

General
This drawing is to be read in conjunction with document SUB-03-017 General Specification for the Civil Engineering and Building Design and Construction of Secondary Substations. It is the constructor's responsibility to confirm, before construction, that the details on this drawing are correct as per SUB-03-017.

Details shown on this drawing are typical for this type of substation building but may not be suitable for substations housing alternative equipment. The constructor shall satisfy themselves that the appropriate details shown are correct depending on the type of substation being constructed.

General
The concrete shall be in accordance with the specification and attain the relevant cub crushing strength at 28 days.

Floor (Concrete 40N/mm² 28-Day Cube Strength)
Floors of substations housing indoor switchgear shall have a visqueen damp proof membrane installed where graded stone infill is used.
A flat, level and smooth floor surface is essential for installation of plant.
Tolerances to finished level expressed as a maximum permissible deviation beneath a straight edge with feet placed anywhere on the floor shall not exceed 1mm in 1m or 3mm in 3m. Floors to be cured, prepared & painted with 2 No. Coats of non-slip floor paint on completion.

General
All brickwork below D.P.C. to be H.D. category 1 min. 75N/mm² mean compressive strength and max 7% M.A. and durability designation F2 S2 (Ex Engineering Brickwork Class B) in English bond except for exposed faces.

Internal facing brickwork to fair faced smooth textured solid concrete bricks, sized to match external facing bricks and with a mean compressive strength of not less than 20N/mm².
Class iii mortar.

Leaves of walls to be tied together by means of type 1 or type 2 stainless steel ties laid in every fourth course at 375mm centres and set back 38mm from outer face, ties are to be staggered.

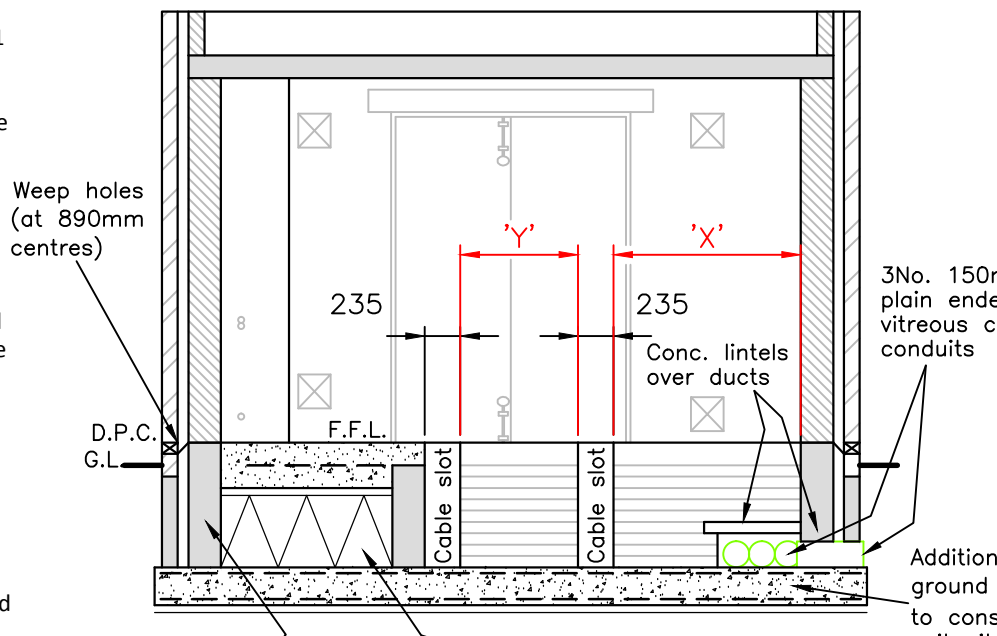
Proprietary GRP faced aluminium or steel security doors are the preferred option, unless stated otherwise.

On completion of cabling, cable trench to be filled with dry sand and skimmed with minimum 50mm depth of sand/cement screed over a visqueen membrane (top to be level with FFL).

Roof shall be proprietary precast pre-stressed beam and in situ concrete screed topping systems with a fair-faced soffit finish, sealed joints and with reinforcement to screed where applicable with water proofing shall be that as shown in the Typical Detail above.

Insulation
Substations housing indoor switchgear require insulation. U values for wall and roof shall meet those detailed in the table below:

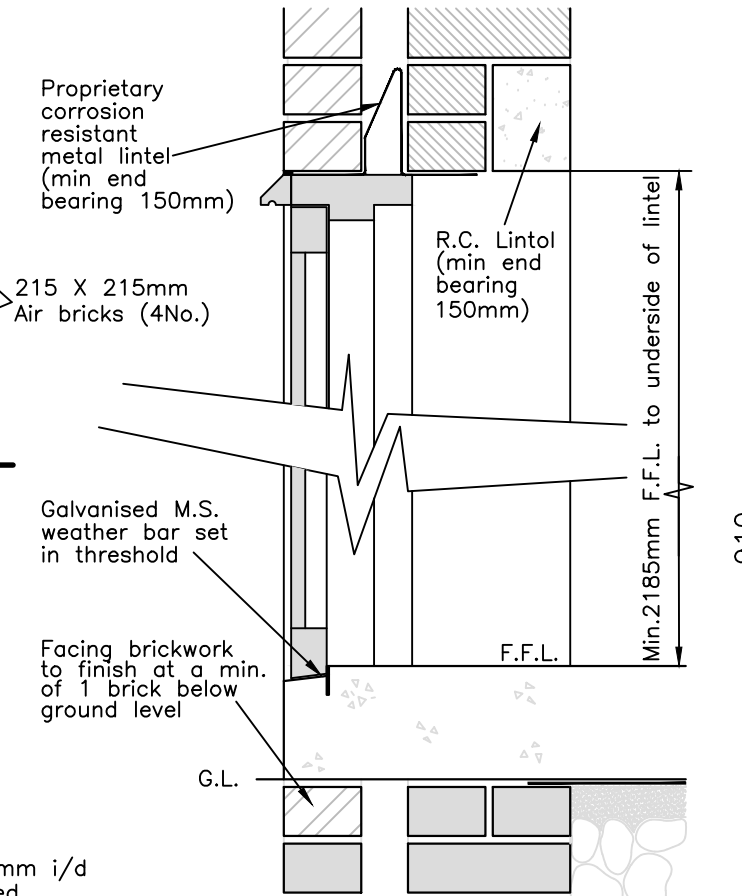
Hardwood Doors	SP4000543	Provide 19
Meter Cupboards	SP4078901	plywood co
		to u/s to



Technical drawing of a door frame assembly showing dimensions and components. The drawing includes the following labels and dimensions:

- Dimensions:**
 - Top horizontal dimensions: 1871, 1177
 - Right vertical dimensions: 225, 2185, 2410 Min. int. height, 150, 825, 675, 250
 - Bottom horizontal dimensions: 910, 500, 251, 1013
 - Left vertical dimension: 150mm i/d ended clay unit
- Components and Labels:**
 - Chamfers
 - Trench
 - Cable slot
 - F.F.L. (Finish Floor Level)
 - Door opening
 - Min. int. height
 - 150mm i/d ended clay unit
 - 150150
- Notes:**
 - Floor slab to be min. 150mm thk. concrete reinforced with A142

For plant installation: /
Provide 19mm thk. temporary
plywood covers (with battens fitted
to u/s to prevent movement)
over open trench area



Foundation and/or
improvement works
Structures design to
specific conditions

25mm Dia. galvanised m.s. bar

A252 Fabric reinf.
900 X 900mm sheet

0.5

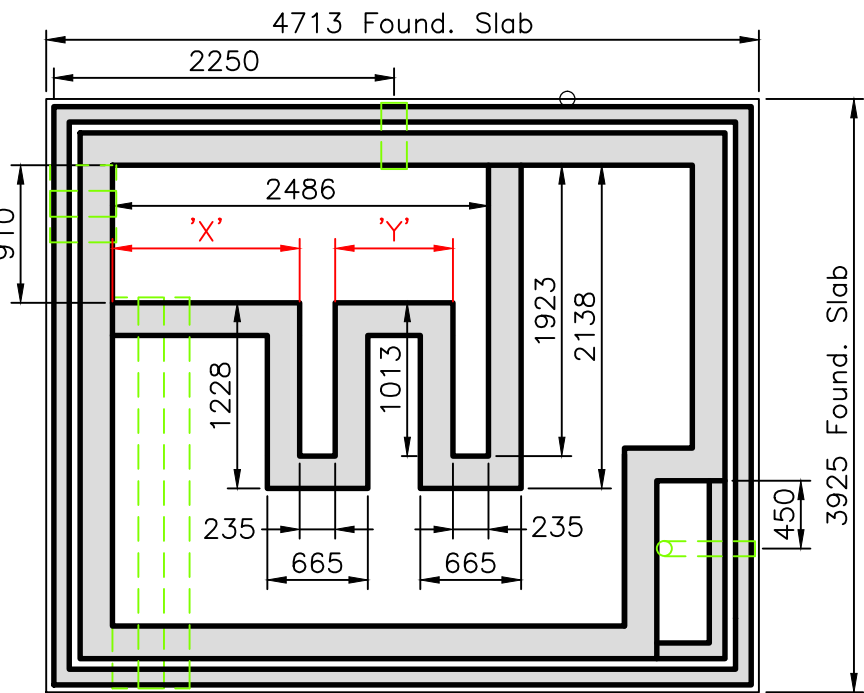
125

100

180

300

150



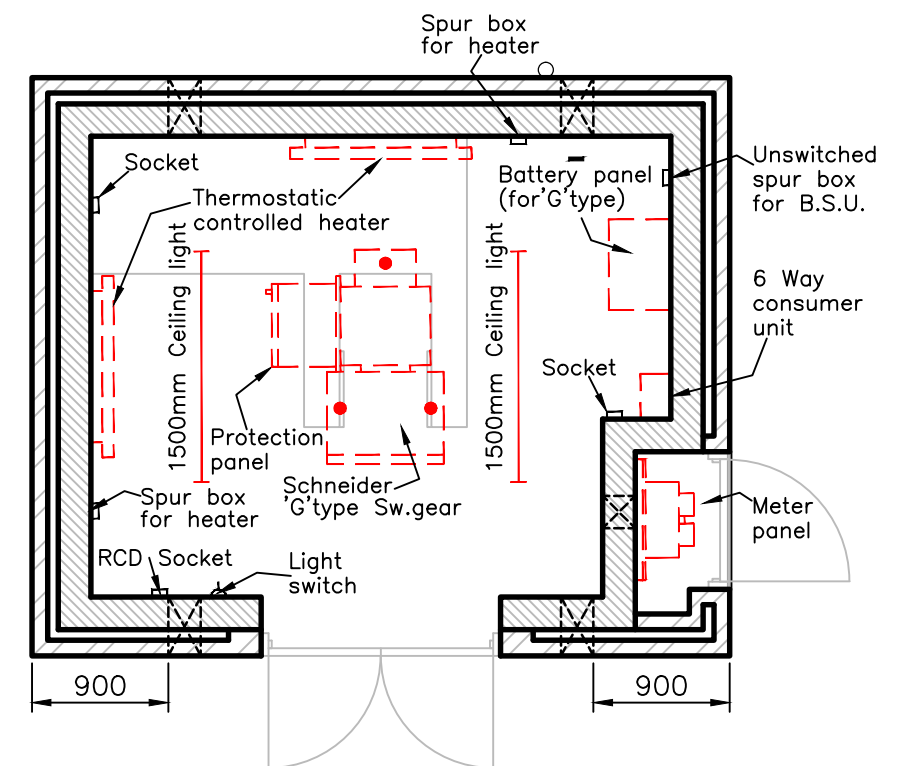
250

Concrete slab, reinforced with min. A252 fabric with 40mm cover to sides, top and bottom. Laps to be min. 400mm

FOUNDATION

[illegible]

PLAN



**SP ENERGY
NETWORKS**

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**TYPICAL TRADITIONAL BUILDING DETAILS FOR
11kV BRICKBUILT SUBSTATION
(‘D’ OR ‘G’ TYPE RMU WITH METERING)**

Location

11kV SUBSTATIONS

Drawn MT	Date OCT 08	Checked C.O.B	Date OCT 08	Approved C.W	Date OCT 08
Status			Drg. No.		Rev

ISSUED	SP4049060	10
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