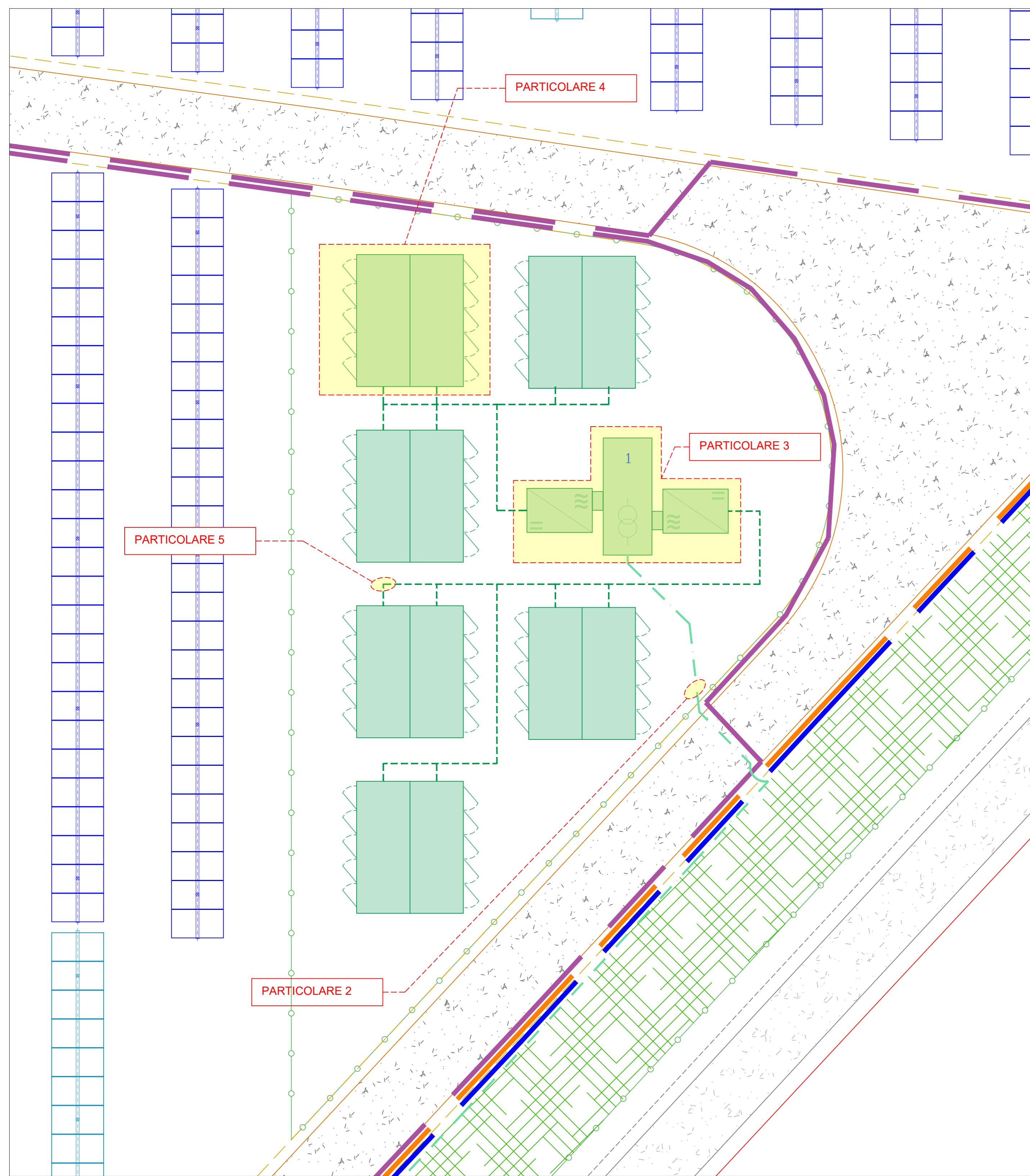
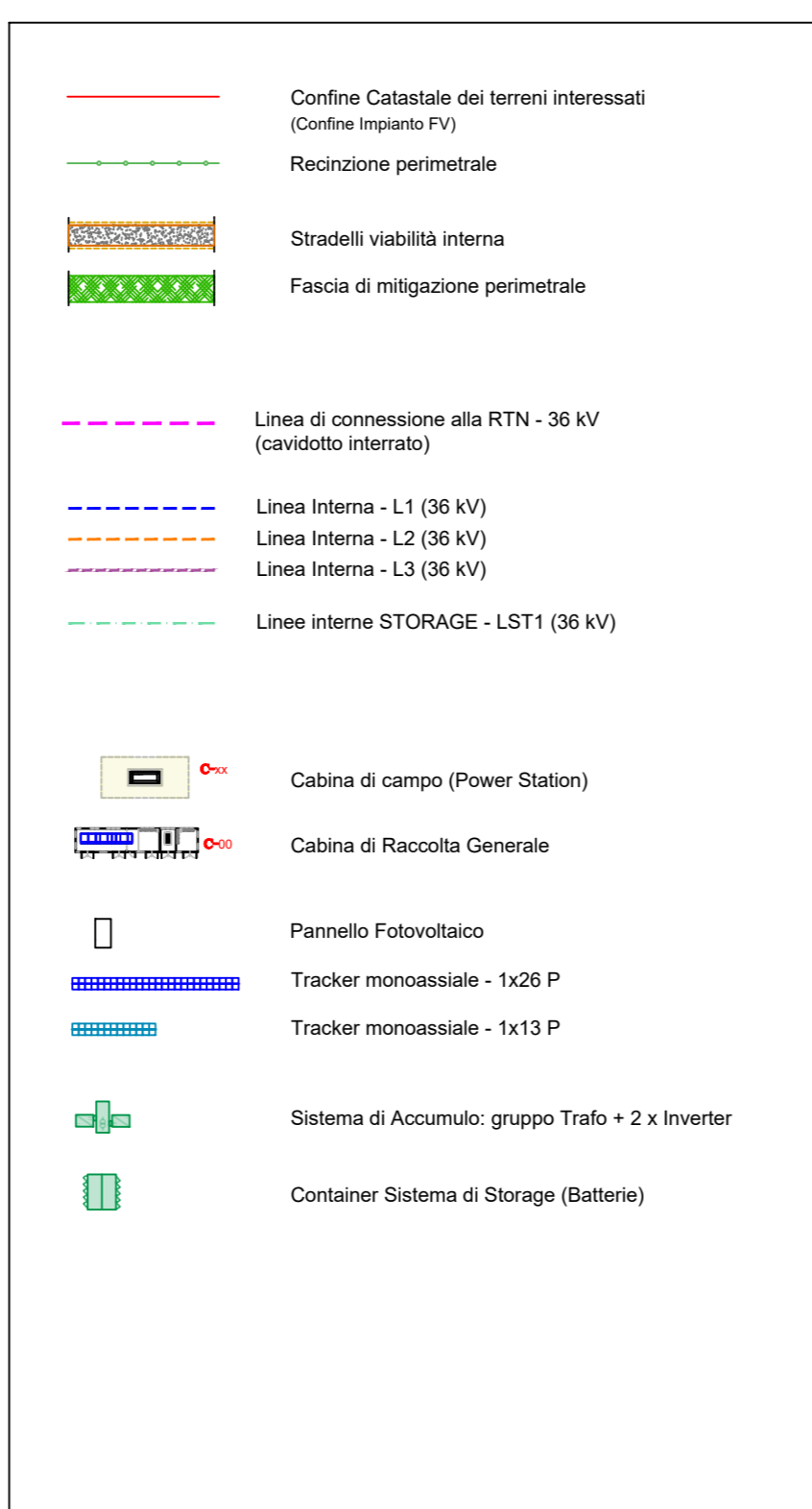


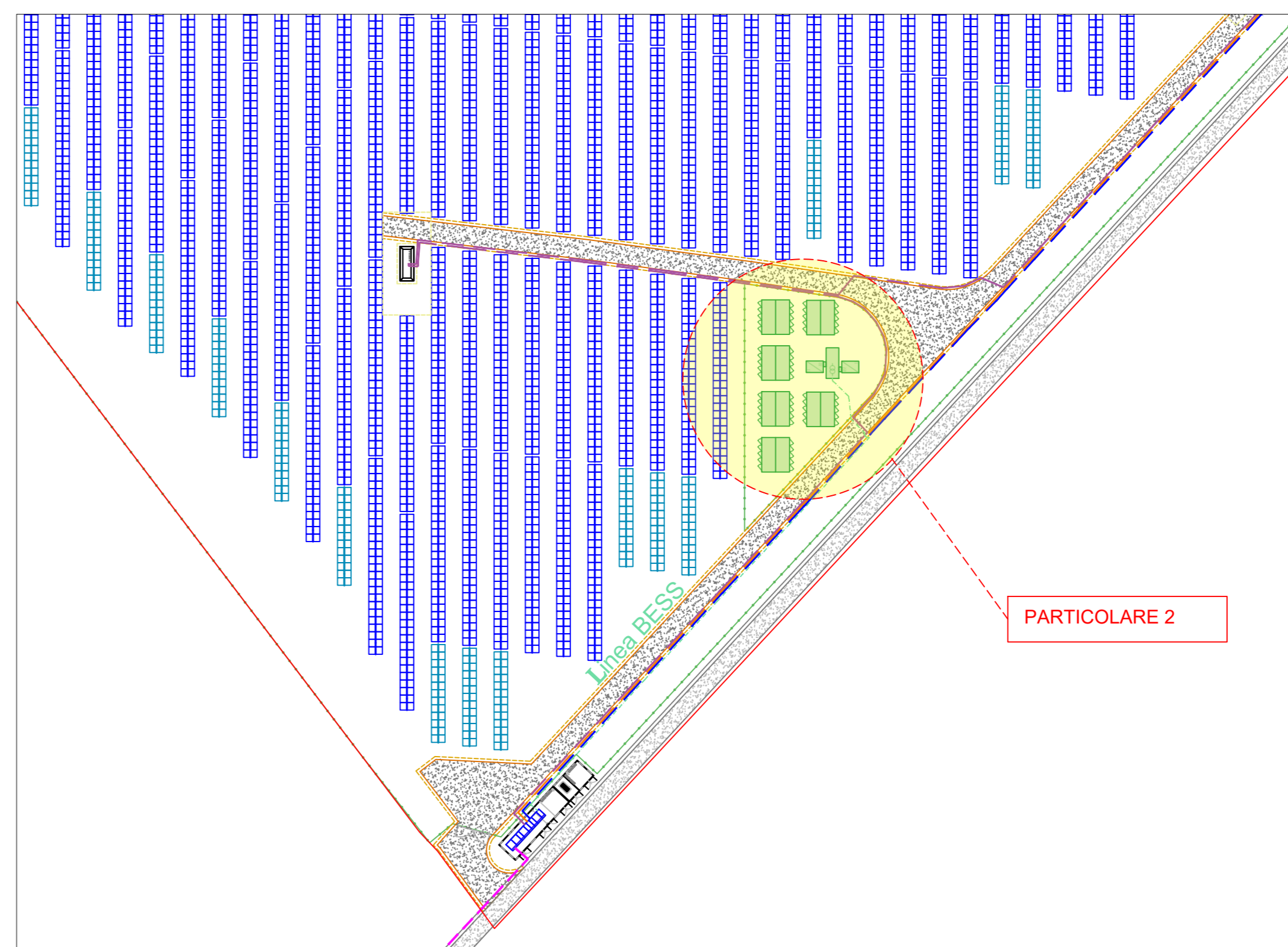
PARTICOLARE 2: DISPOSIZIONE COMPONENTI PER IMPIANTO STORAGE (BESS)



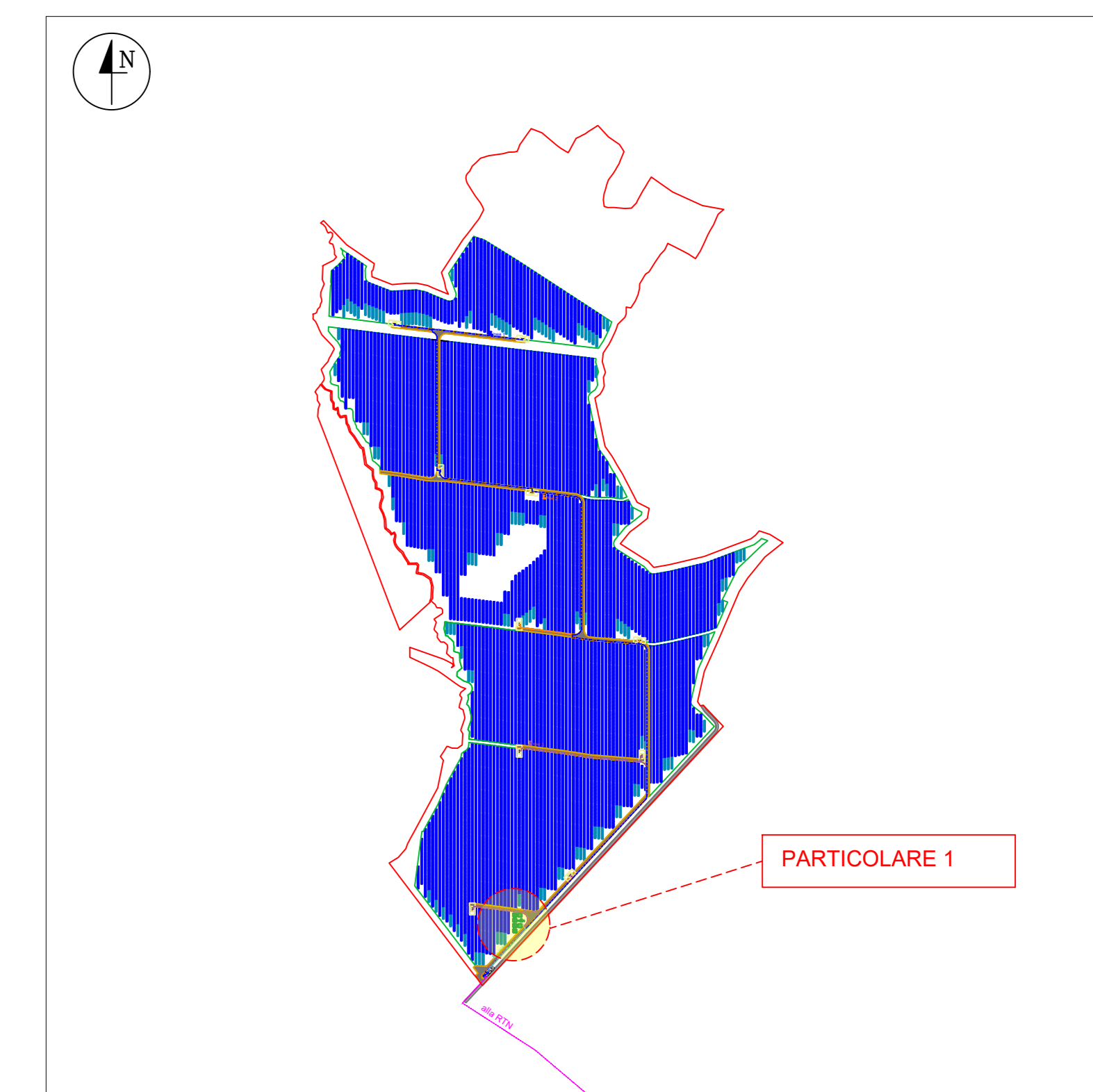
LEGENDA



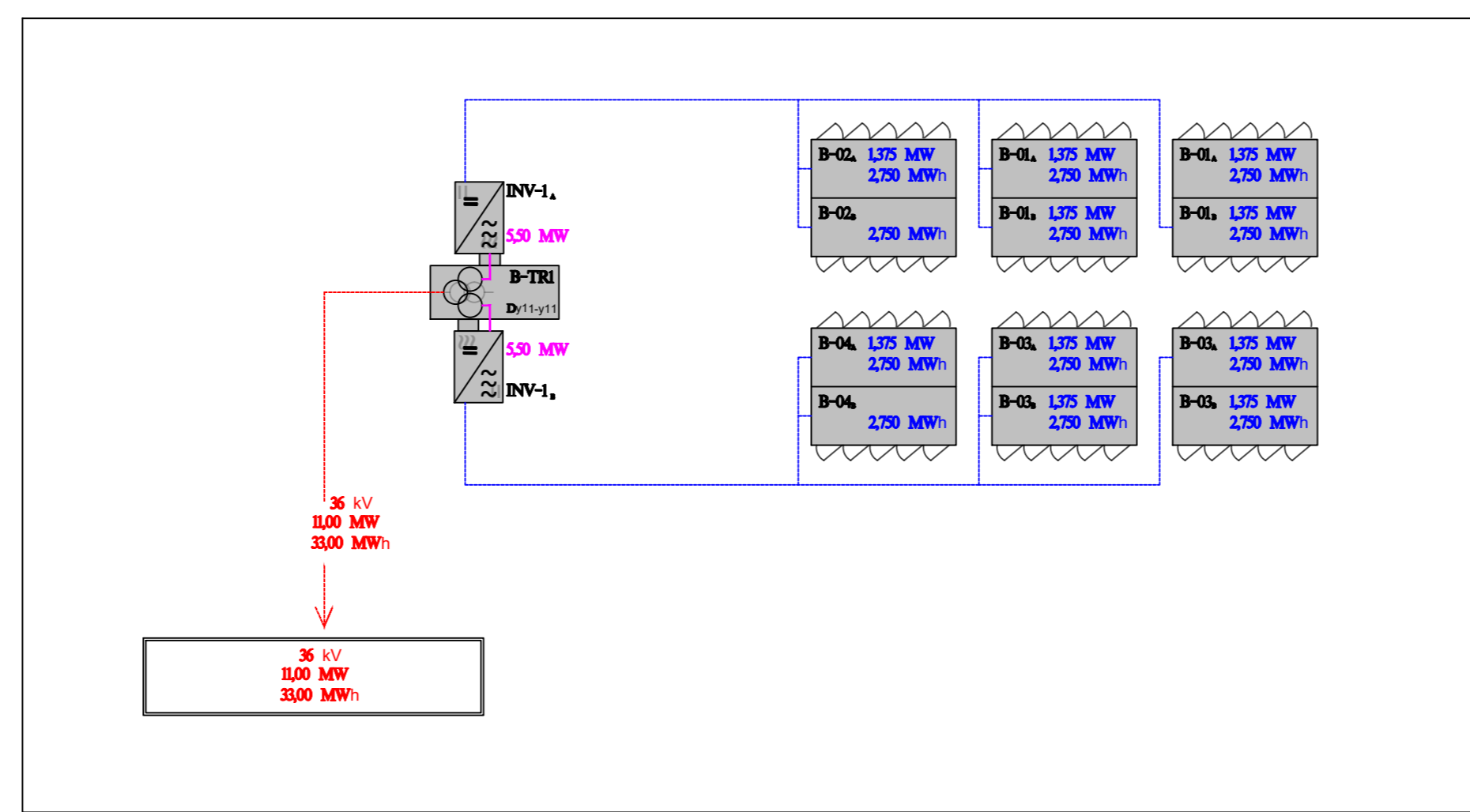
PARTICOLARE 1: AREA IMPIANTO STORAGE (BESS)



LAYOUT DELL'IMPIANTO FV



SCHEMA DI COLLEGAMENTO DEL SISTEMA DI ACCUMULO



PARTICOLARE 4: CONTAINER BATTERIE

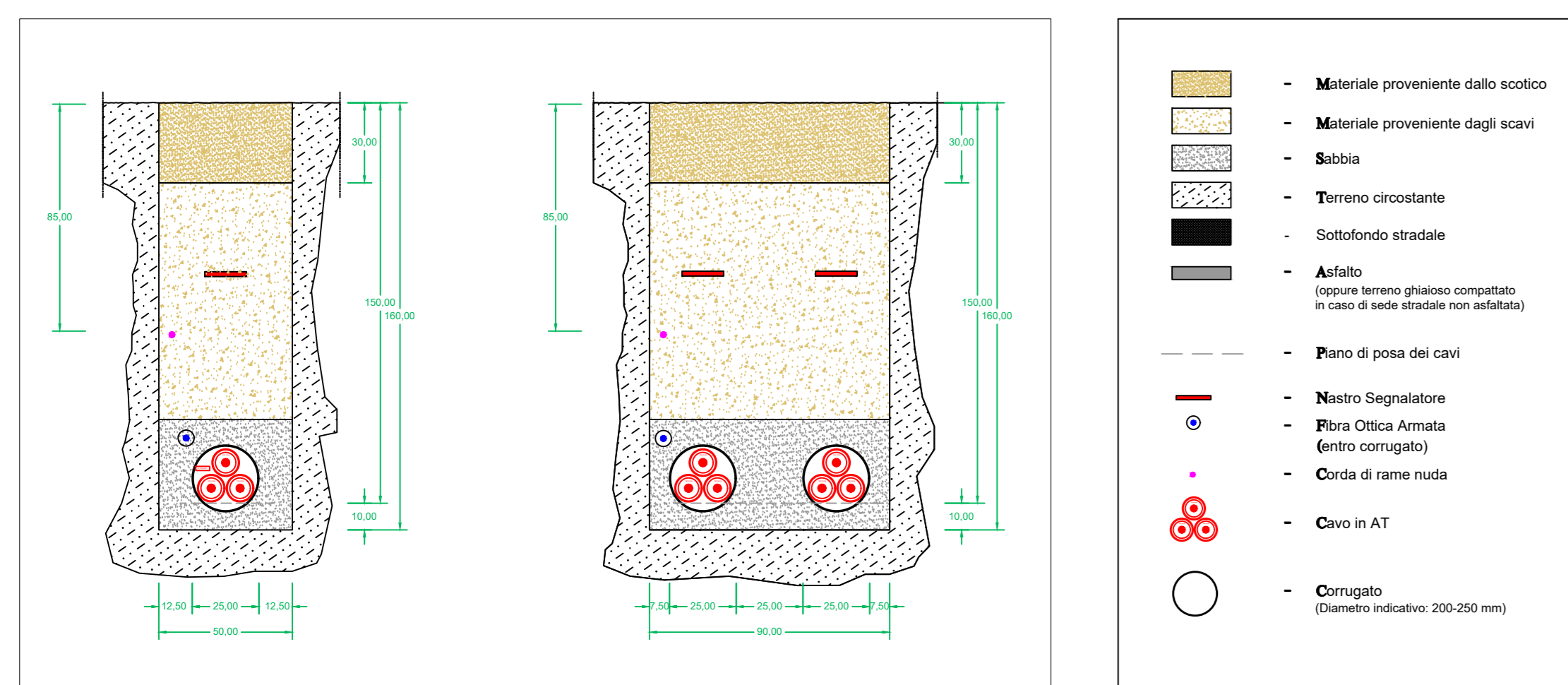
SolBank
CSI-SPB-S048280V01

POWER ELECTRONICS		TWIN SKID COMPACT	
TECHNICAL CHARACTERISTICS		TECHNICAL CHARACTERISTICS	TWIN SKID COMPACT
BATTERY	Power range @ 40 °C: 800 kVA - 8780 kVA Power range @ 50 °C: 2000 kVA - 4000 kVA Max. AC Output Current @ 40°C: 6.5 kA / 11 kV / 13.5 kV / 15 kV / 20 kV / 22 kV / 25 kV / 30 kV / 33 kV / 35 kV LV voltage range: 690 V / 615 V / 690 V / 640 V / 660 V / 690 V Transformer model: 03MVA Transformer voltage: 690/110 kV Transformer protection: Protection relay for pressure, temperature (two levels) and gas leak. Monitoring of electric field intensity: PF100 optional.		
HIGH VOLTAGE EQUIPMENT	Transformer ratio: 03MVA Transformer protection: Protection relay for pressure, temperature (two levels) and gas leak. Monitoring of electric field intensity: PF100 optional.		
ENVIRONMENT	Temperature range: -30°C to +50°C (max. 40°C) Relative humidity: 4% to 95% non-condensing Clear power capacity: 3.0 kVA - 40 kVA at 600 V (3-phase), 50 / 60 Hz (integrated in the inverter) Clear cabinet: Integrated in the inverter (by default). Optionally, LV cabinet in the area. Clearance: 1.8 m (min. 1.5 m) Clearance: 1.8 m (min. 1.5 m) Clearance: 1.8 m (min. 1.5 m)		
AUXILIARY SERVICES	Clear power capacity: 3.0 kVA - 40 kVA at 600 V (3-phase), 50 / 60 Hz (integrated in the inverter) Clear cabinet: Integrated in the inverter (by default). Optionally, LV cabinet in the area. Clearance: 1.8 m (min. 1.5 m) Clearance: 1.8 m (min. 1.5 m) Clearance: 1.8 m (min. 1.5 m)		
OTHER EQUIPMENT	Clear power capacity: 3.0 kVA - 40 kVA at 600 V (3-phase), 50 / 60 Hz (integrated in the inverter) Clear cabinet: Integrated in the inverter (by default). Optionally, LV cabinet in the area. Clearance: 1.8 m (min. 1.5 m) Clearance: 1.8 m (min. 1.5 m) Clearance: 1.8 m (min. 1.5 m)		
STANDARDS	Compliance: IEC 60371-2-1, IEC 60371-200, IEC 60478, IEC 61439-1		

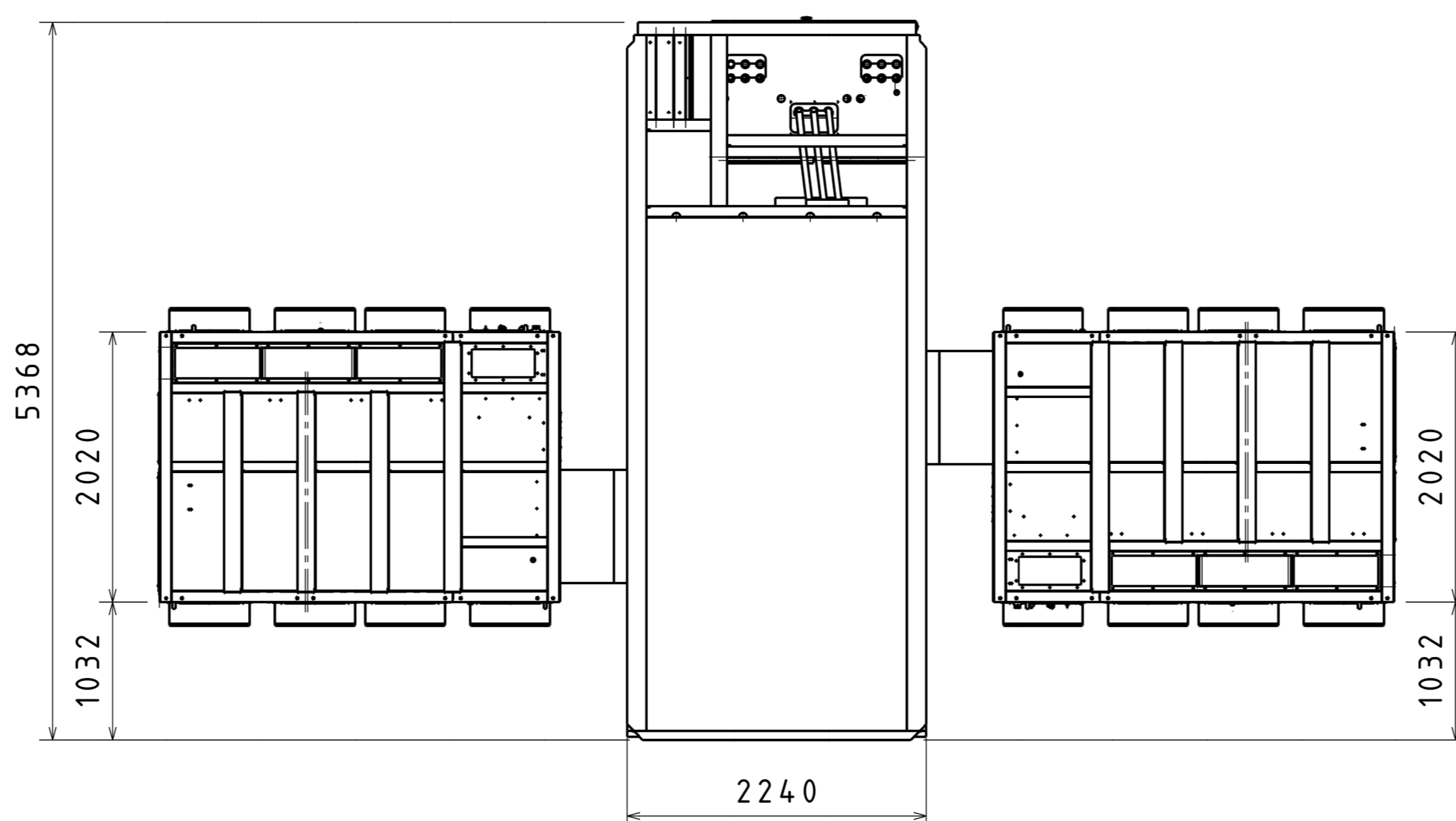
PARTICOLARE 3: GRUPPO INVERTER + TRAFIO BT/AT

TECHNICAL CHARACTERISTICS		FREEMAQ MULTI PCSK 690V	
REFERENCES	FRAME 2 2155	FRAME 4 4070	FRAME 6 6074
AC	AC Output Power (VA/kVA) @40°C: 2155 Max. AC Output Current @ 40°C: 1807 Operating grid voltage (VAC): 690V ±10% Operating grid frequency (Hz): 50/60 Hz Current harmonics distortion (THD): < 3% per IEEE519 Power factor (cosφ) min: 0.95 (leading, 0.95 lagging) Reactive power compensation: Four quadrant operation DC voltage range: 690-1000V DC voltage ripple: < 2%		
EFFICIENCY & AUX. SUPPLY	Efficiency (Max) (%) (preliminary): 98.64% Efficiency (Min) (%) (preliminary): 98.45% Max Power Consumption (kW) (preliminary): 8 Dimensions (WxDxH) (mm): 1180 x 640 x 1710 Weight (kg) (preliminary): 11465 Type of ventilation: Forced air cooling		
ENVIRONMENT	Degree of protection: IP20 Temperature ambient temperature: -30°C to +45°C / -20°C to +50°C (Power derating >30°C) Relative humidity: 4% to 100% non-condensing Max. altitude (above sea level): 2000m / 20000ft (power derating data: 4000m) Noise emission: < 70 dBA		
CONTROL INTERFACE	Communication protocol: Modbus TCP Power Plant Controller: Power Plant Controller		
PROTECTIONS	Ground Fault Protection: Insulation monitoring device Humidity control: Active heating General AC Protection & Disconnection: Circuit Breaker General DC Protection & Disconnection: DC switch in Overvoltage Protection: AC and DC protection fuse S1		
CERTIFICATIONS	Safety: UL1741, CSA 22.2 No.107-1, IEC 61439-1, IEC 61439-2 UL 1741 S&T - Feb. 2018, IEEE 1547.1-2008		

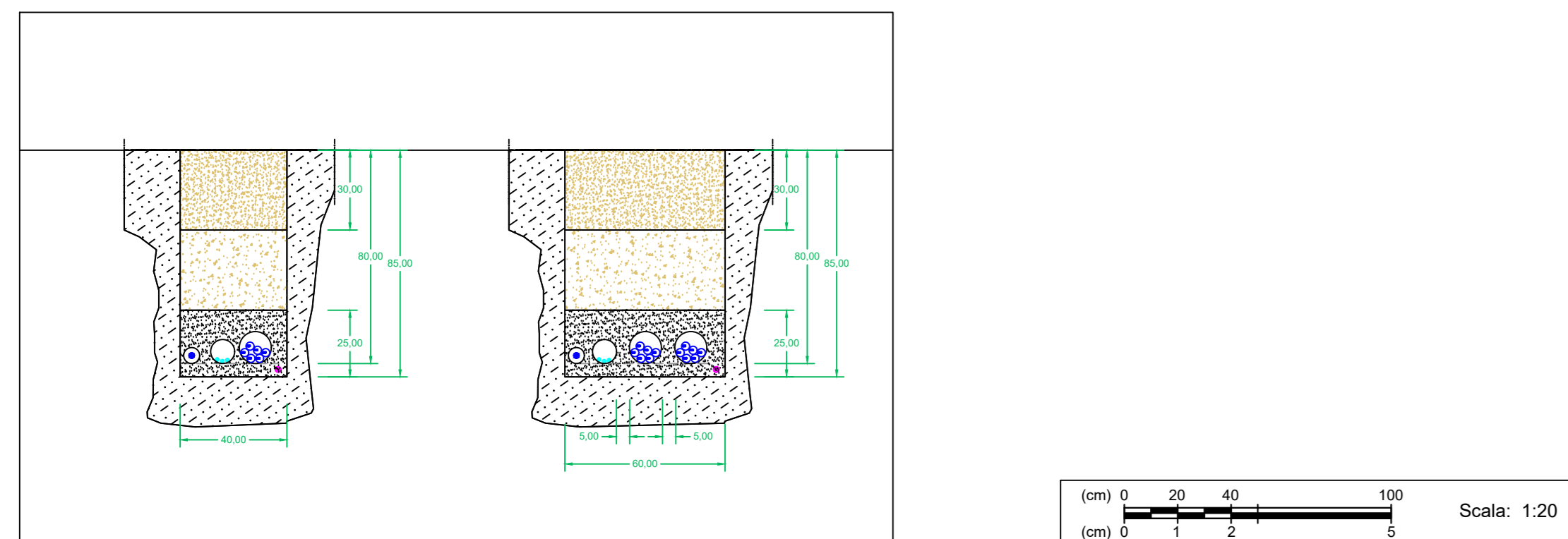
PARTICOLARE 2: SEZIONE SCAVO AT



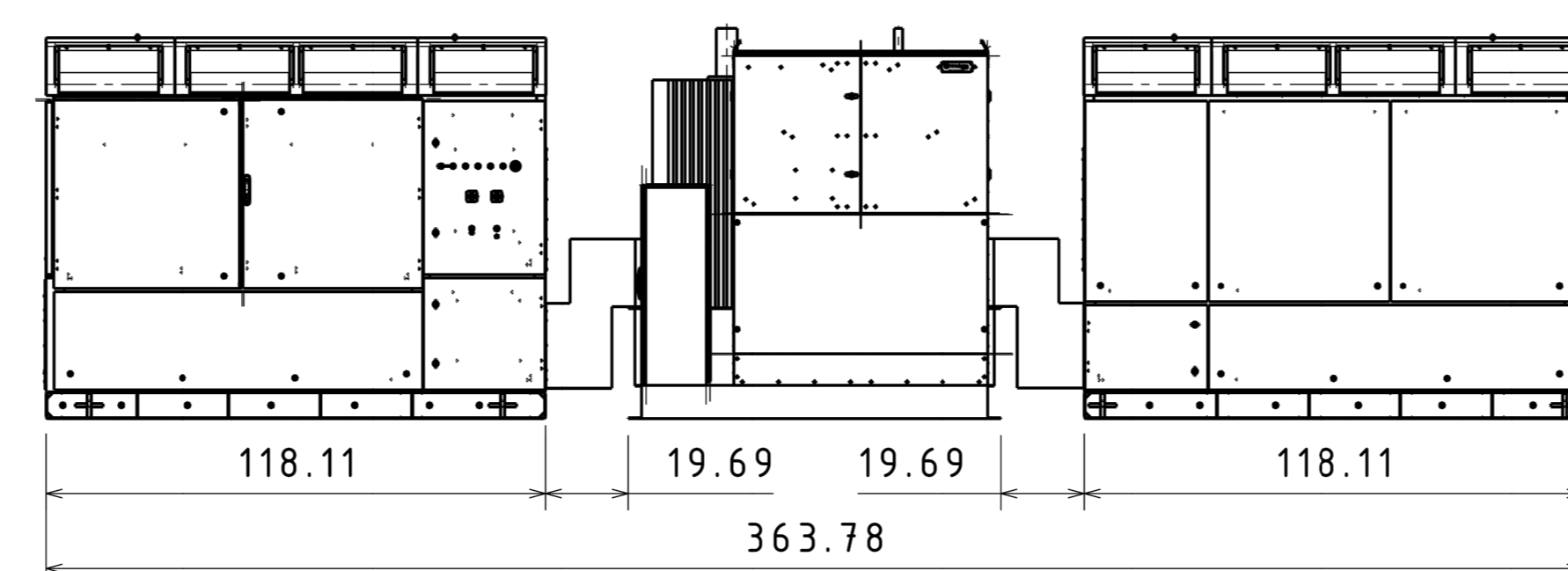
GRUPPO INVERTER + TRAFIO BT/AT:
Vista dal basso



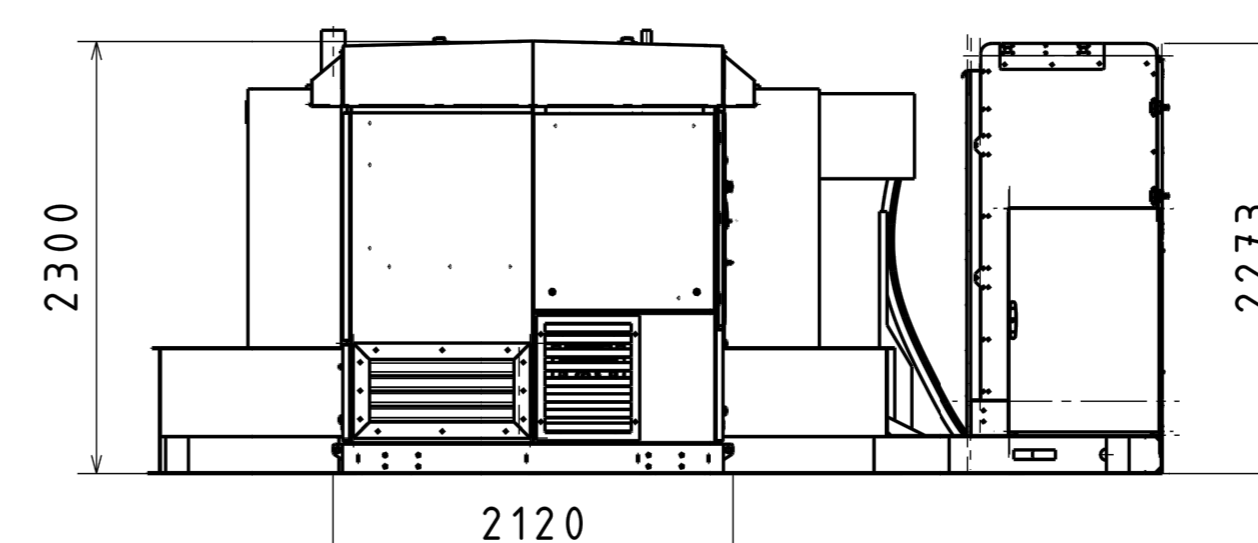
PARTICOLARE 5: SEZIONE SCAVO BT



Vista frontale



Vista laterale



REGIONE AUTONOMA DELLA SARDEGNA
COMUNE DI GUSPINI
Provincia del Sud Sardegna (SU)

PROGETTO DEFINITIVO PER LA REALIZZAZIONE DI UN IMPIANTO AGROVOLTAICO AVANZATO DENOMINATO GUSPINI 5
Loc. "Putzu Nieddu", Guspini (SU) - 09036, Sardegna, Italia
Potenza Nominale: impianto FV 29'997,50 kWp

Committente - Sviluppo progetto FV: ApolloSolar 3 S.r.l. Viale della Stazione n. 7 - 39100 Bolzano (BZ) P.IVA 03187660216, PEC: apolloSolar3srl@pecimpres.it	Gruppo di lavoro - VIA (La SIA S.p.A.) Riccardo Sacconi - Ingegnere Civile Antonio Deodari - Ingegnere Idraulico Giulio Alberto Anca - Architetto Simone Mancioni - Geologo Francesco Paolo Pinchera - Biologo
Coordinamento Progettisti Innova Service S.r.l. Via Santa Margherita n. 4 - 09124 Cagliari (CA) Agr. Rita Boki - Agronomo P.IVA 03378940921, PEC: innovaserviceca@pec.it	Progettazione Agronomica (La SIA S.p.A.) Agr. Stefano Atzeni - Agronomo Agr. Franco Millo - Agronomo Agr. Rita Boki - Agronomo Progettazione Elettrica Ing. Silvio Matta - Ing. Elettrico
Coordinamento gruppo di lavoro VIA La SIA S.p.A. Viale Luigi Schiavonetti n. 286 - Roma (RM) P.IVA 08207411003, PEC: direzione.lasia@pec.it	

Elaborato: **DETTAGLI APPARECCHIATURE STORAGE**

Codice elaborato TAV_EL_08-STORAGE	Scala 1:200 1:40	Formato A0
REV. DATA R00 Maggio 2024	ESEGUITO Ing. Silvio Matta - Ing. Elettrico	VERIFICATO Innova Service S.r.l.
		APPROVATO Apollo Solar 3 S.r.l.

Note