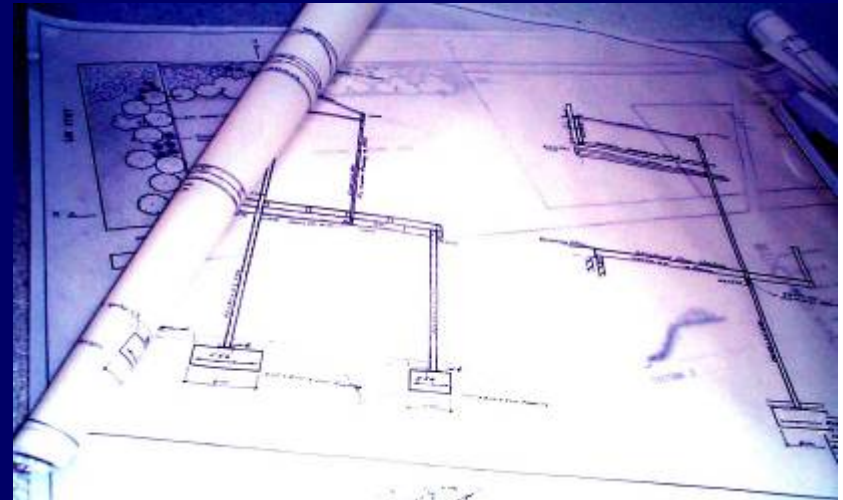




The **ELECTRONIC BLUEPRINT** is a series of building industry design and training publications, including an editable electronic manual for the design and specification of residential construction, provided free-of-charge to architects, consulting engineers and builders. They are encouraged to copy the drawings and specifications into their own contract documents, thus affording building product suppliers a unique opportunity to showcase their products.

**Partner Housing Australasia**



**ELECTRONIC BLUEPRINT Distance Learning Package**

**Affordable Housing: Asia-Pacific Region**

**Wall and Roof Framing**

## About the Training Package

This training package is part of the Electronic Blueprint Distance Learning program. It enables participants to acquire on-going training and professional knowledge of the building industry by distance learning techniques.

## To Navigate the Training Package

To navigate, use the “arrow down” and “arrow up” keys to move forward or back through the presentation.

## More Help

To contact your tutor click on the address below, write the email and send. Your tutor will respond within 48 hours. [info@electronicblueprint.com.au](mailto:info@electronicblueprint.com.au)

## Assignment

On completion of the presentation, you may complete an assignment and email it to the tutor at the address below. The purpose of the assignment is to provide focus for the presentation, and to enable you to apply the information to practical situations. The tutor will assess it, provide comments and forward a certificate by return email. [info@electronicblueprint.com.au](mailto:info@electronicblueprint.com.au)

## Important Note

If you wish to take advantage of the interactive facilities of this training module, you must now connect to the Internet and click here [www.electronicblueprint.com.au](http://www.electronicblueprint.com.au)

## Levels, Dimensions, Square, Setting Out

### Levels

It is critical that all floor framing is level. Before commencing the set out, check that slab or timber floor framing is level. It may be necessary to pack the frames in the low areas or to rectify the high areas.

### Dimensions and Square

Check the position and square of the concrete slab or footings before commencing construction. Measure diagonals to check square.

### Setting Out

When setting out the wall framing, a small error in position can lead to misalignment of the other components, such as the roof. Base the set out on the longest side of a building, since this will reduce the likelihood of errors in square.



## Roof Anchorage

Roof structures should be tied-down to the walls to prevent them from being blown off.

This photo shows how poor construction practice can render a roof anchorage ineffective. The use of a stone to serve as packing ensures that the system will not be functional.

Anchorage should be protected against corrosion to ensure that they remain effective.



Reinforcement from concrete columns should be bent over the bottom chord of the roof truss and nailed on the “off-side” for effective anchorage.



## Bracing and Tie-Down

All buildings must be adequately supported against lateral wind loads, as specified in AS 1170.2 and AS 4055. In some cases, lateral earthquake loads may be a design criterion. The bracing requirements should be determined for the appropriate Region, Terrain Category, Topography and Shielding and recorded on the drawings by the design engineer.



**Lack of adequate bracing renders a building prone to collapse.**

## Corrosion of Galvanised Steel Posts

Where soil with a high salt content is allowed to cover the lower part of galvanised steel posts, it may cause them to corrode. To prevent this, encase the lower part of the post in 300 mm diameter concrete pedestal, 100 mm high with a sloping top. Occasionally inspect the footings to ensure that soil is not in contact with the steel.

