

BUILDING A

Technical services that make care possible

Electrical / Lighting / Water / Solar

Preliminary coordination set • Revision 0.3
For colleagues, architect, contractor and PV installer

23 OCTOBER 2026

RUMAH KAMBERA – BUILDING A
Technical Coordination | Electrical, Lighting, Plumbing & Solar
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ARCHITECTURAL CONCEPT VIEW • NOT AN AS-BUILT PHOTO

Plan now. Change less later.

A working review of proposed installation positions, before wall chases and floor works.

THE QUESTION

Will each room have what people actually need to work safely?

This is not an execution drawing.

Locations, circuit ratings, cable runs, water routes and the solar handover remain subject to technical review.

Clinical work

01

Furnitures positions, medical equipment, hygiene and emergency lighting.

Laboratory and pharmacy

02

Sample handling, handwashing, refrigeration and/or heat.

Workshops and storage

03

Tools, charging stations, task lighting and safe wet areas.

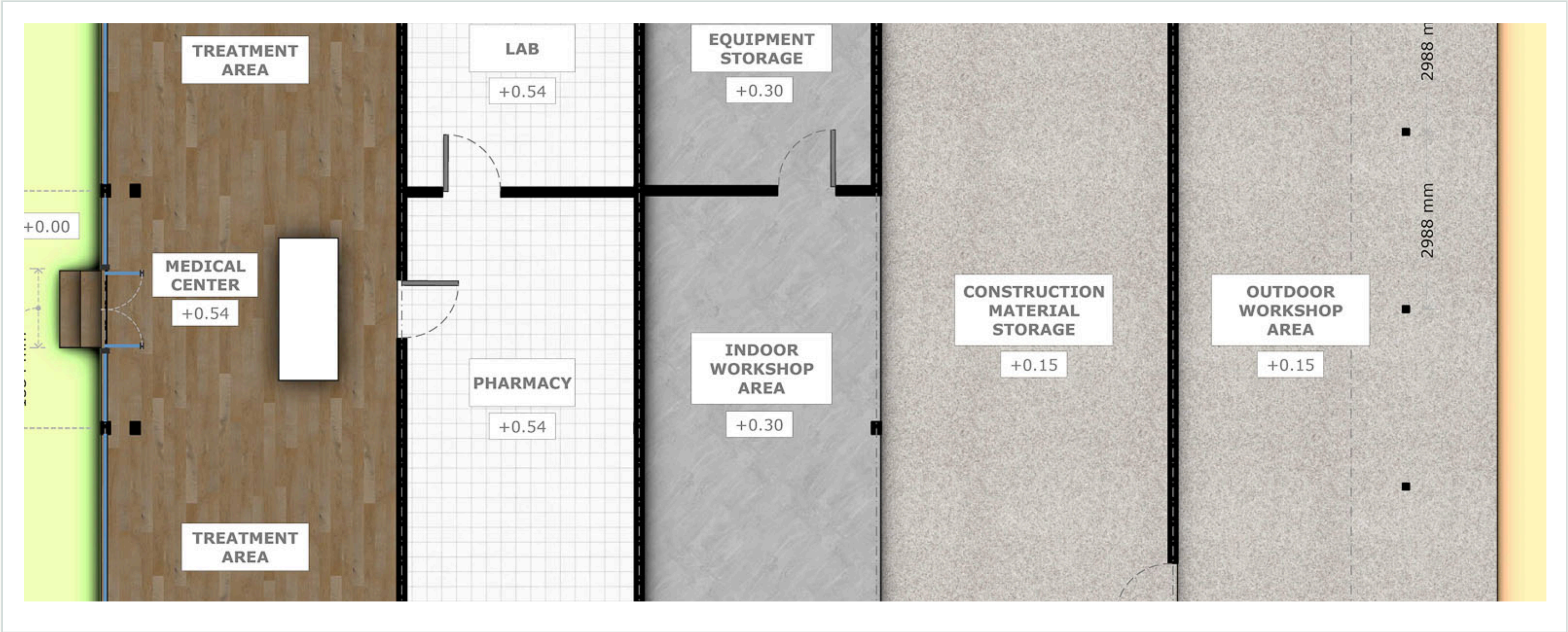
Supply infrastructure

04

Site water, 3-phase solar supply, backup loads and technical-room location.

One building. Seven working areas.

The base drawing below is architectural; proposed installation marks follow on the next three slides.



01 MEDICAL CENTRE
Two treatment areas

02 LAB + PHARMACY
Handwashing and sample use

03 EQUIPMENT + WORKSHOP
Storage, charging and tools

04 MATERIALS + OUTDOOR
Delivery, fabrication and lighting

108 proposed installation points

These are proposed locations, not the final number of circuits, devices or material quantities.

108

NUMBERED
POINTS

Electrical / lighting / water

Coordination drawings: 3

33

double sockets

08

equipment feeds

06

RJ45 data

24

interior LEDs

12

exterior lights

10

switches

04

emergency lights

05

basins / sinks

02

outdoor taps

02

floor drains

01

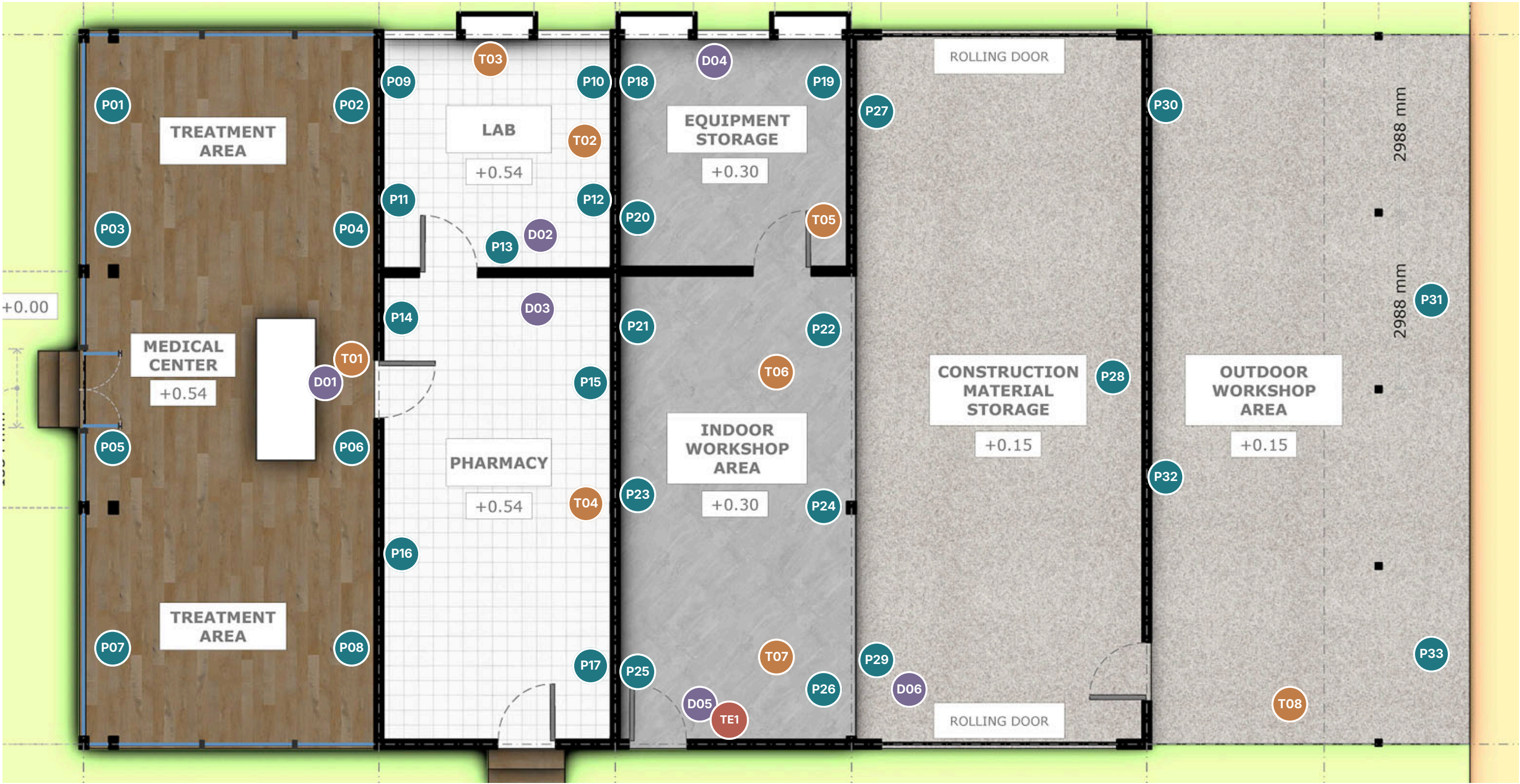
water shutoff

01

AC board

Electrical outlets & data

All proposed power, data and dedicated-load points are individual editable markers.



48

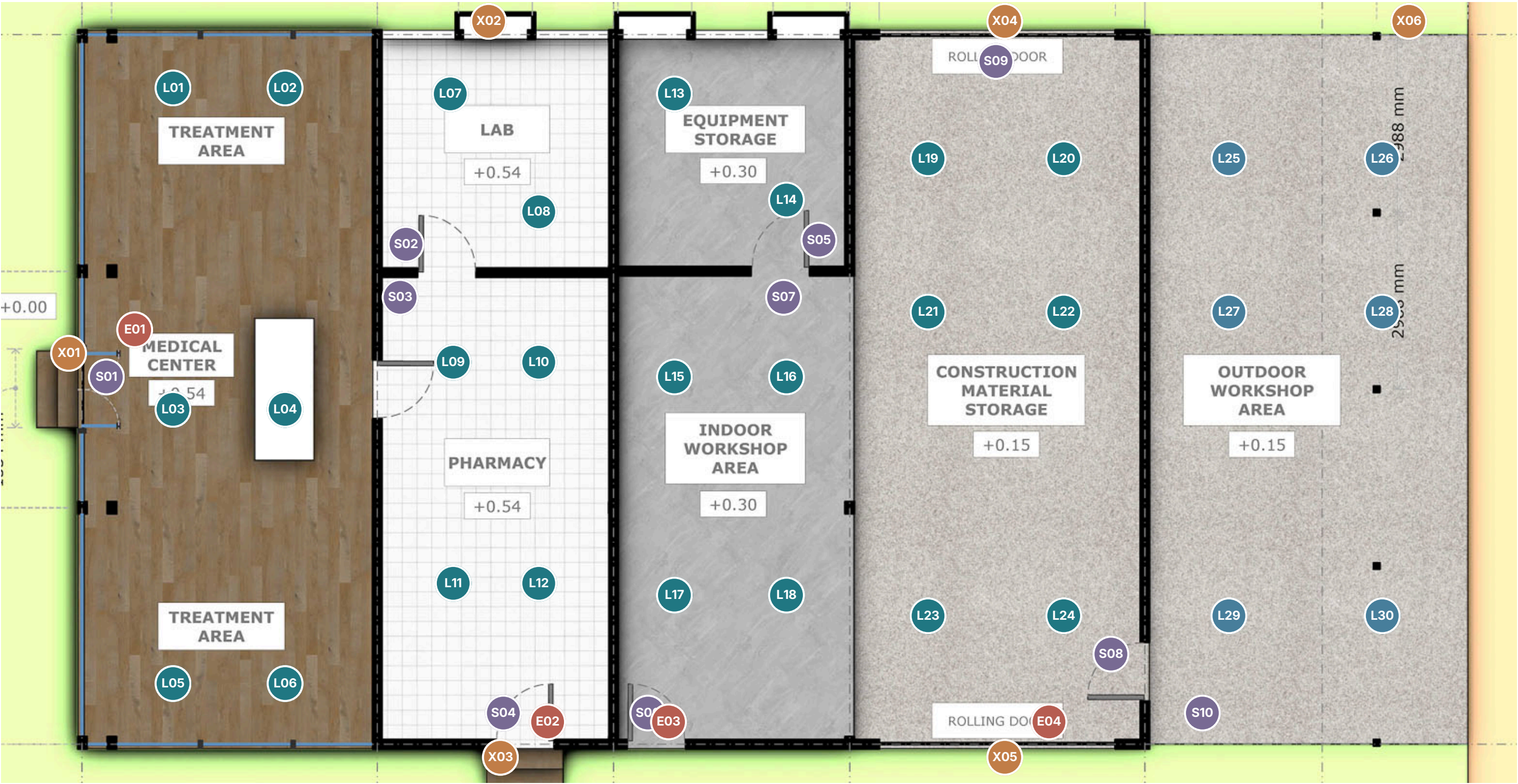
POINT LEGEND

- P01-P33**
Double sockets
- T01-T08**
Equipment feeds
- D01-D06**
RJ45 data
- TE1**
Distribution

Indicative XY positions only.
Inspect room use before
chasing walls.

Lighting & safety

LED, switch, facade and emergency lighting locations. Final lux levels are not yet designed.



50

POINT LEGEND

- L01-L24**
Indoor LED
- L25-L30**
Workshop LED
- X01-X06**
Facade lights
- S01-S10**
Switch points
- E01-E04**
Emergency

Open workshop roof coverage remains unknown.

Water supply & drainage

A plan of fixture locations, not a verified pipe or wastewater routing design.



10

POINT LEGEND

- W01-W05**
Basins / sinks
- R01-R02**
Outdoor taps
- G01-G02**
Floor drains
- A01**
Main shutoff

Verify drains, water source and site wastewater system.

One sink does not fit every purpose.

Water connections are easy to draw. Safe wastewater decisions require the actual clinical and laboratory uses.

W01 + W02

MEDICAL CENTRE

Two staff handwashing basins. Confirm access near treatment stations, taps, soap and drying facilities.

W03

LABORATORY — HANDWASH

Handwashing only. Must not receive reagents or liquid laboratory waste.

W04

LABORATORY — SAMPLES

Dedicated sample-preparation sink. Wastewater handling depends on actual reagents and tests.

W05

INDOOR WORKSHOP

Utility sink with trap, strainer and protection against coarse solids.

ALSO VERIFY

2 outdoor taps • 2 floor drains • 1 shutoff valve • no WC shown in Building A

The solar equipment is now specified.

Supplier quotation received in October 2026. Exact device model numbers and electrical design are still pending.

20 × 630

Wp

**TRINA bifacial
PV modules**

12.6 kWp DC array

10

kW AC

DEYE hybrid inverter

3-phase • low voltage

32

kWh

LiFePO₄ batteries

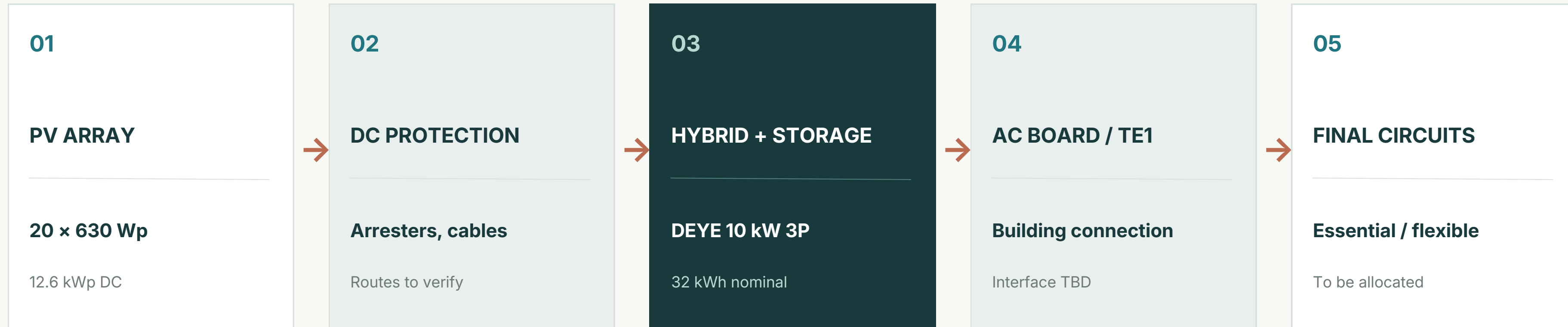
2 × 16 kWh nominal

ON-GRID HYBRID ≠ AUTOMATIC BACKUP GUARANTEE

Confirm PLN connection, operation during outages, usable battery energy, motor starting and site-wide loads with the installer.

A supply chain, not yet a wiring diagram.

Each interface below must be assigned to either the PV supplier or building electrical contractor.



THE DIVIDING LINE

The PV package is quoted separately. Building wiring, AC interface, board and final circuits require their own scope and no double charging.

No cable sizing, phase allocation or connection diagram approved at this stage.

Essential first. Flexible when power allows.

A 10 kW three-phase inverter and 32 kWh of nominal batteries do not establish night-time autonomy.

01 / CRITICAL FUNCTIONS

Possible essential loads

Selected clinical lighting

Essential medical equipment, if identified

Pharmacy refrigeration, if installed

Communications and basic networking

02 / VARIABLE CONSUMPTION

Flexible workshop loads

High-power workshop machinery

Pumps and motors with start-up surges

Non-critical outlets and charging

Future cooling equipment (if selected)

Confirm actual W ratings, daily use-hours, phase balance and motor starts before sizing the backup circuits.

The batteries need a proper technical room.

Location is open. Neither option has been approved or priced as a finished enclosure.

OPTION A

Near the east workshop

A separate, secure partitioned enclosure beside the workshop side of Building A.

Keep away from machines, water, welding and combustible material.

OPTION B

Separate technical room

A dedicated small building with protected feeder route to Building B.

Reserve ducts, weatherproof entry and a maintainable service route.

REQUIREMENTS FOR EITHER OPTION

Security • heat and moisture management • ventilation • fire strategy • maintenance access • cable distances

The supplier quote has one unresolved difference.

All prices below reproduce the owner-supplied offer, not independently verified supplier terms.

SUPPLIER GRAND TOTAL

IDR

244,020,519

Including 15% NGO discount and quoted 11% VAT

Original gross offer: IDR 258,633,300

PV SECTION / QUOTED	IDR 90,633,300
BATTERY SECTION	IDR 132,500,000
SERVICES	IDR 35,500,000
PV ITEM TOTALS / RECOUNTED	IDR 94,133,300

IDR 3,500,000 — TO RECONCILE

The supplier PV subtotal omits the listed 10 m AC cable amount. Request written clarification before accepting the final total.

Room-by-room installation schedule

Proposed point counts from the electrical, lighting and plumbing drawings; not a circuit design.

AREA	SOCKET	DEDIC.	LED / FACADE	SWITCH	WATER	RJ45
Medical Centre	8	1	6	1	2	1
Laboratory	5	2	2	1	2	1
Pharmacy	4	1	4	2	0	1
Equipment Storage	3	1	2	1	0	1
Indoor Workshop	6	2	4	2	1	1
Construction Materials Storage	3	0	6	2	0	1
Outdoor Workshop	4	1	6	1	2	0
External Facades	0	0	6	0	0	0

IN ADDITION 4 emergency lights • 2 floor drains • 1 isolation valve • 1 AC distribution board

Electrical BOQ / points and protection

Proposed contractor scope EL-01 to EL-12. Confirm brands, circuit designs and local safety obligations.

REF	DESCRIPTION	QTY	UNIT	STATUS / SCOPE
EL-01	Double earthed socket outlets	33	pcs	Required
EL-02	Dedicated equipment power points	8	pcs	Provisional
EL-03	RJ45 data connection points	6	pcs	To approve
EL-04	Main electrical distribution board	1	pcs	To study
EL-05	Earthing and equipotential bonding	1	lot	To study
EL-06	Residual-current protection and breakers	1	lot	To study
EL-07	Surge protection device	1	lot	To study
EL-08	Indoor LED light fittings	24	pcs	To confirm
EL-09	Outdoor workshop LED fittings	6	pcs	Provisional
EL-10	Weatherproof facade light fittings	6	pcs	To confirm
EL-11	Lighting control switch points	10	pcs	To confirm
EL-12	Self-contained emergency lights	4	pcs	To approve

One P point represents one DOUBLE socket. All unit prices remain to be supplied by contractor.

Electrical BOQ / routes and PV interface

Proposed contractor coordination EL-13 to EL-22. Solar vendor scope must be reconciled before pricing.

REF	DESCRIPTION	QTY	UNIT	STATUS / SCOPE
EL-13	Cables, conduits, boxes and fixings	TBD	m/lot	To measure
EL-14	Electrical testing and commissioning	1	lot	To study
EL-15	Reserved solar conduit routes	TBD	m	To measure
EL-16	Future air-conditioning provision	TBD	pcs	Optional
EL-17	Inverter-to-building AC interface	TBD	lot	To design
EL-18	Essential / flexible load separation	1	lot	To design
EL-19	Solar technical room / secure enclosure	TBD	lot	Separate quote
EL-20	PV generation and battery package	TBD	lot	Supplier offer
EL-21	PV-side DC wiring and protection	TBD	lot	Supplier offer
EL-22	Energy monitoring and PV handover	TBD	lot	Supplier offer

EL-20 / EL-21 / EL-22 are already shown in supplier solar quotation; avoid duplicate charges.

Water & drainage BOQ

Proposed PL-01 to PL-12. Final pipe size, route, pressure and treatment destination are not established.

REF	DESCRIPTION	QTY	UNIT	STATUS / SCOPE
PL-01	Medical handwashing basins	2	pcs	Proposed
PL-02	Laboratory handwashing basin	1	pcs	Proposed
PL-03	Laboratory sample-preparation sink	1	pcs	Provisional
PL-04	Indoor workshop utility sink	1	pcs	Proposed
PL-05	Outdoor taps with hose fittings	2	pcs	Proposed
PL-06	Floor drains and drain covers	2	pcs	To confirm
PL-07	Accessible main water shutoff valve	1	pcs	To confirm
PL-08	Water supply pipes, fittings and valves	TBD	m	To measure
PL-09	Greywater drains, chambers and traps	TBD	m	To measure
PL-10	Roof rainwater collection and downpipes	TBD	m	To measure
PL-11	Water pump, filter and possible tank	TBD	lot	Optional
PL-12	Separate laboratory effluent management	TBD	lot	To study

Laboratory W04 wastewater route must be reviewed according to actual analyses and reagents.

The next drawing should be a team decision.

Use this presentation to collect changes. Confirm technical details before requesting execution quotations.

01**CLINICAL + LAB**

- ☐ Treatment beds and furniture locations
- ☐ Critical appliances and refrigeration
- ☐ Sink and sample-prep uses
- ☐ Room-by-room lighting needs

02**ENGINEERING**

- ☐ Cable runs, board and earthing
- ☐ Water pressure and wastewater system
- ☐ Lighting mounts and outdoor roof cover
- ☐ Battery room safety and feeder

03**SOLAR SUPPLIER**

- ☐ Exact DEYE and battery models
- ☐ Outage mode and essential circuits
- ☐ Site coverage, 3-phase loads and surge
- ☐ IDR 3.5m quote discrepancy

REVIEWED BY: _____ DATE: _____ DESIGNER / CONTRACTOR: _____

PRELIMINARY • NOT FOR CONSTRUCTION. All point locations remain approximate and must be verified on site.