



MANUFACTURERS AND CONTRACTORS SINCE 1973

SPECIFICATION & CONSTRUCTION METHOD FOR HIGH-SECURITY LARGE PANEL WALL:

1. PREFABRICATED CONCRETE ELEMENTS:

1.1. WORKMANSHIP AND FINISH IN GENERAL:

All concrete elements shall be manufactured from sound concrete, free of structural defects, complying with any sample if previously submitted. All elements shall have off-shutter finish on three sides, with the fourth side having a wood floated finish.

1.2. SHAPE & DIMENSION:

All elements shall retain the required shape and be true to the respective and specified dimensions as indicated in 2.1, 3.1 and 4.1.

1.3. PERFORMANCE REQUIREMENTS (STRENGTH):

The required concrete compressive strength in all prefabricated prestressed elements shall be a minimum of 40 Mpa at 28 days, determined in accordance with SABS method 863.

1.4. CURING:

All concrete elements shall be cured in accordance with the recommendations given in SABS method 863.

1.5. REINFORCEMENT:

All steel used for reinforcements in prefabricated elements shall be high yield steel with a minimum characteristic strength of 450 Mpa, and shall be free of rust, loose scale, flux, grease or oil substances and shall in general comply with SANS 920.

2. Column:

2.1. The column shall be manufactured according to the wall height required. The length of column shall be the wall height plus the depth of foundation as detailed below. The column support groove runs along the length of the element to accommodate walling panels as detailed below.

The back section shall be 310mm wide tapering to the front to 300mm. The thickness of the post shall be 310mm reducing along the centre line to 140mm thereby creating the support groove

Columns shall be spaced at 5.0m centres.

The columns shall be reinforced with 4 x Y16 steel bars, centralised along the element to ensure a minimum of 20mm concrete cover. These bars are welded

together using 8mm Round bar (u-shape) stirrups placed at 600mm intervals along the length.

3. Panel:

- 3.1. The panel shall be 4.920m long with a height of 1.000m and a thickness of 0.120m. Panels will be reinforced with two layers of ref 245 mesh. The two layers will be spaced equidistant along the length of the element to allow for a minimum of 20mm concrete cover.

4. Erection:

- 4.1. Each column shall be embedded to full depth in concrete in a foundation hole of at least 900mm x 900mm and a depth of 1000mm.
- 4.2. The sizes specified in par. 4.1 are for firm soils and it may be necessary to increase these sizes for softer yielding soils.
- 4.3. Foundation shall be a minimum of 15 Mpa at 28 days.