

## CHAPTER 284: LOGISTICS SERVICE

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## 1 PURPOSE AND SCOPE

This document outlines space planning criteria for services and programs provided in VA Chapter 284: Logistics Service for the Department of Veterans Affairs (VA). It applies to all medical facilities at the VA.

Policies and directives, VA Subject Matter Experts (SMEs), and established and / or anticipated best practice guidelines / standards provides the foundation for the workload based space criteria and Net Square Footages (NSF) for each space.

## 2 DEFINITIONS

Accessible: A site, building, facility, or portion thereof that complies with provisions outlined in the Architectural Barriers Act of 1968 (ABA).

Architectural Barriers Act (ABA): A set of standards developed to insure that all buildings financed with federal funds are designed and constructed to be fully accessible to everyone. This law requires all construction, renovation, or leasing of sites, facilities, buildings, and other elements, financed with federal funds, to comply with the Architectural Barriers Act Accessibility Standards (ABAAS). The ABAAS replaces the Uniform Federal Accessibility Standards (UFAS).

Automated Transport: A computer-controlled materials handling system that moves carts along pre-programmed paths to deliver goods. Also referred to as an Automated Guided Vehicle System (AGVS).

Bulk Item Storage: High-bay storage of supplies that are purchased in large quantities, including full pallets, and case-lots. If not available for purchase in a more convenient format, bulk supplies may be broken down into packages or low unit of measure before being transferred to Unit Item Storage. Bulk item storage may also accommodate pandemic supplies, disaster preparedness supplies, and similar items not typically required to maintain routine operation of the medical center.

Clean Linen Storage: An area where clean linen is stored for issue. Clean linen distribution may be the responsibility of either Logistics or Environmental Programs Service (EPS) at the discretion of the particular medical facility.

Clean Loading Dock: Accommodates the delivery of clean material and equipment. Separation between clean and soiled loading docks must be maintained.

Exchange Cart Replenishment: A system where patient care areas are restocked with supplies, or clean linens, based on predetermined schedules. While one exchange cart is in use within a patient area, another is being restocked in Logistics or EPS as a replacement.

Flex Storage: Temporary holding space for incoming supplies and equipment that are not ready for delivery or installation. These items include beds, stretchers, computer equipment, furnishings, and construction materials.

Full-Time Equivalent (FTE): A staffing parameter equal to the amount of time assigned to one full time employee. It may be composed of several part-time employees whose total time commitment equals that of a full-time employee. One FTE equals a 40 hours per week.

Functional Area: The grouping of rooms and spaces based on their function within a clinical service. Typical Functional Areas are Reception Areas, Patient Areas, Support Areas, Staff and Administrative Areas, and Residency Program.

Logical Unit of Measure (LUM): A supply delivery model, also referred to as Low Unit of Measure, whereby medical products that are ordered, received, and replenished directly to end users in a ready-to-use format. This model is part of a “just in time” vendor supported replenishment system.

Input Data Statement: A set of questions designed to elicit information about the healthcare project in order to create a Program for Design (PFD) based on the criteria parameters set forth in this document. Input Data Statements could be Mission related, based in the project’s mission; and Workload or Staffing related, based on projections and data provided by the VHA or the VISN about the estimated model of operation. This information is processed through mathematical and logical operations SEPS 3.

Logistics Receiving, Storage and Dispatch: An area where the receipt and storage of clean supplies, sterile supplies, and sterile instruments takes place in a controlled environment prior to distributing these items to end users.

Pandemic Storage: A portion of the medical center’s disaster preparedness provisions that would complement the Pharmacy Cache with non-prescription related medical supplies. Items may vary by region / VISN or by medical center, but would typically include storage of needles & syringes, masks, gloves and assorted personal protective equipment (PPE).

Program for Design (PFD): A space program generated by SEPS II based on criteria set forth in this document and specific information about Concept of Operations, Workload projections and Staffing levels authorized.

Project Room Contents (PRC): A listing of the assigned contents (medical equipment, FF&E, etc.) for each room in a PFD. This list is generated by SEPS. The list includes Joint Schedule Number (JSN), Content Name, Quantity, Unit of Issue, Unit Price, Logistical Category, Utilities, and National Stock Number (NSN).

Receiving / Processing: An area within Logistics, where the detailed inspection of material and equipment occurs. In this area, Logistics staff will complete the appropriate receiving reports, and the sorting of all items for delivery to the appropriate storage location. Boxes and packing material are broken down into smaller quantities for placement on shelves or delivery to end users.

Service Yard: An exterior area, with controlled access, adjacent to the Loading Dock(s) used for maneuvering and temporary parking of service and delivery vehicles.

Soiled Loading Dock: Accommodates one or more truck bays for the interface with trash compactors, recycling compactors / dumpsters, on-site treatment of regulated medical waste (if authorized), and the removal of soiled linen, sharps, and other soiled materials. The Soiled Loading Dock may be located adjacent to, but must be physically separated from, the Clean Loading Docks.

Standard Storage Unit: Used as a metric for planning SPS and Unit Item storage requirements, using modules representing typical open wire shelves with dimensions of 24” D x 60” W x 72” H. It is also applicable for planning other storage requirements in areas such as the surgical suite / clean core.

SEPS 3: Acronym for Space and Equipment Planning System version 3.X, a digital tool developed by the Department of Veterans Affairs and the Department of Defense (DoD) to generate a Program for Design (PFD) and a Project Room Contents list (PRC) for a VA healthcare project based on approved Space Planning Criteria, the chapter and

specific project-related Mission, Workload and Staffing information entered in response to the Program Data Required - Input Data Statements (IDSs).

Truck Bay: A space at the loading dock that accommodates one delivery truck. Loading docks are comprised of multiple truck bays to accommodate deliveries and may incorporate dock lifts and leveling devices.

Unit Item Storage: Accommodates the storage of medical and non-medical supplies that are dispensed in less than case-lot quantities, including logical (low) unit of measure. Also known as Clean Unit Storage.

Workload: Workload is the anticipated number of procedures or suite stops that is processed through a department/service area. The total workload applied to departmental operational assumptions will determine overall room requirements by modality.

### 3 OPERATING RATIONALE AND BASIS OF CRITERIA

- A. Space planning criteria have been developed on the basis of an understanding of the activities involved in the functional areas of Logistics and its relationship with other services of a medical facility. These criteria are predicated on established and / or anticipated best practice standards, as adapted to provide environments supporting the highest quality health care for Veterans.
- B. Healthcare planners working on VA medical center, hospital or satellite outpatient clinic projects will utilize and apply the workload based criteria set forth herein for identified services and modalities to determine room requirements for each facility.
- C. These criteria are subject to modification relative to development in the equipment, medical practice, vendor requirements, requirements of the individual VA medical campus, the number and types of buildings and services to be served, and subsequent planning and design. Consideration must be given to support of any off campus facilities or home care programs.
- D. Calculation of each of the directly workload-driven room types is implemented in SEPS based on Table 1 below.
- E. Calculation of the number of Clean and Soiled Truck Bays is implemented in SEPS based on Table 2 below.

**TABLE 1: WORKLOAD PARAMETER CALCULATION**

Room Name	Provide additional XX NSF per each...			
	Min. NSF	Bed	Ex./Proc. Rm.	OR
Storage, Bulk Items	500	40	5	100
Storage, Unit Items	120	5	2	20
Staging, Logical Unit of Measure Delivery (LUM)	40	20	20	N/A

**TABLE 2: TRUCK BAY CALCULATION**

Total NSF of Storage for Logistics (see note)	Clean Truck Bay	Soiled Truck Bay	Total Truck Bays
Up to 2,500 NSF	1	1	2
2,501 NSF to 7,000 NSF	2	2	4
7,001 NSF to 10,000 NSF	4	3	7
10,001 NSF to 14,000 NSF	5	3	8
14,001 NSF to 16,000 NSF	6	4	10
Greater than 16,000 NSF	7	4	11

Note: Total NSF of Storage for Logistics includes: Logical Unit of Measure Delivery (LUM) Staging, Full Gas Cylinder Storage, Empty Gas Cylinder Storage, Flex Storage, Pandemic Storage, Emergency Preparedness Storage, Bulk Items Storage, and Unit Items Storage.

**4 PROGRAM DATA REQUIRED (Input Data Statements)**

**A. Mission Input Data Statements**

1. Is a Nutrition and Food Service Receiving Dock authorized? (M)
2. Is Nutrition and Food Service authorized to provide prepared food to other VA locations? (M)
3. Is Logical Unit of Measure Delivery (LUM) authorized? (M)
4. Is the facility a Medical Center? (M)
  - a. How much additional Emergency Preparedness Storage NSF, greater than 200, is authorized? (Misc)
5. Is Logistics authorized to serve a Community Living Center (CLC)? (M)
6. Is a Pneumatic Tube Station authorized for Logistics? (M)
7. Is Postal / Mail Service authorized? (M)
  - a. Is a Postal / Mail Service Chief authorized? (M)
  - b. How many Postal / Mail Service FTE positions are authorized? (S)
    - 1) How many Postal / Mail Service FTE positions are authorized to have a workstation? (Misc)
    - 2) How many Mailroom Clerk FTE positions, greater than one, are authorized? (S)
    - 3) How many Postal / Mail Service FTE positions will work on peak shift? (Misc)

**B. Workload Input Data Statements**

1. How many Sterile Processing Service Instrument Sets are projected to be reprocessed daily? (W)
2. How many patient beds are projected? (W)
3. How many Exam / Procedure Rooms are projected? (W)
4. How many Operating Rooms are projected? (W)

**C. Staffing Input Data Statements**

1. How many Logistics Service FTE positions are authorized? (S)

**D. Miscellaneous Input Data Statements**

1. How many Logistics Service Clerical FTEs are authorized to have a workstation? (Misc)
2. How much additional Flex Storage NSF, greater than 80, is authorized? (Misc)
3. How much additional Pandemic Storage NSF, greater than 200, is authorized? (Misc)
4. How many Logistics Service FTEs will work on peak shift? (Misc)

## 5 SPACE PLANNING CRITERIA

### A. FA 1: Truck Bay Calculation:

1. **Number of Clean Truck Bays (CALC1).....0 NSF (0 NSM)**

*Minimum one; provide an additional one if the total Logistics Storage NSF is between 2,501 and 7,000; provide an additional three if the total Logistics Storage NSF is between 7,001 and 10,000; provide an additional four if the total Logistics Storage NSF is between 10,001 and 14,000; provide an additional five if the total Logistics Storage NSF is between 14,001 and 16,000; provide an additional six if the total Logistics Storage NSF is greater than 16,000. (Refer to Table 2)*

Include the following rooms in the total Logistics Storage NSF calculation: Logical Unit of Measure Delivery (LUM) Staging, Full Gas Cylinder Storage, Empty Gas Cylinder Storage, Flex Storage, Pandemic Storage, Emergency Preparedness Storage, Bulk Items Storage, and Unit Items Storage.

2. **Number of Soiled Truck Bays (CALC1).....0 NSF (0 NSM)**

*Minimum one; provide an additional one if the total Logistics Storage NSF is between 2,501 and 7,000; provide an additional two if the total Logistics Storage NSF is between 7,001 and 14,000; provide an additional three if the total Logistics Storage NSF is greater than 14,001. (Refer to Table 2)*

Include the following rooms in the total Logistics Storage NSF calculation: Logical Unit of Measure Delivery (LUM) Staging, Full Gas Cylinder Storage, Empty Gas Cylinder Storage, Flex Storage, Pandemic Storage, Emergency Preparedness Storage, Bulk Items Storage, and Unit Items Storage.

### B. FA 2: Loading Dock Area:

1. **Receiving Dock, Clean (DOCK1).....200 NSF (18.6 NSM)**

*Minimum NSF; provide an additional 80 NSF per each Clean Truck Bay generated greater than two.*

Exterior covered space adjacent to the Service Yard where delivery trucks unload materials and goods deliveries.

2. **Receiving Dock, Soiled (DOCK1).....200 NSF (18.6 NSM)**

*Minimum NSF; provide an additional 80 NSF per each Soiled Truck Bay generated greater than two.*

Provides a minimum of two soiled delivery lanes, one for a trash compactor and one for an open truck bay; i.e. soiled linen, recycling, etc.

3. **Receiving Dock, Nutrition and Food Service (DOCK1) .....100 NSF (9.3 NSM)**

*Provide one if a Nutrition and Food Service Receiving Dock is authorized; provide an additional one if Nutrition and Food Service is authorized to provide prepared food to other VA locations.*

4. **Breakout Room (MMBK1) .....360 NSF (33.5 NSM)**

*Minimum NSF; provide an additional 180 NSF per each Clean Truck Bay generated greater than three.*

Minimum allocated NSF accommodates material uncrating / staging / manipulation upon unload for two delivery lanes.

5. **Staging Room, Logical Unit of Measure Delivery (LUM) (MMST1)** ..... **40 NSF (3.8 NSM)**  
*Minimum NSF if Logical Unit of Measure Delivery is authorized; provide an additional 20 NSF for every increment of one hundred patient beds greater than two hundred; provide an additional 20 NSF for every increment of twenty Exam / Procedure Rooms greater than forty. (Refer to Table 1)*  
Logical Unit of Measure (LUM) or Just-in-Time (JiT).
6. **Storage, Full Gas Cylinder (SRGC1)** ..... **60 NSF (5.6 NSM)**  
*Minimum NSF; provide an additional 10 NSF for every increment of 1,000 NSF of Bulk Items Storage; provide an additional 40 NSF if Logistics is authorized to serve a Community Living Center (CLC).*  
Ventilated space or outdoor.
7. **Storage, Empty Gas Cylinder (SRGC1)** ..... **60 NSF (5.6 NSM)**  
*Minimum NSF; provide an additional 10 NSF for every increment of 1,000 NSF of Bulk Items Storage, provide an additional 40 NSF if Logistics is authorized to serve a Community Living Center (CLC).*
8. **Storage, Flammable (SRHM1)** ..... **60 NSF (5.6 NSM)**  
*Provide one for Loading Dock.*
9. **Toilet, Staff (TNPG1)** ..... **60 NSF (5.6 NSM)**  
*Provide one for Loading Dock.*  
Allocated NSF accommodates one accessible toilet @ 25 NSF, one wall-hung lavatory @ 12 NSF, ABA clearances, and circulation. In addition to staff use, this Staff Toilet may be used by delivery personnel.

**C. FA 3: Warehouse Area:**

1. **Receiving and Issue (MMRP1)** ..... **400 NSF (37.2 NSM)**  
*Minimum NSF; provide an additional 100 NSF per each Clean Truck Bay generated greater than two.*  
This space is used to verify and scan received materials and goods into the electronic inventory system; minimum allocated NSF accommodates two scanning stations and temporary staging space for materials unloaded from two delivery lanes.
2. **Storage, Equipment Prep and Staging (SSC01)** ..... **80 NSF (7.5 NSM)**  
*Minimum NSF; provide an additional 40 NSF per each Clean Truck Bay generated greater than two; maximum 320 NSF.*
3. **Storage, Flex (SRE01)** ..... **80 NSF (7.5 NSM)**  
*Minimum NSF; provide additional NSF if authorized.*
4. **Storage, Pandemic (SRSE1)** ..... **200 NSF (18.6 NSM)**  
*Minimum NSF if the facility is a Medical Center; provide additional NSF if authorized.*
5. **Storage, Emergency Preparedness (SRSE1)** ..... **200 NSF (18.6 NSM)**  
*Minimum NSF if the facility is a Medical Center; provide additional NSF if authorized.*

6. **Storage, Bulk Items (MMGS1) .....500 NSF (46.5 NSM)**  
*Minimum NSF; provide an additional 40 NSF per each Patient Bed; an additional 5 NSF per each Exam / Procedure Room; and an additional 100 NSF per each Operating Room. (Refer to Table 1)*
7. **Storage, Unit Items (SRSE1) .....120 NSF (11.2 NSM)**  
*Minimum NSF; provide an additional 5 NSF per each Patient Bed; an additional 2 NSF per each Exam / Procedure Room; and an additional 20 NSF per each Operating Room. (Refer to Table 1)*
8. **Receiving Breakout and Inspection Room (MMRP1).....120 NSF (11.2 NSM)**  
*Minimum NSF; provide an additional 60 NSF if the total number of Sterile Processing Service Instrument Sets projected to be reprocessed daily is between one hundred and fifty and four hundred; provide an additional 120 NSF if the total number of Sterile Processing Service Instrument Sets projected to be reprocessed daily is greater than four hundred.*

This area is administratively assigned to Logistics but functionally assigned to the Sterile Processing Service (SPS). It should be co-located with SPS. Included in this area is a workstation / bench, PC / printer used to receive supplies. Adequate circulation is required to remove outer packaging and discard / recycle materials. Outer cardboard must be removed before transfer to clean supply storage area.

9. **Storage, Sterile Consumables (Soft Goods) (SRS04) .....270 NSF (25.1 NSM)**  
*Minimum NSF; provide an additional 120 NSF for every increment of two Operating Rooms greater than four.*

This area is organizationally assigned to Logistics while functionally assigned to SPS and should be co-located with SPS. Minimum allocated NSF accommodates ten standard storage units at 15 NSF each; two Emergency Trauma Case Carts at 10 NSF each; two Crash / Code and Specialty Exchange Carts at 10 NSF each; one information system workstation at 30 NSF and circulation. All consumable supplies in Sterile Processing Service are maintained in low unit of measure with outer carton / packaging removed. Consumable soft goods primarily support the surgical case cart system and other interventional procedure areas. Supplies for nursing units, clinics, etc. are usually distributed by Logistics.

10. **Pneumatic Tube Station (NT001) .....30 NSF (2.8 NSM)**  
*Provide one if a Pneumatic Tube Station System for Logistics is authorized.*

Allocated NSF provides space for up to three stations. Locate adjacent to Service-Issue Window for small item dispatch to patient treatment areas.

**D. FA 4: Postal / Mail Service Area:**

1. **Office, Postal / Mail Service Chief (OFA09).....100 NSF (9.3 NSM)**  
*Provide one if a Postal / Mail Service Chief is authorized.*
2. **Workstation, Postal Clerk (OFA07).....56 NSF (5.3 NSM)**  
*Provide one per each Postal / Mail Service FTE position authorized to have a workstation.*
3. **Mailroom (MRRS1) .....250 NSF (23.3 NSM)**  
*Minimum NSF; provide an additional 50 NSF per each Mailroom Clerk FTE position, greater than one, authorized.*



Minimum NSF includes equipment for Mail Scanning and Sorting.

4. **Reproduction Room, High Volume (RPR02)** ..... 260 NSF (24.2 NSM)  
*Provide one if Postal / Mail Service is authorized.*
5. **Courier Service Drop-off / Pick-up (MRCS1)** ..... 60 NSF (5.6 NSM)  
*Provide one if Postal / Mail Service is authorized.*
6. **Storage Room (SRSE1)** ..... 60 NSF (5.6 NSM)  
*Provide one if Postal / Mail Service is authorized.*

**E. FA 5: Staff and Administrative Area:**

1. **Office, Logistics Chief (OFA09)** ..... 100 NSF (9.3 NSM)  
*Provide one for Logistics Service.*
2. **Office, Logistics Assistant Chief (OFA09)** ..... 100 NSF (9.3 NSM)  
*Provide one for Logistics Service.*
3. **Waiting (WTG03)** ..... 80 NSF (7.5 NSM)  
*Provide one for Logistics Service.*

Allocated space accommodates one standard chair @ 9 NSF, one bariatric chair @ 14 NSF, one accessible space @ 10 NSF, and circulation; total three people.

4. **Workstation, Secretary (OFA07)** ..... 56 NSF (5.3 NSM)  
*Provide one for Logistics Service.*
5. **Workstation, Clerical (OFA07)** ..... 56 NSF (5.3 NSM)  
*Provide one per each Clerk FTE position authorized.*
6. **Training Room, Staff (CFR01)** ..... 240 NSF (22.3 NSM)  
*Provide one for Logistics Service.*

Allocated NSF accommodates six conference chairs @ 7.5 NSF each, two 5'-0" x 2'-0" tables at 10 NSF each, one credenza @ 8 NSF, and circulation; total six people.

7. **Copier / Office Supply Room (RPR01)** ..... 100 NSF (9.3 NSM)  
*Provide one for Logistics Service.*
8. **Lounge, Staff (SL001)** ..... 120 NSF (11.2 NSM)  
*Minimum NSF; provide an additional 60 NSF for every increment of five Logistics Service and Postal / Mail Service FTE positions working on peak shift greater than ten; maximum 360 NSF.*
9. **Locker / Changing Room, Male (LR002)** ..... 100 NSF (9.3 NSM)  
*Minimum NSF if the total number of Logistics Service and Postal / Mail Service FTE positions authorized is between five and thirteen; provide an additional 8 NSF per each Logistics Service and Postal / Mail Service FTE position authorized greater than thirteen.*
10. **Locker / Changing Room, Female (LR002)** ..... 100 NSF (9.3 NSM)  
*Minimum NSF if the total number of Logistics Service and Postal / Mail Service FTE positions authorized is between five and thirteen; provide an additional 8 NSF per each Logistics Service and Postal / Mail Service FTE position authorized greater than thirteen.*

**11. Toilet, Staff (TNP1) .....60 NSF (5.6 NSM)**

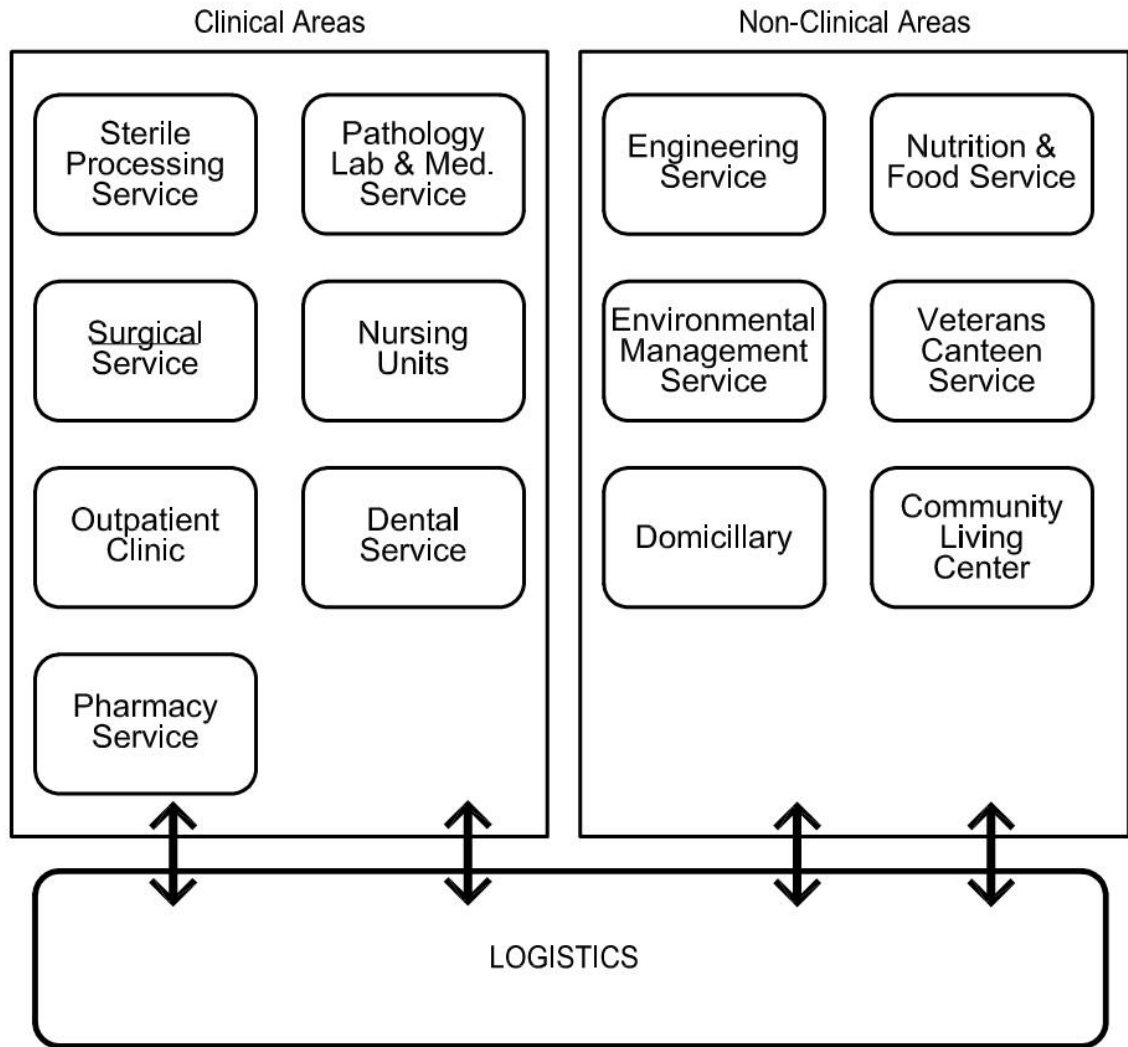
*Minimum two; provide an additional one for every increment of fifteen Logistics Service and Postal / Mail Service FTE positions working on peak shift greater than fifteen.*

Allocated NSF accommodates one accessible toilet @ 25 NSF, one wall-hung lavatory @ 12 NSF, ABA clearances, and circulation.

**6 DESIGN CONSIDERATIONS**

- A. Net-to-Department Gross Factor: The net-to-department gross factor (NTDG) for the Logistics Service is **1.10**. This number when multiplied by the programmed net square foot (NSF) area determines the departmental gross square foot.
- B. Design for flexibility and adaptability to accommodate future expansion.
- C. Clean and Soiled Receiving docks may be collocated but must be provided with a physical separation in order to separate clean from soiled materials.
- D. The Staff Toilet provided in the Loading Dock area is for use by delivery truck drivers, including VA staff, without having to enter the medical facility.
- E. A Nutrition and Food Service Dock may be provided to receive food and other items that are sent to Food Service. A second dock may also be provided if Food Service distributes prepared meals to other VA facilities; located on-site or remote.
- F. The Warehouse may be located entirely within the medical facility, entirely remotely, or portions within the medical facility and other portions remotely depending on the requirements of each particular facility.
- G. Bulk items storage typically consists of high-bay / high capacity storage, which may include wide-span pallet racking, deep shelving, etc. This facilitates the storage of items in case-lots, and to a limited extent, full pallet storage for items that must be procured in bulk quantities.
- H. Potential threats to VA mailrooms can include mailed explosive devices, chemical or biological agents. Theft of mailed materiel is also a potential threat. Mailrooms should be located away from other high-risk activities and on independent air handling or ventilation systems.
- I. The Staff Lounge shall be conveniently located to staff work areas.
- J. Staff toilets should be located with immediate adjacency to the staff lounge but should not open into it.
- K. The provision of a separate locker room from the staff lounge is desirable for staff privacy and noise reduction.

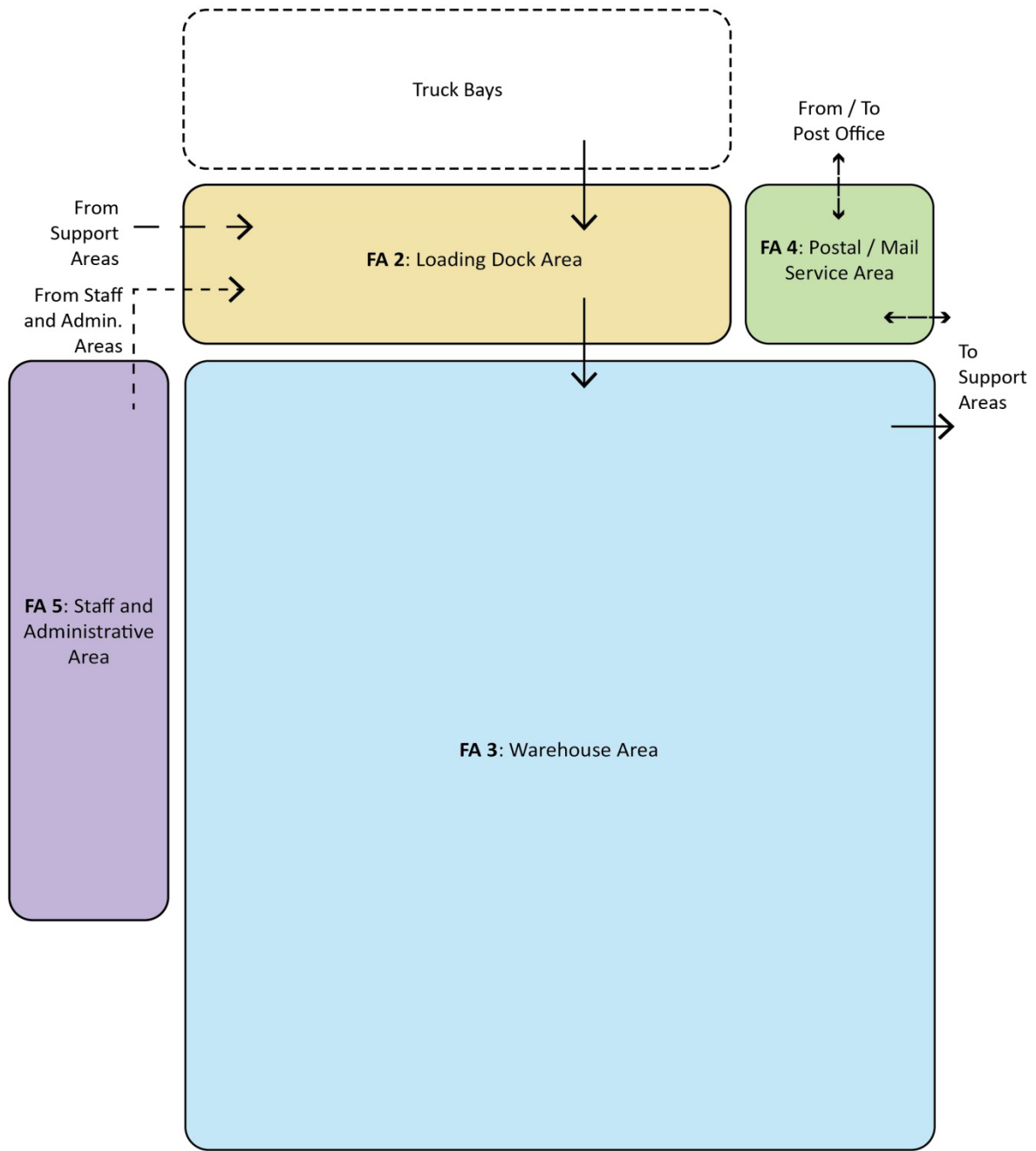
## 7 FUNCTIONAL RELATIONSHIPS



### LEGEND

- Most Critical Adjacency
- - - - - Less Critical Adjacency

### 8 FUNCTIONAL DIAGRAM



- > Clean Material Flow
- - - -> Soiled Material Flow
- .....> Staff Flow
- > Mail Circulation