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Pharmacy Service VA Design Guide



Final Draft

Department of Veterans Affairs
Veterans Health Administration
Office of Facilities Management
Facilities Quality Office
Standards Service
202•565•6775

**VA DESIGN GUIDE
PHARMACY
SERVICE**

FINAL DRAFT

DEPARTMENT OF VETERANS
AFFAIRS VETERANS HEALTH
ADMINISTRATION FACILITIES
MANAGEMENT OFFICE

Foreword

The material contained in the Pharmacy Design Guide is the culmination of a partnering effort by the Department of Veterans Affairs Pharmacy Service, the Department of Veterans Affairs Veterans Health Administration, and the Facilities Quality Office. The goal of the Design Guide is to simplify the design process and to ensure the quality of VA facilities while controlling construction and operating costs.

This document is intended to be used as a guide and to supplement current technical manuals and other VA criteria in planning inpatient and outpatient pharmacies. The Design Guide is not to be used as a standard design and use of the Design Guide does not preclude the need for a functional and physical design program for each specific project. It is the project Architects and Engineers responsibility to develop a complete and accurate project design that best meets the users needs and applicable code requirements.

Lloyd H. Siegel, FAIA
Director, Facilities Quality Office

Contents

- Section 1** Introduction, Acknowledgments, Abbreviations, and Legend Symbols
- Section 2** Narrative
- Section 3** Functional Diagrams
- Section 4** Design Guide Plates and Design Standards: Inpatient Pharmacy
- Section 5** Design Guide Plates and Design Standards: Outpatient Pharmacy
- Section 6** Design Guide Plates and Design Standards: Pharmacy Specialized Programs

Section 1

**Introduction,
Acknowledgments,
Abbreviations
Legend of Symbols**

	Page
Introduction	1-1
Acknowledgments	1-2
Abbreviations	1-3
Legend of Symbols	1-4

Introduction

The Pharmacy Service Design Guide is intended to be a graphic consolidation of existing Department of Veterans Affairs standards and criteria. It contains data from the following sources:

- Master Construction Specifications PG-18-1
- Construction Standards H-18-3
- Standard Details PG-18-4
- Equipment Guide List PG-7610
- List of Equipment symbols PG-18-6
- Space Planning Criteria PG-7610
- Barrier-Free Design Handbook H-18-13
- Room Finish and Door Hardware Schedule PG-18-14
- Various Technical Criteria (Design Manuals) pertaining to Architectural, HVAC, Plumbing, and Electrical.
- Consensus information from various VA medical centers.
- Ambulatory Care Program Division

The Design Guide refers to the above mentioned sources when data is either too detailed or too broad to be included in this guide.

The Design Guide for Pharmacy Service was developed as a design tool to assist the medical center staff and the contracting officers in better understanding the choices that designers ask them to make, and to help designers understand the functional requirements necessary for proper operation of Inpatient and Outpatient Pharmacy Services.

The Guide Plates contained in the Pharmacy Service Design guide are intended as illustrations of VA's furniture, equipment and personnel space needs. They are not meant to limit design opportunities.

This Design Guide is not intended to be project-specific. While it does contain the vast majority of spaces required in Pharmacy Services, it is not possible to foresee all future requirements. The project-specific space program is the basis for an individual project design. It is important to note that the guide plates are a generic graphic representation only.

Equipment manufacturers should be consulted for actual dimensions and utility requirements. Use of this Design Guide does not supersede the project architect's and engineers' responsibilities to develop a complete and accurate design that meets the user's needs and the appropriate code requirements.

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Abbreviations

A	Amperes	PL	Plaster
AC/HR	Air Changes per Hour	PREP	Preparation
ADA	Americans with Disabilities Act	PSIG	Pounds per Square Inch Gauge
AFF	Above Finished Floor	QT	Quarry Tile
AI	Acquisition and Installation	RB	Resilient Base
A&MM	Acquisitions and Material Management	SC	Special Coating (High Build Glazed Coating)
AR	As Required	SD	Standard Detail
AT	Acoustical Ceiling Tile	SF	Square Feet, Square Foot
C	Degrees Celsius	SPD	Supply, Processing, and Distribution
CC	Contractor Furnished and Installed, Construction Funds	SOPC	Satellite Outpatient Clinic
CF	Construction Funds, VA Furnished, Installed by VA or Contractor	SS	Stainless Steel
CFM	Cubic Feet per Minute	TELEC	Telecommunications
CLG	Ceiling	UFAS	Uniform Federal Accessibility Standards
CMU	Concrete Masonry Unit	V	Volts
CP	Carpet (without cushion broadloom)	VA	Department of Veterans Affairs
CS	Construction Standard	VACO	Veterans Affairs Central Office
CT	Ceramic Tile	VAMC	Veterans Affairs Medical Center
DISCSW	Disconnect Switch	VC	VA Furnished and Contractor Installed -- Medical Care Appropriation for Equipment and Construction Appropriations for Installation
EASS	Electronic Access Security System	VCT	Vinyl Composition Tile
EtO	Ethylene Oxide Gas	VHA	Veterans Health Administration
EXH	Exhaust	VV	VA Furnished and Installed-VHA Appropriation
F	Degrees Fahrenheit	W	Watts
FC	Foot-candle	W/SF	Watts per Square Feet
FD	Floor Drain	W/SM	Watts per square meter
FIXT	Fixture	W/m ²	Watts per square meter
FLUOR	Fluorescent		
FM	Facilities Management Office		
GFI	Ground Fault Interrupter		
GWBD	Gypsum Wallboard		
HAC	Housekeeping Aids Closet		
HVAC	Heating, Ventilation, and Air Conditioning		
HP	Horsepower		
HR	Hour		
ICU	Intensive Care Unit		
K	Kelvin		
KW	Kilowatt		
LB	Pound/Pounds		
LLTS	Lounge, Lockers, Toilets, and Showers		
MCS	Master Construction Specifications		
MTD	Mounted		
NA	Not Procured with Activation Funds		
NFPA	National Fire Protection Association		
NSF	Net Square Feet		
NSM	Net Square Meters		
OSD	Open Site Drain		
PCP	Portland Cement Plaster		
PH	Phase		

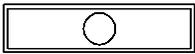
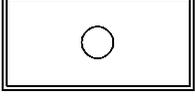
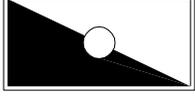
Legend of Symbols

FINAL DRAFT 11-30-95
REVISED MARCH 1997

System	Description of Symbol	Gr. Symbol
Power Receptacles	DUPLEX RECEPTACLE, NEMA 5-20R - 20 AMP - MOUNTED 450MM (18") AFF UNLESS OTHERWISE NOTED	
	DUPLEX RECEPTACLE, NEMA 5-20R - 20 AMP - MOUNTED ABOVE COUNTER TOP	
	DUPLEX RECEPTACLE WITH GROUND FAULT INTERRUPTER, NEMA 5-20R - 20 AMP - MOUNTED 450MM (18") AFF UNLESS OTHERWISE NOTED	
	DUPLEX RECEPTACLE WITH GROUND FAULT INTERRUPTER, NEMA 5-20R - 20 AMP - MOUNTED ABOVE COUNTER TOP	
	WEATHERPROOF DUPLEX RECEPTACLE WITH GFI, NEMA 5-20R - 20 AMP - MOUNTED 450MM (18") AFF UNLESS OTHERWISE NOTED	
	QUADRAPLEX OUTLET, NEMA 5-20R - 20 AMP - MOUNTED 450MM (18") AFF OR QUADRAPLEX OUTLET, NEMA 5-20R - 20 AMP - PEDESTAL-MOUNTED	
	QUADRAPLEX OUTLET, NEMA 5-20R - 20 AMP - MOUNTED ABOVE COUNTER TOP	
	QUADRADUPLEX OUTLET WITH GROUND FAULT INTERRUPTER, NEMA 5-20R - 20 AMP - MOUNTED 450MM (18") AFF UNLESS OTHERWISE NOTED	
	QUADRADUPLEX OUTLET WITH GROUND FAULT INTERRUPTER, NEMA 5-20R - 20 AMP - MOUNTED ABOVE COUNTER TOP	
	DUPLEX RECEPTACLE, NEMA 5-20R - 20 AMP - EMERGENCY POWER - MOUNTED 450MM (18") AFF UNLESS OTHERWISE NOTED	
	QUADRAPLEX RECEPTACLE, NEMA 5-20R - 20 AMP - EMERGENCY POWER	
	SPECIAL RECEPTACLE	
	TELEVISION OUTLET	
	ELECTRICAL STRIP MOLD - NEMA 5-20R RECEPTACLES AT 600MM (2'-0") INTERVALS	
	BATTERY POWERED CLOCK	
CIRCUIT BREAKER		

Legend of Symbols (cont.)

FINAL DRAFT 11-30-95
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System	Description of Symbol	Gr. Symbol
Switches	SINGLE POLE SWITCH	
	SINGLE POLE SWITCH - SUFFIX OF "a", "b", OR "c" INDICATES SEPARATE CONTROL OF FIXTURE(S) WITH SAME DESIGNATION	
	DIMMER SWITCH	
	THREE-WAY SWITCH	
	DOOR SWITCH	
	FUSED OR UNFUSED DISCONNECT SWITCH	
	EMERGENCY POWER OFF (EPO) PUSH BUTTON	
Lighting	600mm x 600mm (2' x 2') FLUORESCENT FIXTURE	
	300mm x 300mm (1' x 4') FLUORESCENT FIXTURE	
	600mm x 1200mm (2' x 4') FLUORESCENT FIXTURE	
	WALL-MOUNTED FLUORESCENT FIXTURE	
	600mm x 1200mm (2' x 2') FLUORESCENT FIXTURE - EMERGENCY POWER	
	600mm x 1200mm (2' x 4') FLUORESCENT FIXTURE - EMERGENCY POWER	
	WALL-MOUNTED FLUORESCENT FIXTURE - EMERGENCY POWER	
	WALL MOUNTED LIGHT FIXTURE - TYPE AS NOTED	
	LIGHT FIXTURE - TYPE AS NOTED	

Legend of Symbols (cont.)

FINAL DRAFT 11-30-95
REVISED MARCH 1997

System	Description of Symbol	Gr. Symbol
Communi- cations	TELEPHONE OUTLET - MOUNTED 450 mm (18") AFF UNLESS OTHERWISE NOTED	
	WALL-MOUNTED TELEPHONE OUTLET - MOUNTED 1200 mm (48") AFF UNLESS OTHERWISE NOTED	
	COMPUTER TERMINAL OUTLET - VERIFY EXACT NEEDS - PROVIDE SIGNAL AND POWER OUTLET AS REQ'D	
	SPEAKER - CEILING-MOUNTED	
	INTERCOM OUTLET	
	NURSE CALL DOME LIGHT - CEILING-MOUNTED	
	NURSE CALL DOME LIGHT - WALL-MOUNTED	
	NURSE CALL DUTY STATION	
	EMERGENCY NURSE CALL	
	NURSE CALL STAFF STATION	
	VOLUME CONTROL - WALL MOUNTED	
	Sp. Outlets	JUNCTION BOX - PURPOSE AND LOCATION AS NOTED
Mechanical	SUPPLY AIR DIFFUSER	
	RETURN OR EXHAUST AIR REGISTER OR GRILLE	
	ROOM THERMOSTAT	
Plumbing	COMBINATION FAUCET HOSE BIBB	
	MEDICAL GAS OUTLET	
	EMERGENCY SHOWER	

Section 2

Narrative

	Page
General Considerations.....	2 - 1
Functional Considerations	2 - 1
Technical Consideration	2 - 2

Narrative

General Considerations

Current Direction

The pharmacy department serves both the inpatient and outpatient environments.

The inpatient component usually consists of a large centralized facility.

VA Hospitals usually have separate outpatient pharmacies.

Ambulatory Care Center pharmacies are often leased and operated by a separate entity in the private sector, VA maintains direct control of their hospital based inpatient and outpatient pharmacies as a component of managed care.

Trends

More "just in time" deliveries from the vendor resulting in less need for long-term storage.

More enhanced communications systems throughout the hospital with faster response to needs.

Better automated delivery systems will be available for transporting medications.

Decentralized clinical "product-line" pharmacies will be considered where volumes and activities warrant.

Inpatient satellite pharmacies within Cardiac Services, Oncology, Neurology, Intensive Care, and other departments will be considered.

NHCU or Long Term Care Facility needs may be served as a satellite to a hospital pharmacy.

Automated medications dispensing machines will be utilized for routine medications, and may provide automatic inventory control/benchmarking billing.

Pharmaceutical research may result in the need for fewer procedures in a number of patient care areas, including surgery.

Off-site mail prescription services will become more common reducing on-site pharmacy storage requirements and goals of face-to-face interaction between pharmacist and patient will be compromised.

At the present time there are two schools of thought about how Pharmacy Service should deal with patients. Some facilities are very concerned with security and deal with users through a secure dispensing area. Other facilities prefer face-to-face relationships with their patients with no barriers similar to a local drug store. The final decision should be determined by the user - the medical center.

Data may be compiled for drug efficacy testing and establishment of treatment protocols.

Functional Considerations

Operations: Services

Pharmacy service is responsible for the controlled dispensing of all drugs required in the delivery of health care. Service includes the total drug utilization review process.

Pharmacy services are coordinated with clinical services and organized into the Outpatient Pharmacy and the Inpatient Pharmacy.

Inpatient and outpatient pharmacies may be combined in one facility where justified by workloads and adjacencies of outpatient and inpatient services and staffing.

Patient Care Concepts

Patient Participation concepts educate and inform the patient of their options to insure their participation in the decision and healing process.

Patient Focused Care decentralized pharmacy services where practical to bring these services closer to the patient.

Incorporating a Pharmacist in the Patient Care Team helps to implement patient participation and patient focused care and is in itself a goal of the VA to improve the quality and effectiveness of Pharmacy Services.

Level of Care

Education and Research programs which increase space demands and effect functional requirements will be identified on a project basis.

Program Missions may result in centers of excellence which require special facilities.

Hospital and outpatient service levels, specialized services and off-site Primary Care Clinics will effect requirements.

Alternatives for service delivery should be considered on a project basis.

Patient Base

The Veteran is and will remain the priority of the VA healthcare system.

The Family of the veteran is a critical consideration in creating and maintaining veteran loyalty to the VA system.

Space Planning Issues

Flexibility

Flexibility is a critical aspect in the design of Pharmacy services which require an Open Plan and Flexible Systems which can adapt to technology and automation.

Efficiency

Process and work flow issues include the outpatient dispensing process, unit dose cart stock, IV packaging process, and bulk supply, storage, and retrieval.

Security

Security issues must be balanced with patient needs to allow Patient Consultation and access to pharmacist, while limiting access to Controlled Substances.

Security requirements for narcotics storage are governed by the Federal Drug Enforcement Agency Code of Federal Regulations Section 1300. These regulations cover off-site clinics where there may not be a walk-in vault.

Space Relationships

Functional Diagrams

Functional organization and work flow are addressed by Inpatient Pharmacy and Outpatient Pharmacy functional diagrams which address Outpatient and Ambulatory patient, Hospital Material Distribution, Stat Service, and Staff and Delivery access.

Organizational Concepts

The concepts indicated by the Guide Plates closely follow the operational organization of Inpatient Pharmacy, and Outpatient Pharmacy.

Satellite Pharmacies are not included in the Guide Plates as they are specialized and pose unique protocol and security requirements. See Community Based Outpatient Clinics and Satellite Outpatient Clinics Design Guides.

Space Allocation

Program Levels

Office of Infrastructure Policy and Development Criteria Division of the Department of Veteran Affairs will set the size of the Pharmacy on an individual basis according to the estimated workloads in appropriate categories for each facility.

The net areas of spaces included in the Guide Plates is representative of the examples given. Actual net area space requirements will vary according to workloads.

Technical Considerations

Architectural

Interior Materials and Finishes: Partitions

Interior partition should be primarily painted gypsum wallboard on metal studs. Partitions around consultation rooms and conference rooms should have sound attenuation batts between the studs in accordance with VA Construction Standard H-18-3, 34-1, "Noise Transmission Control".

The partitions around prescription receiving, drug breakdown and verification, and dispensing areas have special security requirements. Vault construction is required for controlled substance storage. See VA Construction Standard H-18-3, CD-49.

Interior Materials and Finishes: Floors

Floors in offices, conference rooms and waiting areas should be carpet with a 100mm (4 inch) high resilient base.

Floors in areas such as prepackaging, unit dose and dispensing should also be carpeted.

Floors in toilet rooms shall be ceramic tile with a ceramic tile base.

Floors in most other spaces should be vinyl composition tile with a 100mm (4 inch) high resilient base.

Interior Materials and Finishes: Ceilings

Ceilings should be primarily lay-in acoustic ceiling tile.

Refer to VA Construction Standard PG-18-3, CD-49, "Physical Security Requirements for additional concerns.

Interior Materials and Finishes: Protection

Wall and corner guards shall be used in corridors and other areas which wall damage from cart traffic is anticipated.

Interior Doors and Hardware

Doors and Frames

Interior doors should be 45mm (1 3/4") thick solid core flush panel wood doors or hollow metal doors in hollow metal frames.

Door jambs should have hospital type sanitary stops that stop 205mm (8 inches) from the floor to facilitate mopping. Hollow metal doors should be used where high impact is a concern and where fire rated doors are required.

The main doors leading to drug receiving area, Outpatient Pharmacy and Inpatient Pharmacy are required to be steel security doors.

Doors in the Type II Vaults for controlled substance storage are required to meet GSA Class 5 criteria and have a day gate.

Hardware

Kick/mop plates should generally be applied to both sides of the doors. Handicapped accessible hardware should be used throughout.

References

Refer to VA Handbook PG-18-14, "Room Finishes, Door and Hardware Schedule" and VA Construction Standard H-18-3, CD-49 "Physical Security Requirements and Options" for additional information.

Equipment

Casework

Casework systems can be either fixed or modular and are usually decided on a project by project basis.

Modular systems are usually installed by a subcontractor who may or may not have a connection to the general contractor. This can be a problem when utility connections have to be made. Modular systems have a wide range of colors, fabrics and materials and can be quickly installed.

The general contractor has more control over the subcontractor with built-in or fixed casework this sometimes can give a high quality end product, but may take longer to complete than factory made units.

Casework system should be chosen that provide flexibility for planning and utilization purposes.

Casework systems should incorporate components dimensioned for ease of multiple re-use installation applications.

Casework systems should be used that incorporate self supporting assemblies eliminating the need for wall reinforcing.

Casework systems should be planned avoiding corner installations and filler panel instances.

The final decision on casework should be made by the user - the medical center.

Automated Systems

Automated Systems shall include elements of material handling, dispensing, inventory and patient billing.

These systems elements will require access to the main facility's "information backbone" as well as the departmental local area network. All components should be planned for compatibility.

Safety Cabinets and Laminar Flow Hoods

All occurrences of these items will require a confirmation of the materials, chemicals and/or solvents to be used.

All occurrences of these items will require a confirmation of the Hood or Cabinet Classification and Type in order to determine room air and ventilation performance requirements.

Heating, Ventilation and Air Conditioning Operation

Air conditioning systems should be provided to heat, cool and ventilate the individual space, as required by VA design criteria.

The air conditioning systems serving the Pharmacy Service should be designed to operate at full capacity to suite Pharmacy schedule.

Capacities

The number of people and the air conditioning load noted on the room design standard sheet is for purpose of establishing the basis of design guide and its use in planning. The engineers/designers shall verify the actual number of people and the air conditioning load to agree with the project requirements.

Verify equipment A.C. loads shown as per actual equipment furnished on a project.

The percent of outside air shall be based on the space total supply air quantities.

Air Quality and Distribution

In general, clean areas shall have positive air pressure and soiled areas should have negative air flow with respect to the adjoining areas.

Corridors should not be used to supply or exhaust/return air from rooms. Corridor air may be used to ventilate toilet rooms, hacs and small electrical or telephone closets opening directly on corridors. Exfiltration/Infiltration from positive/negative pressure rooms adjacent to a corridor should be considered in balancing air flow.

The transfer air, should not be more than 2.8 m³/min. (100 CFM) per undercut door.

Care should be taken to minimize the short circuiting of air between supply and exhaust/return openings in rooms.

Exhaust System

A dedicated exhaust system should be provided for the biological safety cabinet located in the pharmacy. Locate supply air diffusers as far away from the hood sash opening as possible, and size to eliminate draft conditions and for proper air flow at the hood.

Seismic

Where required, install HVAC systems with seismic provisions as outlined in the VA HVAC Design Manual for Hospital Projects.

Refer to VA Handbook H-18-03, CD-54, "Natural Disaster Resistant Design Non-Structural" for additional information.

Noise Level

Select HVAC equipment, ductwork and air distribution devices to achieve noise levels listed in the HVAC Design Manual for Hospital Projects and Master Construction Specification Section 15200.

Plumbing

Water and Waste Systems

The plumbing systems should be provided to satisfy the departmental plumbing needs.

The department domestic cold water should be piped to all plumbing fixtures and equipment requiring this utility.

The department domestic hot water should be piped to all plumbing fixtures and equipment requiring this utility. A hot water return system should be provided to ensure the design temperature at the farthest outlet.

The department plumbing fixtures and drains should be drained by gravity through soil, waste and vent stacks. In addition, the department special waste should be drained through corrosion resistance flame retardant piping into either a local or centralized acid dilution tank.

Medical Gas Systems

The department medical gases outlets are shown to establish the basis of design guide and its use in planning. The engineers/designers shall verify the medical gases location and quantities for individual projects.

Where required, the plumbing and medical gases systems should be installed with seismic provisions as outlined in the VA Plumbing Design Manual for Hospital Projects.

Refer to VA Handbook H-18-3, CD-54, "Natural Disaster Resistant Design Non-Structural" for additional information.

Electrical**Illumination**

Illumination is typically provided utilizing recessed fluorescent luminaires with acrylic prismatic lenses. The fixtures typically use F32T8 lamps in compliance with the National Energy Policy Act of 1992. Lamps have a minimum color rendering index (CRI) of 85 and a color temperature of 4100 degrees Kelvin (K), which is close to the "cool white" color temperature of 4150 degrees K.

Lighting intensities conform to the VA design criteria, the IES Lighting Handbook and IES publication CP-29, "Lighting for Health Care Facilities". IES CP-29 is currently being updated and will be replaced by IES Recommended Practice RP-29 in the future.

Lighting is typically controlled by wall mounted switches located at the entrance to the room. Larger spaces may utilize multiple switching by separate switches for lighting of individual zones or areas.

Power load densities for lighting are listed for use by the mechanical HVAC load calculation purposes. Load densities should be verified for the actual design, as they may vary depending on the room configuration, fixture types, lamps and ballasts used.

Power

General purpose duplex receptacles are typically provided on each wall of a room or space.

Dedicated duplex or special receptacles are provided for selected pieces of equipment such as refrigerators.

Workstations with personal computer computers (PC's) are typically provided with quadruplex receptacles for the PC, monitor and printer.

Junction boxes are provided for equipment requiring a hardwired connection.

Certain modular casework units are provided with a utility access module with surface mounted electrical strip mold and also provides a chase for wiring. Conduits and junction boxes are provided to connect to the utility access module for power wiring.

Duplex receptacles on the critical branch of the emergency power system are provided for selected pieces of equipment such as refrigerators to allow for limited operation during a power outage.

Emergency Power requirements are addressed in VA Construction Standards H-18-3, #800-3

Security**Physical Security**

A vault with a day gate has been provided in the controlled substance area for secured storage.

Doors for inpatient and outpatient pharmacies are the steel security door type.

Electronic Security

Conduit and junction boxes have been provided in the controlled substances vault and secured dispensing room for an electronic access security system

Life Safety**Purpose**

The life safety program shall be developed to provide a reliable system to protect the building occupants, firefighting personnel, building contents, building structure and continuity of building function. Its intent should be to provide a reasonable level of fire safety by reducing the probability of injury, loss of life or building function changes due to a fire. This can be accomplished by limiting the development and spread of a fire emergency to the area of origin and reducing the need for total occupant evacuation.

Components

The design aspects of the facility which relate to the fire and life safety include:

- Structural fire resistance;
- Building compartmentation;
- Fire detection, alarm and suppression;
- Smoke control and exhaust;
- Firefighter access and facilities; and
- Emergency power.

Fire Suppression

New hospital construction and renovated areas of existing facilities are required to be fully protected by an automatic fire suppression system.

Egress

The minimum width of corridors and passageways in non patient areas of Pharmacy areas is 1120 mm (44"). However, for patient areas and cart movement 1800 mm (72") or 2400 mm (96") corridors and passageways are required.

Waiting areas are permitted to be open to the corridors.

References

Refer to the latest editions of NFPA 1010 "Life Safety Code", the Uniform Building Code and additional standards published by the National Fire Protection Association (NFPA).

Energy Conservation

Refer to VA HVAC Design Manual for Hospital Projects for information.

Communications

Telephone

Telephone outlets are typically provided at each workstation or in each room. Desk outlets are 450 mm (18") AFF and wall phone outlets are 1200 mm (48") AFF.

Certain modular casework units are provided with a utility access module that house communication outlets and provide a chase for cabling. Conduits and junction boxes are provided to connect to the utility access module for telephone service.

Automatic Data Processing (ADP)

ADP or computer outlets are typically provided at each workstation with a personal computer (PC) and or printer. Desk outlets are 450 mm (18") AFF.

Certain modular casework units are provided with a utility access module that house communication outlets and provide a chase for cabling. Conduits and junction boxes are provided to connect to the utility access module for ADP service.

Public Address

The Pharmacy Service will not have an independent public address (PA) system. The department will be included as part of the hospital-wide PA system. Speakers are typically located in corridors and public spaces. The actual system configuration will depend on the overall design layout and functional requirements.

Waste Management

Medical Waste

Medical waste is generated in the form of refused medications and expired drugs which are discarded through waste grinders to sanitary drains, or otherwise destroyed or maintained for secure disposal as required.

General Waste

General waste is generated in all spaces and is held in containers for collection and sorting into carts or bins as required at scheduled times or it is bagged and transported to the waste handling facility by a waste chute where available.

Recycling

Bulk containers are removed and collected at the receiving area where breakout occurs.

Methods for sorting, collecting, transporting and disposing of recyclable products must be specifically analyzed for each facility and location.

The net area requirements of soiled utility rooms and waste holding and collection areas will be determined after the appropriate process of sorting, collecting, segregation and recycling have been determined on a facility basis.

The optional use of disposable or reusable products is an important consideration in recycling and waste disposal alternatives.

Space Requirements

Space requirements will vary with the selection of waste collection and recycling methods and systems, and space requirements need to be analyzed for each optional method or system considered for new and existing facilities.

While space needs are determined by VA Handbook 7610 on a departmental basis space provisions for waste collection needs to be distributed and dedicated to a variety of uses to accommodate the implementation of the system and method selected.

Transportation

Patient: Outpatient

Provide convenient access to The Outpatient Pharmacy from patient parking and the primary care entrance.

Patient volumes for Outpatient Pharmacies generally justify a ground floor location to facilitate wayfinding and to decrease passenger elevator traffic.

Use techniques including clear access routes, public spaces, landmarks and signage to facilitate wayfinding.

Provide passenger elevator access to Outpatient facilities located off main entrance levels.

Patient: Inpatient

The need for patient access to Inpatient Pharmacies and convenient pharmacist access to patient areas while maintaining base contact will be established on a project basis.

Separate Inpatient and Outpatient traffic where possible.

Convenient service access for unit dose and bulk supply cart delivery from hospital service elevators is required.

Unit Dose and Bulk supply carts require securable deliveries due to transport of narcotics and dedicated keyed access to elevators should be considered on a project basis.

Automated cart delivery systems are not generally acceptable for assurance of secure delivery.

Pharmacy deliveries are generally accompanied by pharmacy personnel with verification of delivery documented.

Pharmacy distribution routes to nursing units are planned to minimize conflict with public and patient traffic.

For outpatients mail out prescriptions are now being used throughout the system and are increasingly popular.

Staff

Provide staff access separated from patient waiting and public areas.

Staff access is limited to one point where it can be visually and/or electronically monitored.

Locate staff lounge and locker areas away from inpatient and outpatient traffic, convenient to the pharmacy, but outside of the secure area.

Records

Both the Inpatient and Outpatient Pharmacy depend heavily on bar coding and electronic data transfer for patient prescription, billing information, and inventory.

Pharmacy records record the administration or refusal of each unit dose and the resulting documentation is made part of the patients' consolidated medical records.

Automated prescription filling and automated transport systems are utilized within the pharmacy requiring flexible space to accommodate new and changing systems.

Pharmacy Medical Record and prescription order volumes frequently justify pneumatic tube or automated box transport access to Medical Records and the units served. These transport modes may be located where shared use with stat delivery is possible.

Stat Orders

Stat prescriptions are filled and transported to the ordering unit by pneumatic tube or automated box conveyor systems.

Bulk Delivery of Pharmaceuticals

Bulk Pharmaceuticals, including narcotics and all controlled substances, are delivered directly to the pharmacy where they are received signed for by the pharmacist.

Direct access to outside deliveries or the hospital receiving area is required.

Materials

Clean supplies are transported by exchange carts which are stored in the Bulk Supply Area.

Sterile Supplies

The use of sterile supplies is minimal and is accommodated by prepackaging or disposable items delivered with clean supplies.

Waste

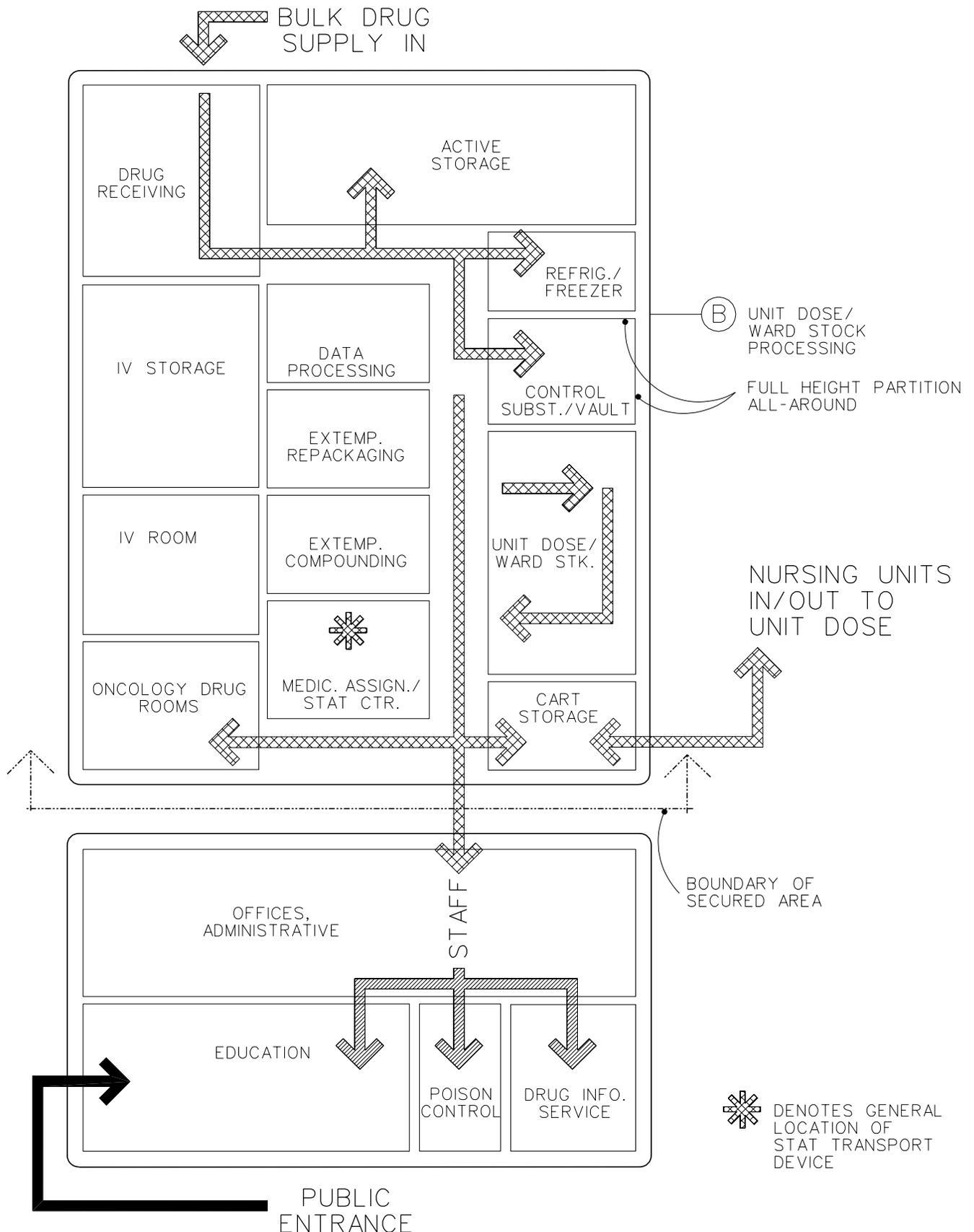
Waste is collected by housekeeping staff and disposed of as indicated above under "Waste Management" (see page 2-6).

Section 3
Relationship Diagrams

	Page
Inpatient Pharmacy	3-1
Outpatient Pharmacy	3-2

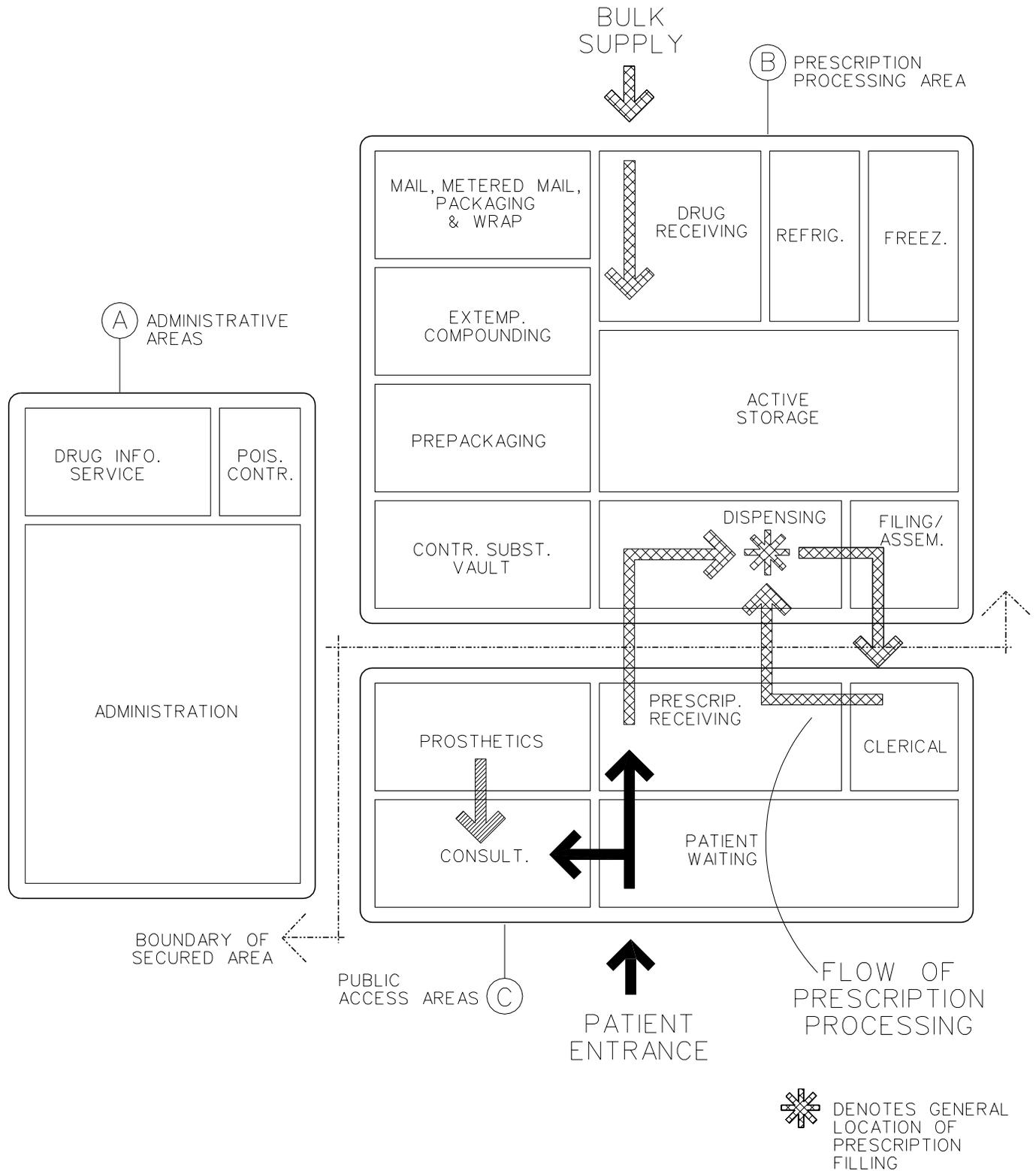
Functional Diagram Inpatient Pharmacy

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Functional Diagram Outpatient Pharmacy

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REVISED MARCH 1997



Section 4

**Design Guide Plates
and Data Sheets:
Inpatient Pharmacy**

Guide Plate Series	Plate Number
Dispensing Station - Unit Dose and Ward Stock	
Equipment & Utility Plan	4-1
Reflected Ceiling	4-1
Design Standards	4-1
Equipment Guide List	4-1
Medication Assignment Area and Stat Counter	
Equipment & Utility Plan	4-2
Reflected Ceiling	4-2
Design Standards	4-2
Equipment Guide List	4-2
Controlled Substance Vault and Secured Dispensing Area	
Equipment & Utility Plan	4-3
Reflected Ceiling Plan.....	4-3
Design Standards	4-3
Equipment Guide List	4-3
Receiving Area	
Equipment & Utility Plan	4-4
Reflected Ceiling Plan.....	4-4
Design Standards	4-4
Equipment Guide List	4-4

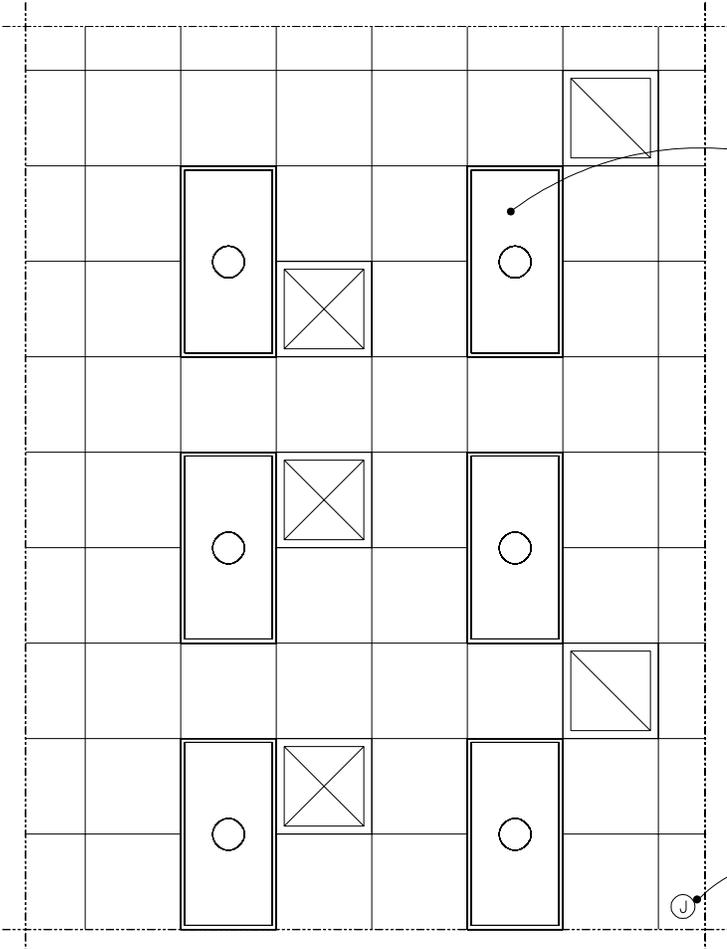
Section 4

**Design Guide Plates
and Data Sheets:
Inpatient Pharmacy**

Guide Plate Series	Plate Number
Extemporaneous Repackaging and Extemporaneous Compounding	
Equipment & Utility Plan	4-5
Reflected Ceiling Plan.....	4-5
Design Standards	4-5
Equipment Guide List	4-5
Intravenous Admixture and Aseptic Transfer	
Equipment & Utility Plan	4-6
Reflected Ceiling Plan.....	4-6
Design Standards	4-6
Equipment Guide List	4-6
Oncology Drugs	
Equipment & Utility Plan	4-7
Reflected Ceiling Plan.....	4-7
Design Standards	4-7
Equipment Guide List	4-7

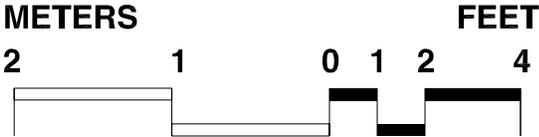
Reflected Ceiling Plan Unit Dose and Ward Stock

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REVISED MARCH 1997



SEE: DESIGN STDS.
LIGHTING-NOTE 2. (TYP.)

SEE: DESIGN STDS.
POWER-NOTE 2.



Design Standards Unit Dose and Ward Stock

ARCHITECTURAL

Ceiling:	Acoustic lay-in ceiling tile
Ceiling Ht:	2740 mm (9'-0")
Wall Finish:	Paint
Wainscot:	--
Base:	Resilient base
Floor Finish:	Vinyl composition tile
Slab Depr:	--
Notes:	

SPECIAL EQUIPMENT

None

LIGHTING

General:	100 FC
Special:	--
Notes:	<ol style="list-style-type: none"> 1. Lighting control by area; switch(es) at room entrance. 2. 600 x 1200 mm (2'x4') recessed fluorescent light fixture, acrylic prismatic lens, W/2-F32T8 lamps, 3500° K CRI=75 (minimum)

POWER

General:	3000W (Receptacles on electrical strip mold on modular casework)
Emergency:	--
Notes:	<ol style="list-style-type: none"> 1. Junction box for 120V power connection to electrical strip mold on modular casework 2. Junction box for dose dispensing machine to be ceiling-mounted

COMMUNICATIONS

ADP:	Yes
Radio:	--
Telephone:	Yes
Intercom:	--
Pub. Addr:	--
Notes:	1. Communications cabling routed via modular casework utility access module to outlets on casework.

HEATING, VENTILATING AND AIR CONDITIONING

Dry Bulb Temp Cooling:	22°C (72°F)
Dry Bulb Temp Heating:	22°C (72°F)
Minimum % Outside Air:	15
100% Exhaust Air:	--
Noise Criteria:	NC-35
Steam:	--
Relative Humidity/Cooling:	50%
Relative Humidity/Heating:	30%
Minimum Air Changes/Hr.:	4
Room Pressure:	0
AC Load Equipment:	54 w/sm (5W/SF)
AC Load Lighting:	32 w/sm (3 W/SF)
Number of People:	3
Special Exhaust:	--
Notes:	

PLUMBING AND MEDICAL GASES

Cold Water:	--
Hot Water:	--
Laboratory Air:	--
Laboratory Vacuum:	--
Sanitary Drain:	--
Reagent Grade Water:	--
Medical Air:	--
Medical Vacuum:	--
Oxygen:	--
Notes:	

Equipment Guide List

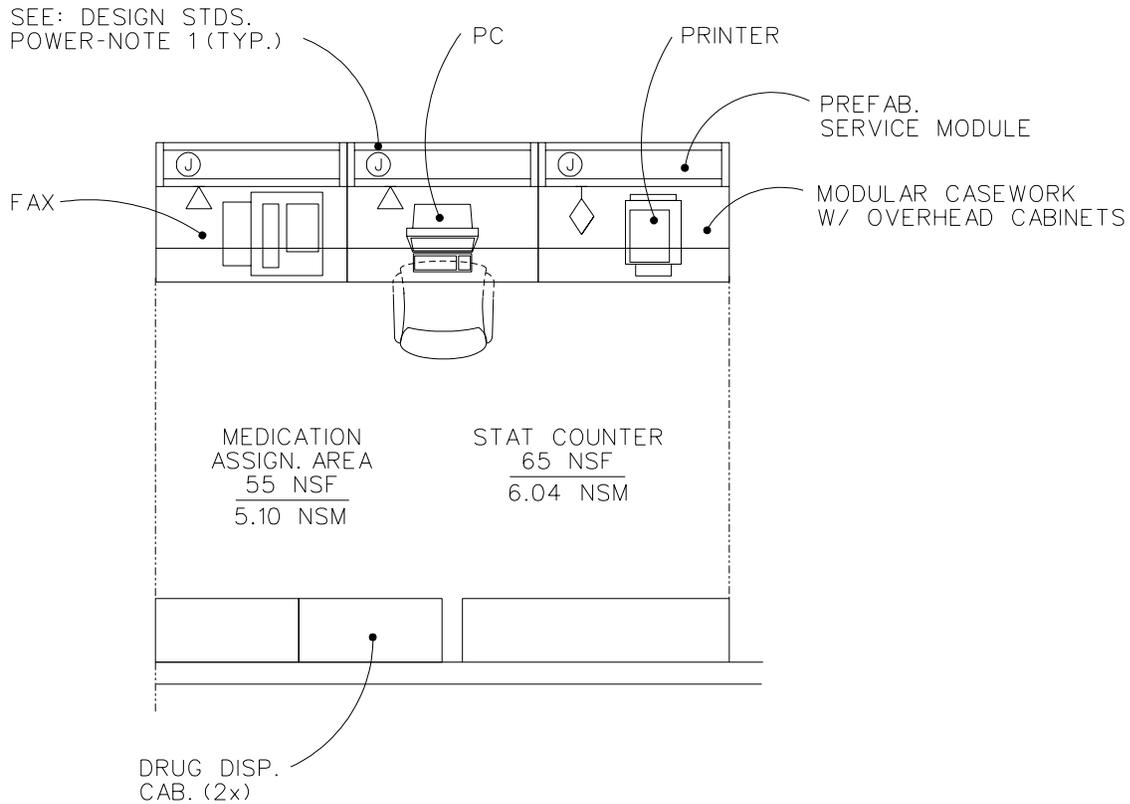
Unit Dose and Ward Stock

SYMBOL	QTY	AI	DESCRIPTION
AR		CF	MODULAR CASEWORK , W/ OVERHEAD CABINETS, GRAVITY FEED SHELVES AND UTILITY ACCESS MODULE
AR		VV	CHAIR, ROTARY, WITH ARMS
AR		VV	COMPUTER, PRINTER
AR		VV	PC, COMPUTER SYSTEM, WITH KEYBOARD
AR		VV	DOSE DISPENSING MACHINE, PATIENT SPECIFIC

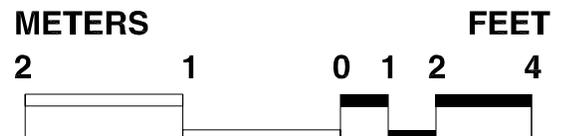
Equipment & Utility Plan

Medication Assignment and Stat Counter

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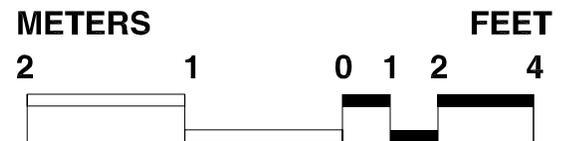
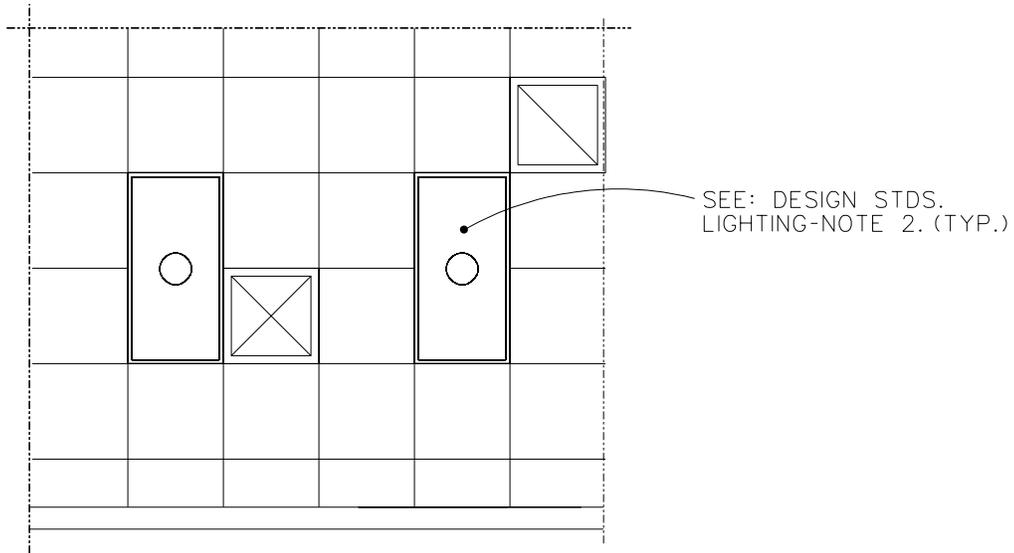


11.15 NSM
120 NSF



Reflected Ceiling Plan Medication Assignment and Stat Counter

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REVISED MARCH 1997



Design Standards

Medication Assignment Area and Stat Counter

ARCHITECTURAL

Ceiling:	Acoustic lay-in ceiling tile
Ceiling Ht:	2740 mm (9'-0")
Wall Finish:	Painted Gypsum Wallboard
Wainscot:	--
Base:	Resilient base
Floor Finish:	Vinyl Composition Tile or Carpet
Slab Depr:	--
Notes:	

SPECIAL EQUIPMENT

This space will have immediate access to a material transport system.

LIGHTING

General:	50 FC
Special:	--
Notes:	<ol style="list-style-type: none"> 1. Lighting control by area; switch(es) at room entrance. 2. 600 x 1200 mm (2'x4')recessed fluorescent light fixture, acrylic prismatic lens, W/2-F32T8 lamps, 3500° K CRI=75 (Min.)

POWER

General:	600W (Receptacles on electrical strip mold on modular casework)
Emergency:	--
Notes:	<ol style="list-style-type: none"> 1. Junction box for 120V power connection to electrical strip mold on modular casework

COMMUNICATIONS

ADP:	Yes
Radio:	--
Telephone:	Yes
Intercom:	--
Pub. Addr:	--
Notes:	<ol style="list-style-type: none"> 1. Communications cabling routed via modular casework utility access module to outlets on casework.

HEATING, VENTILATING AND AIR CONDITIONING

Dry Bulb Temp Cooling:	22°C (72°F)
Dry Bulb Temp Heating:	22°C (72°F)
Minimum % Outside Air:	15
100% Exhaust Air:	--
Noise Criteria:	NC-40
Steam:	--
Relative Humidity/Cooling:	50%
Relative Humidity/Heating:	30%
Minimum Air Changes/Hr.:	4
Room Pressure:	0
AC Load Lighting:	18 w/sm (1.7 w/sf)
AC Load Equipment:	54 w/sm (5 w/hr)
Number of People:	3
Special Exhaust:	--
Notes:	

PLUMBING AND MEDICAL GASES

Cold Water:	--
Hot Water:	--
Laboratory Air:	--
Laboratory Vacuum:	--
Sanitary Drain:	--
Reagent Grade Water:	--
Medical Air:	--
Medical Vacuum:	--
Oxygen:	--
Notes:	

Equipment Guide List

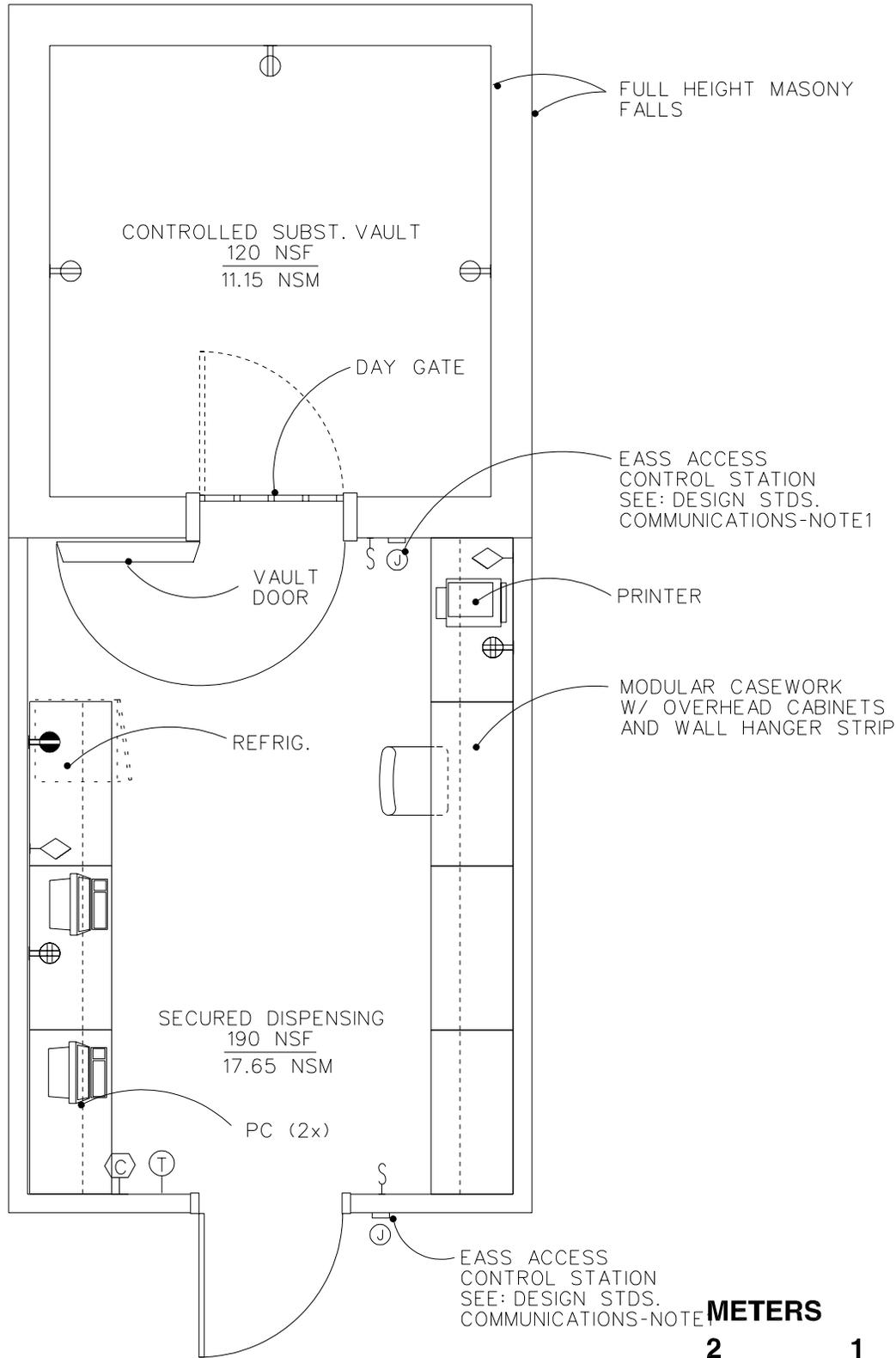
Medication Assignment and Stat Counter

SYMBOL	QTY	AI	DESCRIPTION
AR		CF	CABINET, FULL HEIGHT, DRUG DISPENSING, 1 FIXED SHELF, 1 ADJUSTABLE SHELF AND 8 DISPENSING SHELVES WITH GRAVITY FEED TRAYS, 910mm W x 405mm D x 2130mm H(36"W X 16"D X 84"H)
AR		CF	MODULAR CASEWORK , W/ OVERHEAD CABINETS AND UTILITY ACCESS MODULE
AR		VV	CHAIR, ROTARY, WITH ARMS
AR		VV	CLOCK, BATTERY OPERATED
AR		VV	COMPUTER, PRINTER
AR		VV	PC, COMPUTER SYSTEM, WITH KEYBOARD
AR		VV	TELECOPIER, FACSIMILE RECEIVER/FAX MACHINE

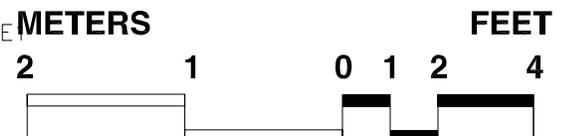
Equipment & Utility Plan

Controlled Substances Vault & Secured Dispensing Area

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REVISED MARCH 1997

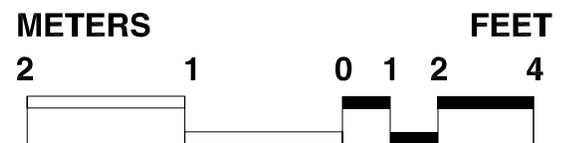
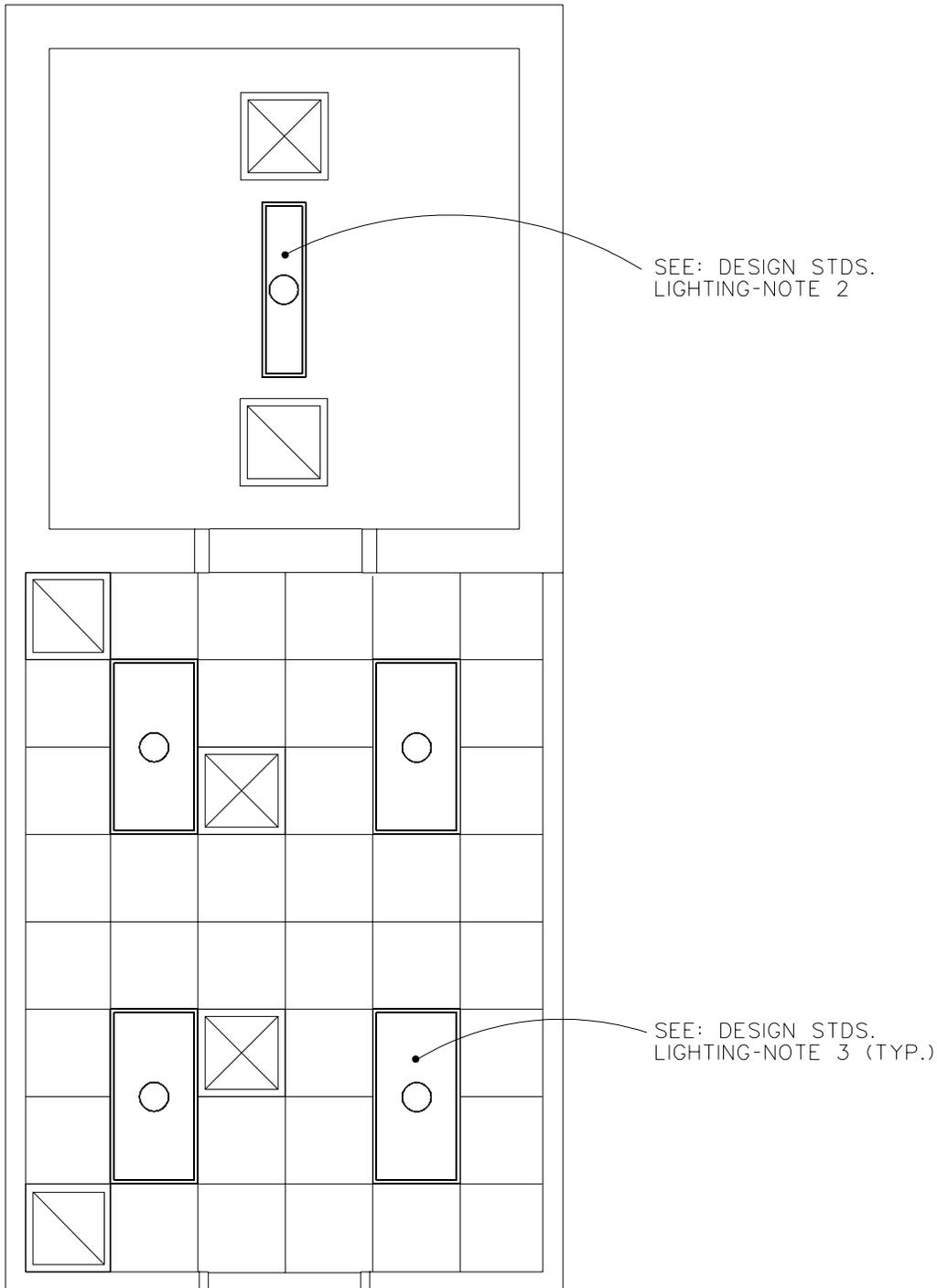


28.8 NSM
310 NSF



Reflected Ceiling Plan Controlled Substances Vault & Secured Dispensing Area

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REVISED MARCH 1997



Design Standards

Controlled Substance Vault & Secured Dispensing Area

ARCHITECTURAL

Ceiling: 1. Acoustic Tile in Secured Dispensing
2. Painted Gypsum Wallboard

Ceiling Ht: 2740 mm (9'-0")

Wall Finish: Paint Masonry & GWBD

Wainscot: --

Base: Resilient base

Floor Finish: Vinyl composition tile

Slab Depr: --

Notes: 1. Vault Construction: Reinforced concrete or reinforced CMU walls; concrete slab "roof".

2. Vault door and day gate: Refer to VA Construction Standard H-08-3, CD-49 for additional security criteria.

SPECIAL EQUIPMENT

None

LIGHTING

General: Secured dispensing = 100 FC
Vault = 20 FC

Notes: 1. Single switch per room controls lighting

2. 300mm x 1200mm (1' x 4') surface mounted fluorescent light fixture, wrap-around acrylic lens, W/2-F32T8 lamps, 3500°K, CRI=75 (minimum)

3. 600mm x 1200mm (2' x 4') recessed fluorescent light fixtures, acrylic prismatic lens, W/2F32T8 lamps, 3500°K, CRI=75 (minimum)

POWER

General: 1000W (Receptacles)

Emergency: --

Notes: 1. Junction box for power and signal connections to electronic access reader (2 locations)

COMMUNICATIONS

ADP: Yes

Radio: --

Telephone: Yes

Intercom: --

Pub. Addr: --

Notes: 1. Conduit and junction boxes required for electronic access security system.

HEATING, VENTILATING AND AIR CONDITIONING

Dry Bulb Temp Cooling: 22°C (72°F)

Dry Bulb Temp Heating: 22°C (72°F)

Minimum % Outside Air: 15

100% Exhaust Air: --

Noise Criteria: NC-40

Steam: --

Relative Humidity/Cooling: 50%

Relative Humidity/Heating: 30%

Minimum Air Changes/Hr.: 4

Room Pressure: 0

AC Load Lighting: Vault Area 11 w/sm (1 w/sf)
Secured Area 32 w/sm (3 w/sf)

AC Load Equipment: Vault Area 43 w/sm (4 w/sf)
Secured Area 54 w/sm (5 w/sf)

Number of People: 3

Special Exhaust: --

Notes:

PLUMBING AND MEDICAL GASES

Cold Water: --

Hot Water: --

Laboratory Air: --

Laboratory Vacuum: --

Sanitary Drain: --

Reagent Grade Water: --

Medical Air: --

Medical Vacuum: --

Oxygen: --

Notes:

Equipment Guide List

Controlled Substance Vault & Secured Dispensing Area

SYMBOL	QTY	AI	DESCRIPTION
AR		CF	MODULAR CASEWORK , W/ OVERHEAD CABINETS AND WALL HANGER STRIP
1		CF	REFRIGERATOR, UNDER COUNTER, 5 CU. FT., 120 VOLTS, 20 AMPS, 600mm W x 600mm D x 960mm H (24"W X 24"D X 38"H)
AR		VV	CHAIR, ROTARY, WITH ARMS
AR		VV	CLOCK, BATTERY OPERATED
AR		VV	COMPUTER, PRINTER
AR		VV	PC, COMPUTER SYSTEM, WITH KEYBOARD
AR		VV	CABINET, FULL HEIGHT OPEN SHELVES, 5 ADJUSTABLE, 1 FIXED SHELF, 900mm W x 405mm D x 2130mm H (36"x16"x84")

Design Standards

Receiving Area

ARCHITECTURAL

Ceiling:	Acoustic lay-in ceiling tile
Ceiling Ht:	2740 mm (9'-0")
Wall Finish:	Painted Gypsum Wallboard
Wainscot:	--
Base:	Resilient base
Floor Finish:	Vinyl Composition Tile
Slab Depr:	--
Notes:	1. 1120mm (3'-8") Wide Door

SPECIAL EQUIPMENT

None

LIGHTING

General:	30 FC
Special:	--
Notes:	1. Lighting control by area; switching 2. 600 x 1200 mm (2'x4')recessed fluorescent light fixture, acrylic prismatic lens, W/2-F32T8 lamps, 3500° K CRI=75 (minimum)

POWER

General:	500 W (Receptacles)
Emergency:	--
Notes:	--

COMMUNICATIONS

ADP:	Yes
Radio:	--
Telephone:	Yes
Intercom:	--
Pub. Addr:	--
Notes:	--

HEATING, VENTILATING AND AIR CONDITIONING

Dry Bulb Temp Cooling:	22°C (72°F)
Dry Bulb Temp Heating:	22°C (72°F)
Minimum % Outside Air:	15
100% Exhaust Air:	--
Noise Criteria:	NC-40
Steam:	--
Relative Humidity/Cooling:	50%
Relative Humidity/Heating:	30%
Minimum Air Changes/Hr.:	4
Room Pressure:	0
AC Load Lighting:	13 w/sm (1.2 W/sf)
AC Load Equipment:	32 w/sm (3W/sf)
Number of People:	6
Special Exhaust:	--
Notes:	--

PLUMBING AND MEDICAL GASES

Cold Water:	--
Hot Water:	--
Laboratory Air:	--
Laboratory Vacuum:	--
Sanitary Drain:	--
Reagent Grade Water:	--
Medical Air:	--
Medical Vacuum:	--
Oxygen:	--
Notes:	--

Equipment Guide List

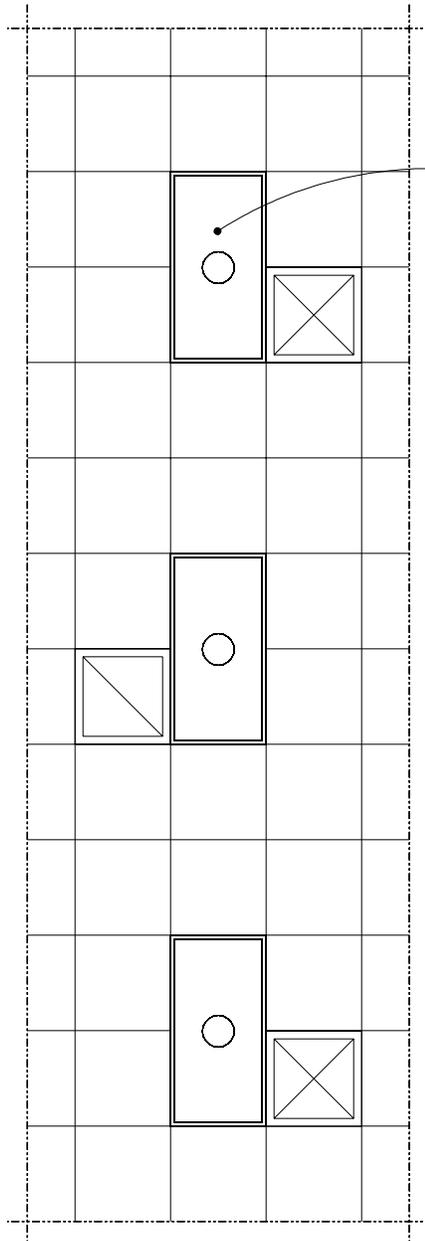
Receiving Area

SYMBOL	QTY	AI	DESCRIPTION
AR	CF		MODULAR CASEWORK , W/ OVERHEAD CABINETS AND WALL HANGER STRIP
AR	CF		CABINET, FULL HEIGHT, BIN TYPE, ADJUSTABLE SHELVES, WITH 60 REMOVEABLE BINS, 910mm W x 305mm D x 2130mm H (36"W X 12"D X 84"H)
AR	CF		CABINET, FULL HEIGHT, OPEN SHELVES, 5 ADJUSTABLE AND 1 FIXED SHELF, AVAILABLE WIDTHS, 915mm (36"), 1200mm (48"); DEPTH 405mm (16"), HEIGHT 2130mm (84")
AR	VV		CHAIR, ROTARY, WITH ARMS
AR	VV		CLOCK, BATTERY OPERATED
AR	VV		PC, COMPUTER SYSTEM, WITH KEYBOARD

Reflected Ceiling Plan

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Extemporaneous Repackaging & Extemporaneous Compounding



SEE: DESIGN STDS.
LIGHTING-NOTE 2. (TYP.)

METERS

2 1



FEET

0 1 2 4



Design Standards

Extemporaneous Repackaging & Extemporaneous Compounding

ARCHITECTURAL

Ceiling:	Acoustic lay-in ceiling Tile
Ceiling Ht:	2740 mm (9'-0")
Wall Finish:	Painted Gypsum Wallboard
Wainscot:	--
Base:	Resilient Base
Floor Finish:	Vinyl Composition Tile or Carpet
Slab Depr:	--
Notes:	--

SPECIAL EQUIPMENT

None

LIGHTING

General:	100 FC
Special:	--
Notes:	<ol style="list-style-type: none"> 1. Lighting control by area; switch(es) at room entrance. 2. 600 x 1200 mm (2'x4') recessed fluorescent light fixture, acrylic prismatic lens, W/3-F32T8 lamps, 3500° K CRI=75 (Min.).

POWER

General:	2400W (Receptacles on electrical strip mold on modular casework)
Emergency:	--
Notes:	<ol style="list-style-type: none"> 1. Junction box for 120V power connection to electrical strip mold on modular casework 2. Junction box for 120V power connection to tablet and capsule counting machine. 3. Junction box for 120V power connection to unit dose packer machine.

COMMUNICATIONS

ADP:	--
Radio:	--
Telephone:	Yes
Intercom:	--
Pub. Addr:	--
Notes:	1. Communications cabling routed via modular casework utility access lab module to outlets on casework.

HEATING, VENTILATING AND AIR CONDITIONING

Dry Bulb Temp Cooling:	22°C (72°F)
Dry Bulb Temp Heating:	22°C (72°F)
Minimum % Outside Air:	15
100% Exhaust Air:	--
Noise Criteria:	NC-40
Steam:	--
Relative Humidity/Cooling:	50%
Relative Humidity/Heating:	30%
Minimum Air Changes/Hr.:	4
Room Pressure:	0
AC Load Lighting:	32 w/sm (3 w/sf)
AC Load Equipment:	64 w/sm (5 w/sf)
Number of People:	3
Special Exhaust:	--
Notes:	

PLUMBING AND MEDICAL GASES

Cold Water:	Yes
Hot Water:	Yes
Laboratory Air:	--
Laboratory Vacuum:	--
Sanitary Drain:	--
Reagent Grade Water:	Yes
Medical Air:	--
Medical Vacuum:	--
Oxygen:	--
Notes:	1. Drain and vent need to be chemical resistant type.

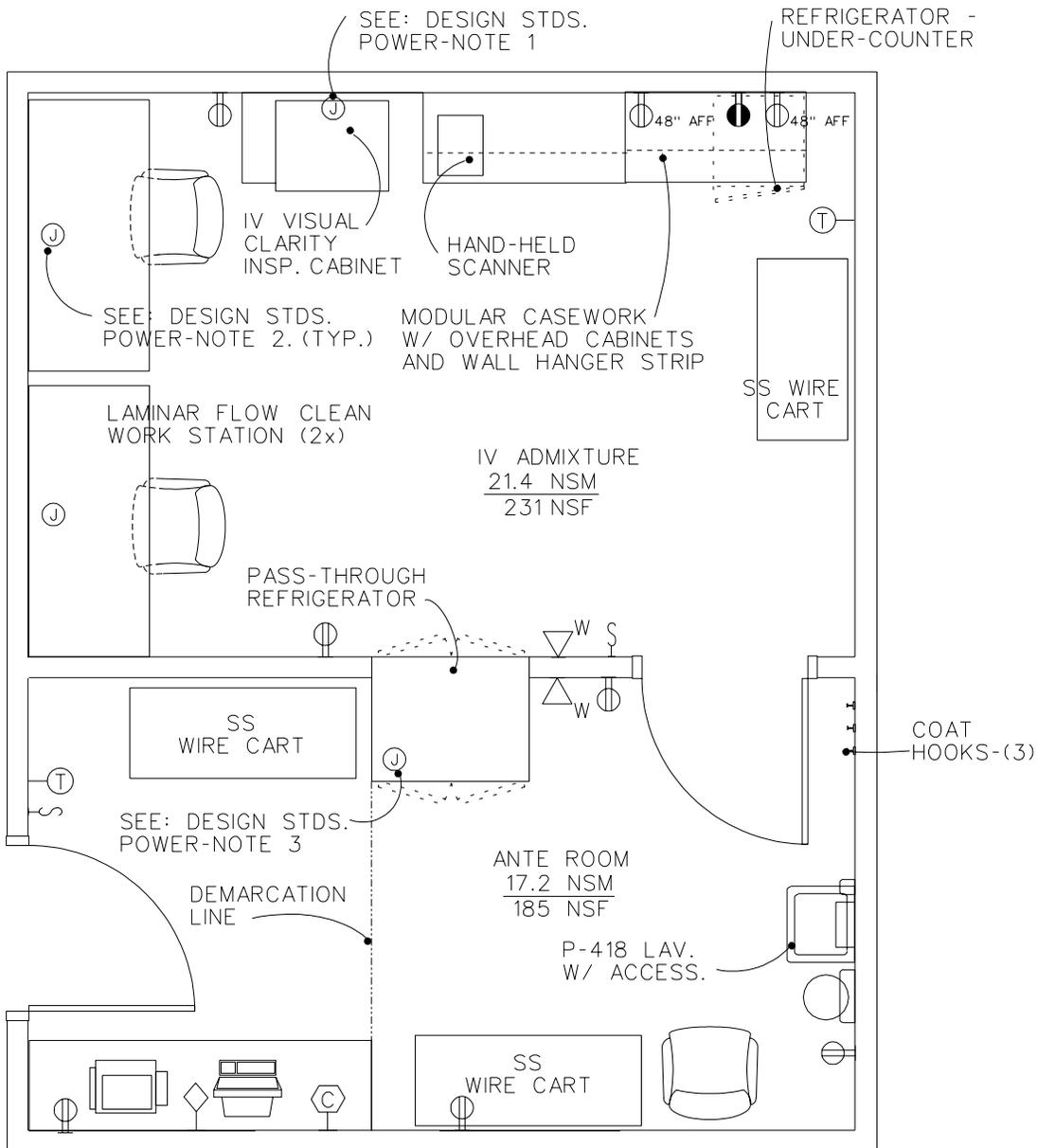
Equipment Guide List

Extemporaneous Repackaging & Extemporaneous Compounding

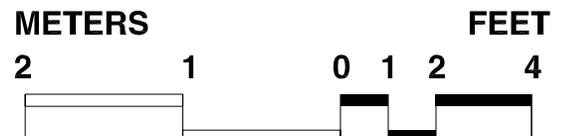
SYMBOL	QTY	AI	DESCRIPTION
AR	CF		MODULAR CASEWORK , W/ OVERHEAD BINS,UTILITY ACCESS MODULE AND WALL HANGER STRIP
AR	CF		SINK, CORROSION RESISTING STEEL, 555mm x 405mm x 205mm (22" X 16" X 8")
AR	CF		PEGBOARD, 405mm W x 600mm H (16"W X 24"H)
AR	VV		CABINET, FILING, UNDER COUNTER, 380mm W x 635mm D (15"W X 25"D)
AR	VV		CHAIR, ROTARY, WITH ARMS
AR	VV		CLOCK, BATTERY OPERATED
AR	VV		MACHINE, COUNTING, TABLET AND CAPSULE, 910mm W x 600mm D (36"W X 24"D)
AR	VV		MACHINE, UNIT DOSE PACKER, STRIP PACKAGING, 910mm W x 600mm D (36"W X 24"D), 120 VOLTS, 20 AMPS
AR	VV		COMPUTER, PRINTER
AR	VV		PC, COMPUTER SYSTEM, WITH KEYBOARD

Equipment & Utility Plan Intravenous Admixture and Aseptic Transfer

FINAL DRAFT 11-30-95
REVISED MARCH 1997



38.6 NSM
416 NSF

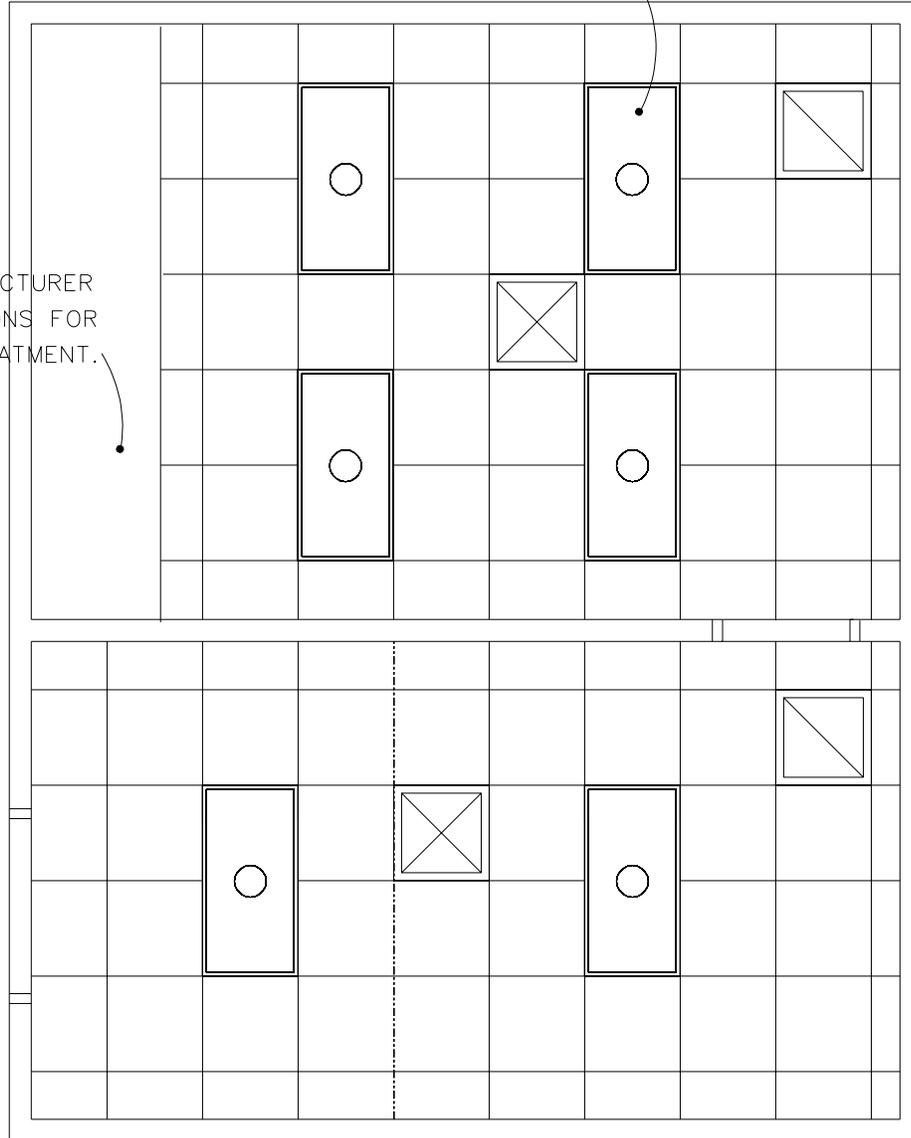


Reflected Ceiling Plan Intravenous Admixture and Aseptic Transfer

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REVISED MARCH 1997

SEE: DESIGN STDS.
LIGHTING-NOTE 2. (TYP.)

FUME HOOD:
SEE MANUFACTURER
SPECIFICATIONS FOR
CEILING TREATMENT.



METERS

2 1

FEET

0 1 2 4



Equipment Guide List

Intravenous Admixture & Aseptic Transfer

SYMBOL	QTY	AI	DESCRIPTION
P-418	1	CC	LAVATORY, WALL HUNG (PG-18-1, MCS 15450; VOL. 3 SD 380)
	AR	CF	MODULAR CASEWORK , W/ OVERHEAD CABINETS AND WALL HANGER STRIP
	AR	CF	REFRIGERATOR, UNDER COUNTER, 5 CU. FT., 120 VOLTS, 20 AMPS, 600mm W x 600mm D x 960mm H (24"W X 24"D X 38"H)
	AR	VV	CABINET, INTRAVENOUS (IV), VISUAL CLARITY INSPECTION, 120 VOLTS, 20 AMPS, 760mm W x 600mm D (30"W X 24"D)
	AR	VV	CART, STAINLESS STEEL, HEAVY DUTY, WIRE, 1525mm L x 600mm D x 2086mm H (60"L X 24"D X 70"H), 205mm (8") CASTERS W/ BRAKE, HORIZONTAL SHELVING
	AR	VV	CHAIR, ROTARY, WITH ARMS
	AR	VV	CLOCK, BATTERY OPERATED
	AR	VV	COMPOUNDER, HIGH SPEED FOR PARENTAL NUTRITION, ELECTRIC, 120 VOLTS, 20 AMPS
	1	VV	DISPENSER, BIFOLD PAPER TOWEL, SURFACE MOUNTED
	1	VV	DISPENSER, SOAP, LIQUID, WALL MOUNTED
	AR	VV	HOOK, COAT, WALL MOUNTED
	AR	VV	LAMINAR FLOW CLEAN WORK STATION, 1830 LINEAR mm (72 LINEAR INCHES) OF WORK SPACE, 815mm D x 2050mm H (32"D X 80"H), PROVIDE 120 VOLTS, 20 AMPS
	AR	VV	MACHINE, COUNTING, TABLET AND CAPSULE, 915mm W x 600mm D (36"W X 24"D)
	1	VV	REFRIGERATOR, SELF CONTAINED, PASS-THRU, .90cm (65 CU. FT.), DISPLAY WITH GLASS DOORS, 1060mm W x 740mm D x 2060mm H (42"W X 33"D X 81"H), 120/208 VOLTS, SINGLE PHASE, 20 AMPS
	AR	VV	SCANNER, LASER, HAND HELD, ELECTRIC, 120 VOLTS, 20 AMPS
	AR	VV	SCANNER, LASER, HAND HELD, ELECTRONIC, 120 VOLTS, 20 AMPS
	AR	VV	COMPUTER, PRINTER
	AR	VV	PC, COMPUTER SYSTEM, WITH KEYBOARD

Design Standards

Intravenous Admixture and Aseptic Transfer

ARCHITECTURAL

Ceiling:	Acoustic lay-in ceiling tile with washable surface
Ceiling Ht:	2740 mm (9'-0")
Wall Finish:	Painted Gypsum Wallboard
Wainscot:	--
Base:	Ceramic Tile
Floor Finish:	Ceramic Tile
Slab Depr:	--
Notes:	1120 (3"-8") Wide Door

SPECIAL EQUIPMENT

None

LIGHTING

General:	50 FC - 1.6 W/SF
Special:	--
Notes:	<ol style="list-style-type: none"> 1. Lighting control by area; switch(es) at room entrance. 2. 600 x 1200 mm (2'x4') recessed fluorescent light fixture, acrylic prismatic lens, W/3-F32T8 lamps, 3500° K CRI=75 (minimum)

POWER

General:	1600 W (Receptacles)
Emergency:	2000 W (Refrigerators)
Notes:	<ol style="list-style-type: none"> 1. Junction box for 120V power connection to visual clarity inspection cabinet. 2. Junction box for 120V power connection to laminar flow work station on emergency power. 3. Junction box for 120V power connection to pass-through refrigerator station on emergency power. 4. Junction box for 120V power connection to tablet and capsule counting machine.

COMMUNICATIONS

ADP:	--
Radio:	--
Telephone:	Yes
Intercom:	--
Pub. Addr:	--
Notes:	--

HEATING, VENTILATING AND AIR CONDITIONING

Dry Bulb Temp Cooling:	22°C (72°F)
Dry Bulb Temp Heating:	22°C (72°F)
Minimum % Outside Air:	100
100% Exhaust Air:	Yes
Noise Criteria:	NC-40
Steam:	--
Relative Humidity/Cooling:	50%
Relative Humidity/Heating:	30%
Minimum Air Changes/Hr.:	10
Room Pressure:	See notes below
AC Load Equipment:	anteroom 32 w/sm (3 w/sf) buffer room 64 w/sm(6 w/sf)
Number of People:	8
Special Exhaust:	--
Notes:	

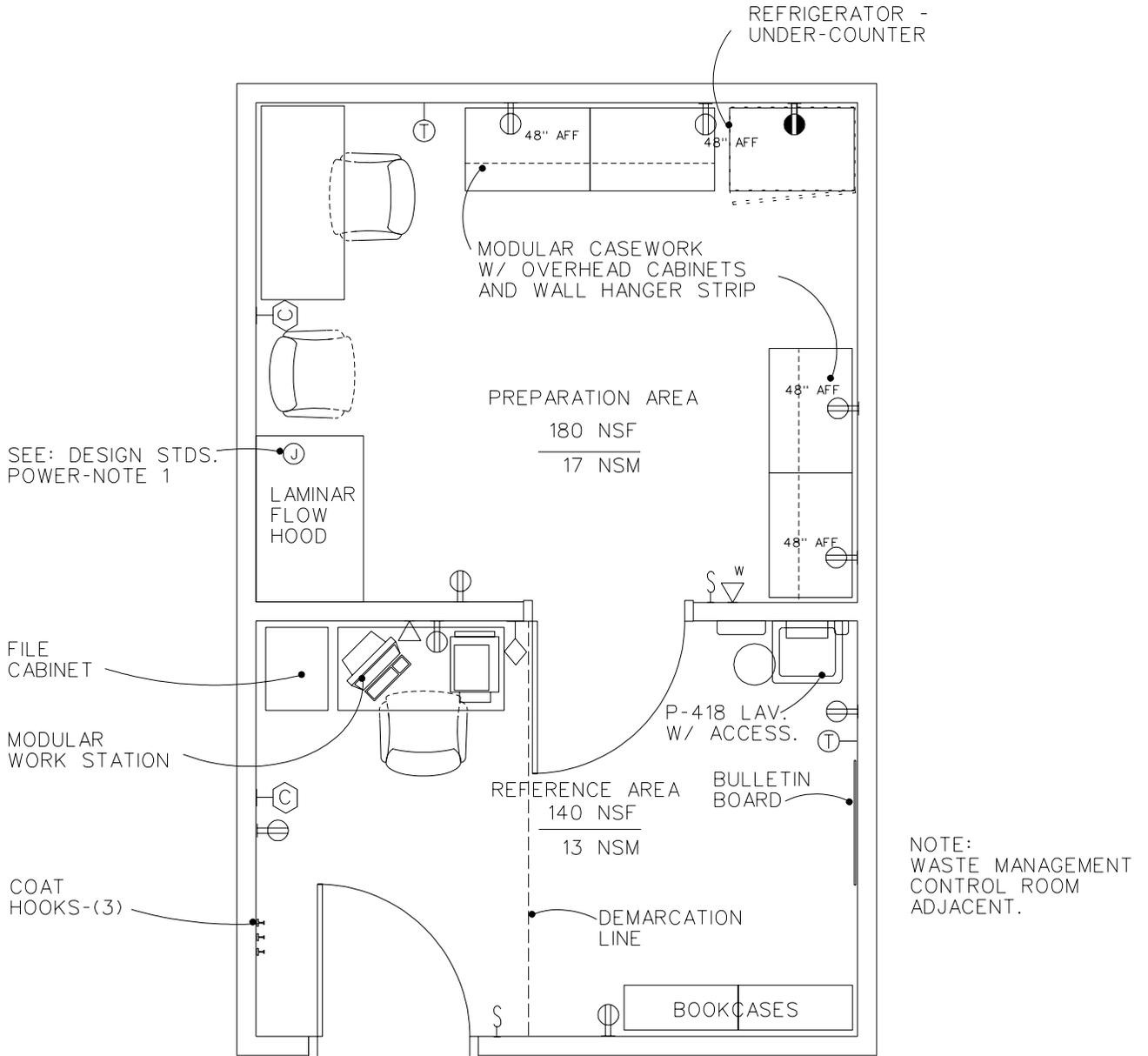
1. Maintain admixture (buffer room) under positive pressure with respect to Ante Room.
2. Maintain Ante Room under positive pressure with respect to Corridor.
3. AC load due to equipment is based on use of water-cooled pass-through refrigerator. If air-cooled refrigerator is used increase heat load correspondingly.
4. HVAC System for Buffer Room (Risk Level II) to be based on 100% outdoor air, HEPA filtered supply air with 100% exhaust from the room.
5. Laminar flow clean work station is self-contained and does not require exhaust to outside the building
6. Provide minimum 12 air changes per hour for Buffer Room and Ante Room

PLUMBING AND MEDICAL GASES

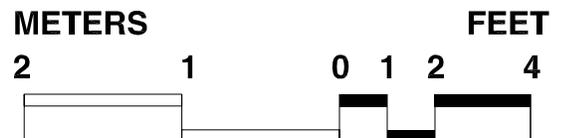
Cold Water:	Yes
Hot Water:	Yes
Laboratory Air:	--
Laboratory Vacuum:	--
Sanitary Drain:	--
Reagent Grade Water:	Yes
Medical Air:	--
Medical Vacuum:	--
Oxygen:	--
Notes:	1. Sanitary drain and vent need to be the chemical resistant type.

Equipment & Utility Plan Oncology Drugs

FINAL DRAFT 11-30-95
REVISED MARCH 1997

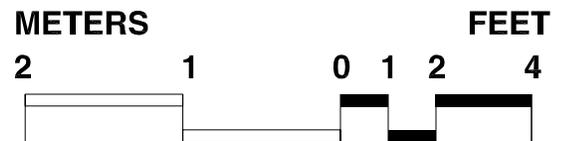
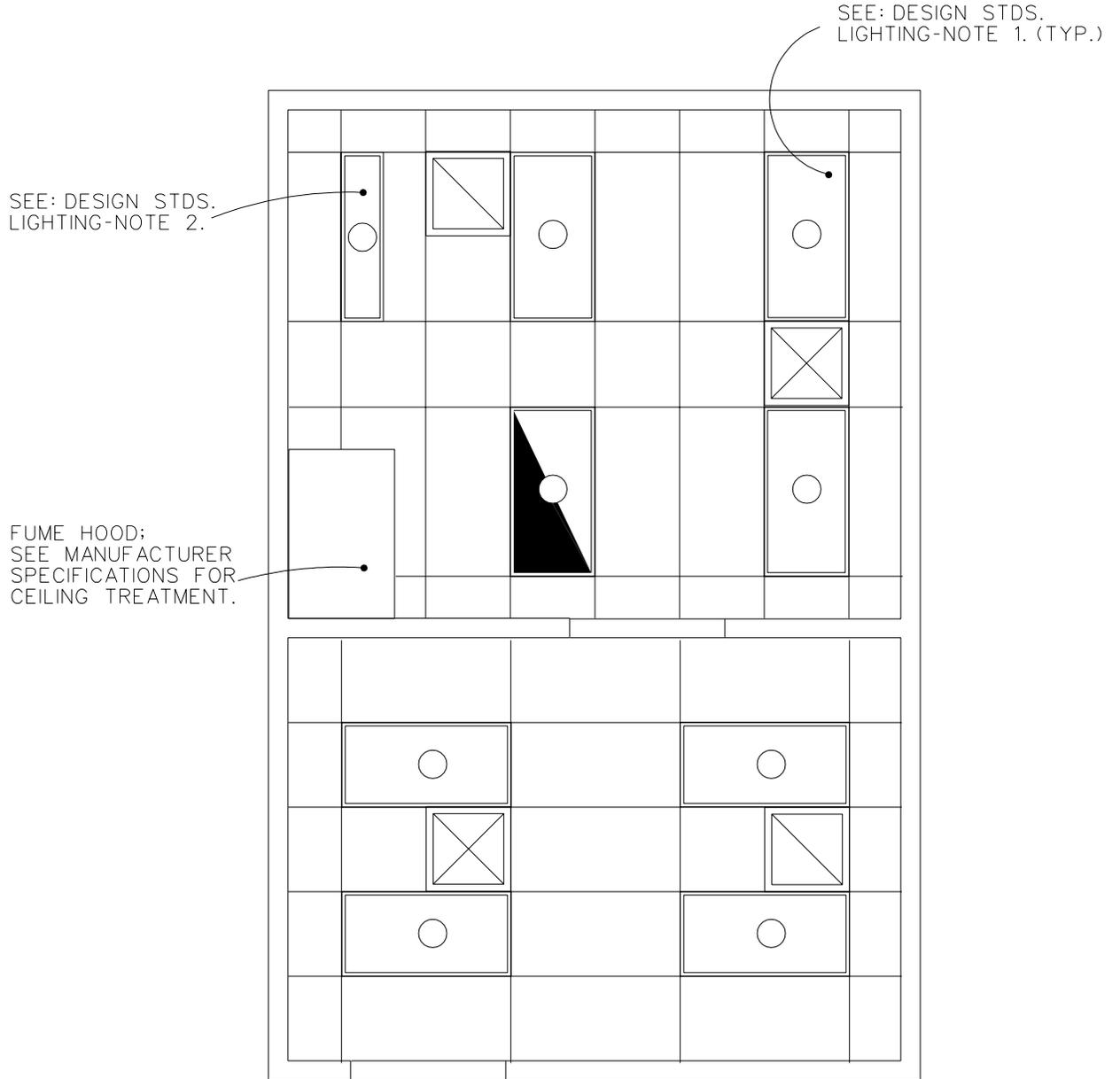


320 NSM
30 NSF



Reflected Ceiling Plan Oncology Drugs

FINAL DRAFT 11-30-95
REVISED MARCH 1997



Design Standards Oncology Drugs

ARCHITECTURAL

Ceiling:	Acoustic lay-in ceiling tile
Ceiling Ht:	2740 mm (9'-0")
Wall Finish:	Paint
Wainscot:	--
Base:	Integral welded seam sheet flooring base
Floor Finish:	Welded seam sheet flooring
Slab Depr:	--
Notes:	1. 1060mm (3'-6") Wide Door

SPECIAL EQUIPMENT

None

LIGHTING

General:	70 FC
Special:	--
Notes:	1. 600 x 1200 mm (2'x4') recessed fluorescent light fixture, acrylic prismatic lens, W/2-F32T8 lamps, 4100° K CRI=85 (minimum)
	2. 300mm x 1300mm (1'x4") recessed fluorescent light fixture, acrylic prismatic lens, W/1-F32T8 lamps, 4100° K

POWER

General:	2800W (Receptacles)
Emergency:	2000W (Receptacles)
Notes:	1. Junction box for Laminar Flow Hood on emergency power.

COMMUNICATIONS

ADP:	Yes
Radio:	--
Telephone:	Yes
Intercom:	Yes
Pub. Addr:	--
Notes:	--

HEATING, VENTILATING AND AIR CONDITIONING

Dry Bulb Temp Cooling:	22°C (72°F)
Dry Bulb Temp Heating:	22°C (72°F)
Minimum % Outside Air:	--
100% Exhaust Air:	Yes
Noise Criteria:	NC-40
Steam:	--
Relative Humidity/Cooling:	50%
Relative Humidity/Heating:	30%
Minimum Air Changes/Hr.:	12 (Prep Area)
Room Pressure:	Negative for Prep Area Equal for reference area with respect to corridor
AC Load Lighting:	22 w/sm (2 w/sf) both rooms
AC Load Equipment:	194 w/sm (18 w/sf)
Number of People:	4 per room
Special Exhaust:	Provide dedicated exhaust system for Laminar Flow H12-B2 hood. See HVAC Design Manual for Hospital Projects.

Notes: --

PLUMBING AND MEDICAL GASES

Cold Water:	--
Hot Water:	--
Laboratory Air:	--
Laboratory Vacuum:	--
Sanitary Drain:	--
Reagent Grade Water:	--
Medical Air:	--
Medical Vacuum:	--
Oxygen:	--
Notes:	--

Equipment Guide List

Oncology Drugs

SYMBOL	QTY	AI	DESCRIPTION
REFERENCE AREA			
P-418	1	CC	LAVATORY, SENSOR CONTROL (PG-18-1: MCS 15450, VOL3, SD 380)
	1	VV	WORK STATION, MODULAR
	1	VV	CHAIR, ROTARY, WITH ARMS
	1	VV	CABINET, FILING (LETTER SIZE) 5 DRAWER, APPROX. 381mm x 635mm x 1524mm (15" x 25" x 60")
	1	VV	BOOKCASE, SECTIONAL, EACH SECTION, 838mm x 330mm x 381mm (33" x 13" x 15") WITH 254mm (10") BASE
	1	VV	BULLETIN BOARD, APPROX. 914mm x 914mm (36" x 36")
	AR	VV	CLOCK, BATTERY OPERATED
	AR	CC	RECEPTACLE, ELECTRICAL, DUPLEX, 120 VOLT, 20 AMP (PG-18-1, MCS 16140, H-18-3, CS 801 3)
	1	VV	DISPENSER, PAPER POWEL, SURFACE MOUNTED
	1	VV	DISPENSER, SOAP, LIQUID, WALL MOUNTED
	1	VV	RECEPTACLE, WASTE, STEP-ON TYPE, APPROX. 305mm (12") DIAMETER
	AR	VV	HOOK, COAT, WALL MOUNTED
PREPARATION AREA			
H7-48	AR	CC	BIOLOGICAL SAFETY CABINET (LAMINAR FLOW) CLASS II, TYPE B2 100% DIRECT EXHAUSTED AIR THROUGH WORK SPACE, 1219mm x 787mm x 2438mm (48" x 31" x 96"), WITH CUP SINK, AIR, VACUUM AND COLD WATER OUTLETS, 120 VOLTS, 20 AMP RECEPTACLES, GAS OUTLETS NOT REQUIRED (PG-18-1 & PG-18-6, MCS 11610)
	1	VV	CHAIR, ROTARY, WITH ARMS
J-2	1	CF	SINK, CORROSION RESISTING STEEL, 555mm x 405mm x 205mm (22"x16"x8")
	AR	CF	MODULAR CASEWORK, W/OVERHEAD CABINETS AND WALL HANGER STRIP
	AR	CF	REFRIGERATOR, .14 m3 (5 CU. FT), 120 VOLT, 20 AMP, UNDERCOUNTER, 610mm x 955mm (24" x 38")
	AR	VV	CLOCK, BATTERY OPERATED
	AR	CC	RECEPTACLE, ELECTRICAL, DUPLEX, 120 VOLT, 20 AMP (PG-18-1, MCS 16140, H-18-3, CS 801 3)
	AR	VV	COMPUTER, PRINTER
	AR	VV	PC, COMPUTER SYSTEM, WITH KEYBOARD

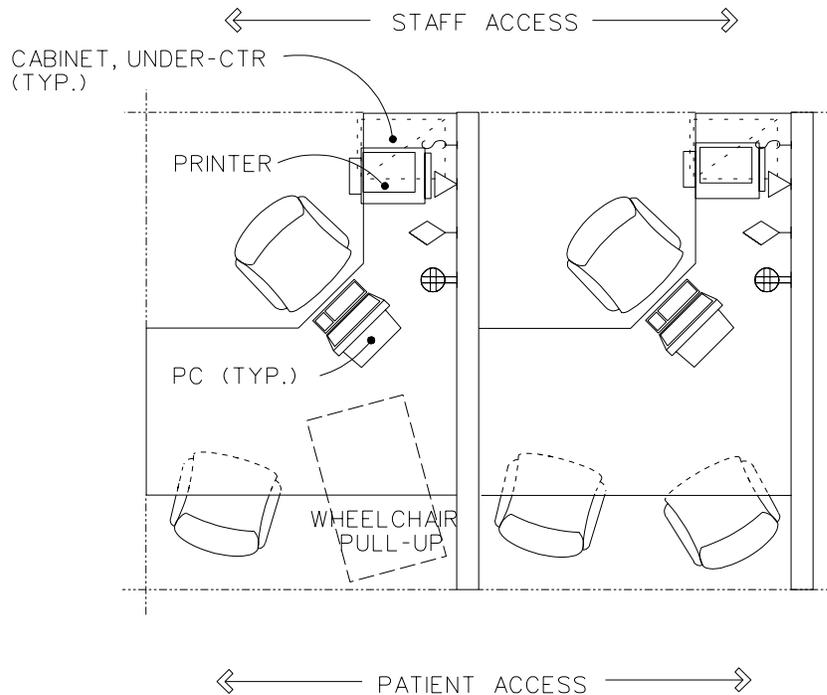
Section 5

**Design Guide Plates
and Data Sheets:
Outpatient Pharmacy**

Guide Plate Series	Plate Number
Prescription Receiving	
Equipment & Utility Plan	5-1
Reflected Ceiling Plan.....	5-1
Design Standards	5-1
Equipment Guide List	5-1
Filing and Assembly	
Equipment & Utility Plan	5-2
Reflected Ceiling Plan.....	5-2
Design Standards	5-2
Equipment Guide List	5-2
Dispensing	
Equipment & Utility Plan	5-3
Reflected Ceiling Plan.....	5-3
Design Standards	5-3
Equipment Guide List	5-3
Prepacking & Extemporaneous Compounding	
Equipment & Utility Plan	5-4
Reflected Ceiling Plan.....	5-4
Design Standards	5-4
Equipment Guide List	5-4

Equipment & Utility Plan Prescription Receiving

FINAL DRAFT 11-30-95
REVISED MARCH 1997

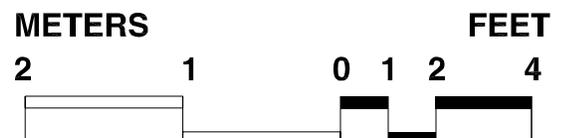


NOTES:
AT LEAST ONE STATION MUST
COMPLY WITH PREVAILING BARRIER-
FREE REQUIREMENTS

EACH STATION-70 NSF/6.5 NSM

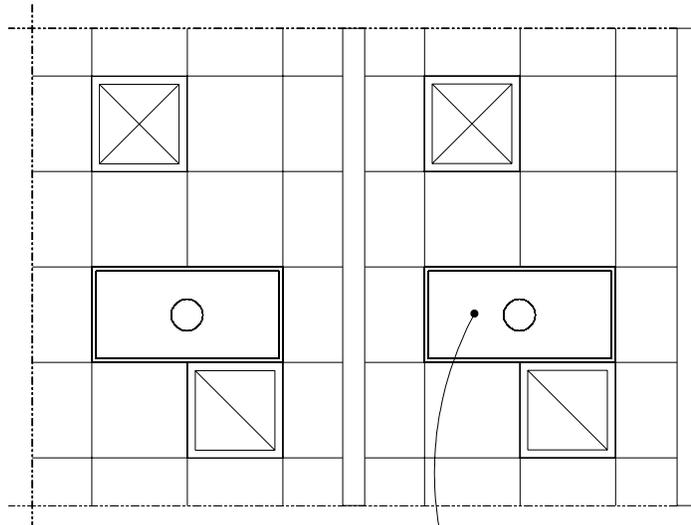
OPEN PHARMACY CONCEPT SHOWN.
VAMC MAY PREFER SECURE RECEIVING
AREA.

13.0 NSM
140 NSF

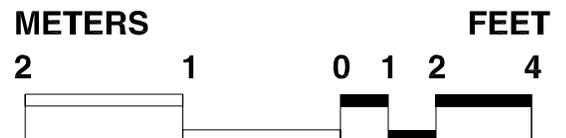


Reflected Ceiling Plan Prescription Receiving

FINAL DRAFT 11-30-95
REVISED MARCH 1997



SEE: DESIGN STDS.
LIGHTING-NOTE 2. (TYP.)



Design Standards

Prescription Receiving

ARCHITECTURAL

Ceiling:	Acoustic lay-in ceiling tile
Ceiling Ht:	2740 mm (9'-0")
Wall Finish:	Fabric (Tackboard Wall Surface)
Wainscot:	--
Base:	Resilient base
Floor Finish:	Carpet
Slab Depr:	--
Notes:	

SPECIAL EQUIPMENT

None

LIGHTING

General:	50 FC
Special:	--
Notes:	<ol style="list-style-type: none"> 1. Single switch per station controls station lighting. As an alternate, lighting may be controlled by area with switch(es) located at room entrance. 2. 600mm x 1200mm (2' x 4') recessed fluorescent light fixture, parabolic louver, W/2-F32T8 lamps, 3500°K, CRI=75 (minimum)

POWER

General:	1000W (receptacles)
Emergency:	--
Notes:	

COMMUNICATION

ADP:	Yes
Radio:	--
Telephone:	Yes
Intercom:	--
Pub. Addr:	--
Notes:	1. Nurse Call/Code One/EMS recorder.

HEATING, VENTILATING AND AIR CONDITIONING

Dry Bulb Temp Cooling:	25°C (78°F)
Dry Bulb Temp Heating:	22°C (72°F)
Minimum % Outside Air:	15
100% Exhaust Air:	--
Noise Criteria:	NC-40
Steam:	--
Relative Humidity/Cooling:	50%
Relative Humidity/Heating:	30%
Minimum Air Changes/Hr.:	4
Room Pressure:	0
AC Load Lighting:	22 w/sm (2 w/sf)
AC Load-Equipment:	54 w/sm (w/sf)
Number of People:	3
Special Exhaust:	--
Notes:	

PLUMBING AND MEDICAL GASES

Cold Water:	--
Hot Water:	--
Laboratory Air:	--
Laboratory Vacuum:	--
Sanitary Drain:	--
Reagent Grade Water:	--
Medical Air:	--
Medical Vacuum:	--
Oxygen:	--
Notes:	--

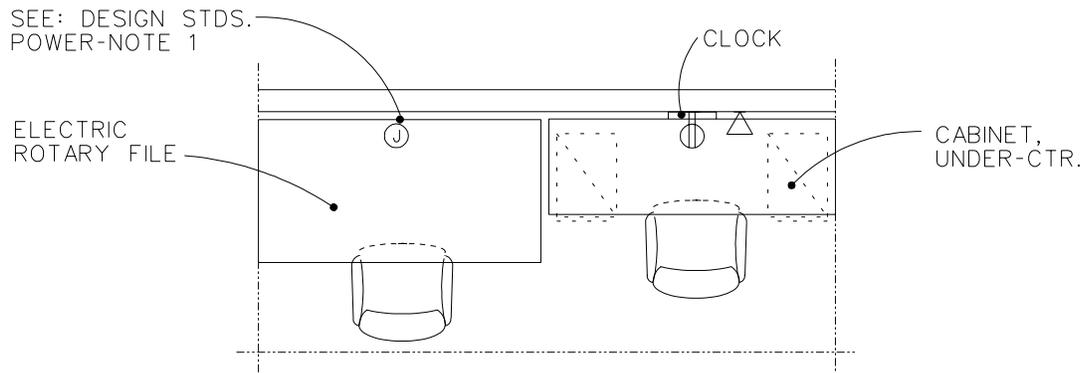
Equipment Guide List

Prescription Receiving

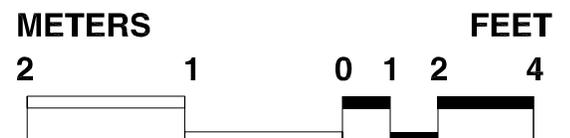
SYMBOL	QTY	AI	DESCRIPTION
AR	CF		CABINET, UNDER COUNTER, 3 DRAWER, 395mm W x 55mm D x 760mm H (15"W X 22"D X 30"H)
AR	CF		COUNTER TOP, HIGH PRESSURE PLASTIC LAMINATE DECORATIVE
AR	VV		CHAIR, ROTARY, WITH ARMS
AR	VV		CHAIR, STRAIGHT, WITH ARMS
AR	VV		COMPUTER, PRINTER
AR	VV		PC, COMPUTER SYSTEM, WITH KEYBOARD

Equipment & Utility Plan Filing and Assembly

FINAL DRAFT 11-30-95
REVISED MARCH 1997



5.57 NSM
60 NSF



Design Standards Filing and Assembly

ARCHITECTURAL

Ceiling:	Acoustic lay-in ceiling Tile
Ceiling Ht:	2740 mm (9'-0")
Wall Finish:	Painted Gypsum Wallboard
Wainscot:	--
Base:	Resilient base
Floor Finish:	Carpet
Slab Depr:	--
Notes:	--

SPECIAL EQUIPMENT

None

LIGHTING

General:	30 FC (ambient)
Special:	--
Notes:	<ol style="list-style-type: none"> 1. Lighting control by area; switch(es) at room entrance. 2. 600mm x 1200mm (2' x 4') recessed fluorescent light fixture, acrylic prismatic lens, w/2-F32T8 lamps, 4100°k, CRI=75 (minimum) 3. Coordinate height of rotary file with lighting layout.

POWER

General:	200 W (receptacles)
Emergency:	--
Notes:	<ol style="list-style-type: none"> 1. Junction box for 120V power connection to electric rotary file

COMMUNICATION

ADP:	--
Radio:	--
Telephone:	--
Intercom:	--
Pub. Addr:	--
Notes:	--

HEATING, VENTILATING AND AIR CONDITIONING

Dry Bulb Temp Cooling:	25°C (78°F)
Dry Bulb Temp Heating:	22°C (72°F)
Minimum % Outside Air:	15
100% Exhaust Air:	--
Noise Criteria:	NC-40
Steam:	--
Relative Humidity/Cooling:	50%
Relative Humidity/Heating:	30%
Minimum Air Changes/Hr.:	4
Room Pressure:	0
AC Load Lighting:	18 w/sm (1.7w/sf)
AC Load-Equipment:	32 w/sm (3 w/sf)
Number of People:	2
Special Exhaust:	--
Notes:	

PLUMBING AND MEDICAL GASES

Cold Water:	--
Hot Water:	--
Laboratory Air:	--
Laboratory Vacuum:	--
Sanitary Drain:	--
Reagent Grade Water:	--
Medical Air:	--
Medical Vacuum:	--
Oxygen:	--
Notes:	

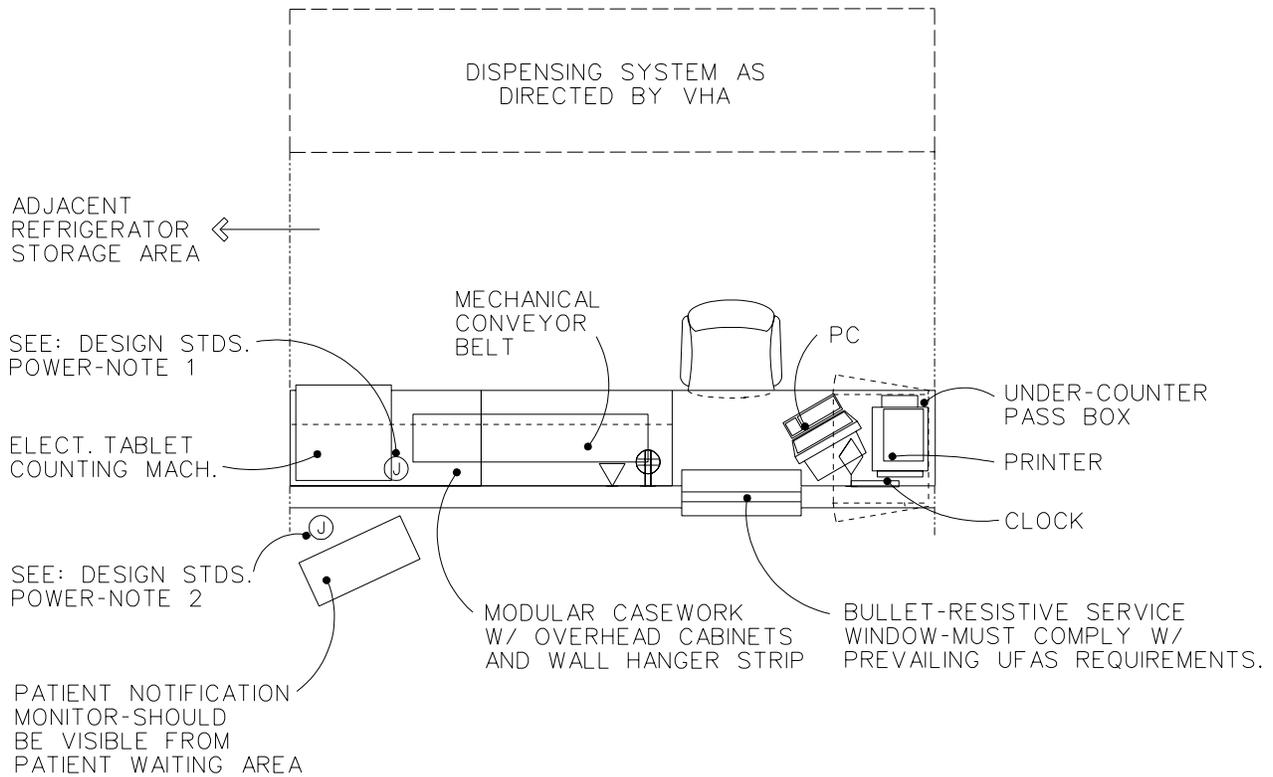
Equipment Guide List

Filing and Assembly

SYMBOL	QTY	AI	DESCRIPTION
AR	CF		CABINET, UNDER COUNTER, 3 DRAWER, 395mm W x 555mm D x 760mm H) 15"W X 22"D X 30"H
AR	CF		COUNTER TOP, HIGH PRESSURE PLASTIC LAMINATE DECORATIVE
AR	VV		CHAIR, ROTARY, WITH ARMS
AR	VV		CLOCK, BATTERY OPERATED
AR	VV		FILE, ROTARY, MECHANICAL POWER, ELECTRIC, 120 VOLTS, 20 AMPS (See 5-2 Lighting Note # 3)

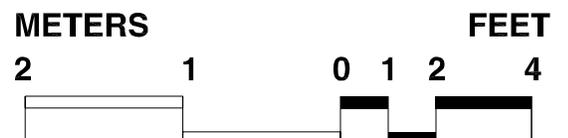
Equipment & Utility Plan Dispensing

FINAL DRAFT 11-30-95
REVISED MARCH 1997



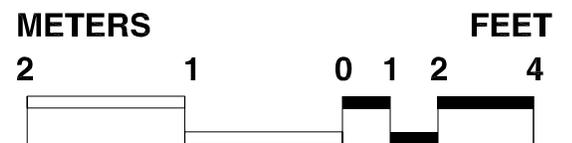
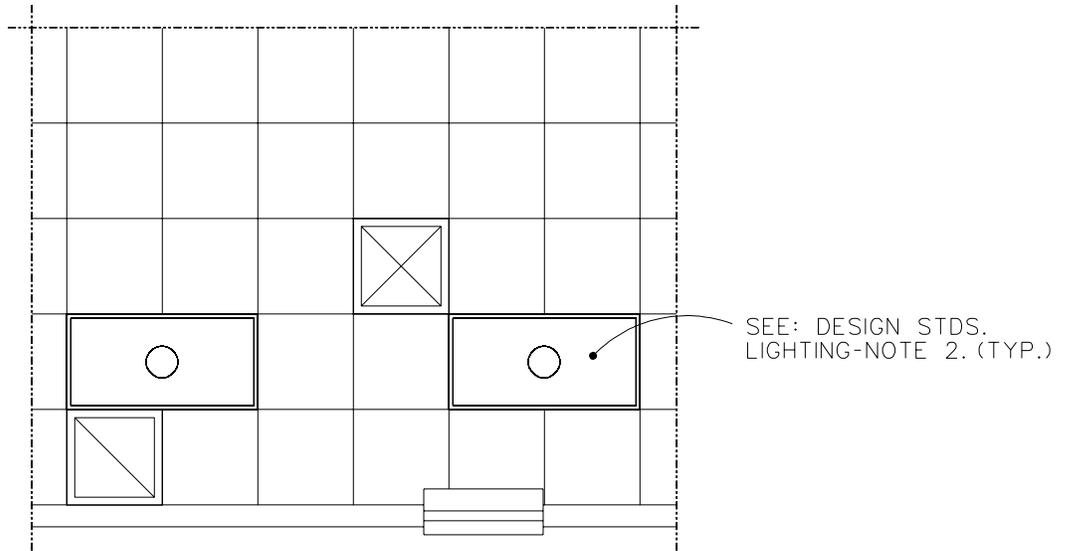
NOTE:
DISPENSING SHELF ALTERNATIVE SYSTEMS:
-MOBILE SHELVES
-DISPENSING SYSTEM
-CASEWK/COUNTERS W/ GRAVITY FEED CABINETS
-PERIMETER WALL MUST BE FULL HEIGHT AND BULLET PROOF.

12.5 NSM
135 NSF



Reflected Ceiling Plan Dispensing

FINAL DRAFT 11-30-95
REVISED MARCH 1997



Design Standards

Dispensing

ARCHITECTURAL

Ceiling:	Acoustic lay-in Ceiling Tile
Ceiling Ht:	2740 mm (9'-0")
Wall Finish:	Painted Gypsum Wallboard on reinforced masonry sub-wall.
Wainscot:	--
Base:	Resilient base
Floor Finish:	Carpet
Slab Depr:	--
Notes:	1. Refer to VA Construction Standard CD-49 for security criteria

SPECIAL EQUIPMENT

None

LIGHTING

General:	100 FC
Special:	--
Notes:	1. Lighting controlled by area; switch(es) located at room entrance. 2. 600 x 1200 mm (2'x4') recessed fluorescent light fixture, acrylic prismatic lens, W/3-F32T8 lamps, 4100°K, CRI=85 (Minimum)

POWER

General:	500W (receptacles)
Emergency:	--
Notes:	1. Junction box for 120V power connection to electronic tablet counting machine. 2. Junction box(es) for 120V power and signal connections to patient notification monitor.

COMMUNICATION

ADP:	Yes
Radio:	--
Telephone:	Yes
Intercom:	--
Pub. Addr:	--
Notes:	1. Conduit and junction boxes required for patient notification monitor system.

HEATING, VENTILATING AND AIR CONDITIONING

Dry Bulb Temp Cooling:	22°C (72°F)
Dry Bulb Temp Heating:	22°C (72°F)
Minimum % Outside Air:	15
100% Exhaust Air:	--
Noise Criteria:	NC-40
Steam:	--
Relative Humidity/Cooling:	50%
Relative Humidity/Heating:	30%
Minimum Air Changes/Hr.:	4
Room Pressure:	0
AC Load Lighting:	32 w/sm (3 w/sf)
AC Load-Equipment:	54 w/hr (5 w/hr)
Number of People:	3
Special Exhaust:	--
Notes:	

PLUMBING AND MEDICAL GASES

Cold Water:	--
Hot Water:	--
Laboratory Air:	--
Laboratory Vacuum:	--
Sanitary Drain:	--
Reagent Grade Water:	--
Medical Air:	--
Medical Vacuum:	--
Oxygen:	--
Notes:	

Equipment Guide List

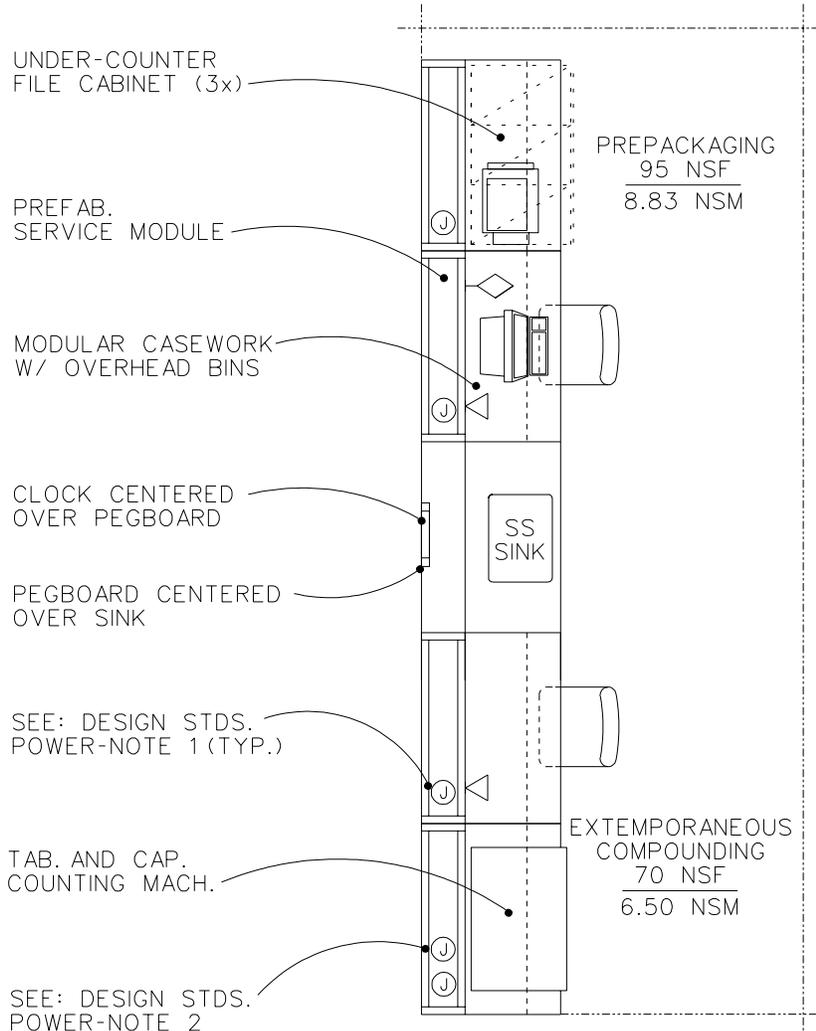
Dispensing

SYMBOL	QTY	AI	DESCRIPTION
AR		CC	SERVICE WINDOW, BULLET RESISTIVE, ONE WINDOW AT WHEELCHAIR HEIGHT AND ONE CONVENTIONAL HEIGHT WITH PACKAGE TRANSFER BOX (PG-18-1, MCS 11022; PG-18-4, SD 67B)
AR		CF	BELT, CONVEYOR, 1 TO 5 BELTS AS REQUIRED (WHEN APPROVED BY VHA)
AR		CF	MODULAR CASEWORK, W/ OVERHEAD CABINETS AND WALL HANGER STRIP
		CF	NOTE: DISPENSING SYSTEMS SHALL BE AS DIRECTED BY VHA
AR		VV	CHAIR, ROTARY, WITH ARMS
AR		VV	CLOCK, BATTERY OPERATED
AR		VV	COMPUTER, PRINTER
AR		VV	CRT, COMPUTER SYSTEM, WITH KEYBOARD
AR		VV	MACHINE, COUNTING TABLET, ELECTRONIC, 120 VOLTS, 20 AMPS, 600mm W x 600mm D (24"W X 24"D)
AR		VV	MONITORS, HIGH RESOLUTION, PATIENT NOTIFICATION SYSTEM, BLACK AND WHITE, 685mm (27")

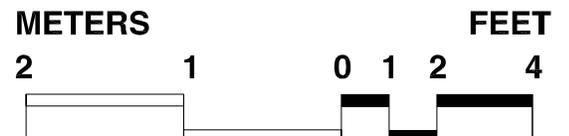
Equipment & Utility Plan

FINAL DRAFT 11-30-95
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Prepackaging & Extemporaneous Compounding



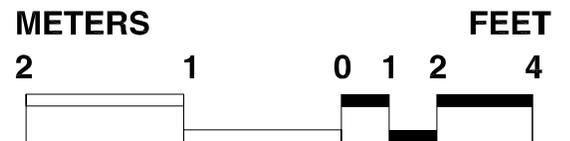
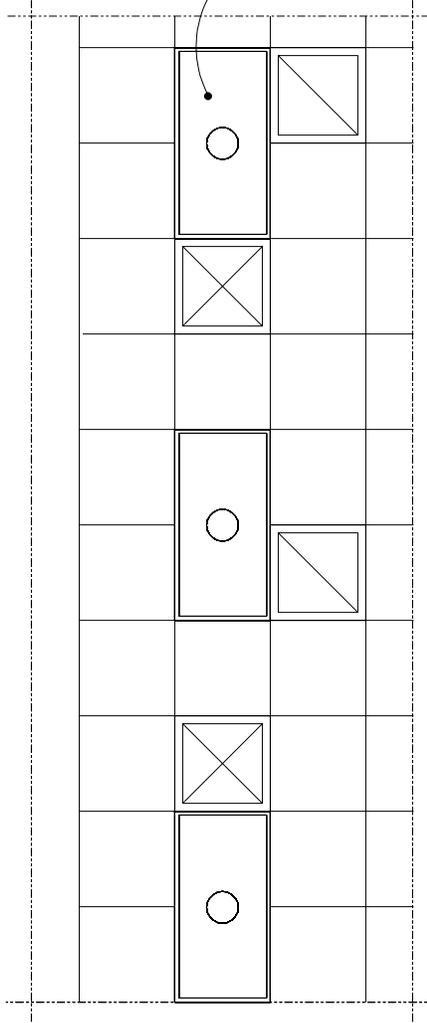
15.3 NSM
165 NSF



Reflected Ceiling Plan Prepackaging & Extemporaneous Compounding

FINAL DRAFT 11-30-95
REVISED MARCH 1997

SEE: DESIGN STDS.
LIGHTING-NOTE 2. (TYP.)



Design Standards

Prepacking & Extemporaneous Compounding

ARCHITECTURAL

Ceiling:	Acoustic Lay-In Ceiling Tile
Ceiling Ht:	2740 mm (9'-0")
Wall Finish:	Painted Gypsum Wallboard
Wainscot:	--
Base:	Resilient Base
Floor Finish:	Vinyl Composition Tile or Carpet
Slab Depr:	--
Notes:	

SPECIAL EQUIPMENT

None

LIGHTING

General:	100 FC
Special:	--
Notes:	<ol style="list-style-type: none"> 1. Lighting control by area; switch(es) at room entrance. 2. 600mm x 1200mm (2' x 4') recessed fluorescent light fixture, acrylic prismatic lens, W/3-F32T8 lamps, 3500°K, CRI=75 (minimum)

POWER

General:	1000W (receptacles on electrical strip mold on modular casework).
Emergency:	--
Notes:	<ol style="list-style-type: none"> 1. Junction box for 120V power connection to electrical strip mold on modular casework. 2. Junction box for 120V power connection to tablet and capsule counting machine. 3. Junction box for 120V power connection to unit dose packer.

COMMUNICATION

ADP:	--
Radio:	--
Telephone:	Yes
Intercom:	--
Pub. Addr:	--
Notes:	<ol style="list-style-type: none"> 1. Communications cabling routed via modular case-work utility access lab module to outlets on casework.

HEATING, VENTILATING AND AIR CONDITIONING

Dry Bulb Temp Cooling:	22°C (72°F)
Dry Bulb Temp Heating:	22°C (72°F)
Minimum % Outside Air:	15
100% Exhaust Air:	--
Noise Criteria:	NC-40
Steam:	--
Relative Humidity/Cooling:	50%
Relative Humidity/Heating:	30%
Minimum Air Changes/Hr.:	4
Room Pressure:	0
AC Load Lighting:	32 w/sm (3 w/sf)
AC Load-Equipment:	54 w/sm (3 w/sf)
Number of People:	3
Special Exhaust:	--
Notes:	

PLUMBING AND MEDICAL GASES

Cold Water:	Yes
Hot Water:	Yes
Laboratory Air:	--
Laboratory Vacuum:	--
Sanitary Drain:	Yes
Reagent Grade Water:	--
Medical Air:	--
Medical Vacuum:	--
Oxygen:	--
Notes:	<ol style="list-style-type: none"> 1. Sanitary drain and vent need to be chemical resistant type.

Equipment Guide List

Prepacking & Extemporaneous Compounding

SYMBOL	QTY	AI	DESCRIPTION
AR	CF		MODULAR CASEWORK , W/ OVERHEAD BINS, UTILITY ACCESS MODULE AND WALL HANGER STRIP
AR	CF		SINK, CORROSION RESISTING STEEL, 555mm x 405mm x 205mm (22" X 16" X 8")
AR	CF		PEGBOARD, 405mm W x 600mm H (16"W X 24"H)
AR	VV		CABINET, FILING, UNDER COUNTER, 380mm W x 635mm D (15"W X 25"D)
AR	VV		CHAIR, ROTARY, WITH ARMS
AR	VV		CLOCK, BATTERY OPERATED
AR	VV		MACHINE, COUNTING, TABLET AND CAPSULE, 910mm W x 610mm D (36"W X 24"D)
AR	VV		MACHINE, UNIT DOSE PACKER, STRIP PACKAGING, 910mm W x 610mm D (36"W x 24"D)
AR	VV		COMPUTER, PRINTER
AR	VV		PC, COMPUTER SYSTEM, WITH KEYBOARD

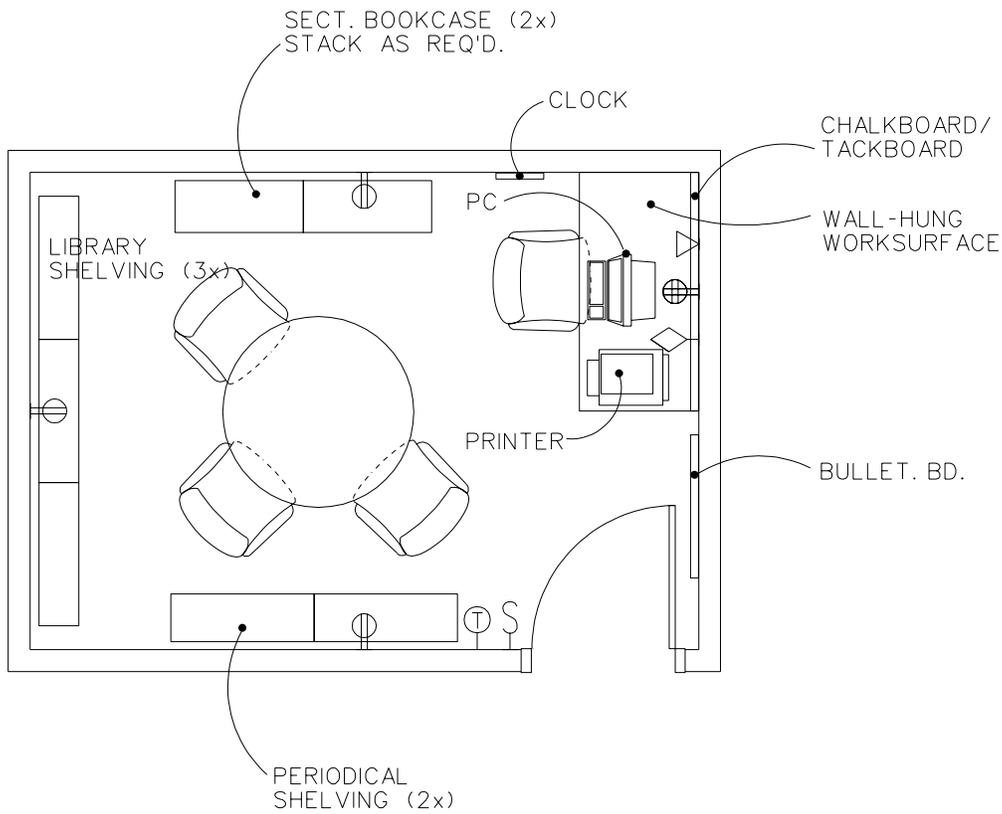
Section 6

**Design Guide Plates
and Data Sheets:
Pharmacy Specialized
Programs**

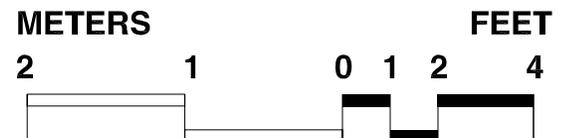
Guide Plate Series	Plate Number
Drug Information Service	
Equipment & Utility Plan.....	6-1
Reflected Ceiling Plan.....	6-1
Design Standards	6-1
Equipment Guide List.....	6-1

Equipment & Utility Plan Drug Information Service

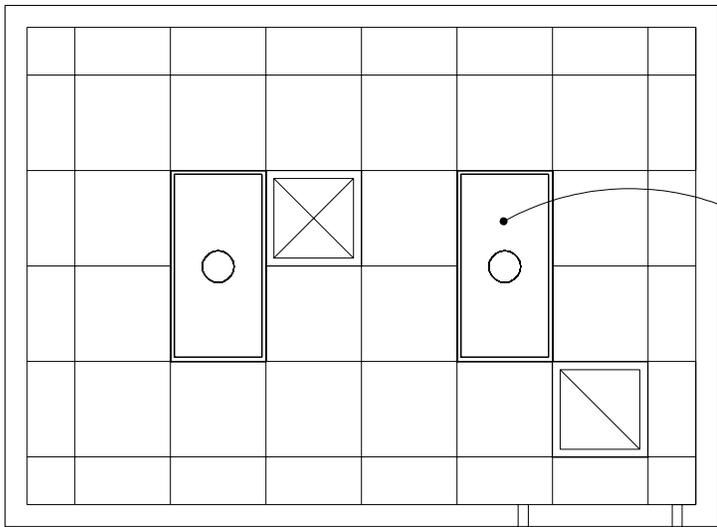
FINAL DRAFT 11-30-95
REVISED MARCH 1997



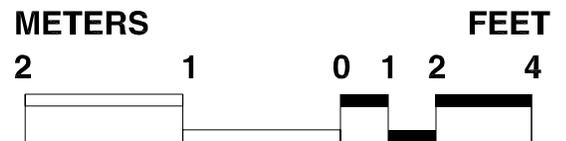
13.0 NSM
140 NSF



Reflected Ceiling Plan Drug Information Service



SEE: DESIGN STDS.
LIGHTING-NOTE 2.
(TYP.)



Design Standards

Drug Information Service

ARCHITECTURAL

Ceiling:	Acoustic Lay-In Ceiling Tile
Ceiling Ht:	2740 MM (9'-0")
Wall Finish:	Painted Gypsum Wallboard
Wainscot:	--
Base:	Resilient base
Floor Finish:	Carpet or Vinyl Composition Tile
Slab Depr:	--
Notes:	--

SPECIAL EQUIPMENT

None

LIGHTING

General:	75 FC (ambient)
Special:	--
Notes:	<ol style="list-style-type: none"> Dual-level switching provided 50/10 FC levels. 600 X 1200 MM (2'x4') recessed fluorescent light fixture, acrylic prismatic lens, W/2-F32T8 lamps, 3500°K, CRI=75 (Min.).

POWER

General:	1000W (receptacles)
Emergency:	--
Notes:	--

COMMUNICATION

ADP:	Yes
Radio:	--
Telephone:	Yes
Intercom:	--
Pub. Addr:	--
Notes:	--

HEATING, VENTILATING AND AIR CONDITIONING

Dry Bulb Temp Cooling:	22°C (72°F)
Dry Bulb Temp Heating :	22°C (72°F)
Minimum % Outside Air:	15
100% Exhaust Air:	--
Noise Criteria:	NC-40
Steam:	--
Relative Humidity/Cooling:	50%
Relative Humidity/Heating:	30%
Minimum Air Changes/Hr.:	4
Room Pressure:	0
AC Load Lighting:	32 w/sm (3 w/sf)
AC Load-Equipment:	54 w/sm (5 w/sf)
Number of People:	3
Special Exhaust:	--
Notes:	--

PLUMBING AND MEDICAL GASES

Cold Water:	--
Hot Water:	--
Laboratory Air:	--
Laboratory Vacuum:	--
Sanitary Drain:	--
Reagent Grade Water:	--
Medical Air:	--
Medical Vacuum:	--
Oxygen:	--
Notes:	--

Equipment Guide List

Drug Information Service

SYMBOL	QTY	AI	DESCRIPTION
AR		CC	SHELVING, FREESTANDING STEEL, LIBRARY, SINGLE FACED UNITS, WITH ADJUSTABLE SHELVES, 915mm W x 255mm D x 2285mm H (36"W X 10"D X 90"H) (PG-18-1, MCS 11052; PG-18-4)
AR		CC	SHELVING, SINGLE FACED UNITS, PERIODICAL, WITH SLOPING AND ADJUSTABLE SHELVES, 915mm W x 305mm D x 2285mm H (36"W X 12"D X 90"H) (PG-18-1, MCS 11052; PG-18-4)
AR		VV	BOOKCASE, SECTIONAL (EACH SECTION, 315mm W x 330mm D x 380mm H (33"W X 13"D X 15"H)) WITH 255mm H (10"H) BASE
1		VV	BULLETIN BOARD, APPROX., 915mm W x 915mm H (36"W X 36"H)
AR		VV	CHAIR, ROTARY, WITH ARMS
AR		VV	CHAIR, STRAIGHT, WITH ARMS
1		VV	CHALKBOARD/TACKBOARD COMBINATION, 1525mm W x 1220mm H (60"W x 48"H)
AR		VV	CLOCK, BATTERY OPERATED
AR		VV	COMPUTER, PRINTER
AR		VV	PC, COMPUTER SYSTEM, WITH KEYBOARD
1		VV	TABLE, OCCASIONAL, 1220mm (48") DIA.
AR		CF	CABINET, UNDERCOUNTER, 3 DRAWER, 395mm W x 555mm D x 760mm H (15"W x 22"D x 30"H)
AR		CF	COUNTER, TOP, HIGH PRESSURE LAMINATED, DECORATIVE 760mm W x 1525m L (30"W x 60"L)