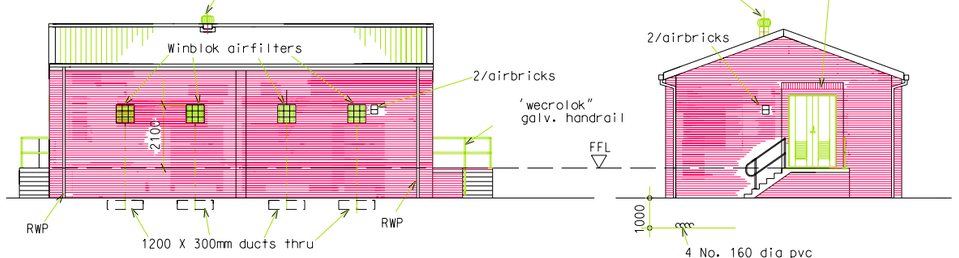
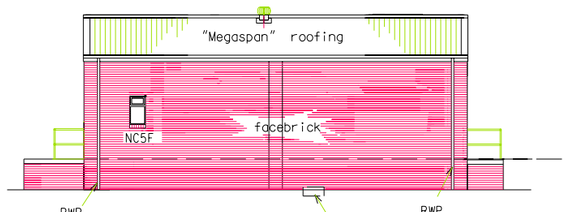
Position of "Whirly bird" : To be a near as possible to the centre of the room but on the side of roof opposite the Cable Trench. (One unit required per 50 square meters of Relay / Switch rm. floor space.)

Precast concrete beam over to inner skin and soldier course to outer skin. Beam to be 2600mm above FFL.



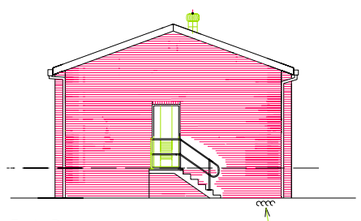
SIDE ELEVATION

FRONT ELEVATION



SIDE ELEVATION

SCALE 1 : 100



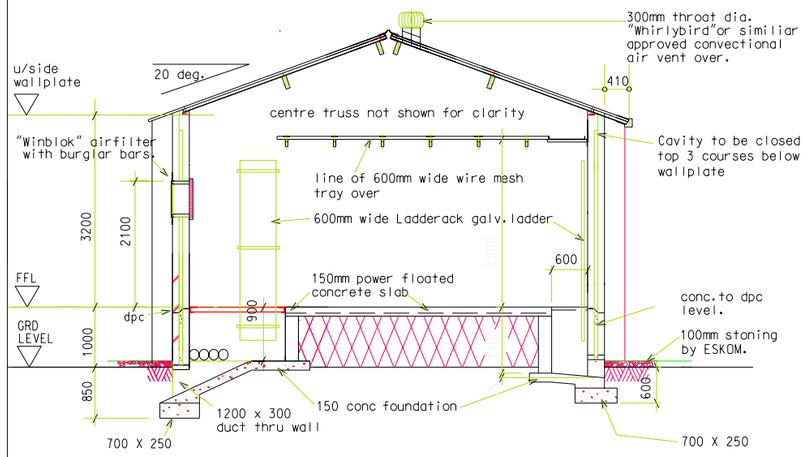
REAR ELEVATION

ROOF CONSTRUCTION

"Megaspan" or equal approved 0.6mm galv. IBR sheeting in 4200mm lengths bonded to 46mm Sagex core with either 0.4mm Chromadek ceiling OR 4mm Nutec fibre/ cement ceiling. Supports to be 220 x 69 PAR SA pine beams as shown. Beams to be max.1735mm c/cs.

TRUSS CONSTRUCTION For Relay/ Switch rooms more than 6000mm in length a supporting truss to be constructed at mid span or every 5000mm. See drg. D-DT- 5074 sheet 15 for details.

WALLPLATE : 108 X 69 shaped wallplate to be tied 600mm into bwk. with galv. hoop iron straps



SECTION A - A

SCALE 1 : 50

FOUNDATIONS GENERALLY :
TYPE1 : For compact non cohesive soils consisting of gravels and sands located above the water table NO reinforcing is required.
TYPE 2 : For stiff or firm cohesive soils consisting of clays and silts the foundation to have a single layer of BRC Weldmesh 617 placed in the centre of the foundation .ie 125mm from bottom of foundation bottom.
TYPE 3 : For soils consisting of soft clays and silts or submerged soils the foundation and the reinforcment to be designed by a registered Civil Engineer.

SPECIFICATION

GENERAL:
This specification to be read in conjunction with ESKOM's Standard Specification and General Conditions of Contract.
Contractor to pay all fees in regard to services supplied by and for the Local Authority.
Portable latrines to be provided and serviced by Contractor.
Contractor to include in his pricing for the temporary supply of water and power for construction purposes.

FOUNDATIONS:
To sizes and depths shown, 220 & 280 walls without adjacent trenches to have 700 x 250 conc. foundations.Concrete to be 15 mPa strength. Reinforcing as shown on Section A - A

WALLS: Below ground : well burnt red hard clay R.O.K. bricks.
Internal walls : Red clay R.O.K. bricks.(min. compressive strength 7 mPa.)
Facebricks : Smooth or rustic IRONSPOTS min.35 mPa or to ESKOM approval and start 1 course below final ground line.
Cavity walls to be 110 - 60 - 110 skins with 60mm cavity

Brikforce : 150mm wide galv. to first 4 courses above foundations and top 3 courses below wallplate. Gables 75mm width every 4th course to ridge. Wallties : Galv. " Butterfly" type, 5 per sq metre in wall, 300 c/c at jambs D.P.C. : Gunplas " Brikgrip " 375 microns, stepped at floor levels in cavity walls, and around openings.
Joints : Facebrick, 10mm raked, all other joints to be keyed for plastering. Every fourth perpend above stepped dpc to be raked clear to drain cavity.

Mortar: 1:4 (cement : sand)

PLASTERWORK:
Internally, 15mm thickness, smooth steel float finish. Mix 1:1:6 (cement:lime:sand). Externally 20mm thickness wood float mix 1:4.

FLOORS: SWITCH /RELAY ROOM
ABE "Korocron" cementatious floor hardener to Manufacturers spec. on 150 mm thickness 30mPa power floated concrete on sand fill compacted in 150mm layers. Reinforcing to be BRC 617 Weldmesh min. 50mm from bottom of slab.

N.B. FLOOR LEVEL TO BE LAYED TO A TOLERANCE OF 0.5MM PER METRE WITH A MAXIMUM OF 2.50MM DIFFERENCE OVER THE LENGTH.

STORE AND WC : 25mm timber floated grano screed on 30 mPa concrete, 100mm thickness.

STEPS AND LOADING BAY : 150mm brush finish 30mPa concrete layed to falls as shown. Reinforcing as Switch rm.

FLOOR FINISHES:
Store room and W/C : Natural grey finish. Relay/Switch room: 2 coats Sika Purigo 5S transparent sealer or equal approved applied after commissioning of panels and switchgear by Contractor.
N.B. NO skirtings required.

Rev 1

CEILINGS: See roof construction.

DOORS: Refer to door schedule drg D-DT-5238 sheet 13 for details.

AIRFILTERS: To be Winblok WI(A)66 fitted with external nat. anodised al. louvre and purpose made al. frame internally. Std burglar bars to be fitted to outside. See detail drg. D-DT-5238 sheet 13.

WINDOW:
Wispeco type NC5F galv. steel. Glazing to be 6mm Georgian wired cast.

SWITCHGEAR RACK OUT STEEL PLATES : Contractor to fix in position (after installation of switchgear by specialist contractor) 3mm thick X 1225mm wide galv. plates with CSK s/steel screws @ 500mm c/cs. See Design document for length required.

SERVICE TRENCHES: Walls to be bagged brick, all trench covers and channels by contractor. Refer to D-DT-5238 Sh.13 for trench details. edging. Trench covers as shown ex 4.5mm thk. "vastrap" 25mm dia lifting holes.

SANITARYWARE: WC : Vaal " Klip" suite white vitreous china with seat & lid, Cobra 'Star' cp stop valve, cp toilet roll holder. Basin: Vaal 'Bantam' 455x290 white vitreous china complete with wall brackets, cp plug & chain. Cobra 'Star cp cold water tap. Hose tap: Cobra No. 108LK

PAINTER: Galv. steel: Galvkleen followed by 1 coat calcium plumbate primer, 1 coat universal undercoat, 1 coat gloss enamel.

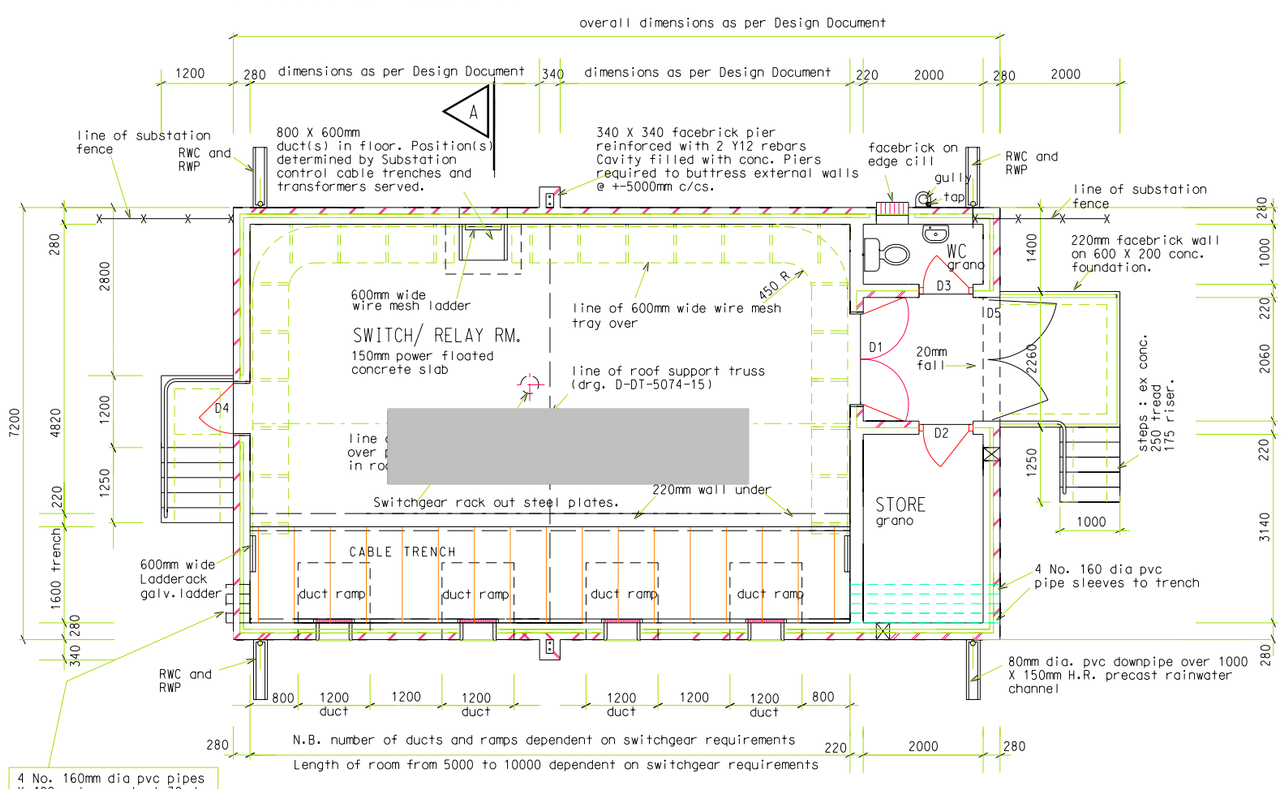
Trench covers: one coat red lead primer, 1 coat u/ undercoat, 2 coats eggshell enamel. Colour: light grey to ESKOM approval.

Internal walls & ceilings: 1 filler coat, 2 coats Dulux "Wash 'n Wear" pva, or similiar approved. colour white. Final coat to be applied by contractor only after commissioning of all electrical equipment by Eskom.

Trusses, purlins and wallplate : 1 coat pink primer, 2 coats flat enamel. Steelwork as above.

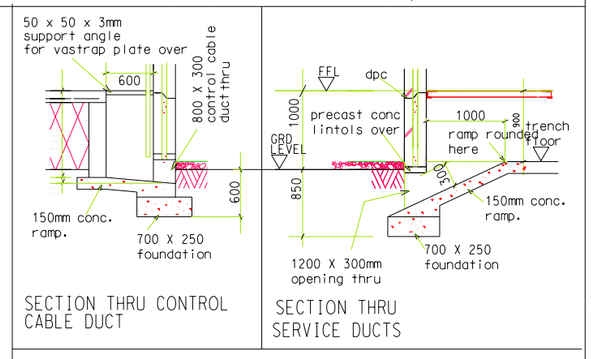
WATER SUPPLY : Run in 20mm copper from water tank supply to wc, external tap and basin.

SUBSTATION YARD SIDE



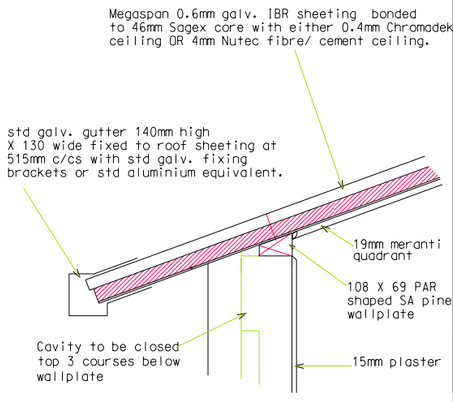
PLAN TYPE 2. (RELAY/SWITCH RM STORE AND WC)

SCALE 1 : 50



SECTION THRU CONTROL CABLE DUCT

SECTION THRU SERVICE DUCTS



DETAIL AT EAVES

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM

N

SCALE 1:

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THIS DRAWING IS THE NEW OFFICIAL REVISION. IT SUPERCEDES ALL OTHER PUBLISHED DRAWINGS.

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DRG NO.	REFERENCE DRAWINGS:
5238 SH.16	LIGHTING AND POWER LAYOUT
5238 SH.15	ROOF TRUSS DETAILS
5238 SH.13	DETAILS AND DOOR SCHEDULE
D-DT-	

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
1	D-DT-5074 CHANGED TO D-DT-5238	PBM	B.P.H	B.P.H.	05/04/2005	
0	DRAWING NO. CHANGED FROM D-DT-5074	VvZ	JFS	JFS	10/12/2002	

Eskom Distribution

AUTH: B.P. HILL
DATE: 10/12/2002
CHKD: J.F. SCHOLTZ
DATE: 10/12/2002
DRAWN: C.GRAY
DATE: 09/12/2002

NATIONAL STD.(SLOPING STEEL ROOF) "COMBO" CONTROL BUILDING TYPE 2 DETAIL PLAN, SECTIONS & ELEVATIONS

D-DT-5238

SET	SHEET	REVISION
16	2	1