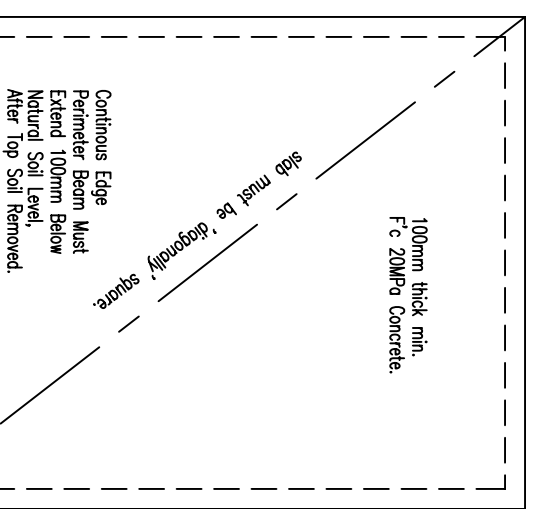
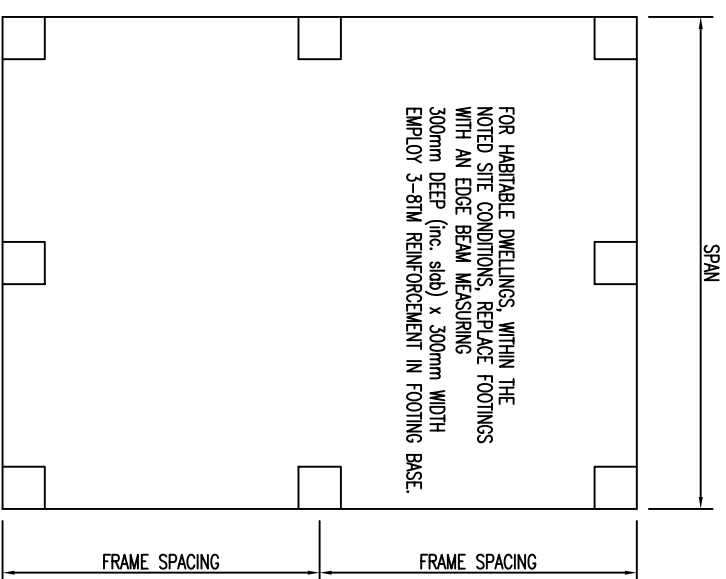


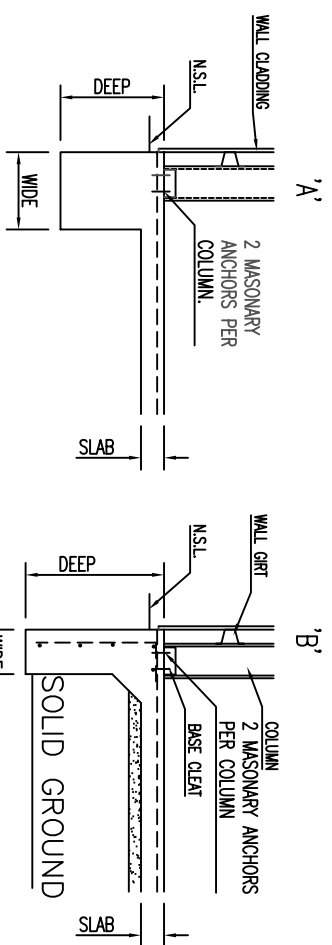
GENERAL ARRANGEMENT FOUNDATION OPTIONS FOR ALL FRAME TYPES.



PLAN (Option 1)
SLAB PLUS EDGE BEAM.

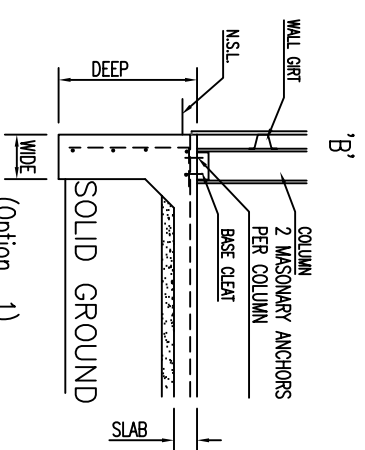


PLAN (Option 2)
SLAB & INTEGRATED MASS CONCRETE
FOOTINGS UNDER COLUMNS
(Edge Beam NOT Required)



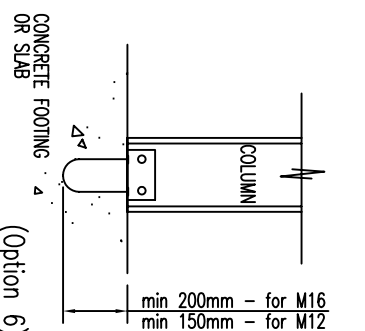
(Option 2)

SLAB PLUS FOOTING



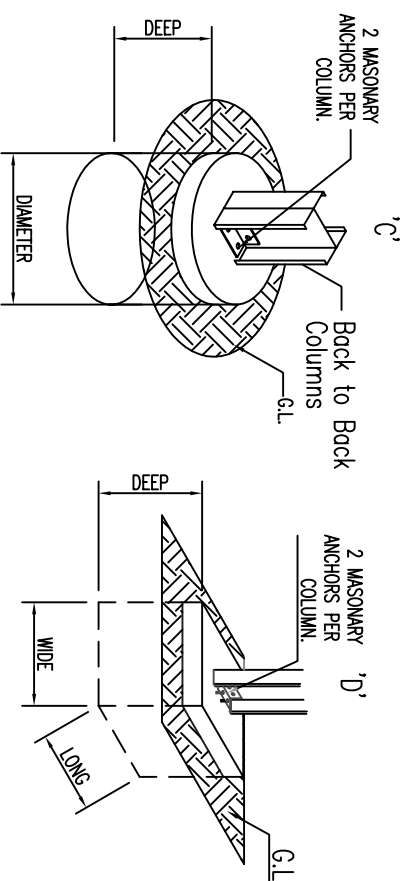
(Option 1)

RETAINING WALL

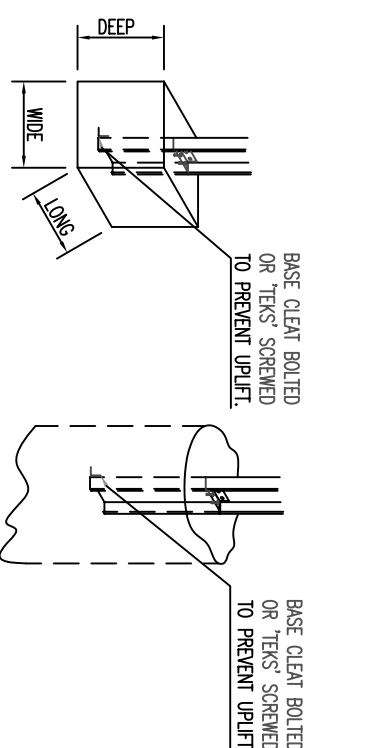


(Option 6)

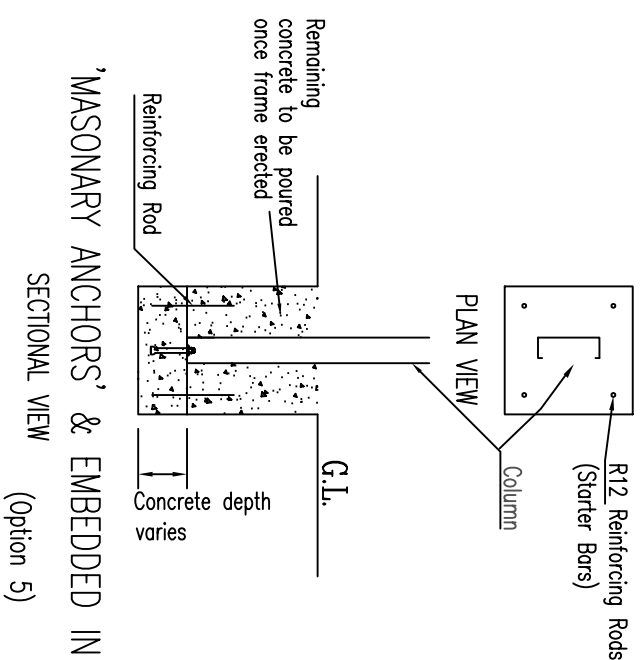
'U' BOLT EMBEDMENT



BORED FOOTING (Option 3)
MASS CONCRETE FOOTING



MASS CONCRETE FOOTING EMBED IN CONCRETE (Option 4)
BORED FOOTING EMBED IN CONCRETE



'MASONRY ANCHORS' & EMBEDDED IN CONCRETE.
SECTIONAL VIEW (Option 5)

FRAME SIZE	MASS CONCRETE FOOTINGS PLUS SLAB COMBINATION FOOTINGS (mm) length x width x depth (mm)	MASS CONCRETE FOOTINGS (mm) length x width x depth (mm)	BORED FOOTINGS (mm) diameter x depth	RETAINING WALL EDGE BEAM (mm) width x max. depth	RETAINING WALL EDGE BEAM (mm) Steel Required
C100/10, 15&19	300 x 300 x 200	300 x 300 x 300	300 x 300	200 x 1000	Retaining wall must be poured with slab using Y12 Reinf. Rods at 300mm c/c vertically
C150/12/20/10/10, 15&19	300 x 300 x 300	450 x 450 x 450	450 x 500	200 x 1000	Retaining wall must be poured with slab using Y12 Reinf. Rods at 300mm c/c vertically
C150/15	300 x 300 x 400	450 x 450 x 450	450 x 500	200 x 1000	Retaining wall must be poured with slab using Y12 Reinf. Rods at 300mm c/c vertically
C150/19	300 x 300 x 400	500 x 500 x 500	450 x 550	200 x 1000	Retaining wall must be poured with slab using Y12 Reinf. Rods at 300mm c/c vertically
C150/24/20/12&15	350 x 350 x 400	600 x 600 x 600	450 x 650	200 x 1000	Retaining wall must be poured with slab using Y12 Reinf. Rods at 300mm c/c vertically
2C150/19&24/20/15	350 x 350 x 400	600 x 600 x 600	600 x 650	250 x 1000	Retaining wall must be poured with slab using Y12 Reinf. Rods at 300mm c/c vertically
2C150/24/20/19	400 x 400 x 400	600 x 600 x 600	600 x 700	250 x 1000	Retaining wall must be poured with slab using Y12 Reinf. Rods at 300mm c/c vertically
2C150/24/20/19	400 x 400 x 400	650 x 650 x 650	600 x 700	250 x 1000	Retaining wall must be poured with slab using Y12 Reinf. Rods at 300mm c/c vertically
2C250/16&19/20/24	450 x 450 x 490	700 x 700 x 700	600 x 750	250 x 1000	Retaining wall must be poured with slab using Y12 Reinf. Rods at 300mm c/c vertically
2C250/19&24/20/24	500 x 500 x 500	750 x 750 x 750	600 x 800	250 x 1000	Retaining wall must be poured with slab using Y12 Reinf. Rods at 300mm c/c vertically
2C250/24/20/24&30	600 x 600 x 600	1000 x 1000 x 1000	600 x 800	300 x 1000	Retaining wall must be poured with slab using Y12 Reinf. Rods at 300mm c/c vertically
2C300/24/20/24	600 x 600 x 600	1100 x 1100 x 1100	600 x 800	300 x 1000	Retaining wall must be poured with slab using Y12 Reinf. Rods at 300mm c/c vertically
2C300/30/20/30	600 x 600 x 750	1200 x 1200 x 1200	750 x 3000	300 x 1000	Retaining wall must be poured with slab using Y12 Reinf. Rods at 300mm c/c vertically
2C400/24&30	700 x 700 x 750	1200 x 1200 x 1300	750 x 3000	300 x 1000	Retaining wall must be poured with slab using Y12 Reinf. Rods at 300mm c/c vertically

UK ONLY

CODES:
Footings have been designed in accordance with BS8103-1:1995, BS8004:1986, Building Regulations 1991 (UK), and Approved Document A Structure.

SITE CLASSIFICATION:
The site is to have a 150 kPa Ultimate Bearing Capacity, with 100 kPa Safe Bearing Capacity. Other Site conditions, including those subject to high ground movement due to moisture changes, to be referred to a Registered Structural Engineer.

FOOTING OPTIONS:
The following footing options are available:
1. Slab plus edge beam combination.
2. Slab and mass concrete footing below columns.
3. Mass concrete footings only.
4. Columns embedded in concrete.
5. Extended columns 'Sleeve Anchored' to a variable depth mass concrete footing, with remaining concrete poured once framework is standing.
6. 'U' Bolt Embedment.

FOUNDING MATERIAL:
Edge beams, mass concrete footings and R.C. slabs to be founded on naturally occurring ground having on S.B.V. of 100kPa min and U.B.V. of 150kPa min.
Rolled or compacted fill may be used under the slab. Fill must be compacted in layers of 150mm to a maximum depth of 900mm.

CONCRETE AND REINFORCING FABRIC:
To be in accordance with BS5328-1:1997. Fabric Mesh to comply with BS4483:1998, Reinforcing bars to comply with BS4449:1997. The 28 day strength of all concrete to be 20MPa and the concrete will be kept moist either by watering or covering with a plastic membrane for 7 days following slab pour. Slump 80mm+-15mm, Max aggregate size 20mm, Cement Type A.

REINFORCEMENT FABRIC:
F72 reinforcing mesh with 30mm(min) top concrete cover. All Reinforcing Bars to have 30mm(min) top and bottom concrete cover. Buildings may be erected on slab after 7 days, with due care taken not to over tighten dyna bolts.

A B CONSULTING ENGINEERS
STRUCTURAL AND CIVIL
MBAust. CPBng. (Regd. NPER - 3 Structural)
Andrew Matukевич
Practising Structural Engineer
Signature: *Andrew Matukевич* Date: 14.8.02
Registered in the Category of Structural

STEEL FRAME GARAGE
C100, C150, C200, C250, C300, C400
MANSARD & DURAGAL FRAMES

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DWG NO. NZMBFOUN.