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  
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## Section 1

### Introduction, Acknowledgments, Abbreviations, Legend of Symbols

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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

This 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.
Acknowledgments

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## Abbreviations

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<tr>
<td>A</td>
<td>Amperes</td>
</tr>
<tr>
<td>AC/HR</td>
<td>Air Changes per Hour</td>
</tr>
<tr>
<td>ADA</td>
<td>Americans with Disabilities Act</td>
</tr>
<tr>
<td>AFF</td>
<td>Above Finished Floor</td>
</tr>
<tr>
<td>AI</td>
<td>Acquisition and Installation</td>
</tr>
<tr>
<td>A&amp;MM</td>
<td>Acquisitions and Material Management</td>
</tr>
<tr>
<td>AR</td>
<td>As Required</td>
</tr>
<tr>
<td>AT</td>
<td>Acoustical Ceiling Tile</td>
</tr>
<tr>
<td>C</td>
<td>Degrees Celsius</td>
</tr>
<tr>
<td>CC</td>
<td>Contractor Furnished and Installed, Construction Funds</td>
</tr>
<tr>
<td>CF</td>
<td>Construction Funds, VA Furnished, Installed by VA or Contractor</td>
</tr>
<tr>
<td>CFM</td>
<td>Cubic Feet per Minute</td>
</tr>
<tr>
<td>CLG</td>
<td>Ceiling</td>
</tr>
<tr>
<td>CMU</td>
<td>Concrete Masonry Unit</td>
</tr>
<tr>
<td>CP</td>
<td>Carpet (without cushion broadloom)</td>
</tr>
<tr>
<td>CS</td>
<td>Construction Standard</td>
</tr>
<tr>
<td>CT</td>
<td>Ceramic Tile</td>
</tr>
<tr>
<td>DISCSW</td>
<td>Disconnect Switch</td>
</tr>
<tr>
<td>EASS</td>
<td>Electronic Access Security System</td>
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<tr>
<td>ETO</td>
<td>Ethylene Oxide Gas</td>
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<tr>
<td>EXH</td>
<td>Exhaust</td>
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<tr>
<td>F</td>
<td>Degrees Fahrenheit</td>
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<td>Foot-candle</td>
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<td>FD</td>
<td>Floor Drain</td>
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<tr>
<td>FIXT</td>
<td>Fixture</td>
</tr>
<tr>
<td>FLUOR</td>
<td>Fluorescent</td>
</tr>
<tr>
<td>FM</td>
<td>Facilities Management Office</td>
</tr>
<tr>
<td>GFI</td>
<td>Ground Fault Interrupter</td>
</tr>
<tr>
<td>GWBD</td>
<td>Gypsum Wallboard</td>
</tr>
<tr>
<td>HAC</td>
<td>Housekeeping Aids Closet</td>
</tr>
<tr>
<td>HVAC</td>
<td>Heating, Ventilation, and Air Conditioning</td>
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<tr>
<td>HP</td>
<td>Horsepower</td>
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<tr>
<td>HR</td>
<td>Hour</td>
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<tr>
<td>ICU</td>
<td>Intensive Care Unit</td>
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<td>K</td>
<td>Kelvin</td>
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<td>KW</td>
<td>Kilowatt</td>
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<tr>
<td>LB</td>
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<tr>
<td>LLTS</td>
<td>Lounge, Lockers, Toilets, and Showers</td>
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<tr>
<td>MCS</td>
<td>Master Construction Specifications</td>
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<tr>
<td>MTD</td>
<td>Mounted</td>
</tr>
<tr>
<td>NA</td>
<td>Not Procured with Activation Funds</td>
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<tr>
<td>NFPA</td>
<td>National Fire Protection Association</td>
</tr>
<tr>
<td>NSF</td>
<td>Net Square Feet</td>
</tr>
<tr>
<td>NSM</td>
<td>Net Square Meters</td>
</tr>
<tr>
<td>OSM</td>
<td>Open Site Drain</td>
</tr>
<tr>
<td>PCP</td>
<td>Portland Cement Plaster</td>
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<tr>
<td>PH</td>
<td>Phase</td>
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</tbody>
</table>

PL  | Plaster |
PREP | Preparation |
PSIG | Pounds per Square Inch Gauge |
QT   | Quarry Tile |
RB   | Resilient Base |
SC   | Special Coating (High Build Glazed Coating) |
SD   | Standard Detail |
SF   | Square Feet, Square Foot |
SPD  | Supply, Processing, and Distribution |
SOPC | Satellite Outpatient Clinic |
SS   | Stainless Steel |
TELEC | Telecommunications |
UFAS | Uniform Federal Accessibility Standards |
V    | Volts |
VA   | Department of Veterans Affairs |
VACO | Veterans Affairs Central Office |
VAMC | Veterans Affairs Medical Center |
VC   | VA Furnished and Contractor Installed |
|     | -- Medical Care Appropriation for Equipment and Construction Appropriations for Installation |
|     | VA Furnished and Contractor Installed |
|     | VCT | Vinyl Composition Tile |
VCT  | Vinyl Composition Tile |
VHA  | Veterans Health Administration |
VV   | VA Furnished and Installed-VHA Appropriation |
W    | Watts |
W/SF | Watts per Square Feet |
W/SM | Watts per square meter |
W/m² | Watts per square meter |
### Legend of Symbols

<table>
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<tr>
<th>System</th>
<th>Description of Symbol</th>
<th>Gr. Symbol</th>
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<td><strong>DUPLEX RECEPTACLE, NEMA 5-20R - 20 AMP - MOUNTED ABOVE COUNTER TOP</strong></td>
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<td><strong>QUADRADUPEX OUTLET WITH GROUND FAULT INTERRUPTER, NEMA 5-20R - 20 AMP - MOUNTED 450MM (18”) AFF UNLESS OTHERWISE NOTED</strong></td>
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<td><strong>DUPLEX RECEPTACLE, NEMA 5-20R - 20 AMP - EMERGENCY POWER - MOUNTED 450MM (18”) AFF UNLESS OTHERWISE NOTED</strong></td>
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<tr>
<td></td>
<td><strong>SPECIAL RECEPTACLE</strong></td>
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<td><strong>TELEVISION OUTLET</strong></td>
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<td><strong>ELECTRICAL STRIP MOLD - NEMA 5-20R RECEPTACLES AT 600MM (2’’-0”’) INTERVALS</strong></td>
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<td><strong>BATTERY POWERED CLOCK</strong></td>
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<td><strong>CIRCUIT BREAKER</strong></td>
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<td><strong>Switches</strong></td>
<td>SINGLE POLE SWITCH</td>
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<td>SINGLE POLE SWITCH - SUFFIX OF &quot;a&quot;, &quot;b&quot;, OR &quot;c&quot; INDICATES SEPARATE CONTROL OF FIXTURE(S) WITH SAME DESIGNATION</td>
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<td>DIMMER SWITCH</td>
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<td>THREE-WAY SWITCH</td>
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<td>DOOR SWITCH</td>
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<td>FUSED OR UNFUSED DISCONNECT SWITCH</td>
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<td>EMERGENCY POWER OFF (EPO) PUSH BUTTON</td>
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<td>WALL-MOUNTED TELEPHONE OUTLET - MOUNTED 1200 mm (48&quot;) AFF UNLESS OTHERWISE NOTED</td>
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<td>COMPUTER TERMINAL OUTLET - VERIFY EXACT NEEDS - PROVIDE SIGNAL AND POWER OUTLET AS REQ'D</td>
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<td>SPEAKER - CEILING-MOUNTED</td>
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<td></td>
<td>INTERCOM OUTLET</td>
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<td>NURSE CALL DOME LIGHT - CEILING-MOUNTED</td>
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<td>NURSE CALL DOME LIGHT - WALL-MOUNTED</td>
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<td>ROOM THERMOSTAT</td>
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<td>Plumbing</td>
<td>COMBINATION FAUCET HOSE BIBB</td>
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<td>MEDICAL GAS OUTLET</td>
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## Section 2

### Narrative

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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 affect 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.


**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**

**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.


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.


Electrical
Illumination
Illumination is typically provided utilizing recessed fluorescent luminaries 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

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

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<th>Relationship</th>
<th>Page</th>
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<tr>
<td>Outpatient Pharmacy</td>
<td>3-2</td>
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### Section 4

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

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<th>Guide Plate Series</th>
<th>Plate Number</th>
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<tbody>
<tr>
<td>Dispensing Station - Unit Dose and Ward Stock</td>
<td>4-1</td>
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<tr>
<td>Equipment &amp; Utility Plan</td>
<td></td>
</tr>
<tr>
<td>Reflected Ceiling</td>
<td>4-1</td>
</tr>
<tr>
<td>Design Standards</td>
<td>4-1</td>
</tr>
<tr>
<td>Equipment Guide List</td>
<td>4-1</td>
</tr>
<tr>
<td>Medication Assignment Area and Stat Counter</td>
<td>4-2</td>
</tr>
<tr>
<td>Equipment &amp; Utility Plan</td>
<td></td>
</tr>
<tr>
<td>Reflected Ceiling</td>
<td>4-2</td>
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<tr>
<td>Design Standards</td>
<td>4-2</td>
</tr>
<tr>
<td>Equipment Guide List</td>
<td>4-2</td>
</tr>
<tr>
<td>Controlled Substance Vault and</td>
<td>4-3</td>
</tr>
<tr>
<td>Secured Dispensing Area</td>
<td></td>
</tr>
<tr>
<td>Equipment &amp; Utility Plan</td>
<td></td>
</tr>
<tr>
<td>Reflected Ceiling Plan</td>
<td>4-3</td>
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<tr>
<td>Design Standards</td>
<td>4-3</td>
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<tr>
<td>Equipment Guide List</td>
<td>4-3</td>
</tr>
<tr>
<td>Receiving Area</td>
<td>4-4</td>
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<tr>
<td>Equipment &amp; Utility Plan</td>
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<td>Reflected Ceiling Plan</td>
<td>4-4</td>
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<tr>
<td>Design Standards</td>
<td>4-4</td>
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<tr>
<td>Equipment Guide List</td>
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</table>
Section 4

Design Guide Plates
and Data Sheets:

Inpatient Pharmacy

<table>
<thead>
<tr>
<th>Guide Plate Series</th>
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<tbody>
<tr>
<td>Extemporaneous Repackaging and Extemporaneous Compounding</td>
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<tr>
<td>Equipment &amp; Utility Plan</td>
<td>4-5</td>
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<tr>
<td>Reflected Ceiling Plan</td>
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<td>Design Standards</td>
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<tr>
<td>Equipment Guide List</td>
<td>4-5</td>
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<tr>
<td>Intravenous Admixture and Aseptic Transfer</td>
<td>4-6</td>
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<td>Equipment &amp; Utility Plan</td>
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<td>4-6</td>
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<tr>
<td>Equipment Guide List</td>
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<tr>
<td>Oncology Drugs</td>
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<tr>
<td>Equipment &amp; Utility Plan</td>
<td>4-7</td>
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<td>Reflected Ceiling Plan</td>
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<td>Design Standards</td>
<td>4-7</td>
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<td>Equipment Guide List</td>
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Design Standards
Unit Dose and Ward Stock

<table>
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<tr>
<th>ARCHITECTURAL</th>
<th>HEATING, VENTILATING AND AIR CONDITIONING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceiling: Acoustic lay-in ceiling tile</td>
<td>Dry Bulb Temp Cooling: 22°C (72°F)</td>
</tr>
<tr>
<td>Ceiling Ht: 2740 mm (9'-0&quot;)</td>
<td>Dry Bulb Temp Heating: 22°C (72°F)</td>
</tr>
<tr>
<td>Wall Finish: Paint</td>
<td>Minimum % Outside Air: 15</td>
</tr>
<tr>
<td>Wainscot: --</td>
<td>100% Exhaust Air: --</td>
</tr>
<tr>
<td>Base: Resilient base</td>
<td>Noise Criteria: NC-35</td>
</tr>
<tr>
<td>Floor Finish: Vinyl composition tile</td>
<td>Steam: --</td>
</tr>
<tr>
<td>Slab Depr: --</td>
<td>Relative Humidity/Cooling: 50%</td>
</tr>
<tr>
<td>Notes:</td>
<td>Relative Humidity/Heating: 30%</td>
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<table>
<thead>
<tr>
<th>SPECIAL EQUIPMENT</th>
<th>LIGHTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>General: 100 FC</td>
</tr>
<tr>
<td></td>
<td>Special: --</td>
</tr>
<tr>
<td>Notes: 1. Lighting control by area; switch(es) at room entrance.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. 600 x 1200 mm (2'x4') recessed fluorescent light fixture, acrylic prismatic lens, W/2-F32T8 lamps, 3500° K CRI=75 (minimum)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POWER</th>
<th>PLUMBING AND MEDICAL GASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>General: 3000W (Receptacles on electrical strip mold on modular casework)</td>
<td>Cold Water: --</td>
</tr>
<tr>
<td>Emergency: --</td>
<td>Hot Water: --</td>
</tr>
<tr>
<td>Notes: 1. Junction box for 120V power connection to electrical strip mold on modular casework</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Laboratory Air: --</td>
</tr>
<tr>
<td></td>
<td>Laboratory Vacuum: --</td>
</tr>
<tr>
<td></td>
<td>Sanitary Drain: --</td>
</tr>
<tr>
<td></td>
<td>Reagent Grade Water: --</td>
</tr>
<tr>
<td></td>
<td>Medical Air: --</td>
</tr>
<tr>
<td></td>
<td>Medical Vacuum: --</td>
</tr>
<tr>
<td></td>
<td>Oxygen: --</td>
</tr>
<tr>
<td></td>
<td>Notes:</td>
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<table>
<thead>
<tr>
<th>COMMUNICATIONS</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ADP: Yes</td>
<td></td>
</tr>
<tr>
<td>Radio: --</td>
<td></td>
</tr>
<tr>
<td>Telephone: Yes</td>
<td></td>
</tr>
<tr>
<td>Intercom: --</td>
<td></td>
</tr>
<tr>
<td>Pub. Addr: --</td>
<td></td>
</tr>
<tr>
<td>Notes: 1. Communications cabling routed via modular casework utility access module to outlets on casework.</td>
<td></td>
</tr>
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</table>
## Equipment Guide List
### Unit Dose and Ward Stock

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>QTY</th>
<th>AI</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR</td>
<td>CF</td>
<td></td>
<td>MODULAR CASEWORK, W/ OVERHEAD CABINETS, GRAVITY FEED SHELVES AND UTILITY ACCESS MODULE</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>CHAIR, ROTARY, WITH ARMS</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>COMPUTER, PRINTER</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>PC, COMPUTER SYSTEM, WITH KEYBOARD</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>DOSE DISPENSING MACHINE, PATIENT SPECIFIC</td>
</tr>
</tbody>
</table>
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: 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: 1. Junction box for 120V power connection to electrical strip mold on modular casework

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-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

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>QTY</th>
<th>AI</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR CF</td>
<td></td>
<td></td>
<td>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&quot;W X 16&quot;D X 84&quot;H)</td>
</tr>
<tr>
<td>AR CF</td>
<td></td>
<td></td>
<td>MODULAR CASEWORK, W/ OVERHEAD CABINETS AND UTILITY ACCESS MODULE</td>
</tr>
<tr>
<td>AR VV</td>
<td></td>
<td></td>
<td>CHAIR, ROTARY, WITH ARMS</td>
</tr>
<tr>
<td>AR VV</td>
<td></td>
<td></td>
<td>CLOCK, BATTERY OPERATED</td>
</tr>
<tr>
<td>AR VV</td>
<td></td>
<td></td>
<td>COMPUTER, PRINTER</td>
</tr>
<tr>
<td>AR VV</td>
<td></td>
<td></td>
<td>PC, COMPUTER SYSTEM, WITH KEYBOARD</td>
</tr>
<tr>
<td>AR VV</td>
<td></td>
<td></td>
<td>TELECOPIER, FACSIMILE RECEIVER/FAX MACHINE</td>
</tr>
</tbody>
</table>
Equipment & Utility Plan
Controlled Substances Vault & Secured Dispensing Area

CONTROLLED SUBST. VAULT
120 NSF
11.15 NSM

DAY GATE

VAULT DOOR

REFRIG.

SECURED DISPENSING
190 NSF
17.65 NSM

PC (2x)

FULL HEIGHT MASONY FALLS

EASS ACCESS
CONTROL STATION
SEE: DESIGN STDS.
COMMUNICATIONS-NOTE1

PRINTER

MODULAR CASEWORK
W/ OVERHEAD CABINETS
AND WALL HANGER STRIP

EASS ACCESS
CONTROL STATION
SEE: DESIGN STDS.
COMMUNICATIONS-NOTE1

28.8 NSM
310 NSF

METERS
2
1
0 1 2 4

FEET

VA DESIGN GUIDE
PHARMACY SERVICE

GUIDE PLATE 4-3
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: --
- Intercom: Yes
- 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

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>QTY</th>
<th>AI</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR</td>
<td>CF</td>
<td></td>
<td>MODULAR CASEWORK, W/ OVERHEAD CABINETS AND WALL HANGER STRIP</td>
</tr>
<tr>
<td>1</td>
<td>CF</td>
<td></td>
<td>REFRIGERATOR, UNDER COUNTER, 5 CU. FT., 120 VOLTS, 20 AMPS, 600mm W x 600mm D x 960mm H (24&quot;W X 24&quot;D X 38&quot;H)</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>CHAIR, ROTARY, WITH ARMS</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>CLOCK, BATTERY OPERATED</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>COMPUTER, PRINTER</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>PC, COMPUTER SYSTEM, WITH KEYBOARD</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>CABINET, FULL HEIGHT OPEN SHELVES, 5 ADJUSTABLE, 1 FIXED SHELF, 900mm W x 405mm D x 2130mm H (36&quot;x16&quot;x84&quot;)</td>
</tr>
</tbody>
</table>
Equipment & Utility Plan
Receiving Area

FULL-HEIGHT OPEN-SHELF CABINETS (4x)
FULL-HEIGHT BIN-TYPE CABINETS (4x)

BREAKDOWN AND VERIFICATION
170 NSF
15.8 NSM

INVENTORY CONTROL CLERK
80 NSF
7.43 NSM

MODULAR CASEWORK
W/ OVERHEAD CABINETS
AND WALL HANGER STRIP

CLOCK

23.2 NSM
250 NSF

VA DESIGN GUIDE
PHARMACY SERVICE

GUIDE PLATE 4-4
Reflected Ceiling Plan
Receiving Area

SEE: DESIGN STDS.
LIGHTING NOTE 4. (TYP.)

METERS
2
1
0 1 2 4

FEET

VA DESIGN GUIDE
PHARMACY SERVICE

GUIDE PLATE 4-4
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

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>QTY</th>
<th>AI</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR</td>
<td>CF</td>
<td></td>
<td>MODULAR CASEWORK, W/ OVERHEAD CABINETS AND WALL HANGER STRIP</td>
</tr>
<tr>
<td>AR</td>
<td>CF</td>
<td></td>
<td>CABINET, FULL HEIGHT, BIN TYPE, ADJUSTABLE SHELVES, WITH 60 REMOVEABLE BINS, 910mm W x 305mm D x 2130mm H (36&quot;W X 12&quot;D X 84&quot;H)</td>
</tr>
<tr>
<td>AR</td>
<td>CF</td>
<td></td>
<td>CABINET, FULL HEIGHT, OPEN SHELVES, 5 ADJUSTABLE AND 1 FIXED SHELF, AVAILABLE WIDTHS, 915mm (36&quot;), 1200mm (48&quot;); DEPTH 405mm (16&quot;), HEIGHT 2130mm (84&quot;)</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>CHAIR, ROTARY, WITH ARMS</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>CLOCK, BATTERY OPERATED</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>PC, COMPUTER SYSTEM, WITH KEYBOARD</td>
</tr>
</tbody>
</table>
Reflected Ceiling Plan
Extemporaneous Repackaging & Extemporaneous Compounding

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

Extemporaneous Repackaging & Extemporaneous Compounding

**ARCHITECTURAL**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceiling</td>
<td>Acoustic lay-in ceiling tile</td>
</tr>
<tr>
<td>Ceiling Ht</td>
<td>2740 mm (9'-0&quot;)</td>
</tr>
<tr>
<td>Wall Finish</td>
<td>Painted Gypsum Wallboard</td>
</tr>
<tr>
<td>Base</td>
<td>Resilient base</td>
</tr>
<tr>
<td>Floor Finish</td>
<td>Vinyl Composition Tile or Carpet</td>
</tr>
<tr>
<td>Slab Depr</td>
<td>--</td>
</tr>
<tr>
<td>Notes</td>
<td>--</td>
</tr>
</tbody>
</table>

**SPECIAL EQUIPMENT**

- None

**LIGHTING**

<table>
<thead>
<tr>
<th>Type</th>
<th>Specification</th>
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<tbody>
<tr>
<td>General</td>
<td>100 FC</td>
</tr>
<tr>
<td>Special</td>
<td>--</td>
</tr>
</tbody>
</table>
| Notes        | 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**

<table>
<thead>
<tr>
<th>Type</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>2400W (Receptacles on electrical strip mold on modular casework)</td>
</tr>
<tr>
<td>Emergency</td>
<td>--</td>
</tr>
</tbody>
</table>
| Notes        | 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. |

**HEATING, VENTILATING AND AIR CONDITIONING**

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

**PLUMBING AND MEDICAL GASES**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cold Water</td>
<td>Yes</td>
</tr>
<tr>
<td>Hot Water</td>
<td>Yes</td>
</tr>
<tr>
<td>Laboratory Air</td>
<td>--</td>
</tr>
<tr>
<td>Laboratory Vacuum</td>
<td>--</td>
</tr>
<tr>
<td>Sanitary Drain</td>
<td>--</td>
</tr>
<tr>
<td>Reagent Grade Water</td>
<td>Yes</td>
</tr>
<tr>
<td>Medical Air</td>
<td>--</td>
</tr>
<tr>
<td>Medical Vacuum</td>
<td>--</td>
</tr>
<tr>
<td>Oxygen</td>
<td>--</td>
</tr>
<tr>
<td>Notes</td>
<td>1. Drain and vent need to be chemical resistant type.</td>
</tr>
</tbody>
</table>

**COMMUNICATIONS**

<table>
<thead>
<tr>
<th>Type</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADP</td>
<td>--</td>
</tr>
<tr>
<td>Radio</td>
<td>--</td>
</tr>
<tr>
<td>Telephone</td>
<td>Yes</td>
</tr>
<tr>
<td>Intercom</td>
<td>--</td>
</tr>
<tr>
<td>Pub. Addr</td>
<td>--</td>
</tr>
</tbody>
</table>
| Notes        | 1. Communications cabling routed via modular casework utility  
               access lab module to outlets on casework. |

VA DESIGN GUIDE
PHARMACY SERVICE
## Equipment Guide List

### Extemporaneous Repackaging & Extemporaneous Compounding

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>QTY</th>
<th>AI</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR</td>
<td>CF</td>
<td></td>
<td>MODULAR CASEWORK, W/ OVERHEAD BINS, UTILITY ACCESS MODULE AND WALL HANGER STRIP</td>
</tr>
<tr>
<td>AR</td>
<td>CF</td>
<td></td>
<td>SINK, CORROSION RESISTING STEEL, 555mm x 405mm x 205mm (22&quot; X 16&quot; X 8&quot;)</td>
</tr>
<tr>
<td>AR</td>
<td>CF</td>
<td></td>
<td>PEGBOARD, 405mm W x 600mm H (16&quot; W X 24&quot; H)</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>CABINET, FILING, UNDER COUNTER, 380mm W x 635mm D (15&quot; W X 25&quot; D)</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>CHAIR, ROTARY, WITH ARMS</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>CLOCK, BATTERY OPERATED</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>MACHINE, COUNTING, TABLET AND CAPSULE, 910mm W x 600mm D (36&quot; W X 24&quot; D)</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>MACHINE, UNIT DOSE PACKER, STRIP PACKAGING, 910mm W x 600mm D (36&quot; W X 24&quot; D), 120 VOLTS, 20 AMPS</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>COMPUTER, PRINTER</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>PC, COMPUTER SYSTEM, WITH KEYBOARD</td>
</tr>
</tbody>
</table>
## Equipment Guide List
### Intravenous Admixture & Aseptic Transfer

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

PREPARATION AREA
180 NSF
17 NSM

REFERENCE AREA
140 NSF
13 NSM

NOTE:
WASTE MANAGEMENT
CONTROL ROOM
ADJACENT.

320 NSM
30 NSF

VA DESIGN GUIDE
PHARMACY SERVICE

GUIDE PLATE 4-7
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. 1600 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
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

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>QTY</th>
<th>AI</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REFERENCE AREA</strong></td>
<td></td>
<td></td>
<td></td>
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<td>P-418</td>
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<td>LAVATORY, SENSOR CONTROL (PG-18-1: MCS 15450, VOL3, SD 380)</td>
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<td>WORK STATION, MODULAR</td>
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<td>CHAIR, ROTARY, WITH ARMS</td>
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<td>VV</td>
<td>CABINET, FILING (LETTER SIZE) 5 DRAWER, APPROX. 381mm x 635mm x 1524mm (15” x 25” x 60”)</td>
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<td>VV</td>
<td>BOOKCASE, SECTIONAL, EACH SECTION, 838mm x 330mm x 381mm (33” x 13” x 15”) WITH 254mm (10”) BASE</td>
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<td>BULLETIN BOARD, APPROX. 914mm x 914mm (36” x 36”)</td>
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<td>CLOCK, BATTERY OPERATED</td>
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<td>RECEPTACLE, ELECTRICAL, DUPLEX, 120 VOLT, 20 AMP (PG-18-1, MCS 16140, H-18-3, CS 801 3)</td>
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<td>DISPENSER, PAPER POWEL, SURFACE MOUNTED</td>
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<td>VV</td>
<td>DISPENSER, SOAP, LIQUID, WALL MOUNTED</td>
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<td>RECEPTACLE, WASTE, STEP-ON TYPE, APPROX. 305mm (12”) DIAMETER</td>
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<td>HOOK, COAT, WALL MOUNTED</td>
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<td><strong>PREPARATION AREA</strong></td>
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<td>H7-48</td>
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<td>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 &amp; PG-18-6, MCS 11610)</td>
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<td>CHAIR, ROTARY, WITH ARMS</td>
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<td>SINK, CORROSION RESISTING STEEL, 555mm x 405mm x 205mm (22”x16”x8”)</td>
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<td>MODULAR CASEWORK, W/OVERHEAD CABINETS AND WALL HANGER STRIP</td>
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<td>REFRIGERATOR, .14 m3 (5 CU. FT), 120 VOLT, 20 AMP, UNDERCOUNTER, 610mm x 955mm (24” x 38”)</td>
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<td>CLOCK, BATTERY OPERATED</td>
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<td>RECEPTACLE, ELECTRICAL, DUPLEX, 120 VOLT, 20 AMP (PG-18-1, MCS 16140, H-18-3, CS 801 3)</td>
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<td>PC, COMPUTER SYSTEM, WITH KEYBOARD</td>
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</table>
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

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
### Design Standards

#### Prescription Receiving

<table>
<thead>
<tr>
<th>ARCHITECTURAL</th>
<th>HEATING, VENTILATING AND AIR CONDITIONING</th>
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<tbody>
<tr>
<td><strong>Ceiling:</strong> Acoustic lay-in ceiling tile</td>
<td><strong>Dry Bulb Temp Cooling:</strong> 25°C (78°F)</td>
</tr>
<tr>
<td><strong>Ceiling Ht:</strong> 2740 mm (9'-0&quot;)</td>
<td><strong>Dry Bulb Temp Heating:</strong> 22°C (72°F)</td>
</tr>
<tr>
<td><strong>Wall Finish:</strong> Fabric (Tackboard Wall Surface)</td>
<td><strong>Minimum % Outside Air:</strong> 15</td>
</tr>
<tr>
<td><strong>Wainscot:</strong> --</td>
<td><strong>100% Exhaust Air:</strong> --</td>
</tr>
<tr>
<td><strong>Base:</strong> Resilient base</td>
<td><strong>Noise Criteria:</strong> NC-40</td>
</tr>
<tr>
<td><strong>Floor Finish:</strong> Carpet</td>
<td><strong>Steam:</strong> --</td>
</tr>
<tr>
<td><strong>Slab Depr:</strong> --</td>
<td><strong>Relative Humidity/Cooling:</strong> 50%</td>
</tr>
<tr>
<td><strong>Notes:</strong></td>
<td><strong>Relative Humidity/Heating:</strong> 30%</td>
</tr>
<tr>
<td></td>
<td><strong>Minimum Air Changes/Hr.:</strong> 4</td>
</tr>
<tr>
<td></td>
<td><strong>Room Pressure:</strong> 0</td>
</tr>
<tr>
<td></td>
<td><strong>AC Load Lighting:</strong> 22 w/sm (2 w/sf)</td>
</tr>
<tr>
<td></td>
<td><strong>AC Load-Equipment:</strong> 54 w/sm (w/sf)</td>
</tr>
<tr>
<td></td>
<td><strong>Number of People:</strong> 3</td>
</tr>
<tr>
<td></td>
<td><strong>Special Exhaust:</strong> --</td>
</tr>
<tr>
<td></td>
<td><strong>Notes:</strong></td>
</tr>
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</table>

#### SPECIAL EQUIPMENT

- None

#### LIGHTING

<table>
<thead>
<tr>
<th><strong>General:</strong> 50 FC</th>
</tr>
</thead>
</table>

**Notes:**

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

**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:**

#### POWER

<table>
<thead>
<tr>
<th><strong>General:</strong> 1000W (receptacles)</th>
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**Emergency:** --

**Notes:**

#### COMMUNICATION

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<th><strong>ADP:</strong> Yes</th>
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<tr>
<td><strong>Radio:</strong> --</td>
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<tr>
<td><strong>Telephone:</strong> Yes</td>
</tr>
<tr>
<td><strong>Intercom:</strong> --</td>
</tr>
<tr>
<td><strong>Pub. Addr:</strong> --</td>
</tr>
</tbody>
</table>

**Notes:**

1. Nurse Call/Code One/EMS recorder.

#### 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

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>QTY</th>
<th>AI</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>AR</td>
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<td>CABINET, UNDER COUNTER, 3 DRAWER, 395mm W x 55mm D x 760mm H (15&quot;W X 22&quot;D X 30&quot;H)</td>
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<tr>
<td>AR</td>
<td>CF</td>
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<td>COUNTER TOP, HIGH PRESSURE PLASTIC LAMINATE DECORATIVE</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>CHAIR, ROTARY, WITH ARMS</td>
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<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>CHAIR, STRAIGHT, WITH ARMS</td>
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<td>AR</td>
<td>VV</td>
<td></td>
<td>COMPUTER, PRINTER</td>
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<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>PC, COMPUTER SYSTEM, WITH KEYBOARD</td>
</tr>
</tbody>
</table>
Equipment & Utility Plan
Filing and Assembly

SEE: DESIGN STDS.
POWER-NOTE 1

CLOCK

ELECTRIC
ROTARY FILE

CABINET,
UNDER-CTR.

5.57 NSM
60 NSF
SEE: DESIGN STDS.
LIGHTING-NOTE 2. (TYP.)
## 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:** --

**POWER**
- **General:** 200 W (receptacles)
- **Emergency:** --

**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:** --

### PLUMBING AND MEDICAL GASES

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

*Notes:*
<table>
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<tr>
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<th>AI</th>
<th>DESCRIPTION</th>
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<tr>
<td>AR</td>
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<td>CABINET, UNDER COUNTER, 3 DRAWER, 395mm W x 555mm D x 760mm H) 15&quot;W X 22&quot;D X 30&quot;H</td>
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<tr>
<td>AR</td>
<td>CF</td>
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<td>COUNTER TOP, HIGH PRESSURE PLASTIC LAMINATE DECORATIVE</td>
</tr>
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<td>VV</td>
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<td>CHAIR, ROTARY, WITH ARMS</td>
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<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>CLOCK, BATTERY OPERATED</td>
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<tr>
<td>AR</td>
<td>VV</td>
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<td>FILE, ROTARY, MECHANICAL POWER, ELECTRIC, 120 VOLTS, 20 AMPS (See 5-2 Lighting Note # 3)</td>
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</table>
Equipment & Utility Plan
Dispensing

Dispensing system as directed by VHA

Adjacent refrigerator storage area

See: Design Stds. Power-Note 1

Elect. tablet counting mach.

See: Design Stds. Power-Note 2

Patient notification monitor-should be visible from patient waiting area

Mechanical conveyor belt

Under-counter pass box

Printer

Clock

Modular casework w/ overhead cabinets and wall hanger strip

Bullet-resistive service window must comply w/ prevailing UFAS requirements.

Note:
Dispensing shelf alternative systems:
- Mobile shelves
- Dispensing system
- Casework/counters w/ gravity feed cabinets
- Perimeter wall must be full height and bullet proof.

12.5 NSM
135 NSF

VA Design Guide
Pharmacy Service

Guide Plate 5-3
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°(72°F)
Dry Bulb Temp Heating: 22°(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

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<th>DESCRIPTION</th>
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<td>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)</td>
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<td>BELT, CONVEYOR, 1 TO 5 BELTS AS REQUIRED (WHEN APPROVED BY VHA)</td>
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<td>MODULAR CASEWORK, W/ OVERHEAD CABINETS AND WALL HANGER STRIP</td>
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<td>NOTE: DISPENSING SYSTEMS SHALL BE AS DIRECTED BY VHA</td>
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<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>CLOCK, BATTERY OPERATED</td>
</tr>
<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>COMPUTER, PRINTER</td>
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<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>CRT, COMPUTER SYSTEM, WITH KEYBOARD</td>
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<tr>
<td>AR</td>
<td>VV</td>
<td></td>
<td>MACHINE, COUNTING TABLET, ELECTRONIC, 120 VOLTS, 20 AMPS, 600mm W x 600mm D (24&quot;W X 24&quot;D)</td>
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<tr>
<td>AR</td>
<td>VV</td>
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<td>MONITORS, HIGH RESOLUTION, PATIENT NOTIFICATION SYSTEM, BLACK AND WHITE, 685mm (27&quot;)</td>
</tr>
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</table>
Reflected Ceiling Plan
Prepackaging & Extemporaneous Compounding

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

METERS
2 1

FEET
0 1 2 4

VA DESIGN GUIDE
PHARMACY SERVICE
GUIDE PLATE 5-4
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: 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: 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: 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: 1. Sanitary drain and vent need to be chemical resistant type.
# Equipment Guide List

## Prepacking & Extemporaneous Compounding

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>QTY</th>
<th>AI</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
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<td>MODULAR CASEWORK, W/ OVERHEAD BINS, UTILITY ACCESS MODULE AND WALL HANGER STRIP</td>
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<td>CABINET, FILING, UNDER COUNTER, 380mm W x 635mm D (15&quot;W X 25&quot;D)</td>
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<td>VV</td>
<td>CLOCK, BATTERY OPERATED</td>
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<tr>
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<td>VV</td>
<td>MACHINE, COUNTING, TABLET AND CAPSULE, 910mm W x 610mm D (36&quot;W X 24&quot;D)</td>
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<tr>
<td>AR</td>
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<td>MACHINE, UNIT DOSE PACKER, STRIP PACKAGING, 910mm W x 610mm D (36&quot;W X 24&quot;D)</td>
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<td>AR</td>
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<td>COMPUTER, PRINTER</td>
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# Section 6

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

<table>
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<tr>
<th>Guide Plate Series</th>
<th>Plate Number</th>
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<tr>
<td>Drug Information Service</td>
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<tr>
<td>Equipment &amp; Utility Plan...................</td>
<td>6-1</td>
</tr>
<tr>
<td>Reflected Ceiling Plan......................</td>
<td>6-1</td>
</tr>
<tr>
<td>Design Standards</td>
<td>6-1</td>
</tr>
<tr>
<td>Equipment Guide List.......................</td>
<td>6-1</td>
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</table>
Equipment & Utility Plan
Drug Information Service

SECT. BOOKCASE (2x)
STACK AS REQ'D.

CLOCK

CHALKBOARD/TACKBOARD

WALL-HUNG WORKSURFACE

LIBRARY SHELVING (3x)

PC

PRINTERS

PERIODICAL SHELVING (2x)

BULLET. BD.

13.0 NSM
140 NSF

METERS

FEET

2 1 0 1 2 4

VA DESIGN GUIDE
PHARMACY SERVICE

GUIDE PLATE 6-1
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
- **Base:** Resilient base
- **Floor Finish:** Carpet or Vinyl Composition Tile
- **Slab Depr:** --
- **Notes:** --

### SPECIAL EQUIPMENT
- **None**

### LIGHTING
- **General:** 75 FC (ambient)
- **Special:** --
- **Notes:**
  1. Dual-level switching provided 50/10 FC levels.
  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:** 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/Heat:** 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:** --
<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>QTY</th>
<th>AI</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR CC</td>
<td></td>
<td></td>
<td>SHELVING, FREESTANDING STEEL, LIBRARY, SINGLE FACED UNITS, WITH ADJUSTABLE SHELVES, 915mm W x 255mm D x 2285mm H (36&quot;W X 10&quot;D X 90&quot;H) (PG-18-1, MCS 11052; PG-18-4)</td>
</tr>
<tr>
<td>AR CC</td>
<td></td>
<td></td>
<td>SHELVING, SINGLE FACED UNITS, PERIODICAL, WITH SLOPING AND ADJUSTABLE SHELVES, 915mm W x 305mm D x 2285mm H (36&quot;W X 12&quot;D X 90&quot;H) (PG-18-1, MCS 11052; PG-18-4)</td>
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<tr>
<td>AR VV</td>
<td>1</td>
<td></td>
<td>BOOKCASE, SECTIONAL (EACH SECTION, 315mm W x 330mm D x 380mm H (33&quot;W X 13&quot;D X 15&quot;H)) WITH 255mm H (10&quot;H) BASE</td>
</tr>
<tr>
<td>AR VV</td>
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<td></td>
<td>BULLETIN BOARD, APPROX., 915mm W x 915mm H (36&quot;W X 36&quot;H)</td>
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<tr>
<td>AR VV</td>
<td></td>
<td></td>
<td>CHAIR, ROTARY, WITH ARMS</td>
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<tr>
<td>AR VV</td>
<td></td>
<td></td>
<td>CHAIR, STRAIGHT, WITH ARMS</td>
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<tr>
<td>AR VV</td>
<td>1</td>
<td></td>
<td>CHALKBOARD/TACKBOARD COMBINATION, 1525mm W x 1220mm H (60&quot;W X 48&quot;H)</td>
</tr>
<tr>
<td>AR VV</td>
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<td></td>
<td>CLOCK, BATTERY OPERATED</td>
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<tr>
<td>AR VV</td>
<td></td>
<td></td>
<td>COMPUTER, PRINTER</td>
</tr>
<tr>
<td>AR VV</td>
<td></td>
<td></td>
<td>PC, COMPUTER SYSTEM, WITH KEYBOARD</td>
</tr>
<tr>
<td>AR VV</td>
<td>1</td>
<td></td>
<td>TABLE, OCCASIONAL, 1220mm (48&quot;) DIA.</td>
</tr>
<tr>
<td>AR CF</td>
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<td>CABINET, UNDERCOUNTER, 3 DRAWER, 395mm W x 555mm D x 760mm H (15&quot;W x 22&quot;D x 30&quot;H)</td>
</tr>
<tr>
<td>AR CF</td>
<td></td>
<td></td>
<td>COUNTER, TOP, HIGH PRESSURE LAMINATED, DECORATIVE 760mm W x 1525m L (30&quot;W x 60&quot;L)</td>
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</tbody>
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