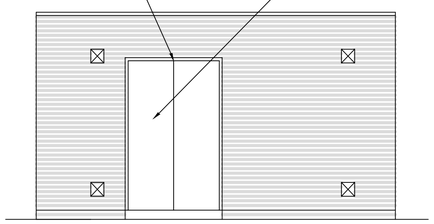
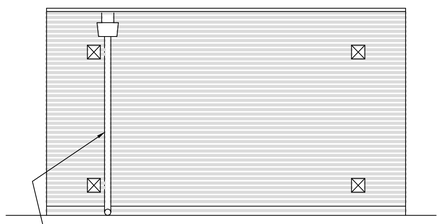
NOTE:
IT IS ESSENTIAL THAT ENERGYNETWORKS PERSONNEL CAN ACCESS AND PROPERLY SECURE ON EGRESS ALL DOORS AT ALL TIMES. ANY HARDWOOD, METALWORK OR GRP CONSTRUCTION DOORS THAT MAY SHRINK, WARP, WIND, DISTORT, CORRODE OR BIND WILL NOT BE ACCEPTABLE

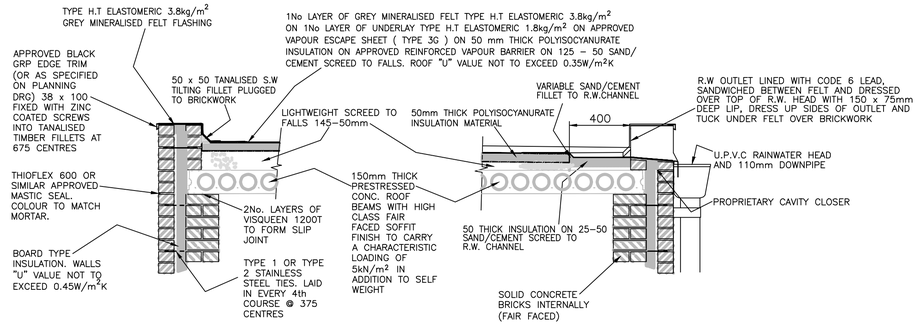


FRONT ELEVATION



REAR ELEVATION

RAINWATER PIPE MAY REQUIRE ANTI-VANDAL GUARDS TO BE FITTED



TYPICAL DETAIL AT HIGH POINT & END BEARING

TYPICAL DETAIL AT ROOF OUTLET & SIDE BEARING

Scale 1:25

NOTES

CONCRETE
THE CONCRETE TO BE IN ACCORDANCE WITH THE SPECIFICATION AND ATTAIN THE RELEVANT CUBE CRUSHING STRENGTH AT 28 DAYS.

FOUNDATIONS (CONCRETE 35N/mm² 28 DAY CUBE STRENGTH)
FOUNDATIONS TO BE SET ON UNDISTURBED INORGANIC STRATA THAT PROVIDE THE REQUIRED MINIMUM DESIGN SAFE GROUND BEARING CAPACITY.

FLOOR (CONCRETE 35N/mm² 28 DAY CUBE STRENGTH)
A FLAT, LEVEL AND SMOOTH FLOOR SURFACE IS ESSENTIAL FOR INSTALLATION OF PLANT. TOLERANCE 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.

BRICKWORK :-TO BE RED SEMI ENGINEERING BRICKS
ALL BRICKWORK BELOW D.P.C. TO BE H.D. CATEGORY 1 MIN. 75 N/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. EXTERNAL FACING BRICKS TO BE H.D. CATEGORY 1 MIN. 30N/mm² MEAN COMPRESSIVE STRENGTH, MAXIMUM 12% M.A. AND DURABILITY DESIGNATION F1 S1 OR BETTER. INTERNAL BRICKS TO BE FAIR FACED SMOOTH TEXTURED SOLID CONCRETE BRICKS, SIZE TO MATCH EXTERNAL FACING BRICKS AND WITH A MEAN COMPRESSIVE STRENGTH OF NOT LESS THAN 20N/mm².

ALTERNATIVE 190mm THICK SOLID DENSE FAIR FACED INTERNAL CONCRETE BLOCKS OF MIN. 17.5N/mm² COMPRESSIVE STRENGTH WOULD BE ACCEPTABLE IN PRINCIPLE; HOWEVER, THIS WOULD HAVE IMPLICATIONS WITH RESPECT TO MANUAL HANDLING.

WALLS ('U' VALUE N.E. 0.45 W/m²K)
LEAVES OF WALLS TO BE TIED TOGETHER BY MEANS OF TYPE 1 OR TYPE 2 STAINLESS STEEL TIES LAID IN EVERY 4TH COURSE AT 375mm CENTRES AND SET BACK 38mm FROM OUTER FACE, TIES ARE TO BE STAGGERED.

WHERE ALTERNATIVE CAVITY WALL CONSTRUCTION IS PROPOSED THE CONSTRUCTOR SHALL CONFIRM BY STRUCTURAL DESIGN CALCULATION TO THE SATISFACTION OF ENERGY NETWORKS THAT THE PROPOSED CAVITY WALL PANEL CONSTRUCTION HAS EQUIVALENT LATERAL STRENGTH OR BETTER THAN THAT DETAILED ON THIS DRAWING (EG STAINLESS STEEL WINKPOSTS OR OTHER STAINLESS STEEL REINFORCEMENT SYSTEM).

DOORS
REFER TO DWG SP4000543 FOR "TYPICAL APPROVED HARDWOOD DOOR CONSTRUCTION DETAILS FOR SECONDARY SUBSTATIONS".
DETAILS OF PROPOSED GRP, GRP FACED ALUMINIUM OR STEEL SECURITY DOORS SHALL BE SUBMITTED TO ENERGYNETWORKS FOR COMMENT, BEFORE WORK COMMENCES.

RAMP AND TRENCH
ON COMPLETION OF CABLING, TRENCH TO BE FILLED WITH DRY SAND AND SKIMMED WITH MINIMUM 50mm DEPTH OF SAND/CEMENT SCREED OVER A VISQUEEN MEMBRANE.

ROOF ('U' VALUE N.E. 0.35 W/m²K)
WHERE A SUPERIMPOSED PITCHED ROOF IS PROPOSED, THE CONCRETE SUB-ROOF SHALL HAVE A WATERPROOF COATING AND PROVISION MUST BE MADE TO SHED RAINWATER FROM THE ROOF SLAB EXTERNALLY IN THE EVENT OF A FAILURE OF THE PITCHED ROOF.

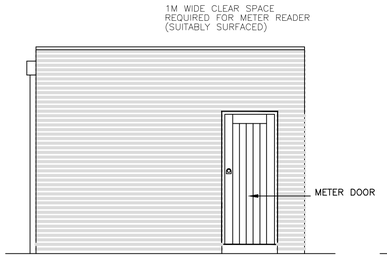
ALL PROPOSALS REGARDING CONSTRUCTION OF THE PITCHED ROOF MUST BE SUBMITTED TO ENERGY NETWORKS FOR COMMENT BEFORE WORK COMMENCES.

FOUNDATION & FLOOR LAYOUT DETAILS INDICATED ARE TYPICAL FOR SUBSTATION BUILDINGS HOUSING H.V. SWITCHGEAR PANELS AND WOULD NOT THEREFORE BE APPLICABLE TO OTHER SUBSTATION TYPES.

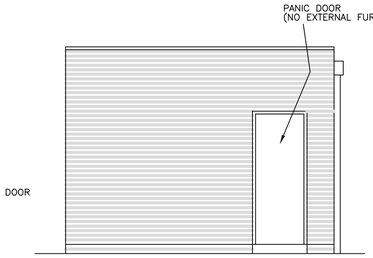
RELATED TYPICAL DEEMED TO SATISFY CONSTRUCTION DRAWINGS

HARDWOOD DOORS	SP4000543
METER CABINET:	SP4000544

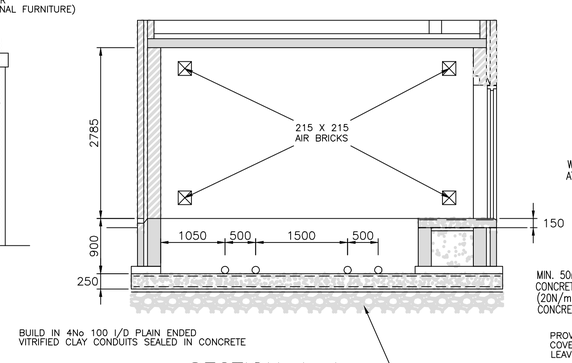
THIS DRAWING TO BE READ IN CONJUCTION WITH SUB-03-017 'GENERAL SPECIFICATION FOR THE CIVIL ENGINEERING AND BUILDING DESIGN AND CONSTRUCTION OF SECONDARY SUBSTATIONS'



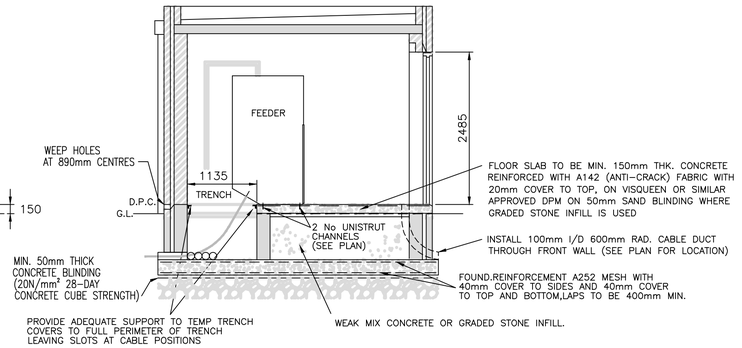
SIDE ELEVATION



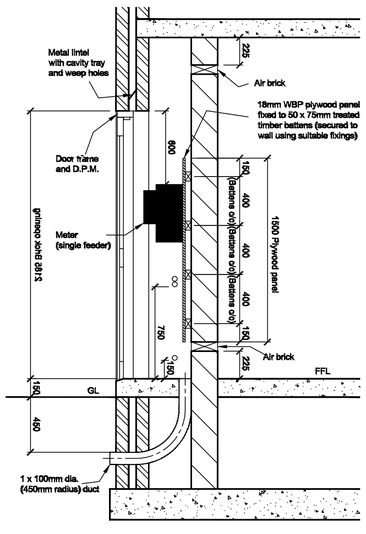
SIDE ELEVATION



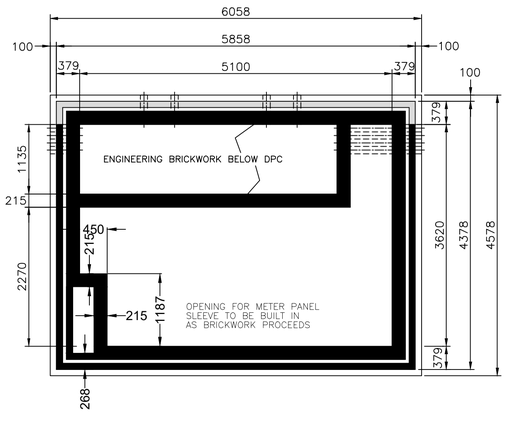
SECTION A–A



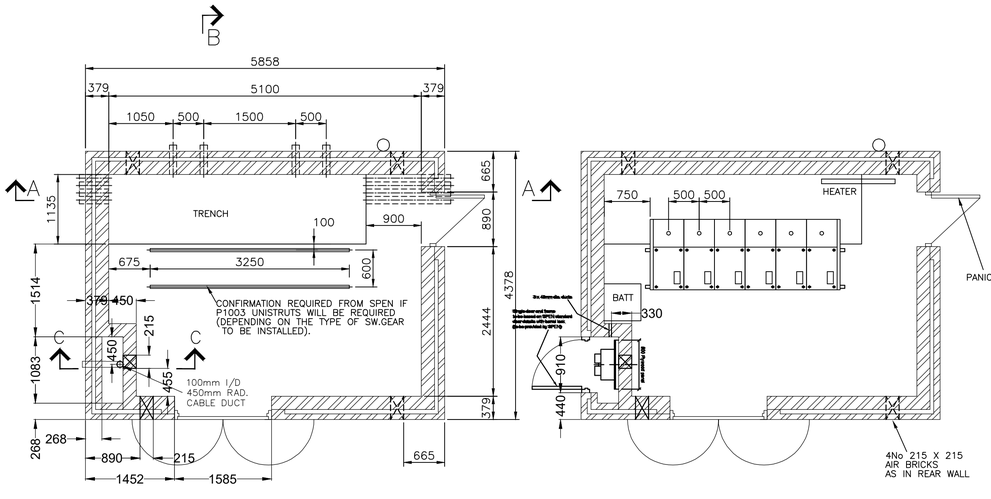
SECTION B–B



SECTION CC – NTS



FOUNDATION PLAN & BRICKWORK BELOW F.F.L.



PLAN

PLAN OF PLANT

NOTES :-

* Fixings to treated timber battens shall be corrosion resistant.
* Fixings to treated timber battens supporting meters shall be designed to safely carry applied loadings to meter operator requirements (meters will typically not exceed 30kg).
* External doors to metering rooms/cabinets shall be to meter operator requirements providing a level of security and weathering appropriate for an enclosure containing live electrical equipment eg:- typical framed tongue and groove boarded hardwood construction to drawing SP4000543 including protective decorative finish.
* Locks to doors to metering rooms/cabinets shall be 'Yale' type night-latch mechanisms; Energy Networks will supply replacement cylinder barrels suited for SP Manweb metering access, to be fitted by the Constructor.

0m 0.5m 1m 2m

Rev	Revision Description	Date	Author/ Reviewer
P2	Annotations Amended	06/02/20	SM/NH
P1	FIRST ISSUE	05/02/20	SM/NH

PRELIMINARY

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Project
UNIT 1
OMEGA WEST WARRINGTON

Client
OMEGA ST HELENS LTD / T.J.MORRIS LTD

Drawing Title
UNIT 1
TYPICAL CUSTOMER SUBSTATION
INFRA DWG 23

Scale	Size	Drawn	Checked	Date
1:50	A1	SM	NH	05/02/2020

Project	Originator	Zone	Level	Type	Role	Number	Rev.
4150	CA	00	00	DR	A	00023	P2