SHEET 1

PENANG SANGAM HIGH SCHOOL

P. O. BOX 44, RAKIRAKI

LESSON NOTES - 18

SCHOOL: PENANG SANGAM HIGH **SUBJECT: TECHNICAL DRAWING** **YEAR/ LEVEL: 11 C/D**

Strand	TD11.3 APPLIED DRAWING
Sub - Strand	TD11.3.2 ARCHITECTURAL DRAWING
Content Learning Outcome	TD11.3.2.1 Demonstrate basic knowledge of building symbols, building safety with traditional designs and construct details of traditional boat building

ARCHITECTURAL DRAWING

An architectural drawing or architect's drawing is a technical drawing of a building (or building project) that falls within the definition of architecture.

Domestic Construction

There are several different construction techniques used in domestic construction today. The major ones include timber frame and concrete blocks. Foundations commonly used in Fiji are strip and raft or piles.

Factors in Architectural Design

Architecture is designing to meet structural requirements of the building and functional and aesthetic needs of the user. Sound planning, good use of materials and comfort are important factors to be considered.

Physical Problems in Design

The position of the dwelling on the site is governed by Ministry of Urban Development and Local Government or City/Town Council regulations fixing the minimum distances from boundaries and other buildings. Houses should be situated to take advantage of the sun, ventilation and views and to exclude, as far as possible, wind, noise and unsightly outlook.

Outline of Plans and Specifications

To enable a building to be planned and then built to this plan and to ensure that a satisfactory standard of work is maintained throughout the building operation, plans and specifications are drawn up.

Plans

The plan of a house shows the position of the foundations, layout and relation of rooms, their internal sizes, door and window types and positions and position of any other item fixed during building.

A block plan is included on the plan drawn, because of its size, to a scale of 1:500. These drawings are commonly referred to as a 'set of plans'.
The minimum details contained in the 'set of plans' are:

- floor plan
- four elevations (front, rear, right side, left side)
- Sectional view
- foundation plan
- site plan
- locality plan
- drainage (storm and waste water) plan
- details of foundations, walk binding and roof

Other details which could be included in the 'set of plans' are:

- Electrical layout
- Window and door detail and schedule
- Kitchen details

Specification

The specification sets out in written form the type and standard of material to be used and the work to be done, and should be related closely to the plan.

Foundations

Those parts of a house in direct contact with, and transmitting and distributing loads to the ground, through a footing.

Walls

In timber framed construction, the principal part is the vertical member, called the stud. The loads imposed by the roof and interior and exterior linings are transmitted by the studs to a bottom plate and from there to the foundations.

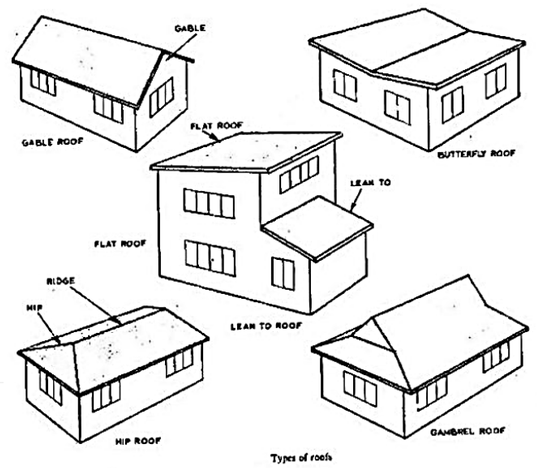
Exterior wall cladding

The main materials used for covering the outside of a timber framed building is timber, corrugated iron, and flat sheet boards such as hardflix locally.

Roofing

The main framing members of a roof are the rafters, ridges, hips, valleys, under purlins, struts and collar ties. The main function of roof framing are:

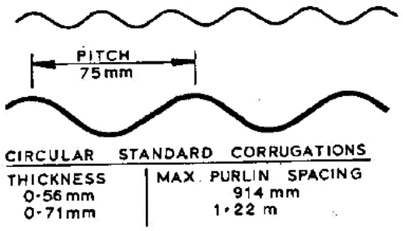
- To provide support and fixing for the roof covering
- To transmit the roof load to the walls and thus to the foundations
- And to tie and stiffen the wall frame.



Types of roofs

Roof Covering

The most important function of a roof covering is to protect the interior of the building from the entry of rain water. There is a variety of roof covering available but the most one used locally is the corrugated iron.



CIRCULAR STANDARD CORRUGATIONS

THICKNESS	MAX. PURLIN SPACING
0·56 mm	914 mm
0·71mm	1·22 m

Traditional Construction

Traditional construction has been going since the early settlers came to Fiji.

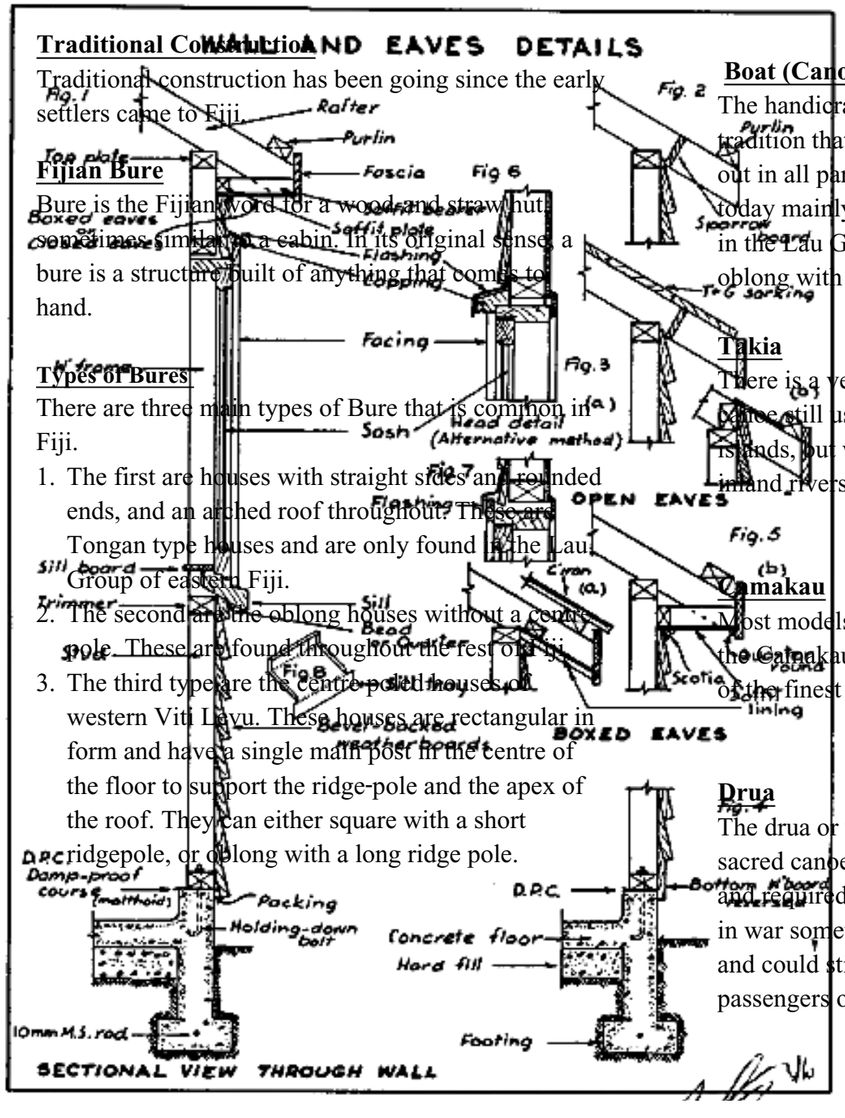
Fijian Bure

Bure is the Fijian word for a wood and straw hut sometimes similar to a cabin. In its original sense, a bure is a structure built of anything that comes to hand.

Types of Bures

There are three main types of Bure that is common in Fiji.

1. The first are houses with straight sides and rounded ends, and an arched roof throughout. These are Tongan type houses and are only found in the Lau Group of eastern Fiji.
2. The second are the oblong houses without a centre pole. These are found throughout the rest of Fiji.
3. The third type are the centre-pole houses of western Viti Levu. These houses are rectangular in form and have a single main post in the centre of the floor to support the ridge-pole and the apex of the roof. They can either square with a short ridgepole, or oblong with a long ridge pole.



Boat (Canoe/Drua,)

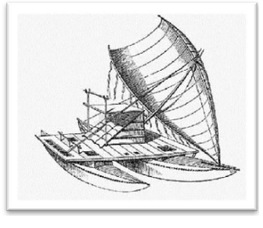
The handicraft of sailing vessels is a tradition that was at one time, carried out in all parts of Fiji but is done today mainly on Kadavu Island and in the Lau Group. Ridgepole, or oblong with a long ridge pole.

Takia

There is a very common outrigger canoe still used today in the outer islands, but were mainly used on inland rivers in old Fiji.

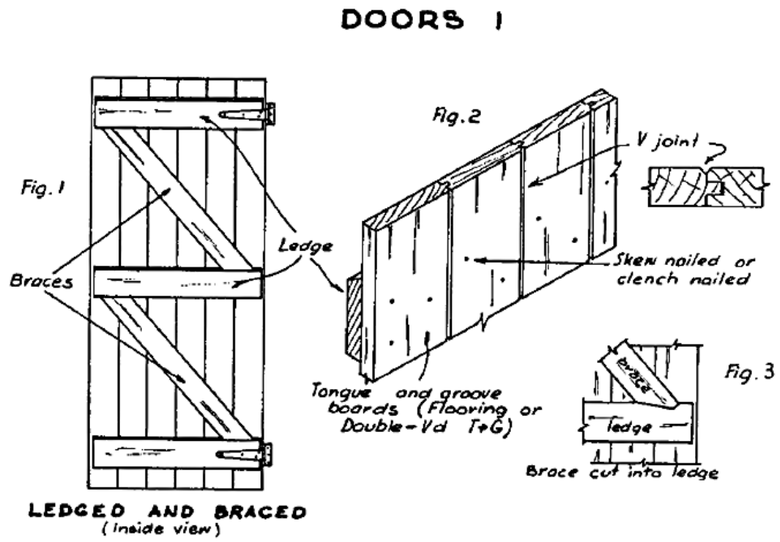
Camakau

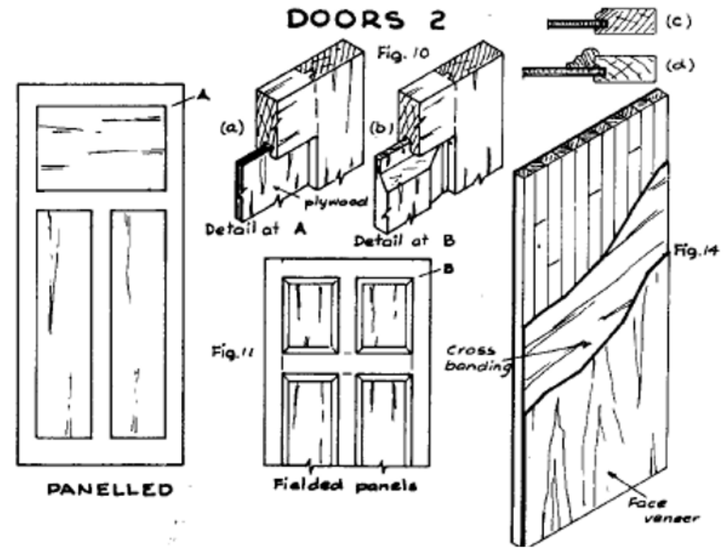
Most models one sees today are of the Camakau. In its days it was one of the finest outrigger ever made.



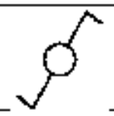
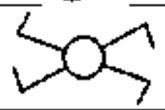
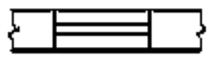
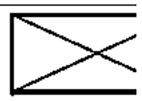
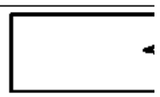
Drua

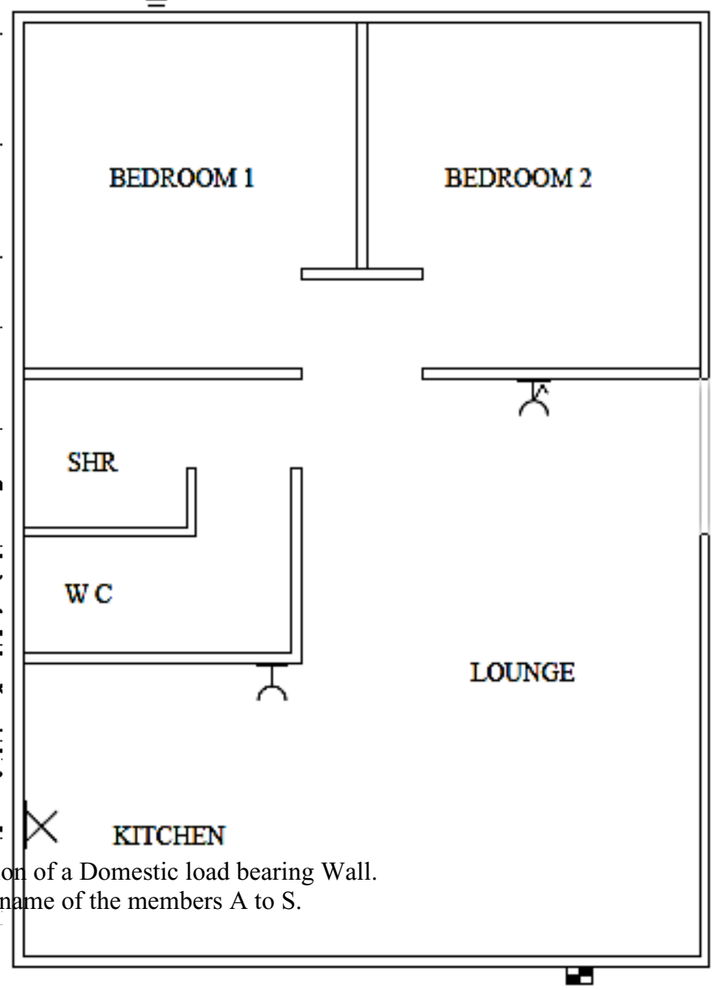
The drua or waqa tabu (which means sacred canoe) was the largest canoe and required a crew of 50 men, and in war sometimes held 100 sailors and could still transport 200 passengers of warriors.





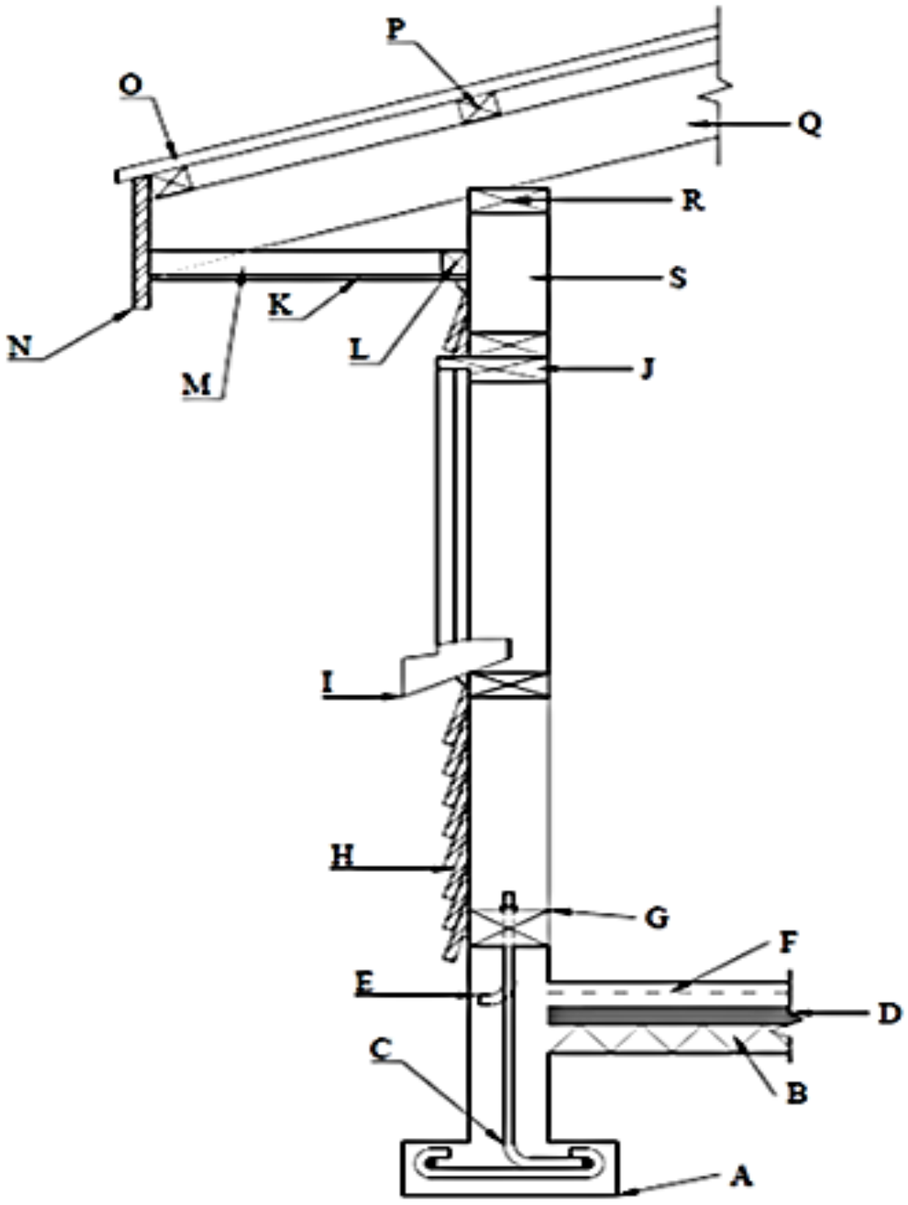
ELECTRICAL SYMBOLS

Name	Symbol	Name	Symbol
One way switch		Switch - with dimmer	
Two way switch		Switch - intermediate	
Socket outlet		Switch - push button	
Switch socket outlet		Ceiling mounted light	
Window - In cavity wall		Wall mounted light	
Door - Swing single			
Door - Swing double			
Door - Sliding into pocket			
Door - Sliding exposed on wall			
Point of entry			
Sawn timber			
Timber break			
Concrete			



QUESTION

Given: The Section of a Domestic load bearing Wall.
Required: State the name of the members A to S.



A _____
B _____
C _____
D _____
E _____
F _____
G _____
H _____
I _____
J _____
K _____
L _____
M _____
N _____
O _____
P _____
Q _____
R _____
S _____

THE END