

Part B - Health Facility Briefing and Planning

310 ENGINEERING & MAINTENANCE UNIT

INDEX

Description

- 310 .1.00 INTRODUCTION
Description
- PLANNING
Functional Areas
Functional Relationships
- COMPONENTS OF THE UNIT
Introduction
Standard Components
Non-Standard Components
- APPENDICES
Generic Schedule of Accommodation
References and Further Reading
Functional Relationships Diagram

INTRODUCTION

General

- 310 .2.00 All facilities, no matter how large or small, will require environmental support services in the form of:
- Maintenance services
 - Engineering
 - Cleaning services
 - Waste disposal
 - Gardening services
 - Storage

Description

- 310 .3.00 A Maintenance Service shall be provided. It may be in-house or contracted, with an on-call repair service. The complexity of the services within and provided by the facility will obviously dictate the nature and extent of the Maintenance Service required. The Maintenance Service is provided to effect preventative maintenance and repairs to all elements of the facility, from the building fabric to items of specialist equipment.
- 310 .4.00 Areas that require a 24 hour per day, 7 day per week 'on-call' maintenance service are:
- Medical gases and suction systems
 - Lifts
 - Fire systems
 - Bio-electronic equipment
 - Any life-support systems
 - Emergency power systems
 - Boiler plant
 - Telecommunications systems including PA, EWIS and Nurse Call

The potential life threatening nature of the failure of any of the above systems justifies a 24 hour service.

PLANNING

Functional Areas

- 310 .5.00 The Engineering and Maintenance Unit may consist of the following Functional Areas dependent on the Operational Policy and service demand:
- Workshop areas which may include separate areas for carpentry, mechanical, plumbing and electrical services
 - Storage areas for all specialty services/trades including paint, gardening and flammable liquids
 - Office area for administrative and clerical activities
 - Staff amenities which may be shared

310 .6.00 ELECTRONICS WORKSHOP

A separate workshop may be provided specifically for the storage, repair and testing of electronic and other medical equipment. The amount of space and type of utilities will vary with the type of equipment involved and types of service and maintenance contracts used.

310 .7.00 ENGINEER'S OFFICE

If on-staff, an Engineer's Office shall be provided with file space and provision for protected storage of facility drawings, records and manuals.

310 .8.00 GARDENER'S FACILITIES

A room or shed shall be provided for the storage of all the necessary gardening equipment and material. Depending upon the size of the grounds team, consideration shall also be given to the provision of a Head Gardener's office, hand-washing facilities, toilet facilities and showering facilities.

Note: Gardening services may be externally contracted, in which case onsite provisions may not be required.

310 .9.00 STORAGE AREAS

A storage room shall be provided for the storage of building maintenance supplies. Storage for solvents and flammable liquids shall comply with relevant statutory requirements and AS 1940 - The storage and handling of flammable and combustible liquids.

310 .10.00 WORKSHOP AREAS

A general maintenance Workshop shall be provided for repair and maintenance. Sufficient space is required for a workbench, drill press, angle grinder, stainless steel trough, tool peg board, storage cabinets. Floor space is also required for the standing of equipment during repairs. Adequate lighting, power and ventilation are required.

Note: If Maintenance Services are externally contracted, then a Workshop is not required.

- 310 .11.00 Maintenance workshops incorporating carpentry, metal fabrication, plumbing, refrigeration or other noise generating trades shall be acoustically isolated from non-maintenance areas.

Functional Relationships

- 310 .12.00 The Engineering & Maintenance Unit should be located on the ground floor to facilitate delivery and despatch of heavy items of equipment. Access to a

Part B - Health Facility Briefing and Planning

loading dock is desirable. The Unit will require ready access to all areas of the hospital and in particular, to plant rooms and areas.

Depending on the size of the Unit and the Operational Policy, considerable noise and fumes may be generated by the Unit and care should be taken in locating the Unit relative to other units such as Inpatient Accommodation Units.

COMPONENTS OF THE UNIT

Introduction

- 310.13.00 The Engineering and Maintenance Unit will consist of a combination of Standard Components and Non-Standard Components.

Standard Components must comply with details in Standard Components in these Guidelines. Refer also to Standard Components Room Data Sheets.

Standard Components

- 310.14.00 Provide the Standard Component as identified in the Generic Schedule of Accommodation. Provision of accommodation for Engineering & Maintenance will depend on the Operational Policy and service demand.

Non-Standard Components

- 310.15.00 Provide the Non-Standard Components identified in the Schedule of Accommodation, according to Operational Policy and service demand.

Part B - Health Facility Briefing and Planning

APPENDICES

Engineering Generic Schedule of Accommodation

310.16.00 The following Generic Schedule of Accommodation is for a typical Engineering & Maintenance Unit in a Level 4 Hospital with 120 Beds and a range of diagnostic and treatment facilities. This schedule assumes that all services are provided in-house.

Note: For maximum functionality, some of the workshop areas should be combined into one large area.

ROOM / SPACE	Standard Component			Level 4 Qty x m2			Remarks
FLAMMABLE LIQUID STORE				1 x 2 optional			or Steel cupboard
GARDENING STORE / SHED				5 x 5.5 optional			
OFFICE - SINGLE PERSON 12 M2	yes			1 x 12			For Engineer if on staff
PAINTER'S STORE				1 x 9 optional			
PLAN FILE - STORAGE				1 x 12 optional			
WORKSHOP - CARPENTRY				4 x 6.5 optional			Including storage
WORKSHOP - MECHANICAL				4 x 6.5 optional			Including storage
WORKSHOP - PLUMBING				4 x 6.5 optional			Including storage
CIRCULATION %				15			

310.17.00 SHARED AREAS

ROOM / SPACE	Standard Component			Level 4 Qty x m2			Remarks
BAY - CLEAN-UP				1 x 3			
STAFF ROOM	yes			1 x 15			
TOILET - STAFF	yes			2 x 2			

References and Further Reading

- 310.18.00
- American Institute of Architects, Guidelines for Design & Construction of Hospital & Healthcare Facilities, 1997.
 - Health Department Western Australia, Private Hospital Guidelines, 1998.

Part B - Health Facility Briefing and Planning

FUNCTIONAL RELATIONSHIPS DIAGRAM - ENGINEERING & MAINTENANCE UNIT

