

## DoD Space Planning Criteria for Health Facilities

### Central Sterile

FUNCTION	Room Code	AUTHORIZED		PLANNING RANGE/COMMENTS
		m <sup>2</sup>	nsf	

#### 4.5.1. PURPOSE AND SCOPE:

##### Central Sterile (CS):

This section provides guidance for the space planning criteria for the decontamination, sterilization, processing and packaging of instruments and reusable supplies required for patient care in a DoD medical facilities. This activity often packages health care items into “packs and trays” which may include reusable items, new items or both. The title and scope of functions accomplished in this area may vary between the Services and between facilities. In this document, this function is referred to as Central Sterile (CS).

**Concepts of Operation:** It is important that the programmer understand the projected concept of operation for the Central Sterile (CS) of the health facility that is being programmed. In some medical treatment facilities (typically freestanding clinics) this service may not occur and those items in need of decontamination may be sent to a hospital and re-supplied in like kind. In some smaller medical clinic facilities, the sterilization service of a Dental Clinic (for example, Dental Instrument Processing Centers in the Air Force) may be used to meet the CS needs. Additionally it is typical that some decontamination capability will exist in the operating room suites, especially for “flash” sterilization of instruments.

In general the following is true:

- CS will complete all sterilization of supplies and instruments. Sterile supplies will be distributed to using areas by dedicated delivery systems by CS personnel or Medical Materiel personnel.
- All disposable items that do not require processing and sterilizing will be stored and distributed to the using area by Medical Materiel.
- Equipment requiring CS handling will be cleaned, decontaminated, and stored in the CS in a clean environment.
- The CS as defined in this document may be designed as part of a total material distribution system.

**Receiving, Decontaminating and Cleaning areas:** All contaminated (dirty) instrument sets are brought to this area following initial cleaning (bio-burden reduction) and prepared for decontamination process. This area is considered “dirty”. Instruments are further cleaned and prepared for final decontamination process in a washer-decontamination unit or decontamination sterilizer unit. Ideally these units would have a pass through capability from the receiving / decontamination area into the assembly / sterilization area. All case carts are cleaned in this area.

**Assembly Area:** Instruments entering the assembly area from the Receiving, Decontamination areas are now safe for handling by CS personnel. At this location, instruments are assembled into sets, placed in sterilization containers or sterilization packs and prepared for the next step, the sterilization process.

**Sterilization Area:** Packaged instrument sets from the Assembly area are loaded onto sterilization transport carts, placed into sterilizer units where sterilization process occurs, carts are removed from sterilizer and items are allowed to dry and cool. Sterile items are then transported to the Sterile Storage Area.

**Sterile Storage Area:** Location for all sterile supplies now ready for transfer to individual case carts or other distribution carts to be delivered to using departments.

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**Bulk Storage Area:** This area is a storage space for expendable, sterile items that are in original shipment boxes. Disposable surgical drape packs and other sterile items, in bulk boxes, are maintained in this location. Individual items are removed from shipment containers and moved into the Sterile Storage area for preparation case cart supply prior to surgical procedures.

**Cart Queuing & Clean Cart Storage areas:** Space for carts before/after they have been cleaned in the Receiving area and lined up for specific use in the next day surgery cases.

**Dirty and Clean separation:** The separation of activities dealing with sterile and non-sterile items is important to the layout and use of the spaces described in this section. This separation may be thought of as a “clean / dirty” line that traverses the CS area. This line generally is defined by the activities on either side of the Washer-Decontamination Sterilizer units. This is especially true if “pass-thru” Washer-Decontamination Sterilizer units are used. Those activities (receiving, decontamination) that lead up to items being placed in the Washer-Decontaminator-Sterilizer are on the dirty or contaminated side of the CS. Those activities, which occur with items that are removed from the opposite side of this decontamination unit, should occur on the clean (decontaminated / safe for handling) side of the CS.

**Size of Central Sterile Service** – This criteria divides the central sterile services into three size options: large, medium and small. These sizes align with the size of the central sterile service needed to support health care service in a clinic or hospital supporting itself and in some cases satellite services (health and dental) on an installation. Generally, the small size is for a facility, which has no inpatient services, the medium size is for a community hospital and the large size is for a medical center or large community hospital with satellite services.

#### 4.5.2. DEFINITIONS:

**Assembly Area** - Assembly occurs on the clean side and is space needed to assemble decontaminated instruments into sets and packaged for sterilization.

**Bulk Storage Area** – Storage space for expendable, sterile items that are in the original shipment boxes. Disposable surgical drape packs and other sterile items, in bulk boxes are maintained in this location.

**Cart Queuing Area** - Area for queuing carts ready to be delivered to the using departments.

**Conditioned Water Unit** – Some sterilizers require conditioned (softened) water in order to function properly. If facilities provide clean steam, a conditioned water unit may not be necessary.

**CS Category Classifications:** Classify the facility being programmed into one of the following five categories:

**No CS:** A clinic, which receives CS support from another MTF or Dental Clinic

**Minimum CS:** Primary Clinic with no specialty services

**Small CS:** A Health Clinic, which does not provide ambulatory surgery, is alone on an installation and does not receive CS support from another source.

**Medium CS:** A Community Hospital or an ambulatory surgery center.

**Large CS:** A Medical Center.

**Decontamination** - Freeing an object of most of the contaminating substance (reduction of bi-burden) – The process of decontamination renders items safe for handling by health care members and allows the now clean items to be prepared for final sterilization.

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**Decontamination Area** - Area for the cleaning of soiled, contaminated, and used items that have to be returned to the CS. This area includes transportation carts, ultrasonic cleaners, sinks, and instrument washers/decontaminators.

**Equipment and Cart Holding Area** - A staging area for medical equipment and carts after they have been decontaminated and cleaned prior to storage or issue. The equipment will then be moved to materiel distribution for storage in a clean area. A portion of this area may also serve as a case cart holding area.

**Heat Sensitive Cleaning Area** - Area for the decontamination of heat sensitive items such as thermometers, lens equipment, etc. Heat sensitive sterilization can be accomplished via alternative low temperature sterilization. This area is a part of the sterilization area.

**Housekeeping** - The area where housekeeping items required in the CS are stored. Separate areas will be maintained in both the decontamination area and in the clean area.

**Instrument Storage and Assembly Area** - Storage area for non-sterile instruments that are to be used in sets and trays. Area includes space for instrument assembly and sterilization units.

**Receiving, Decontaminating, and Cleaning Area** - An area where reusable instruments, supplies, equipment and carts are received, sorted, cleaned, and decontaminated. This area adjoins the assembly and sterilization areas.

**Sterile Storage Area** - Area to hold sterile processed materiel that is awaiting delivery to using departments.

**Sterilization Area** - Consists of space for steam sterilizers and low temperature sterilization units, i.e., STERRAD and other drying units along with loading and unloading space for each machine.

#### 4.5.3 **POLICIES:**

**When Service is Provided:** At a minimum, Central Sterile (CS) service will be programmed into any DoD medical treatment facility, which includes an operating room. Based on the concept of operation, a central sterile service may be provided in medical treatment facilities that do not have operating rooms, but require an “in facility” capability, for such items as a steam sterilizer and a Steris unit.

**Lockers, Lounges, Toilets, Showers** - Separate staff support area should be provided for those personnel working in clean areas and for those personnel in the Decontamination area. If there is a single support area, it should be centrally located with separate exits to the decontamination and clean areas.

#### 4.5.4. **PROGRAM DATA REQUIRED:**

How many operating rooms are in the facility being programmed?

How many carts, other than those dedicated to the ORs, the CS is servicing?

What is the projected number of cases per OR per day?

Is there an OB service?

Is there a Cardiac OR procedure room?

Is there a cardiac specialty OR?

Are there other than cardiac specialty ORs?

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How many daily cases per OR will be performed?  
 How many total ORs?  
 How many cardiac ORs?  
 Will OB be performed?  
 Will Specialty ORs be serviced?  
 How many carts (other than from OR suite) will be serviced?  
 Total number of carts serviced (calculated value).  
 What size CS Service is projected (1=minimal, 2=small, 3=medium, and 4=large)?  
 How many automatic cart washers are projected?  
 How many FTE administrative staff will require a dedicated cubicle?  
 How many FTE staff on peak shift are projected?

**Note:** Transportation systems (cart conveyors, pneumatic tubes, box conveyors and dumb waiters) may add to the space requirements in this area. If the planned medical treatment facility will include such systems, the programmer will need to add space for the “Send and/or Receive” points for such systems.

#### **4.5.5. SPACE CRITERIA:**

**Toilets, Lounges and Locker Areas:** The criteria for toilets, lounges and locker rooms are provided in Section 6.

**Administrative Offices:** The office space required to provide administrative support to operate the clinic services will be provided in accordance with criteria for administration in Section 2.1.

**NOTE:** GP indicates that a guideplate exists for that particular Room Code.

#### **RECEIVING, DECONTAMINATING, AND CLEANING AREAS:**

Cart Receiving	CSCR1	.93	10	Per 5% of the total number of carts. See formula in 4.5.6 for determining number of carts.
Scope Wash Room	CSWS3	11.15	120	One per CS (excluding minimum and small CS). Provide if procedures are performed in OR and CS is in close proximity.
Decontamination Area	CSDE1	11.15	120	Per minimum or small CS
		23.23	250	Per medium CS
		33.44	360	Per large CS
Automatic Cart Wash Area	CWSH2	15.79	170	One machine per MTF with more than four ORs.
Manual Cart Wash Area	CWSH1	11.15	120	One per CS.
Crash Cart Exchange Room	SRE01	11.15	120	If included in concept of operations, used for exchange and restocking of crash carts.
Janitor Closet	JANC1	3.72	40	One per CS.

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**ASSEMBLY AREAS/STERILIZATION:**

Central Sterilization	CSSS1	13.01	140	Per minimum or small CS
		14.86	160	Per medium CS
		59.46	640	Per large CS. See explanation in Purpose and Scope Section of criteria.
Central Sterile Instrument Assembly	CSIA1			
		13.01	140	Per small CS
		55.74	600	Per medium CS
		111.48	1200	Per large CS includes breakout area
Bulk Storage	SRS01	7.43	80	Per small CS
		27.87	300	Per medium CS
		55.74	600	Per large CS

**STERILE STORAGE AREAS (SSA):**

Sterile Storage Area	ORSS1	28.87	600	Per small CS
		55.74	1400	Per medium CS
		92.90	2000	Per large CS
Sterile Breakdown Room	SRS01	11.15	120	Per CS.
Janitor Closet	JANC1	3.72	40	Per CS.

**CART QUEUING & CLEAN CART STORAGE AREAS:**

Cart Assembly/Queue	CSCQ1	.93	10	Per cart. See formula in 4.5.6 for determining number of carts.
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<b>STAFF AND SUPPORT AREAS:</b>				If CS is collocated with Surgery, combine with Surgery, if feasible.
Chief of CS Service	OFA01	11.15	120	Private office, Standard Furniture. One per medium or large CS Service.
	OFA02	11.15	120	Private office, System Furniture
Administrative area	OFA03	5.57	60	System Furniture Cubicle. Per projected administrative FTE
NCOIC/LCPO/LPO/SMT Office	OFA01	11.15	120	One per medium or large CS Service.
	OFA02	11.15	120	One per medium or large CS Service
Staff Lounge (GP)	SL001	13.01	140	Minimum. Add 5 NSF per FTE staff over 10 on peak shift. Maximum 200 Nsf. If FTE staff is less than 4, do not provide a separate lounge, but collocate with Surgery lounge (see Section 4.4).
Changing Locker Room (GP)	LR002	4.65	50	See Section 6.1.If necessary may have separate Locker area for decon and clean area.
Staff Toilet (GP)	TLTU1	4.65	50	Minimum. See Section 6.1 for sizing
Staff Shower (GP)	SHWR1	5.57	60	Program on for each male and female locker room. See section 6.2 for sizing

**4.5.6. FORMULA:**

Formula for calculating number of carts:

Number of cases per OR per day X # of ORs = \_\_\_\_\_ carts

+ 2 carts if C-Sections are performed outside of ORs.

+ 1cart per specialty OR (cardiac, orthopedic, or neurosurgery)