes
Hot Water:	Yes
Waste:	Yes
Reagent Grade Water:	No
Medical Air	No
Medical Vacuum	No
Oxygen	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Light Hazard

**4.24. UTILITY ROOM, SURGICAL SOILED (USCL7)**Equipment List

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
A1012	Telephone, Wall Mounted, 1 Line	1	C / C	Telephone, wall mounted, 1 line.
A5075	Dispenser, Soap, Disposable	1	V / V	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
A5077	Dispenser, Hand Sanitizer, Hands-Free	1	V / V	A touch free wall-mounted hand sanitizer dispenser. For use throughout a healthcare facility. Unit does not include the sanitizing liquid. Units are battery operated.
A5082	Dispenser, Paper Towel, Sensor, Hands Free	1	C / C	A surface mounted, sensor activated, automatic, roll paper towel dispenser. The unit dispenses a paper towel automatically only when hands are placed in position below the dispenser for maximum sanitation and hygiene. May include adjustable settings for sheet length, time delay, and sensor range. Unit is battery operated or with optional AC power adapter.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	1	V / V	Examination glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Provided with wall bracket to facilitate mounting and demounting.
CD030	Cabinet, W/H, 2 Shelf, 2 DO, Sloping Top, 38x30x13	1	C / C	Wall hung steel cabinet with two adjustable shelves, solid hinged doors, and sloping top. Also referred to as a solid hinged double door wall case. For general purpose use throughout the facility.
F2010	Basket, Wastepaper, Step-On	1	V / V	"Step-on" wastepaper basket with inner liner and foot pedal activated flip top.
M3070	Hamper, Linen, Mobile, w/Lid	1	V / V	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters. For linen transport in hospitals and clinics.
M3072	Frame, Infectious Waste Bag w/Lid	1	V / V	Frame for an infectious waste collection bag. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Adjust to hold 18" or 25" trash bags. Mounted on ball bearing casters and includes permanently mounted hinged lid. Provides means of bagging infectious waste at point of waste generation.

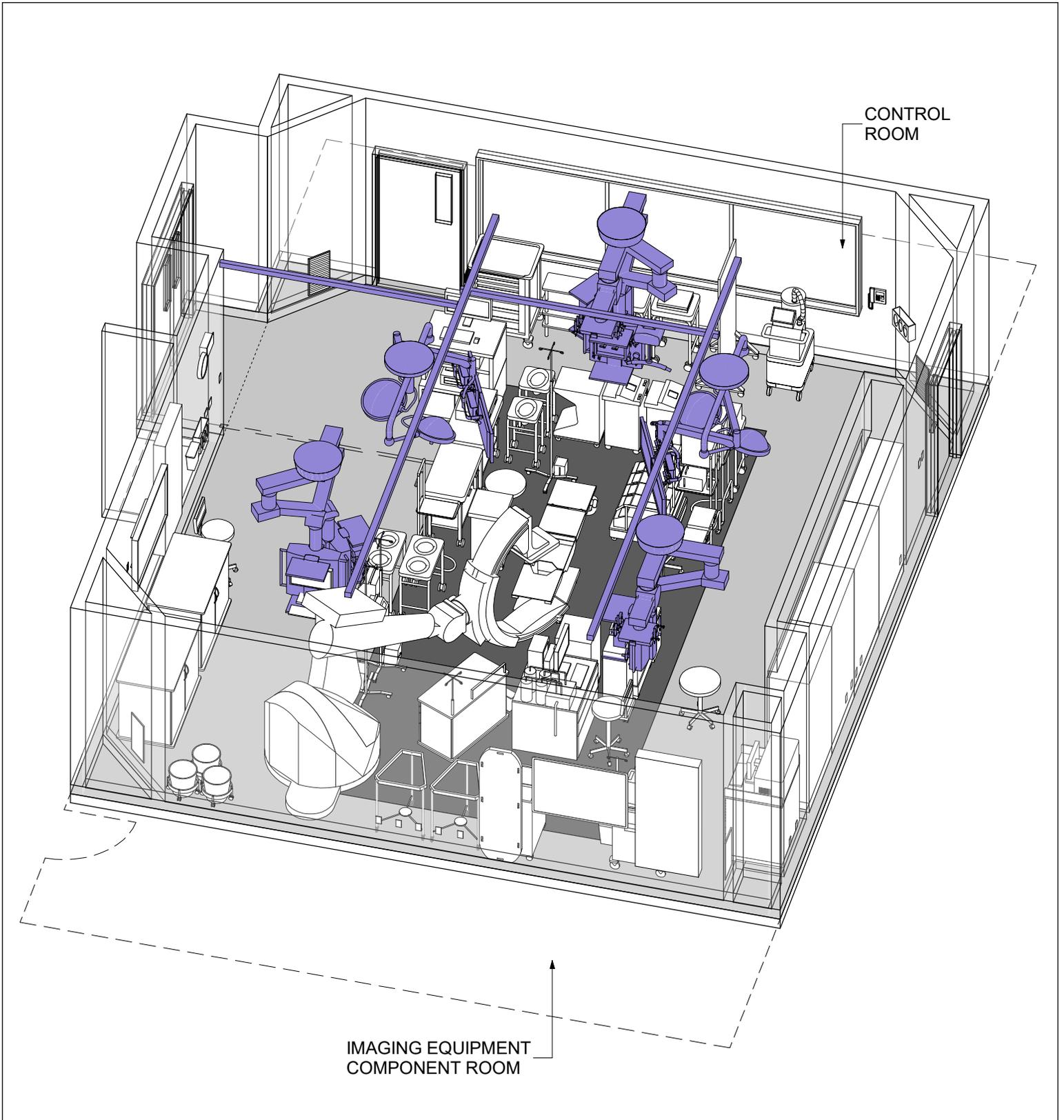
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
P2000	Eyewash, Wall Mounted, Hands-Free	1	C / C	Wall mounted emergency eye wash station. The flow of water from the unit is activated by hand. Upon initiation of water flow the unit will operate hands free to provide streams of water to clear foreign particles or dilute caustic liquids from the eyes in emergency situations. Used in laboratories and areas of the hospital where employees are subject to foreign bodies or liquid material to the eyes.
P2451	Valve, Mixing, Thermostatic, Eyewash	1	C / C	Emergency tempering valve thermostatically mixes hot and cold water to provide a safe fluid supply for a single emergency eye/face wash with a flow rate of 10 gpm (38.8L)
P3100	Lavatory, Vitreous China, Slab Type	1	C / C	Wall mounted, slab type, vitreous china, lavatory (approximate bowl size 7"x15"x10") with: faucet holes on 4" centers; gooseneck spout; wrist blade handles; and grid strainer. It shall be suitable for use in clinics, offices, washrooms or patient care area.
P6350	Sink, Flushing Rim, China	1	C / C	Flushing rim sink approximately 18" H x 26" D x 22" W. Also called a clinic service sink. Unit is constructed of vitreous china with an integral flushing rim. It includes: faucet with a fork brace; 6 inch wrist control handles; plain end spout with bucket hook; stainless steel spring type front rim guard; and grid drain. If it is to be floor mounted, a base must be provided. Unit is used in utility rooms to clean equipment and materials.
S9755	Suction System, Surgical, Mobile Rover Unit	2	V / V	Surgical fluid waste management system with powered IV pole and smoke evacuation. Portable waste collection unit, for use with Docking Station (specified separately). Dual canisters (one 4L and one 20L), two levels of suction: 2-21in/Hg, fluid readout, 3 different port sizes for smoke tubing.
S9756	Suction System, Surgical, Rover Docking Station	2	V / V	Docking station for Neptune 2 surgical fluid waste disposal system. Interfaces with the Rover to empty and rinse the Rover's canister(s) of fluid waste. A detergent dispenser is connected to the docker to release detergent into the Rover's canister system automatically. The docker is typically installed in a utility closet or disposal area.



# SURGICAL AND ENDOVASCULAR SERVICES (ORHY3) OPERATING ROOM, HYBRID OR ROBOTIC AXONOMETRIC

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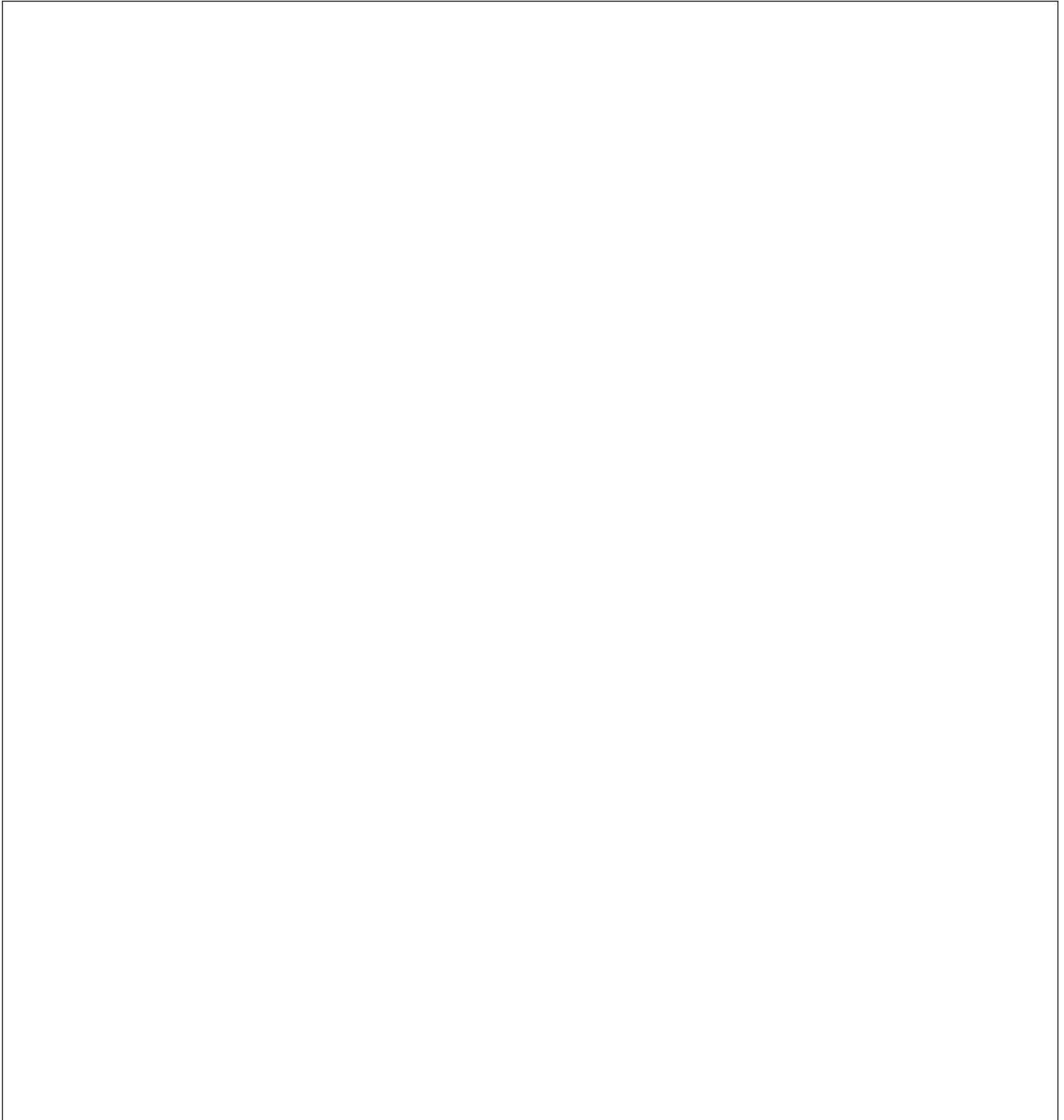


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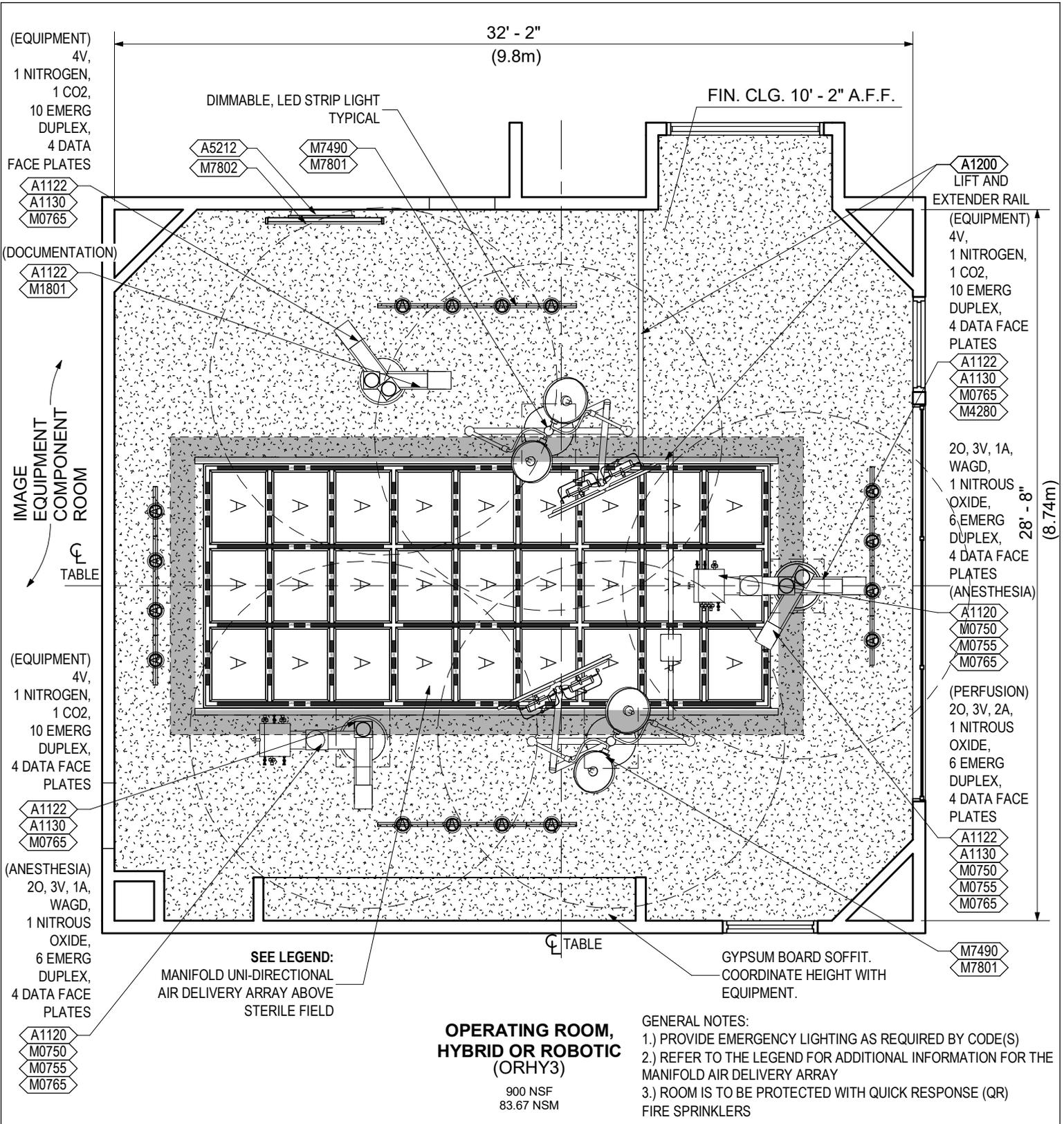


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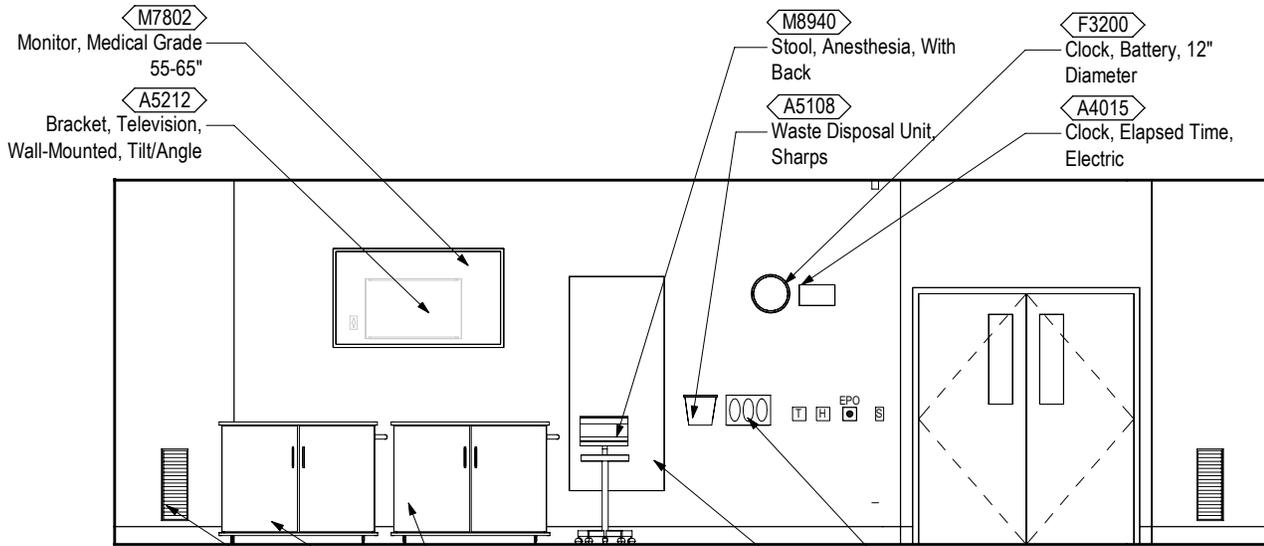


JSN	NAME
	X
A1014	Telephone, Wall Mounted, 1 Line, With Speaker
A1120	Column, Service, Prefab, Surgical, Ceiling Mounted
A1122	Column, Equipment Arm, Ceiling Mounted, Surgery
A1130	Cabinet, Control, Nitrogen
A1200	Lift System, Overhead, Patient Room
A4015	Clock, Elapsed Time, Electric
A5104	Cart, Medical Waste Disposal, Mobile w/Foot Pedal
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd
A5108	Waste Disposal Unit, Sharps
A5212	Bracket, Television, Wall-Mounted, Tilt/Angle
E0948	Cart, General Storage, Mobile, 42"H x 32"W x 22"D
E0954	Cart, Emergency, Mobile, 66"H x 32"W x 22"D
F0355	Footstool, Straight
F3050	Whiteboard, Dry Erase
F3200	Clock, Battery, 12" Diameter
L0221	Analyzer, Blood, Portable, Hand Held
L1095	Cell Saver
M0630	Anesthesia Apparatus, 3 Gas
M0750	Flowmeter, Air, Connect w/50 PSI Supply
M0755	Flowmeter, Oxygen, Low Flow
M0765	Regulator, Vacuum
M1801	Computer, Microprocessing, w/Flat Panel Monitor
M3070	Hamper, Linen, Mobile, w/Lid
M3072	Frame, Infectious Waste Bag w/Lid
M3080	Cabinet, Instrument, CRS, 2 Glass Door, 6 Shelf
M3109	Electrosurgical/Coagulator, Argon Plasma
M3150	Distribution System, Medication, Automatic
M3165	Cabinet, Catheter Storage
M3175	Electrosurgical Unit, Dual Output
M4250	Pump, Syringe, Infusion
M4255	Stand, IV, Adjustable
M4266	Pump, Volumetric, Infusion, Multiple Line
M4280	Pump, Pneumatic Stocking/Cuff
M4287	Irrigation System, Surgical
M4645	Patient Transfer Device
M4810	Heart/Lung Machine, Bypass, Modular

JSN	NAME
M4811	Pump, Intra-Aortic, Balloon
M4812	Pacemaker, Single Chamber, External, Temporary
M4815	Hypo/Hyperthermia Unit, Automatic/Manual, Mobile
M4816	Warming Unit, Patient, Automatic/Manual, Air
M5030	Stool, Surgeon, Revolving
M5512	Laser, Smoke Evacuator
M7490	Light, Surg, Ceiling Mtd, Dual, Unequal Dia Heads
M7650	Defibrillator/Monitor, Acute Care
M7801	Monitor, Medical Grade 26 - 42"
M7802	Monitor, Medical Grade 55-65"
M7818	Monitor, Transport
M7845	Monitor, Physiological, Bedside, 4 Channel
M8551	Light Source, Fiberoptic Headlamp
M8606	Endoscopy Cart, Fiberoptic, w/Video Accessories
M8800	Cart, Anesthesia
M8810	Stand, Mayo
M8825	Table, Instrument/Dressing, CRS, approx. 36x20x34
M8830	Table, Instrument/Dressing, Mobile
M8840	Table, Back, Instrument/Dressing
M8900	Carriage, Pail, CRS, Without Pail
M8905	Pail, Utility, CRS, With Carriage
M8910	Cart, Surgical Case
M8920	Stand, Basin, CRS, Mobile, Double
M8925	Stand, Basin, CRS, Mobile, Single
M8940	Stool, Anesthesia, With Back
M8950	Warmer, Blood
M8970	Warmer, Blood, High Volume
M9080	Table, Operating, Pedestal, 5 Section
R4785	Ice Maker, Surgical Slush
S9755	Suction System, Surgical, Mobile Rover Unit
U0105	ExtraCorporeal Support System
X2106	Scanner, Ultrasound, Intra-Cardiac Echo
X3145	Screen, X-Ray, Protective, Mobile
X6190	Radiographic/Fluoro Unit, Cardiac, 100 kW, Digital

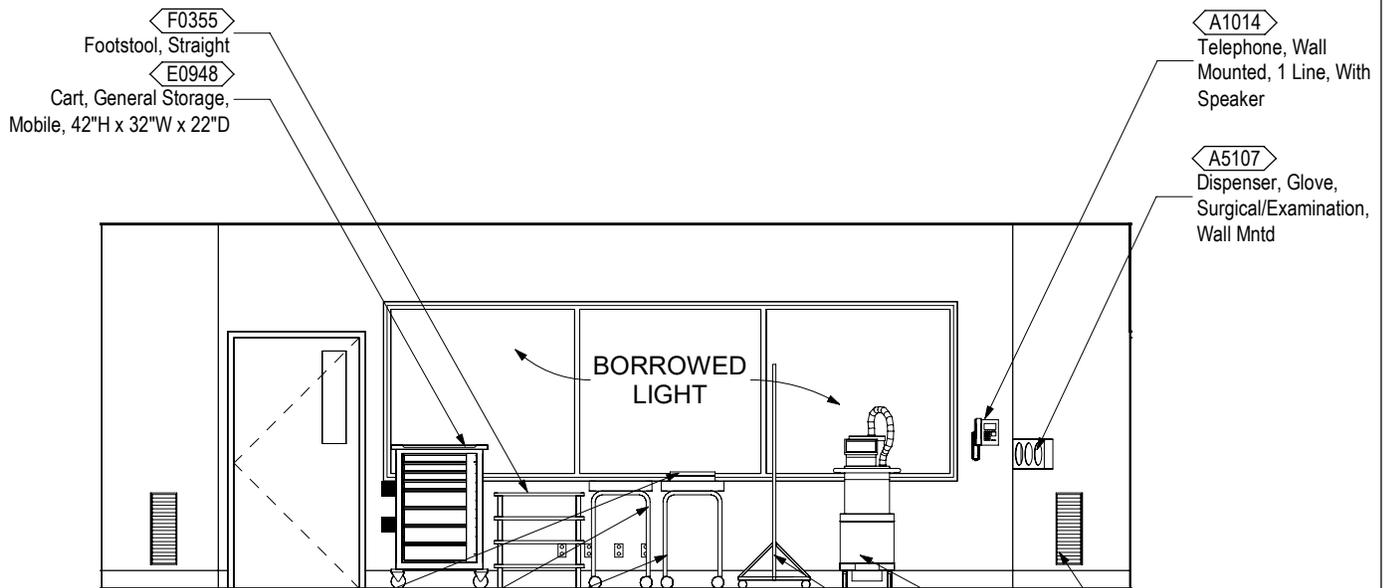
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ELEVATION 1

- M7802 Monitor, Medical Grade 55-65"
- A5212 Bracket, Television, Wall-Mounted, Tilt/Angle
- M8940 Stool, Anesthesia, With Back
- A5108 Waste Disposal Unit, Sharps
- F3200 Clock, Battery, 12" Diameter
- A4015 Clock, Elapsed Time, Electric
- M8910 Cart, Surgical Case
- LOW WALL RETURN AIR REGISTER (TYPICAL)
- A5107 Dispenser, Glove, Surgical/Examination, Wall Mntd
- ISOLATED POWER SYSTEM



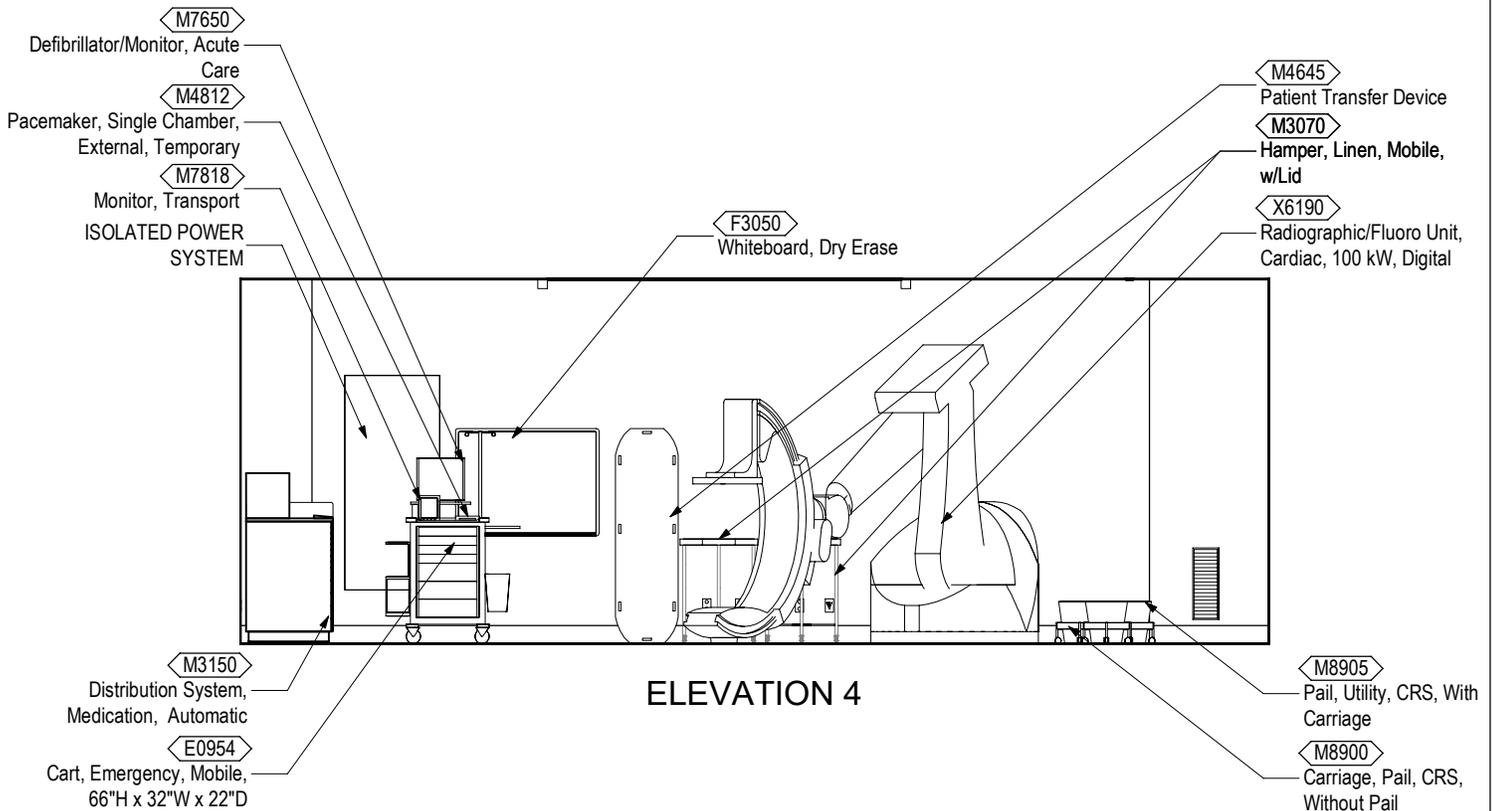
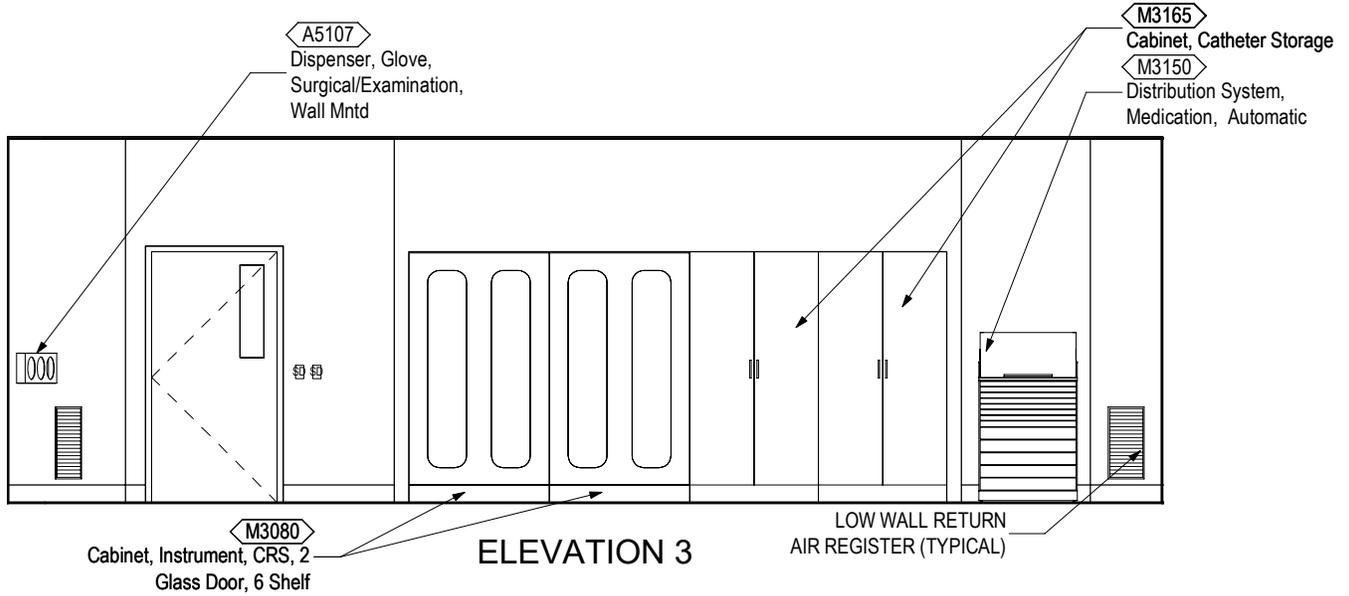
ELEVATION 2

- F0355 Footstool, Straight
- E0948 Cart, General Storage, Mobile, 42"H x 32"W x 22"D
- A1014 Telephone, Wall Mounted, 1 Line, With Speaker
- A5107 Dispenser, Glove, Surgical/Examination, Wall Mntd
- BORROWED LIGHT
- X2106 Scanner, Ultrasound, Intra-Cardiac Echo
- M8830 Table, Instrument/Dressing, Mobile
- LOW WALL RETURN AIR REGISTER (TYPICAL)
- S9755 Suction System, Surgical, Mobile Rover Unit
- X3145 Screen, X-Ray, Protective, Mobile

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**4.25 OPERATING ROOM, HYBRID OR ROBOTIC (ORHY3)****Room Data Sheet****ARCHITECTURAL**

Ceiling Type:	Gypsum Wallboard (SC)
Ceiling Height:	10'-0" (3048 mm)
Ceiling Finish:	
Wall Finish:	Gypsum Wallboard (SC)
Wainscot:	
Base:	RF Integral Base (min. 6"/152 mm)
Floor Finish:	Resinous Flooring (RF) Res 4
Slab Depression:	As required by imaging modality manufacturer
Sound Protection:	50 STC (to other room), 35 STC (to corridor)
Doors:	Double, Size 6'-0" x 7'-0" (1829 mm x 2133 mm) Wood w/Narrow View Window; Single, Size 4'-0" x 7'-0" (1219 mm x 2133 mm) Wood w/ Small View Window
Special Requirement:	

**Notes:**

- 1) Shielding is to be provided in all walls, windows, and doors, as determined by the Physicist on a per project basis.
- 2) Locate access panels as required to allow for the maintenance of surgical booms and lights in facilities without interstitial space. Min. size to be 24" x 24".
- 3) Cabinetry can be built in or free-standing.
- 4) Nominal wall thickness is shown at 8" (203 mm) to account for a variety of wall-mounted panels, such as isolation power unit panels, that require a thicker partition.
- 5) Include wall extensions at both sides of the scrub sink to protect the scrub sinks from cart and stretcher traffic in the semi-restricted corridor.
- 6) Coordinate structural supports, utility connections and other requirements for surgical lighting pendants with manufacturer.

7) Equipment and Anesthesia booms are duplicated to provide maximum flexibility. If duplicate booms are not desired, they can be omitted subject to approval by clinical leadership.

8) Facility will select number and types of scopes and other instrumentation as necessitated by the unique case load.

9) Endoscopy equipment can be located on a cart or on the equipment boom.

10) NSF provided for this space is the minimal acceptable NSF; contact Facilities Standards Service for any deviations.

**LIGHTING**

Refer to the VA Lighting Design Manual section 4.2.13 - Surgery/Operating Room - for lighting design consideration.

**POWER**

Normal Power: Connect selected receptacles and equipment to Normal power IPS.

Emergency Power: Connect selected receptacles and equipment to Critical Branch emergency IPS.

**Notes:**

- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
- 2) IPS Power & ground modules mounted at +24" AFF
- 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
- 4) Provide power connections for articulating utility columns.

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No

Special Requirement:

**Notes:**

- 1) Provide connections for articulating utility columns.
- 2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization.

**Notes:**

- 1) Refer to the latest version of the VA HVAC Design Manual for quantity and location of low air return grilles and ceiling diffusers.
- 2) Room does not contain multiple slot diffusers and uses laminar flow perforated face outlets only for supply air
- 3) Suggested minimum laminar flow array over the entire sterile field area as imaging equipment gantry creates excessive turbulence. Mechanical design engineer shall be responsible to design the array in such manner as to minimize turbulence and to maintain the sterile aseptic field.

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	Yes
Medical Vacuum	Yes
Oxygen	Yes
Special Requirement:	

**Notes:**

- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen, Nitrous Oxide, Carbon Dioxide
- 2) For gas quantities per boom refer to the reflected ceiling plan.
- 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project
- 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.25 OPERATING ROOM, HYBRID OR ROBOTIC (ORHY3)****Equipment List**

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
A1014	Telephone, Wall Mounted, 1 Line, With Speaker	1	V/V	Telephone, wall mounted, 1 line, with speaker.
A1120	Column, Service, Prefab, Surgical, Ceiling Mounted	2	C/C	Prefabricated surgical service column. Strong 18 gauge stainless steel shell ceiling mounted unit with the following services: oxygen, nitrous oxide, nitrogen, medical air, medical vacuum, gas evacuation, electrical outlets, monitoring connectors, and IV holders. Specify type of column (fixed or retractable) and number of outlets required for each service. Size will vary with number of service outlets required. Designed to be used in the operating room, recovery and; ICU-CCU rooms.
A1122	Column, Equipment Arm, Ceiling Mounted, Surgery	5	C/C	A ceiling mounted retractable equipment arm for use in the OR. Designed to provide equipment placement support, power receptacles including low-voltage panels, gas outlets and flat screen mounting for a surgical suite. Unit will provide a range of motion of up to 330 degrees with arm providing additional vertical movement. Units are custom configured with multiple options available. Price is based on a unit with two (double) retractable arms. Also available are units for use in anesthesia, ICU and ER.
A1130	Cabinet, Control, Nitrogen	4	C/C	Nitrogen control cabinet. Unit consists of supply cut-off valve, supply pressure gauge, pressure regulator (adjustable 0 to 200 PSI), outlet pressure gauge, nitrogen outlet and connection to surgical gas column. Specify recessed or surface mounting. Designed for powering surgical pneumatic tools.
A1200	Lift System, Overhead, Patient Room	1	V/C	An overhead rail system specifically designed for patient lifting and movement for a single bed patient room. The system will consist of recessed or ceiling mounted primary and secondary rails, lift motor with rolling carriage, patient harness or seat, and a hand controller or control box with charger. System will facilitate lifting and movement of patient to and from bed to gurney, chair or other requirement.; Minimum lift capability is 550 pounds. Custom design of track layout by manufacturer is essential to meet individual facility requirements.
A4015	Clock, Elapsed Time, Electric	1	C/C	Elapsed time digital electric clock. Single display time that can be used either as a clock or elapsed time indicator. Clock consists of buttons to set minutes, and hours for the time. For use in operating and delivery room, and medical service columns. Analog or digital displays may be provided as specified by the user.
A5104	Cart, Medical Waste Disposal, Mobile w/Foot Pedal	1	V/V	Mobile molded cart with foot pedal, to house 18-24 gal sharps disposal container. Lid lift or slide opens easily with foot-operated pedal. Lid may remain closed when not in use to reduce exposure to contents. Ergonomic handle is telescopic. Heavy containers can be removed from the side with minimal lifting. Meets requirements of OSHA 29 CFR 1910.130.
A5107	Dispenser, Glove, Surgical/Examination, Wall Mntd	2	V/V	Examination three (Small Medium, Large) glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Hardware not included, Option 3 powder coated steel.
A5108	Waste Disposal Unit, Sharps	2	V/V	A container for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
A5212	Bracket, Television, Wall-Mounted, Tilt/Angle	1	V/V	A wall mounted, tilt/angled TV bracket for 37" to 80" TVs. Mount will be a universal and VESA compliant unit with a load capacity of up to 130 lbs.

## 4.25 ORHY3

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
E0948	Cart, General Storage, Mobile, 42"H x 32"W x 22"D	1	V/V	THIS TYPICAL INCLUDES:; 1 Cart Body, Style-A Narrow, w/Raised Edge Top 2 Drawers, 3" H; 4 Drawers, 6" H; 1 Accessory Rail, Side Drawer Organizer Bins
E0954	Cart, Emergency, Mobile, 66"H x 32"W x 22"D	1	V/V	THIS TYPICAL INCLUDES:; 1 Cart body, style-A narrow, w/raised edge top; 1 Accessory rail, side; 1 Accessory rail, back; 1 Defibrillator tray; 1 IV pole; 1 Breakaway bar; 1 Flip-up shelf; 1 Wastebasket; 1 Oxygen tank holder; 1 Electrical box-4 outlet; 1 Cord wrap; 4 Drawer, 3"H; 3 Drawer, 6"H; Drawer organizer bins.
F0355	Footstool, Straight	4	V/V	Step stool. Used to assist patients getting on and off exam or surgical tables. Fitted with electrically conductive rubber tips.
F3050	Whiteboard, Dry Erase	1	V/V	Whiteboard unit, approximately 36" H x 48" W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
F3200	Clock, Battery, 12" Diameter	1	V/V	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
L0221	Analyzer, Blood, Portable, Hand Held	1	V/V	Handheld point-of-care testing analyzer. Utilizes single-use, disposable cartridges for diagnostic testing to include: Blood gases, electrolytes and chemistries, lactate, coagulation, hematology, and cardiac markers.
L1095	Cell Saver	1	V/V	Autologous blood recovery system, also known as a "Cell Saver." Used in the operating room and laboratory to wash extravascular blood free of debris, clots, etc., and to make the blood safe for re-infusion into the patient.
M0630	Anesthesia Apparatus, 3 Gas	1	V/V	Three gas anesthesia apparatus. Basic unit consists of steel cabinet with casters with one shallow, one medium, and one deep drawer, seven long scale eleven-inch flowmeters, five cylinder yokes, and telescoping absorber post. It includes two-canister model carbon dioxide absorber with inhalation and exhalation check valves, switch valve, switch valve elbow, sidearm Vernitrol, flow calculator, mounting kit, ventilator calculator, ventilator and an oxygen piping inlet. Also features nitrous oxide fail safe valve kit, aspirator kit, gas evacuator with vacuum and a flow meter safety cover. Used to dispense a mixture of gases during surgical procedures.
M0750	Flowmeter, Air, Connect w/50 PSI Supply	4	V/V	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Requires the appropriate adapter for connection to the wall outlet and fitting to connect to tubing. Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0755	Flowmeter, Oxygen, Low Flow	6	V/V	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Database pricing includes DISS fitting and DISS power outlet and wall adapter. Other fitting and adapter configurations are available.
M0765	Regulator, Vacuum	21	V/V	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required. To be used in delivery, neonatal, pediatrics or any area where suction is required.; Database pricing reflects continuous regulators graduated to 200 mm Hg with a full line vacuum selection switch and DISS configured inlets and outlets.

## 4.25 ORHY3

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M1801	Computer, Microprocessing, w/Flat Panel Monitor	2	V/V	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
M3070	Hamper, Linen, Mobile, w/Lid	2	V/V	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters. For linen transport in hospitals and clinics.
M3072	Frame, Infectious Waste Bag w/Lid	1	V/V	Frame for an infectious waste collection bag. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Adjust to hold 18" or 25" trash bags. Mounted on ball bearing casters and includes permanently mounted hinged lid. Provides means of bagging infectious waste at point of waste generation.
M3080	Cabinet, Instrument, CRS, 2 Glass Door, 6 Shelf	2	V/V	Non-magnetic stainless steel instrument cabinet with two glass doors and six shelves (five adjustable). Cabinet body has a single storage compartment and seamless welded face. Shelf heights are adjustable on full length perforated strips mounted to the back and inside front cabinet corners. Cabinet is mounted on glides or casters.; Cabinet may be covered by a sloping top.
M3109	Electrosurgical/Coagulator, Argon Plasma	1	V/V	An electrosurgical generator with an argon plasma coagulator and APC pulsed mode. This feature auto-regulates beam ignition and provides automatic dosing of power for increased control. The plug and play digital instrument recognition technology automatically configures the entire system to preprogrammed procedural parameters.
M3150	Distribution System, Medication, Automatic	1	V/V	An automated dispensing system that provides controlled dispensing, inventory and security. Size and cost will vary dependent on number of modules selected.
M3165	Cabinet, Catheter Storage	2	V/V	A cabinet to be used for the hanging storage of catheters. Cabinet comes with adjustable laminate shelves, slide-out arms equipped with hangers to hold various size catheters, and doors. Door locks are an optional accessory.
M3175	Electrosurgical Unit, Dual Output	1	V/V	Dual output electrosurgical unit. Solid state power source with foot switch jacks, monopolar and bipolar outputs, and four independent modes of operation. Used in the operating room or surgicenter as an alternative to the scalpel for cutting tissue.
M4250	Pump, Syringe, Infusion	2	V/V	The infusion syringe pump ensures highly accurate volume delivery and consistent flow for small volumes (<50 ml) of pharmacologic agents or thick feeding solutions. It shall be small, lightweight construction, making it transportable. Shall have menu-driven programming capable of flow rates (e.g. 0.1 or 1.0 mL/hr) that are intended for; long-term bedside use and/or critical care patient transport, plunger positioning sensor, LCD display for easy viewing, volume limit programming to serve as a convenient cue of volume or dose delivery completion and multiple delivery modes for all applications requiring precisely controlled infusion rates. The infusion pump shall have automatic syringe size sensing which will give the flexibility to accept a wide range of syringe sizes (up to 60 mL) from different manufacturers. Shall be battery powered/AC adapter.
M4255	Stand, IV, Adjustable	3	V/V	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.

## 4.25 ORHY3

JSN	NAME	QTY	ACO/INS	DESCRIPTION
M4266	Pump, Volumetric, Infusion, Multiple Line	2	V/V	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.
M4280	Pump, Pneumatic Stocking/Cuff	1	V/V	Pneumatic stocking/cuff pump. Pump provides alternating pressure to pneumatic stockings for reduction of the threat of deep vein thrombophlebitis in post operative patients. May also be used in the CCU for rotating cuff therapy for reduction of peripheral circulation in congestive heart failure patients.
M4287	Irrigation System, Surgical	1	V/V	High flow surgical irrigation pump up 2.5l/min, available in single and double flow.
M4645	Patient Transfer Device	1	V/V	A patient transfer board designed to make lateral patient transfers safer for staff and be more comfortable for the patients. The board uses a smooth, low friction and static free surface to eliminate the need for metal rollers. The board has a soft foam core that makes them lightweight for ease of use and storage. The long board device also enables the transfer of a patient in the seated or Fowler position. The boards come in three sizes with the long board being foldable. The dimensions and price are for the long wide board.
M4810	Heart/Lung Machine, Bypass, Modular	1	V/V	Modular by-pass heart lung machine. Unit consists of an arterial pump, a backup arterial pump, one or two suction pumps, a water mixer, and a backup battery pack. To include disposable components: oxygenator/heater exchanger, cardiotomy reservoir, blood filters, and tubing. Unit is designed to temporarily replace the function of the patients heart and lungs during open-heart surgery or any surgical procedure that requires isolation of the heart.
M4811	Pump, Intra-Aortic, Balloon	1	V/V	Intra-aortic balloon pump. Item is used to treat cardiogenic shock resulting from extensive myocardial injury or damage. The pump shall function from line or battery power and is to be a mobile unit. It contains physiological monitoring, pacing, and pumping capabilities. It requires minimal set-up time and has immediate pumping capability. Adjustments can be accomplished without interruption of pumping. The monitor can be mounted remotely for the clinicians convenience and permits viewing of both cardio-pulmonary bypass and intra-aortic balloon pump simultaneously. The pump is designed for use in the critical care unit, operating room, cardiac cath lab and during transport.
M4812	Pacemaker, Single Chamber, External, Temporary	1	V/V	A single chamber, external temporary pacemaker designed to provide acute therapeutic, prophylactic, and diagnostic pacing support. It is capable of operating in the demand or asynchronous modes and includes adjustable rate, output, and sensing controls. Battery operated.
M4815	Hypo/Hyperthermia Unit, Automatic/Manual, Mobile	2	V/V	Automatic/manual hypo/hyperthermia unit. Sealed refrigeration system. Microprocessor controlled with multiple alarm system constantly monitoring temperature and water levels. Cabinet type unit. Designed to regulate body temperature by application of water-filled hypothermia blankets.
M4816	Warming Unit, Patient, Automatic/Manual, Air	1	V/V	Automatic/manual patient warming unit. Unit delivers a flow of warmed air through a perforated plastic blanket. Used primarily for postoperative patients to speed recovery of normal body temperature.
M5030	Stool, Surgeon, Revolving	2	V/V	Revolving stool. Consists of a padded upholstered seat with height adjustment. Unit rotates and is mounted on ball bearing swivel casters. Designed for use in examinations, treatment, and surgical procedures.

## 4.25 ORHY3

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M5512	Laser, Smoke Evacuator	1	V/V	Filtration system used in conjunction with laser operations to remove surgical laser plume. The unit includes a pneumatic foot switch, disposable 0.12 micron HEPA primary filters, a secondary 0.12 micron ULPA/carbon filter, disposable funnels, reducer fittings and connector hoses.
M7490	Light, Surg, Ceiling Mtd, Dual, Unequal Dia Heads	2	V/C	Dual head surgical light ceiling mounted from a single pole. Unit has two lamp heads of differing sizes mounted on individual swing arms. Unit features multiple lighting pods in each lamp head, deep cavity illumination, color-corrected light, intensity control and sterilizable handles. Refer to the manufacturers' specifications for minimum ceiling heights and installation data. The database height dimension below refers to the height of the lamp head itself. The width and depth measurements are the larger of the two sums of the swing arm length and the head diameter. For use in general purpose surgical suites.
M7650	Defibrillator/Monitor, Acute Care	1	V/V	Portable defibrillator/monitor for acute care includes biphasic defibrillator, pacing, SPO2, Interpretive 12-lead, NIBP monitoring, EtCO2 monitoring, Invasive pressure monitoring, Vital Sign monitoring, temperature probe, Fax transmission, PCMCIA Data Cards, Paddle accessories, and a color LCD.
M7801	Monitor, Medical Grade 26 - 42"	6	V/V	
M7802	Monitor, Medical Grade 55- 65"	1	V/V	LED HD monitor capable of displaying medical grade images. Monitor' size is 55 - 65".
M7818	Monitor, Transport	1	V/V	A light weight, rugged patient monitor for use during transport. Unit consists of a compact monitor with touchscreen display with up to 3 waveforms on a on a bright non-fading display. The unit measures ECG/respiration, NBP, SpO2, pressure, and temperature and CO2. Data can be transferred seamlessly throughout the continuum; of care. Unit is approved for aeromedical use (US Army Airworthiness Certification and Evaluation (ACE) program. Battery run time of 3 hours before recharge.
M7845	Monitor, Physiological, Bedside, 4 Channel	1	V/V	4 channel bedside physiological monitor. The unit consist of a four-channel non-fade monochrome display monitor, an alarm system and printer-recording capabilities. The monitor has color coded controls and automatic calibration. The unit displays up to four waveforms simultaneously. The parameters to be monitored are user selectable. The monitor may be connected to a central monitoring station. The unit monitors patients in most acute care areas, step-down units, procedure rooms and emergency rooms.
M8551	Light Source, Fiberoptic Headlamp	2	V/V	Fiberoptic light source for surgical headlamps. This unit provides color corrected light for surgical procedures where photography is not required.
M8606	Endoscopy Cart, Fiberoptic, w/Video Accessories	1	V/V	Endoscopy cart with video and print capabilities for use with fiberoptic (direct vision) endoscopes. This cart does not work with videoscopes. System takes optical images from a single endoscope and directly records them or converts them to digital signals for recording. A typical system cart includes the cart, a light source, an insufflator, a suction unit, a heat probe unit, an electrosurgical apparatus, a digital camera converter or color video camera, a camera controller, a monitor, a video/DVD recorder and a color printer. This JSN does not include the endoscope; refer to the endoscopes at JSNs M8500-M8550. Each cart can support one or more types of endoscope and should be specifically tailored to its intended use(s). This cart can be configured to interface with a network endoscopy information management system; refer to JSN M8600. Database physical information and pricing is for a higher cost system containing one of each of the above components.

## 4.25 ORHY3

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M8800	Cart, Anesthesia	1	V/V	Mobile anesthesia cart. The cart shall be built of stainless steel or other appropriate material and mounted on 4" casters for easy mobility. It shall be capable of being equipped with bottle holders, adjustable IV pole, storage drawers, shelves and a top bar/rail.
M8810	Stand, Mayo	3	V/V	Adjustable instrument table. Table is corrosion resistant stainless steel construction and is mounted on two casters with two skid rails. It has telescopic upright adjusts from 39 inches to 60 inches with automatic locking device, and removable 13"x19" instrument tray. Designed for use in operating and procedure rooms.
M8825	Table, Instrument/Dressing, CRS, approx. 36x20x34	2	V/V	Instrument and dressing table. Made of corrosion resistant stainless steel with a sound deadened top. Includes guard rail, shelf and two side-by-side drawers. The table is mounted on swivel, ball-bearing casters.
M8830	Table, Instrument/Dressing, Mobile	2	V/V	Mobile instrument/dressing table, approximately 34" H x 20" W x 16" D Corrosion resistant stainless steel mobile table with sound-deadening shelf and drawer. Unit is mounted on 2" casters. Designed for all purpose use in the hospital or clinic.
M8840	Table, Back, Instrument/Dressing	1	V/V	A specialty back table for large cases such as orthopedics, spinal fusions, neuro and craniotomies. The table has a pneumatic tuck-away cantilevered shelf which can hold multiple trays and is angled for clear observation of instruments. It comes with 4" diameter heavy-duty ball bearing brake/swivel casters. Construction is all stainless steel.
M8900	Carriage, Pail, CRS, Without Pail	3	V/V	Carriage, pail (kick bucket) CRS. Consists of a stainless steel ring type carriage mounted on ball bearing casters. Includes circular non-marring bumper. For use in the surgical operating room.
M8905	Pail, Utility, CRS, With Carriage	3	V/V	Utility pail (kick bucket). Shall be a stainless steel 12 quart bucket for use in surgical operating rooms.
M8910	Cart, Surgical Case	2	V/V	Surgical case cart. Unit consists of two hinged cabinet sections, each section equipped with two pull-out shelves with stops. The entire unit is mounted on four heavy duty conductive swivel casters. Used to transport surgical packs and supplies to surgery and soiled items back to central supply.
M8920	Stand, Basin, CRS, Mobile, Double	2	V/V	CRS, mobile, double basin stand with shelf. Stainless steel corrosion resistant frame constructed from two continuous inverted "U" shaped tubes, forming four legs and mounted on casters. Circular rings welded to top receive two removable 8 quart stainless steel basins. For open heart and other procedures.
M8925	Stand, Basin, CRS, Mobile, Single	2	V/V	Mobile single basin stand with shelf. The stand shall be constructed of tubular stainless steel and mounted on 2" swivel casters. Shall include a shelf and an 8 quart stainless steel basin. Intended for use in ORs and treatment areas.
M8940	Stool, Anesthesia, With Back	3	V/V	Anesthesia stool with back. All stainless steel with well-curved back panel and wide conductive seat. Designed for the anesthesiologist during surgical procedures.
M8950	Warmer, Blood	1	V/V	Unit consists of a temperature regulated water bath, circulating fluid, or dry heat with controls and an audible high temperature alarm. The warmer provides a stable environment for the controlled warming of blood or other fluids prior to being transfused to a patient.
M8970	Warmer, Blood, High Volume	1	V/V	Unit contains a proportional controller to regulate temperature in the heat exchanger and an audible high temperature alarm. Designed to provide a stable temperature for the controlled warming of blood or other fluids prior to being transfused to a patient. Unit may be a cuff type or circulating water heat exchanger.

## 4.25 ORHY3

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
M9080	Table, Operating, Pedestal, 5 Section	1	V/V	Pedestal type major operating table with 5 sections. Table is mounted on a solid base with casters and locks. Table top surface is fabricated from radio-translucent, conductive panels and the larger table sections are equipped with radiographic cassette tunnels. Table includes Electro-hydraulic controls, side rail locking system, kidney elevator, grounding receptacle and dual arm support section. Designed for use in the operating room in a variety of surgical procedures.
R4785	Ice Maker, Surgical Slush	1	V/V	An automated surgical slush machine designed to produce a velvet soft slush to limit the likelihood of damaging tissue due to large or sharp ice particles during surgical procedures. Unit operates with a temperature range of 30 degrees F to 32 degrees F. The unit is also designed to operate quietly to not disrupt the OR environment. Casters allow for easy movement.
S9755	Suction System, Surgical, Mobile Rover Unit	1	V/V	Surgical fluid waste management system with powered IV pole and smoke evacuation. Portable waste collection unit, for use with Docking Station (specified separately). Dual canisters (one 4L and one 20L), two levels of suction: 2-21in/Hg, fluid readout, 3 different port sizes for smoke tubing.
U0105	ExtraCorporeal Support System	1	V/V	ECHO is a device used to provide cardio pulmonary support on a temporary basis and assist oxygen to vital body systems. Provides oxygenation and carbon dioxide removal from the blood.
X2106	Scanner, Ultrasound, Intra-Cardiac Echo	1	V/V	A portable cardiovascular ultrasound with full diagnostic and monitoring capabilities. The unit employs phased-array transducer technology for 2D, color and Doppler imaging. It will have multiple focal zones to optimize image quality. The unit will have an integrated EchoPAC with data review, analysis, patient archive and reporting capabilities. It will have full DICOM connectivity with embedded raw data speeds allowing for post-exam quantitative analyses at the users convenience. The rechargeable battery will provide up to 1 hour of full scan operation.
X3145	Screen, X-Ray, Protective, Mobile	1	V/V	Mobile X-ray protective screen/barrier. The X-ray barrier provides optically-clear visibility while shielding medical personnel from scatter radiation. Its large clear Pb lead-plastic or acrylic window offers 0.5 mm lead-equivalent protection to the user's head and upper body. The unit is used for effective radiation protection of department personnel during vascular or other procedures. This unit can fit any application with its mobility. Adjustable screens are also available.
X6190	Radiographic/Fluoro Unit, Cardiac, 100 kW, Digital	1	V/C	This system is specifically designed to perform biplane radiographic/fluoroscopic examinations in the Cardiology Department. On-line digital cardiac image processing will provide instant availability of images for review. This units characteristics and components include 100 kW micro-processor controlled X-ray generators, C-arm and U arm with 9" multi-field Image Intensifier, integrated X-ray tube unit and cine camera. The Digital Imaging for both the AP and Lateral planes shall consist of a computer, keyboard with acquisition, viewing monitor, and slave monitor. The system shall be DICOM 3.0 compatible, for easy linkage to filmless image management systems and review stations. It is recommended that the TV monitors be ceiling suspended. System to be procured with Cardiac Cath Lab computerized analysis/monitoring system.