

MV SWITCHGEAR ROOM CUBICLES | EQUIPMENT IN SUBSTATION CONTROL ROOM CIRCUIT 2 POWER PLANT"A" CAPACITOR BANK PROTECTION CONTROL ROOM 12 m2 12 m2 AUXILIARY SERVICES KITCHEN ALWAYS ALWAYS TRANSFORMER MEASUREMENT 6 POWER TRANSFORMER PROTECTION 7 EQUIPPED RESERVE CUBICLE COM UT2 COMMUNICATION PANEL FOR UTILITY (RESERVE) SHOWERS EMS ENERGY MANAGEMENT SYSTEM (RTU) LOCKERS COUPLING BETWEEN BUSBARS SCU SUBSTATION SCADA SYSTEM PV POWER (AREA= 0.95 x MWp +5) NO. WTGs WAREHOUSE COM COMMUNICATION PANEL FOR EDPR 9 COUPLING M1 MEASUREMENT 1 5 MWp 10 MWp 25 MWp 50 MWp 75 MWp 100 MWp 150 MWp M2 MEASUREMENT 2 BUSBAR 2 AUXILIARY SERVICES PANELS AND EQUIPMENTS 1 EQUIPPED RESERVE CUBICLE 12 POWER TRANSFORMER PROTECTION BAT-2 BATTERY CHARGER 1 RB-2 RECTIFIER 2 13 MEASUREMENT BAT-2 BATTERY CHARGER 2 14 CAPACITOR BANK PROTECTION A.C. AUXILIARY SERVICES A.C. 15 AUXILIARY SERVICES TRANSFORMER D.C. AUXILIARY SERVICES D.C. 16 CIRCUIT 1 POWER PLANT "B" SEC SUBSTATION SECURITY SYSTEM 17 CIRCUIT 2 POWER PLANT "B"

APONE DESIGN CORDESPO

ABOVE DESIGN CORRESPOND TO A SUBSTATION WITH TWO WIND FARMS (2 WF) WITH 22-30 WTG IN TOTAL AND ONE LINE BAY (1L) + TWO TRAFO BAYS (2T).
 DIMENSION OF THE POWER PLANT CONTROL ROOM AND WAREHOUSE WILL BE MODIFIED ACCORDING TO THE TABLE ATTACHED. FINAL DIMENSIONS OF THE POWER PLANT CONTROL ROOM AND EQUIPMENT WILL BE DEFINED FOR EACH PROJECT ACCORDING TO MANUFACTURER REQUIREMENTS..
 MV SWITCHGEAR ROOM MUST BE ADAPTED TO THE NUMBER OF MV CUBICLES REQUIRED IN SUBSTATION UNDER DESIGN AND MV CUBICLE MANUFACTURER SPECIFICATIONS OF CUBICLE DIMENSIONS, WALL DISTANCES AND AISLE WIDTH. DEPENDING ON THE MV CUBICLE FINAL MODEL OR IN CASE OF LIMITED SPACE, ALTERNATIVE ARRANGEMENTS, SUCH AS SINGLE ROW OR WALL-STANDING, CAN BE CONSIDERED WITH THE APPROVAL OF EDPR. DISTRIBUTION OF CUBICLES SHALL BE ACCORDING THE PROJECT SLDs. THERE SHALL BE A SPACE FOR ONE FUTURE CUBICLE IN EACH MV BUSBAR.

4. LAYOUT OF ROOMS CAN BE CHANGED TO ADAPT THE ACCESS AND GENERAL LAYOUT BUT PHILOSOPHY MUST BE KEPT UP:
- WAREHOUSE MUST BE ACCESSIBLE FROM THE MV SWITCHGEAR OR SUBSTATION CONTROL ROOM. THE MAIN DOOR MUST BE PREPARED FOR VEHICLE ACCESS, INCLUDING FORKLIFTS AND PALLET TRUCKS. VEHICLES MUST ONLY REMAIN IN THE WAREHOUSE TO LOAD AND UNLOAD MATERIALS. PARKING IS NOT ALLOWED.

- KITCHEN MUST BE ACCESSIBLE FROM POWER PLANT CONTROL ROOM AND SUBSTATION CONTROL ROOM.

- IN NORMAL OPERATION, THE DOOR BETWEEN KITCHEN AND SUBSTATION CONTROL ROOM, WAREHOUSE AND MV SWITCHGEAR ROOM AND/OR WAREHOUSE AND SUBSTATION CONTROL ROOM MUST BE CLOSED AND THE KEY MUST BE UNDER THE CONTROL OF 0&M EDPR.

- THE ACCESS HATCH TO THE CABLE BASEMENT IN THE MV SWITCHGEAR ROOM WILL HAVE AN ANTI-CLOSING SYSTEM AND THE RISK OF FALLING AT A DISERBENT LEVEL WILL BE SIGNIFICATION IN THE INSIDE OF THE HATCH'S DOOR.

- THE ACCESS HATCH TO THE CABLE BASEMENT IN THE MV SWITCHGEAR ROOM WILL HAVE AN ANTI-CLOSING SYSTEM AND THE RISK OF FALLING AT A DIFFERENT LEVEL WILL BE SIGNPOSTED IN THE INSIDE OF THE HATCH'S DOOR.

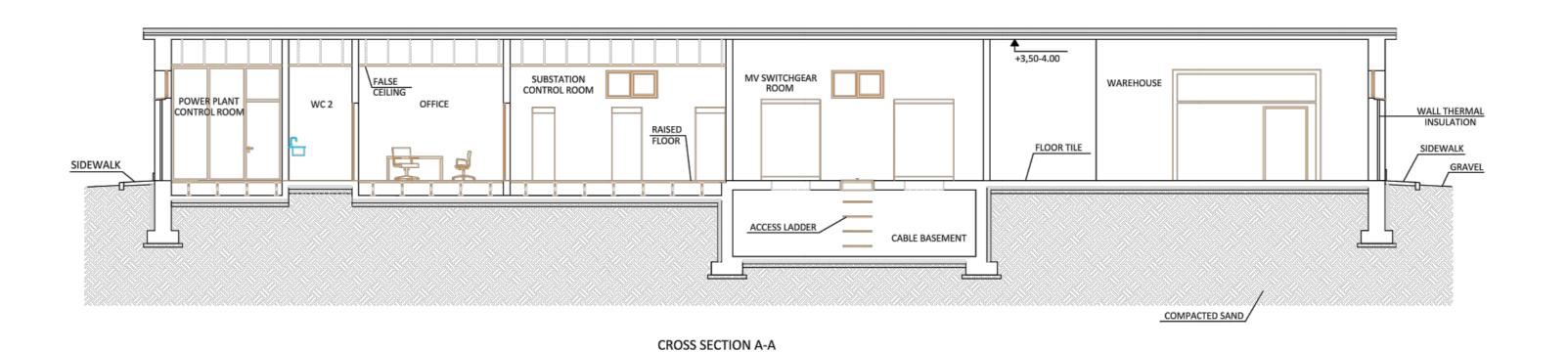
- POWER PLANT CONTROL ROOM, WAREHOUSE, AND GENERATOR SET ROOM SHALL NOT BE ACCESSIBLE FROM SUBSTATION SWITCHYARD, IN ORDER TO AVOID PRESENCE OF NON-AUTHORIZED PERSONNEL IN HIGH VOLTAGE AREAS.

- HALL 2 IS REQUIRED FOR GEOGRAPHIES WITH HIGH PRESENCE OF SNOW. IT CAN BE ELIMINATED WITH THE APPROVAL OF EDPR.

5. THE GEN SET ROOM AREA MUST BE ADAPTED TO THE FINAL EQUIPMENT RESPECTING AT LEAST 1 M OF AISLE ON BOTH SIDES OF THE GENERATOR SET.

CONTROL BUILDING STRUCTURE MUST BE CALCULATED ACCORDING TO LEGISLATION AND ENVIRONMENTAL CONDITIONS OF THE AREA. THE LAYOUT OF WINDOWS CAN BE MODIFIED.

ALL THE SPACES SHALL COMPLY WITH THE LOCAL H&S REGULATIONS.
 SEE SPECIFICATION TCSP-EU_E&C-SBST-00054 "DESIGN AND CONSTRUCTION OF SUBSTATION CONTROL BUILDING" FOR MORE DETAILS.



NOTES:

1.-THIS IS AN INDICATIVE DRAWING. BUILDING MUST BE CALCULATED ACCORDING TO LOCAL AND

INTERNATIONAL LEGISLATION.

2.- CABLE BASEMENT: MINIMUM HEIGHT MUST BE 1,7 M.

3.- THE SLOPE OF THE ROOF WILL DEPEND ON THE LOCATION OF THE BUILDING (CLIMATIC CONDITIONS). IF NEEDED, ROOF-MOUNTED SNOW FENCES MUST BE CONSIDERED.

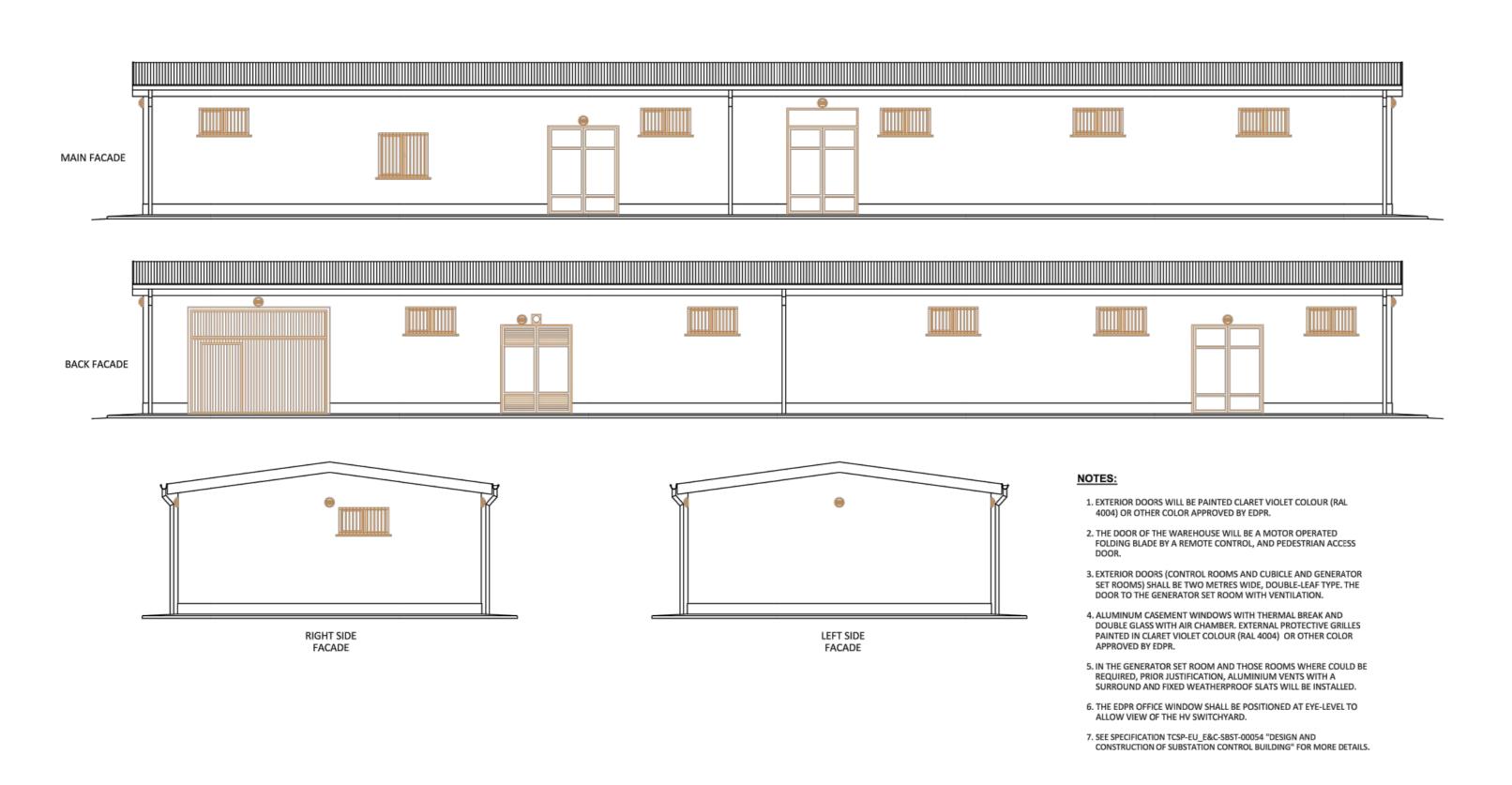
4.- FALSE CEILING SHALL BE INSTALLED IN THE FOLLOWING ROOMS: POWER PLANT CONTROL ROOM,

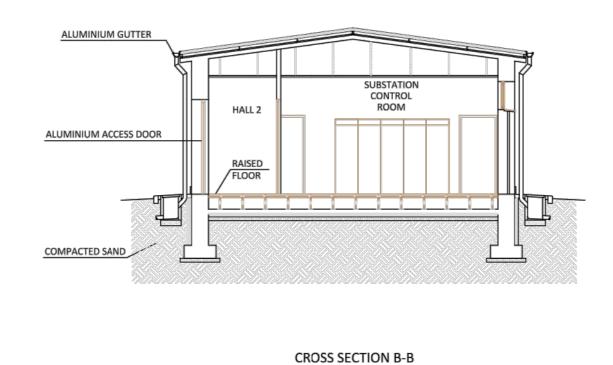
SUBSTATION CONTROL ROOM, KITCHEN AND WCS.

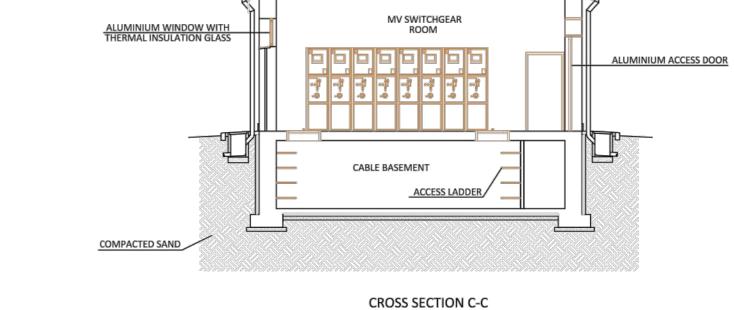
5.- RAISED ACCESS FLOOR WILL BE INSTALLED IN THE CONTROL ROOMS, POWER PLANT AND SUBSTATION.

6.- CONCRETE FLOOR WITH EPOXY RESIN WILL BE INSTALLED IN MV SWITCHGEAR ROOM
7.- ALL ACCESSES TO THE BUILDING FOR CABLES THROUGH THE STRUCTURE MUST BE PERFECTLY SEALED BY WATERTIGHT WALL BUSHINGS.

8.- SEE SPECIFICATION TCSP-EU_E&C-SBST-00054 "DESIGN AND CONSTRUCTION OF SUBSTATION CONTROL BUILDING" FOR MORE DETAILS.







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VICTORIA SOLAR FARM PROGETTO PER LA REALIZZAZIONE E L'ESERCIZIO DI UN PARCO AGROVOLTAICO DA 190 MWP NEI COMUNI DI ACATE E VITTORIA E **DELLE OPERE DI CONNESSIONE ALLA RETE DI TRASMISSIONE NAZIONALE** Architettonico Edificio sottostazione di Elevazione VISTI E APPROVAZIONI METRAN srls Via Gen. C. A. Dalla Chiesa n. 40 90143 Palermo CF e P. IVA 06514460820 PEC: metran@pec.it SOGGETTO PROPONENTE COLLABORAZIONE SPERIMENTALE UNIVERSITÀ di Agricoltura, degli STUDI Alimentazione Via Lepetit n. 8-10 20124 Milano CF e P. IVA 11064600965 di CATANIA e Ambiente Di3A Validato: Eseguito: FEBBRAIO 2022 P.U.A. - art. 27 D.Lgs 152/06 e ss.mm.ii. ingg. Di Martino - Trentacosti ingg. Di Martino - Trentacosti SETTEMBRE 2023

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