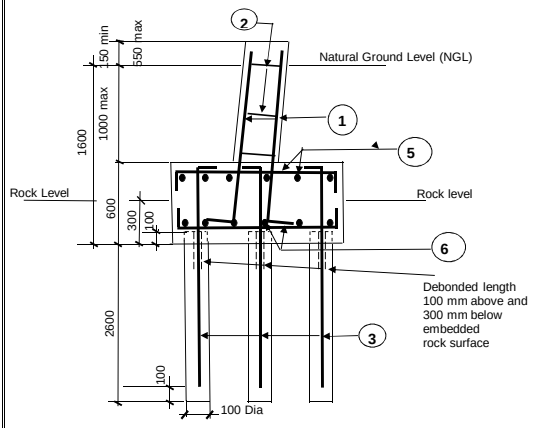
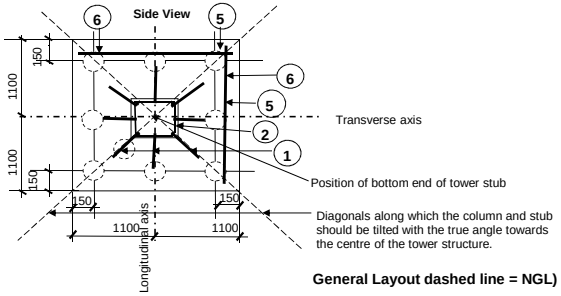
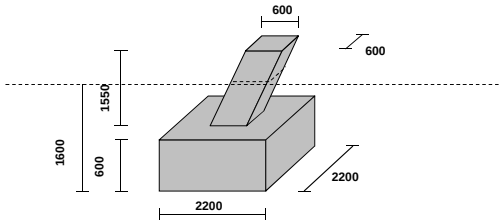




Plan View

General Layout dashed line = NGL)



Soil Layer on top of pad assumed = 1000 mm

Bar Mark	Bending Schedule Shape (not to scale)	Shape Code	No. of bars	Dia mm	Length mm	a mm	b mm	c mm	d mm	Spacing mm
1	Column bars	37	8	Y16	1900	300				260
2	Column stirrups	60	7	R10	2300	520	520			250
3	Anchor bars	37	6	Y32	3300	300				
5	Pad bars (top)	38	30	Y20	2800	410	2100			150
6	Pad bars (bottom)	38	30	Y20	2800	410	2100			150

Pricing Parameters

Steel Weight (kg)	Concrete Volume (m^3)	Formwork surface area (m^2)	Rock excavation (m^3)	Anchor depth (m)	Grout volume (m^2)	Anchors (N)	Pad embedment depth (m)	Tower stub weight (kg)
573.52	3.46	6.36	1.45	2.60	0.13	6	0.30	127.05

Quantities are based on dimensions of design drawings
NO Allowances have been made for material wastage or overbreak

Design Loads (incl. load factor)

Compression	Uplift	Transverse	Longitudinal
kN	kN	kN	kN
1153.20	963.60	55.20	8.40

Note:
1 Reinforcing layout diagrams are not to scale.
2 All design data and Construction to Specification TRMSCAAC1 Rev 5.
3 Concrete strength: 25 MPa minimum at 28 days.
4 Construction joint between column and the pad to be scabbled and painted with cement slurry or wet/dry epoxy.
5 Rock anchor holes are 100 mm diameter.
6 Bottom end of tower stub is always in the centre of the pad in both the transverse and longitudinal directions

Stub and column angle (from vert)(maximum on diagonal line) 16.200 degrees

Min Cover required:
Pad: 50 mm
Column: 40 mm

Revision Description	Rev No

Rock Anchor Column and Pad Foundation for
517E Tower
Soft Rock
Eskom Standard Design -

Eskom

Disclaimer:
While due care has been applied in the design of this foundation, the contractor is required to verify that this design is fit for purpose considering preferred construction methodolgies, geotechnical and structural requirements required at the point of application.

Designed:	Checked:	Revision	Date:	Drawing No:
S DUDHIA	W H COMBRINCK	Rev 0	22-May-2014	