



PETRA
Programme for Earthquake
and Tsunami Infrastructure
Reconstruction Assistance

KFW



TECHNICAL PRESENTATION

ITB-UNDP-PETRA-143286-004-2021

RECONSTRUCTION OF TWO PUBLIC MARKET
OMU SIGI DISTRICT & SIBADO DONGGALA DISTRICT



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ISSUE

1. The economic sector, both the formal and informal sectors, is an important aspect that can support the progress of a region and even a nation. Whether an area is progressing or not is determined by the area's capacity. To improve economic recovery in post-disaster can be done through reconstruction of traditional markets
2. Follow-up to BPBD Letter number 800/145/BPBD-SIGI related to the proposed priority activities for Community Infrastructure Development through the UNDP PETRA program



BACKGROUND

Part of PETRA Output (2) that aim for community infrastructure rehabilitation and reconstruction to support livelihood recovery, decisions on which activities are to be identified and prioritized by the communities themselves and further consulted with the district/ municipality.

The component is intended for community works which covers rehabilitation and reconstruction of public market, clean water sources, storage and distributions, drainages or irrigation channel, pedestrian, and vehicular roads (including sidewalks, trail track, small bridges and culvert), etc.



BACKGROUND

The specific objective is to improve, expand and maintain basic services and social facilities at community level to pursue resilient and sustainable livelihood.

The expected results from this program component are

- a) reconstructed community infrastructure in to support livelihood recovery in Central Sulawesi, and
- b) restored minimum household capacity for restarting and improving their livelihood.

Community, cultural & environmental considerations

It must also be aware of community and political sensitivities, most vulnerable groups, biases and practices toward religious practices, child labor, LGBT, people with disabilities, and female headed family in infrastructure labor intensive works and drivers of family survival initiatives

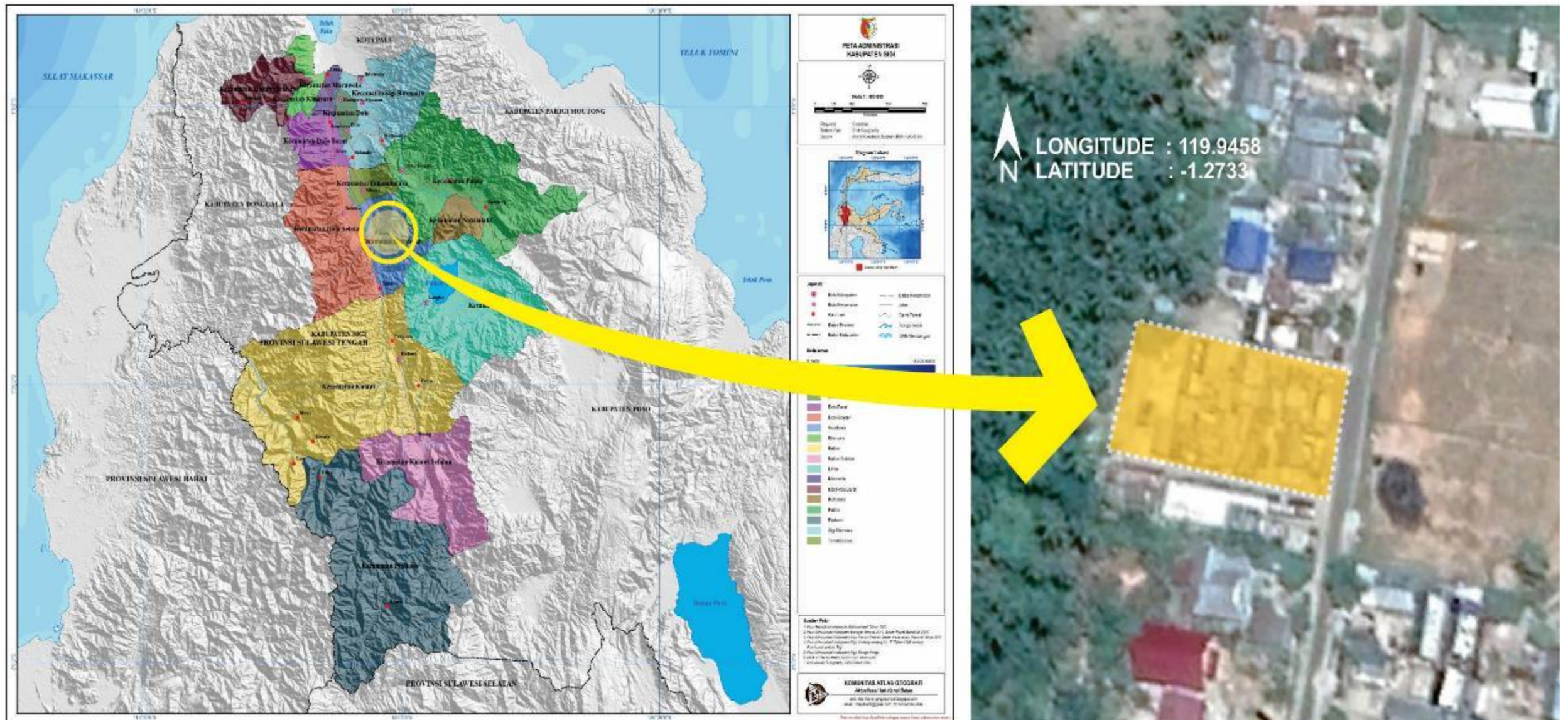




OMU MARKET



OMU MARKET | Location



Geological agency recommendation
*Earthquake resistant building with shallow foundation and
 must in dry condition (above groundwater table)*





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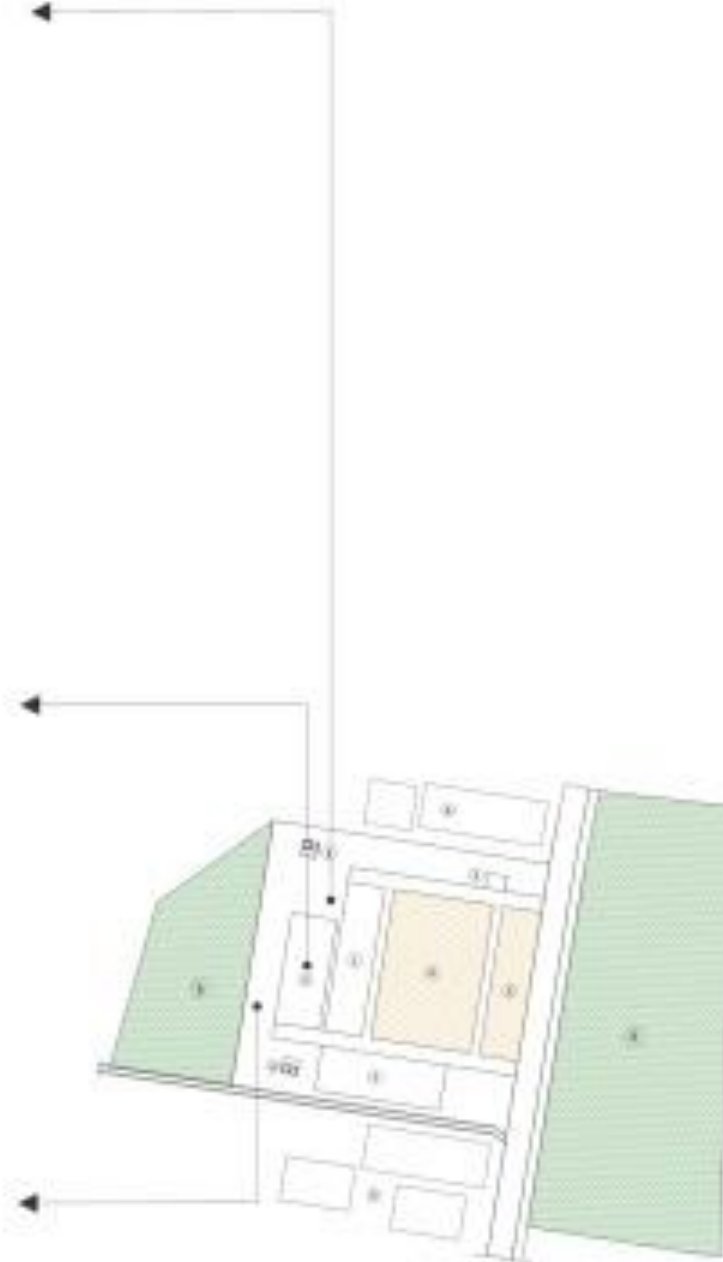
The fish trader area without drainage system



The existing los is not feasible



Irregular traders parking



OMU MARKET | Existing
Site



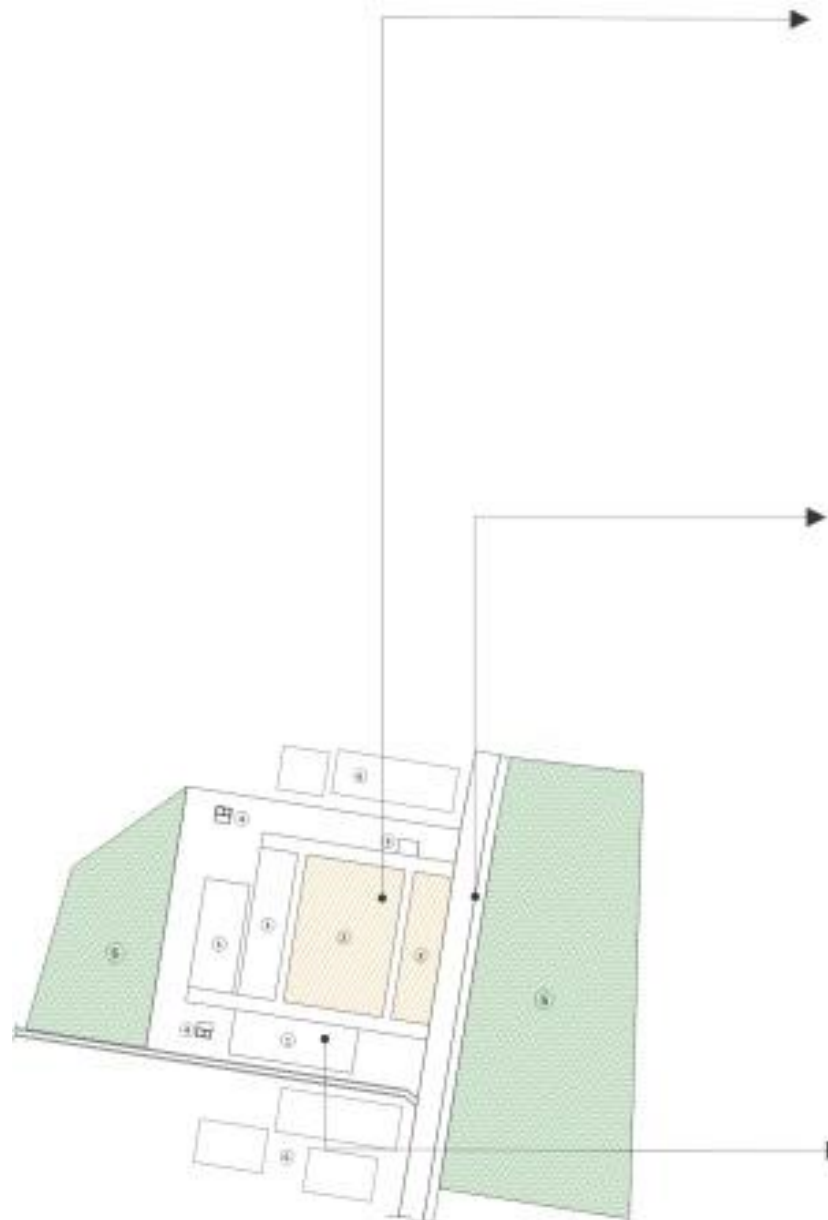


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inconvenient accessibility and disorganized space organization



Parking area disturbs traffic

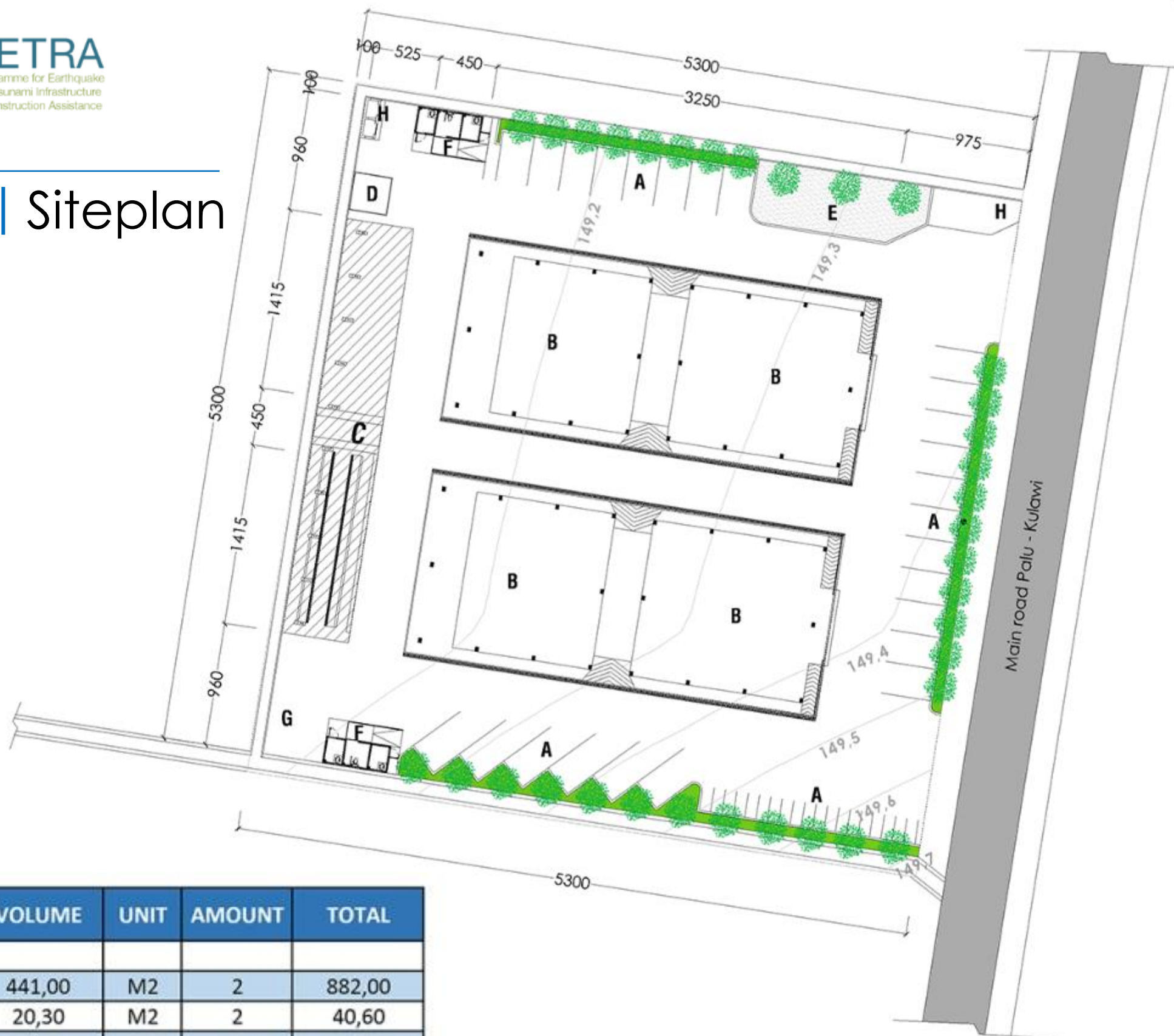


The existing lot is not feasible

OMU MARKET | Existing Site



OMU MARKET | Siteplan



NO	BUILDING NAME	VOLUME	UNIT	AMOUNT	TOTAL
OMU MARKET					
1	MARKET 1 (DRY AREA)	441,00	M2	2	882,00
2	TOILET	20,30	M2	2	40,60
3	WATER TANK	1,00	UNIT	1	1,00
4	IPAL	1,00	UNIT	1	1,00
5	TRASH BIN	6,00	M2	1	6,00
		15,00	M2	1	15,00





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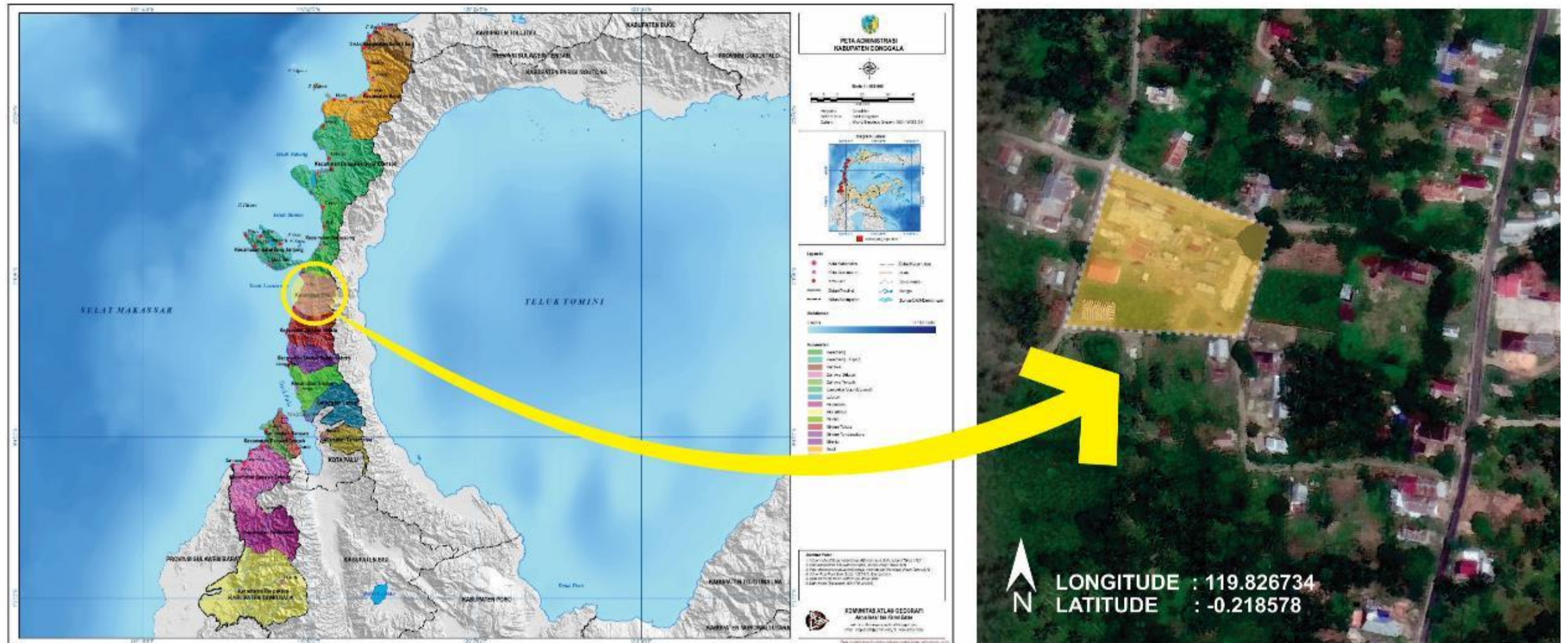
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SIBADO MARKET



SIBADO MARKET | Location



Geological agency recommendation
*Earthquake resistant building with shallow foundation
 and in flat topography.*





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SIBADO MARKET | Existing Site



Parking area disturbs traffic



Temporary los in bad condition



Farm animals enter the market area





The condition of the existing booth was damaged by the earthquake



Booths permanent that were built after the disaster and are still in decent condition



Village meeting hall

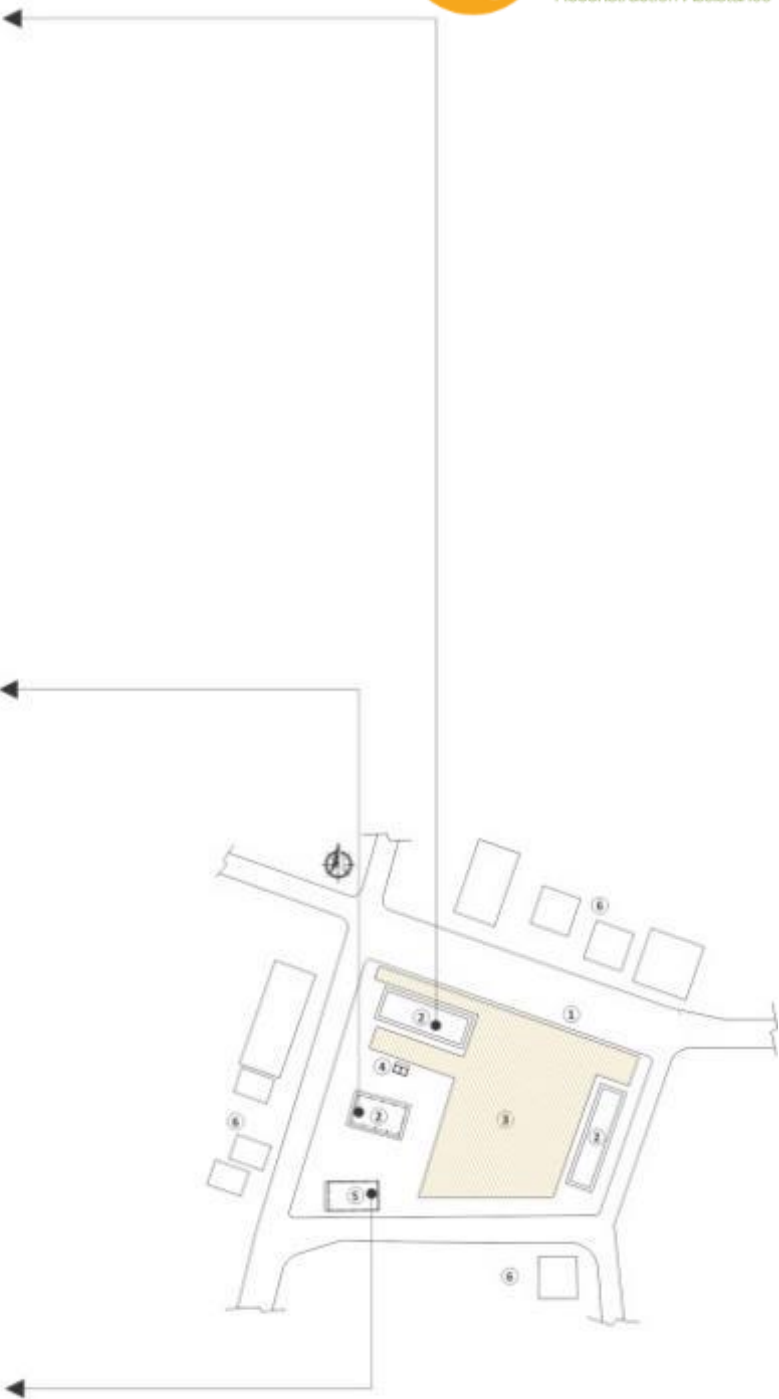


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SIBADO MARKET | Existing Site



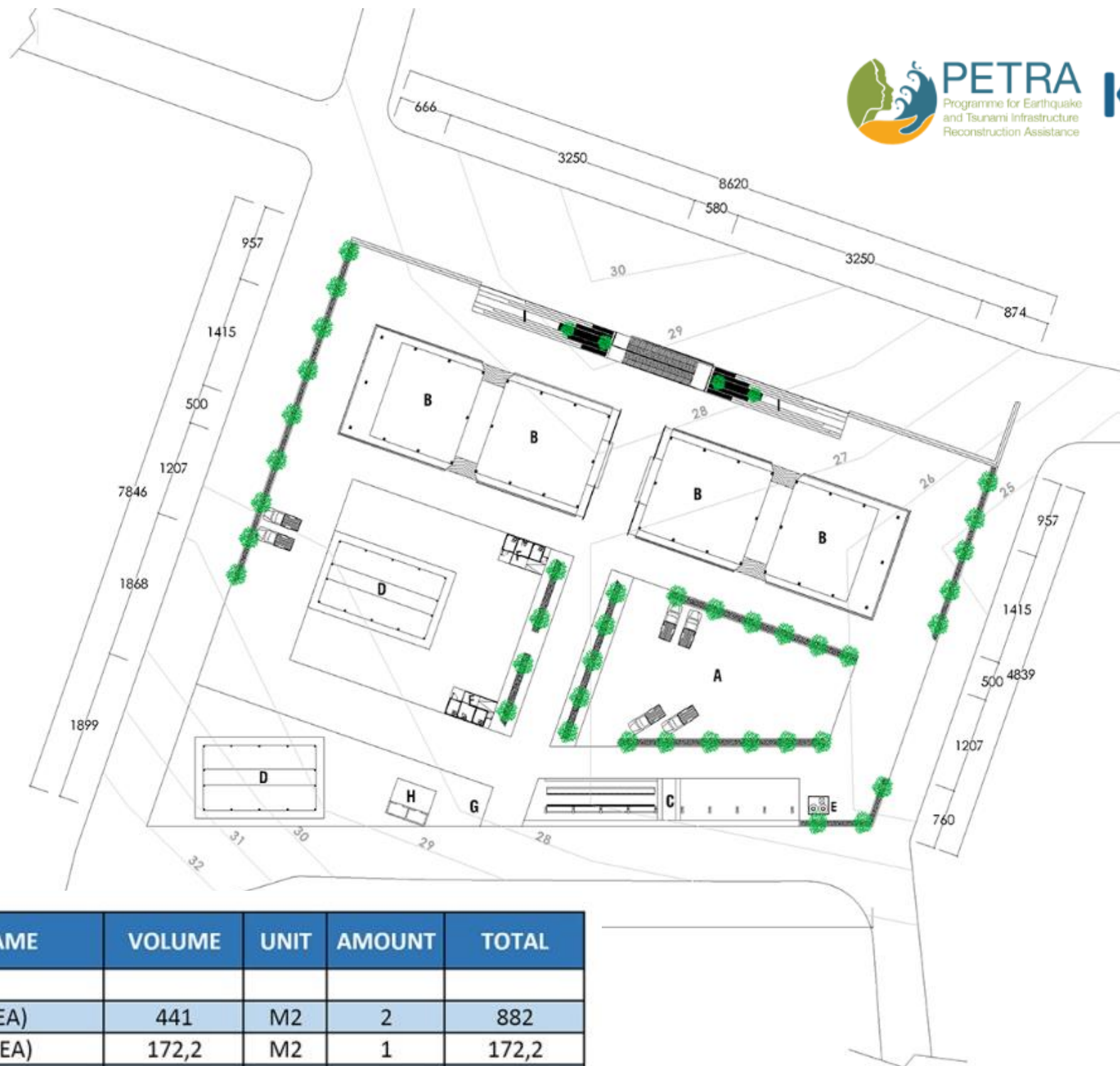


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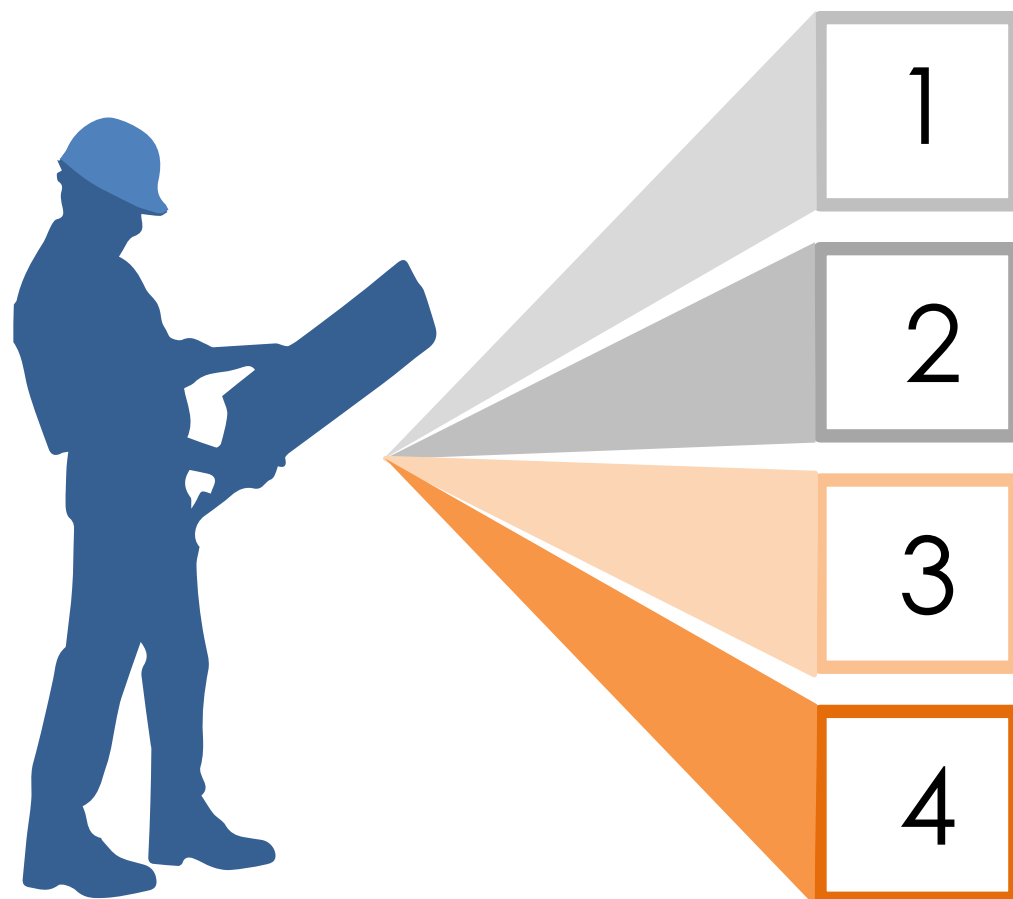
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NO	BUILDING NAME	VOLUME	UNIT	AMOUNT	TOTAL
	SIBADO MARKET				
1	MARKET 1 (DRY AREA)	441	M2	2	882
2	MARKET 2 (WET AREA)	172,2	M2	1	172,2
3	TOILET	20,30	M2	2	40,60
4	WATER TANK	1,00	UNIT	1	1,00
5	IPAL	1,00	UNIT	1	1,00
6	TRASH BIN	6,00	M2	1	6,00
		15,00	M2	1	15,00



TECHNICAL SPESIFICATION



Public Work

Archictectural Work

Structural Work

Electrical Work



PUBLIC WORK

01

GENERAL TECHNICAL REQUIREMENT

- Related to National Standard (SNI) and Regulation/Guidance

Specifically for item (6) is closely related to payment term (1st progress payment: 20% of contract amount upon completion of mobilization tools & worker), including Time Schedule and the Quality Assurance Program / Quality Control Plan.

(See ITB section 5B page 38)

02

SPECIAL TECHNICAL REQUIREMENT

1. Site Measurement and Bow plank Installation
2. Project Safety Fencing
3. Project Signage
4. Temporary Office Construction; Plaster Floor
5. Storage Construction & Bording house
6. Mobilization, Demobilization of Personnel and Tools
7. HSE (Safety Net, Hat, Helmet, etc.)
8. Cleaning of field and leveling

03

CONSTRUCTION WORK SAFETY & HEALTH PLAN (RK3K)

This guideline is intended as a reference and provision for building contractors related to the implementation of the Construction Work Safety and Health Plan (RK3K)





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ARCHITECTURAL WORK

FLOOR

Homogenous Tile and Ceramic Tile (Polished & Unpolished), and Concrete Floor finish (Grooving)

CELLING

Calcium Board (t=6mm) with hollow frame (for Toilet)

WALL

Brick Wall, Masonry Plastering & Emulsion Paint finish (for Toilet)

PAINTING

Dulux, Danapaint or equivalent

DISABILITY RAMP

Hand rail Ramp, Ramp Work

ROOF FRAME

Steel Structure, Truss WF 150.75.5.7, 250.125.6.9 Battens CNP 100.50.20.2,3

ROOF MATERIAL

Zincalum Spandex (t=0.4mm)





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STRUCTURAL WORK

FOUNDATION

Footplate Foundation, Stone Masonry

BEAM & COLUMN

Beam and Column (Reinforcement
Concrete, f_c' 20 Mpa)

DRAINAGE & STEEL GRATING

Brick, Concrete, Stone Masonry and Steel Grating

ELECTRICAL WORK

ELECTRICAL

Panasonic, Clipsal or equivalent

LIGHTNING ROD INSTALLATION

Ø 3/4 30cm Air Terminal , Completed With Ø 3/4 70cm GIP





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SITE WORK

PIPING

Water Shallow Well, Pralon / Rucika or equivalent products

CLEAN WATER

Jet Pump 20 lpm, PPR PN-10

GREY WATER

PVC - AW

WATER TOWER TANK

Type : Fiberglass Capacity : 1.2 m3

LIGHTING POLE

Lighting pole (solar cell) complete with foundation

GARBAGE BOX

Brick & Concrete



QUALITY CONTROL

CONCRETE QUALITY	K225	K250
Minimum Compressive Strength, 7 days (kg/cm ²)	158	175
Minimum Amount of Cement (kg/m ³)	300	300
Maximum Amount of Cement(kg/m ³)	550	550

To ensure that the quality of the concrete, the Contractor must experiment under the requirements of applicable regulations.

Concrete Class		Minimum compressive strength (kg/cm ³)	
Fc' (MPa)	T (kg/cm ³)	15x15x15 cm cube specimen	15x30 cm cylinder specimen
50	K600	600	500
45	K500	500	450
40	K450	450	400
35	K400	400	350
30	K350	350	300
25	K300	300	250
20	K250	250	200
15	K175	175	150
10	K125	125	100



BILL OF QUANTITY

I. MARKET-1 (DRY AREA)

A PREPARATION WORK

- 1 Site Measurement and Bow plank Installation
- 2 Project Safety Fencing
- 3 Project Signage
- 4 Temporary Office Construction; Plaster Floor
- 5 Storage Construction & Bordinghouse
- 6 Mobilization, Demobilization of Personnel and Tools
- 7 HSE (Safety Net, Hat, Helmet, etc.)
- 8 Cleaning of field and leveling

B ARCHITECTURAL WORKS

- I. Floor Installation Work
- II. Painting Works
- III. Disability Ramp Work
- IV. Roof Covering Works

Procurement and installation of a complete structure in framing, comprising wide flange bolted to cleats, welded to rafter; including all labour, materials and plant in fabricating, assembling and erecting with welded and bolted shop and site connections; all necessities as specified on specifications.

C. STRUCTURAL WORK

- I. Foundation Work
- II. 1ST Level (Floor, Column, Sloof and Beam)

D. ELECTRICAL WORKS

- I. Low Voltage Panel Works
- II. Lighting Works
- III. Lightning Rod Installation

For detail, see Annex 2 – Bill of Quantity



BILL OF QUANTITY

II. MARKET-2 (WET AREA)

A PREPARATION WORK

B ARCHITECTURAL WORKS

- I. Wall Work
- II. Painting Works
- III. Roof Covering Works
 (Complete steel structure frame)

C. STRUCTURAL WORK

- I. Foundation Work
- II. 1ST Level (Floor, Column,
 Sloof, Deck Slab and Beam)

D. ELECTRICAL WORKS

- I. Low Voltage Panel Works
- II. Lighting Works

For detail, see Annex 2 – Bill of Quantity



BILL OF QUANTITY

III. TOILET 3 ROOMS

A PREPARATION WORK

B ARCHITECTURAL WORKS

- I. Wall Work
- II. Floor Installation Work
- III. Painting Works
- IV. Sanitary Work and Installation
- V. Door and Window Installation Work
(complete with Alum. frame)
- VI. Ceiling Installation Work
- VII. Disability Ramp Work
- VIII. Roof Covering Works
*Light steel frame; including rafter
and accessories*

C STRUCTURAL WORK

- I. Foundation Work
- II. 1ST Level (Floor, Column, Sloof and Beam)

D MECHANICAL AND ELECTRICAL WORKS

- I. Toilet Plumbing System
 - 1.1 Clean Water System
 - 1.2 Vent and Grey Water System
 - 1.3 Drainage Pipe System to Infiltration Well
- II. Toilet Electrical Works
 - 2.1 Panel Works
 - 2.2 Lighting Works

For detail, see Annex 2 – Bill of Quantity



BILL OF QUANTITY

IV. SEPTICK TANK WORKS

Septic tank work, including junction box, Bio Media Filter & infiltration

V. SITE PLAN

A. SITEPLAN PLUMBING WORKS

1. Main Equipment of Clean Water System
2. Clean Water System
3. Vent and Grey Water System

B. SITE PLAN ELECTRICAL WORKS

1. Low Voltage Panel Work
2. Connector Cable Provision and Installation
3. Lighting Pole
4. Testing and Commissioning

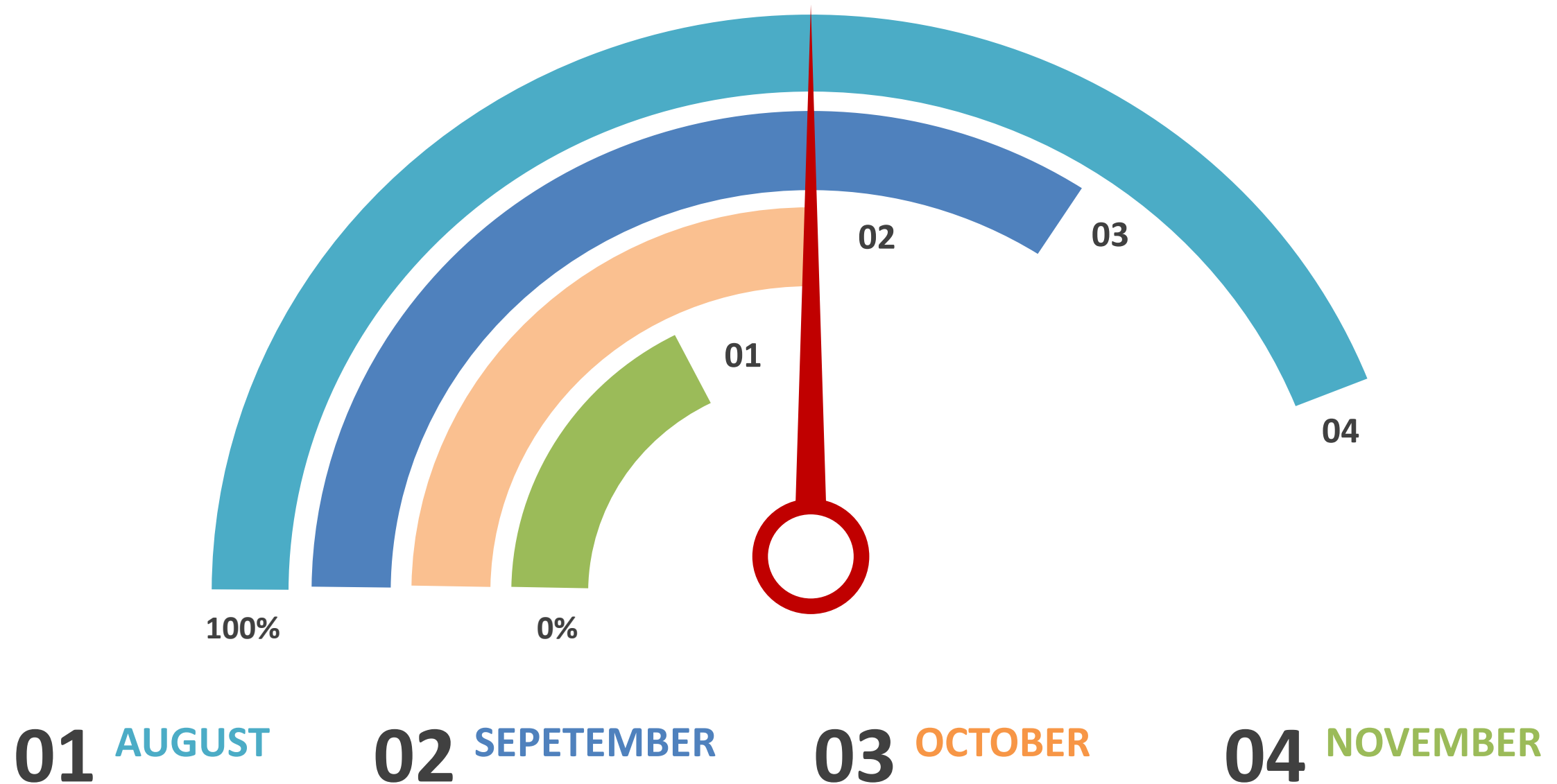
C. SITE, PAVING AND FENCE WORKS

D. GARBAGE BOX AND SLAB

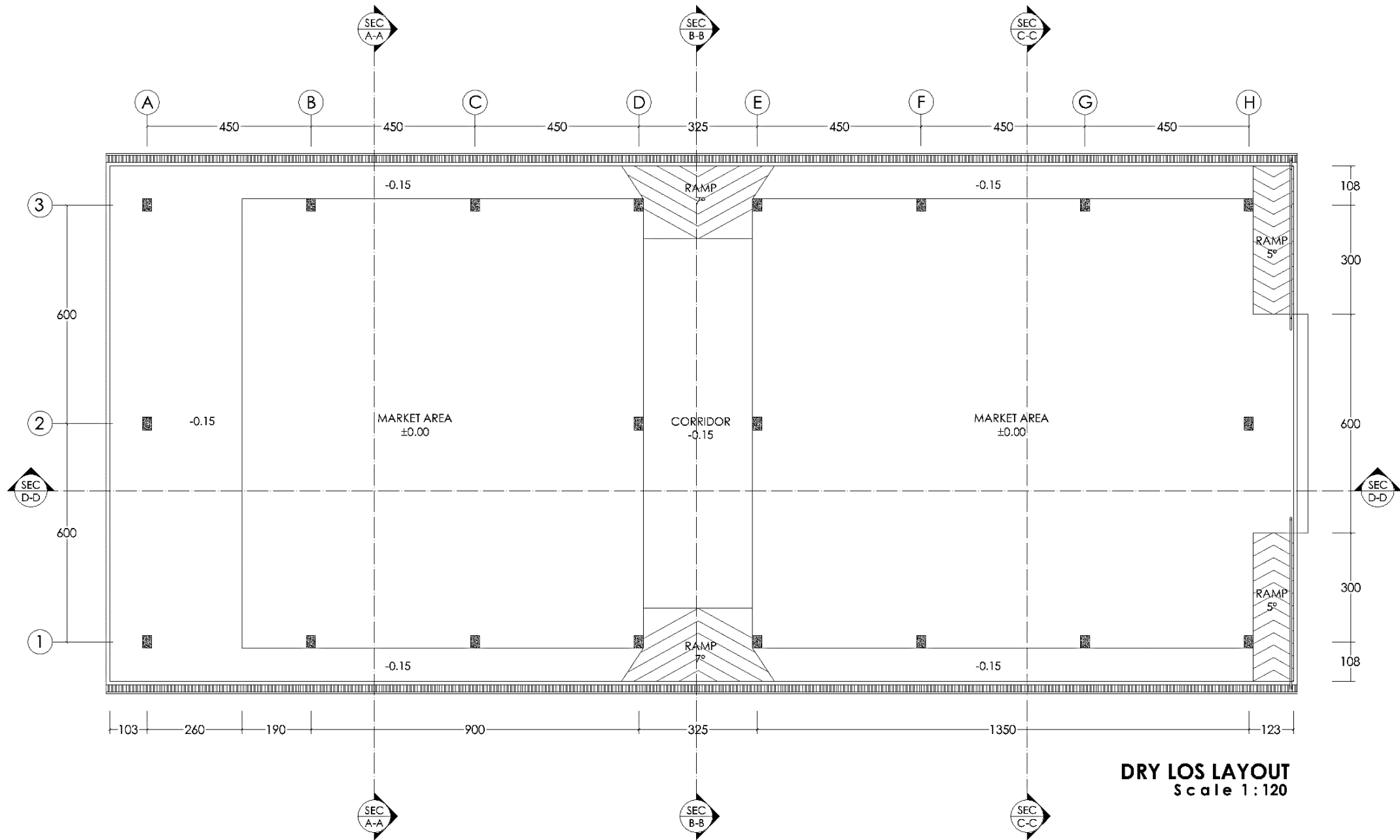
For detail, see Annex 2 – Bill of Quantity

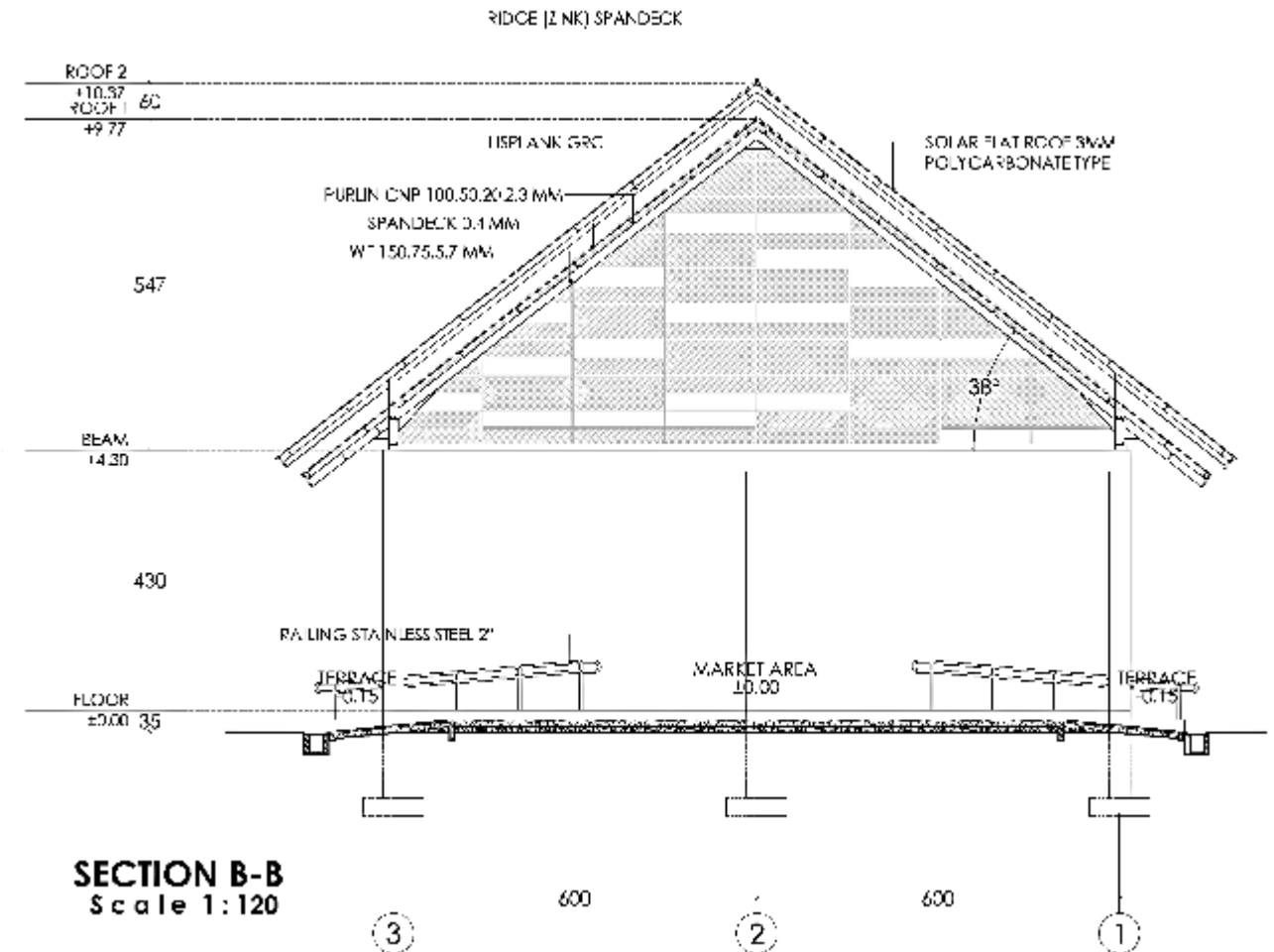
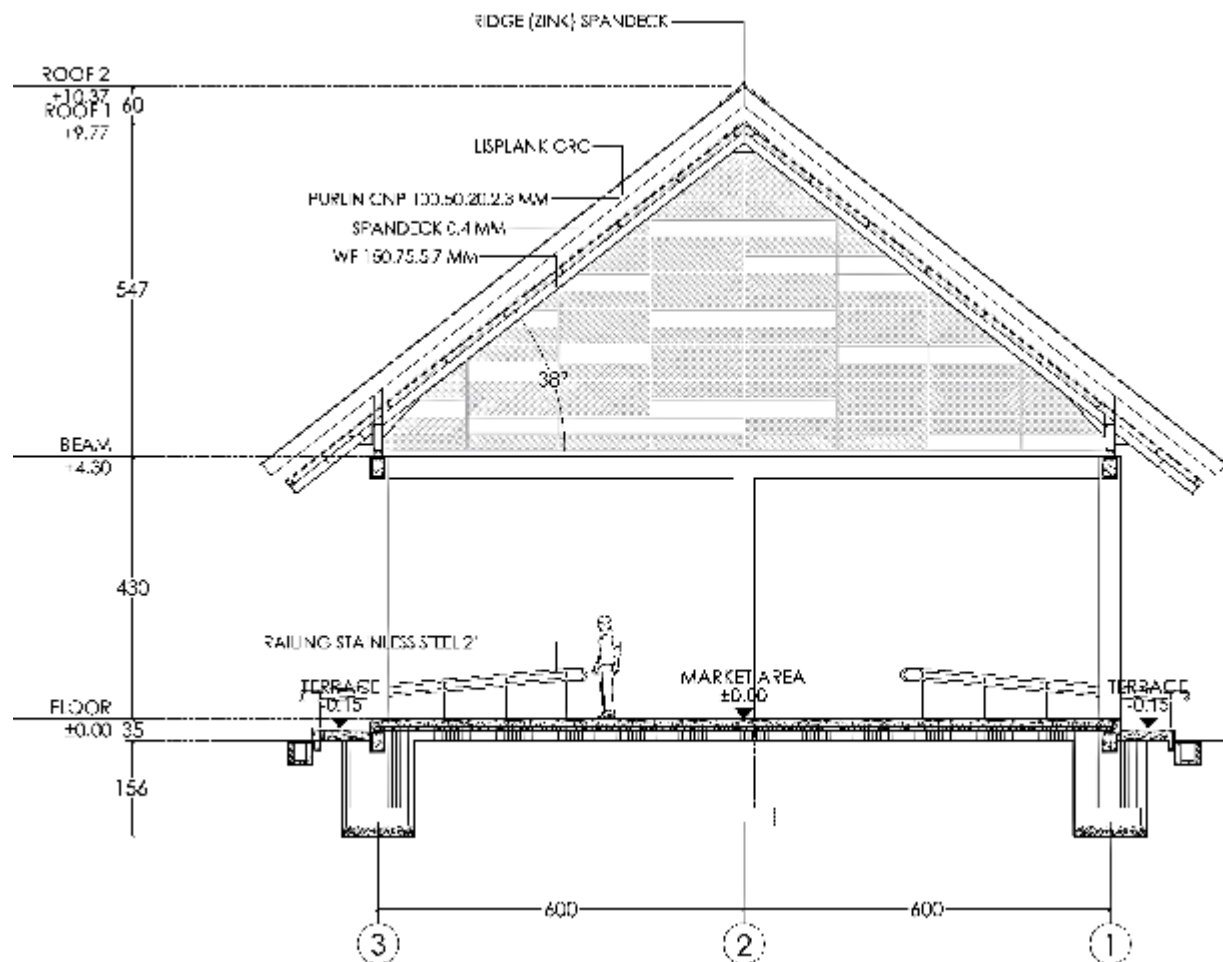


TIME SCHEDULE



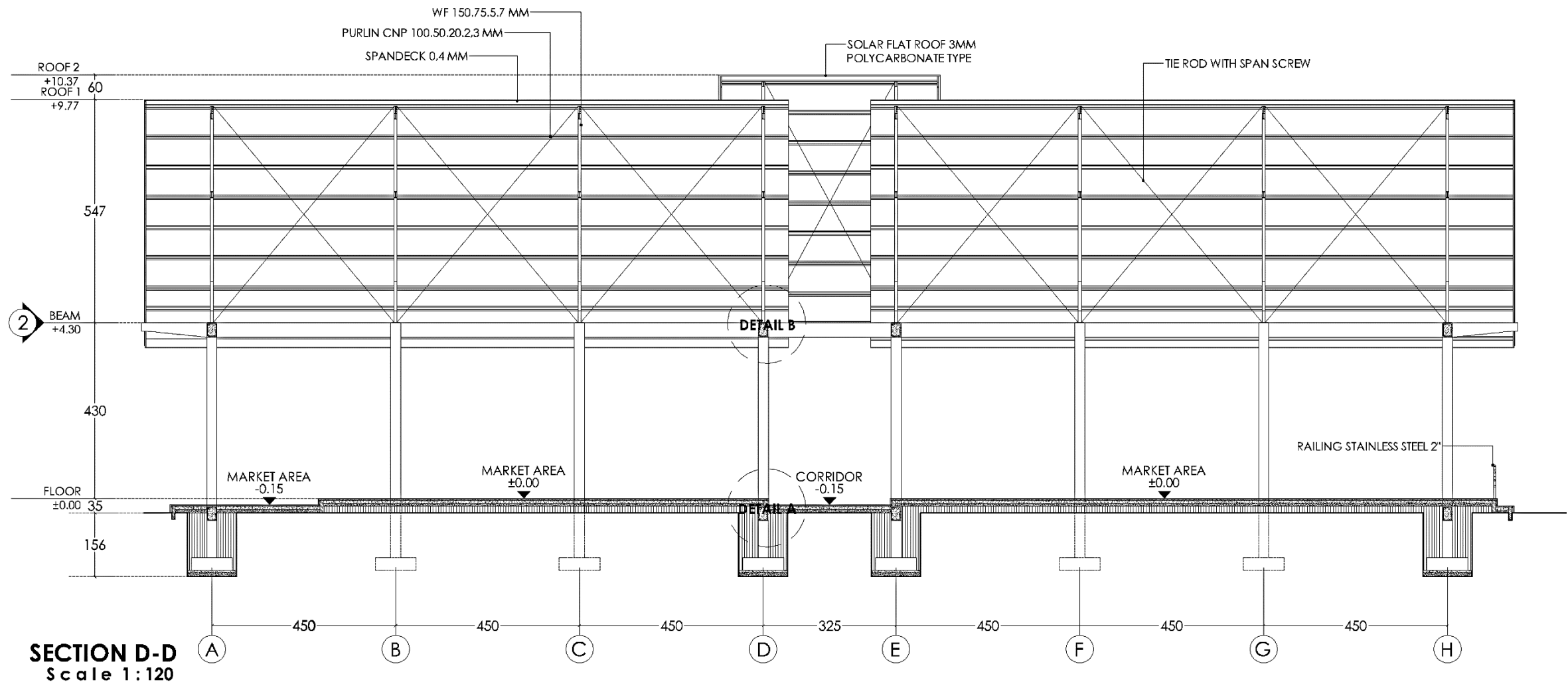
DRAWINGS



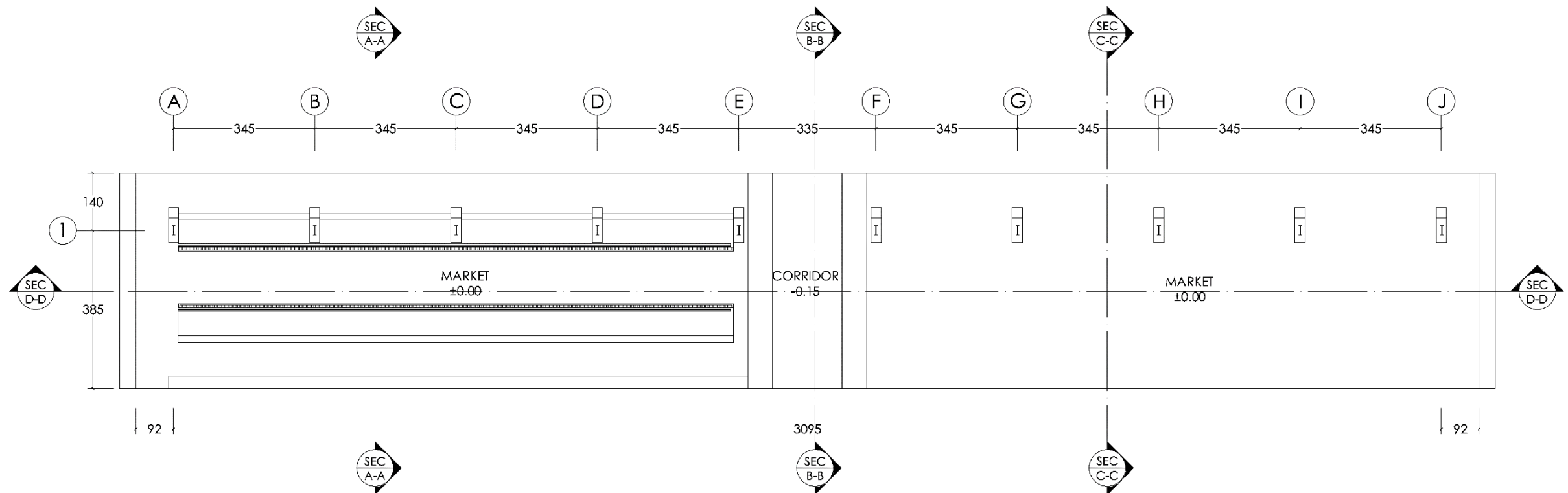




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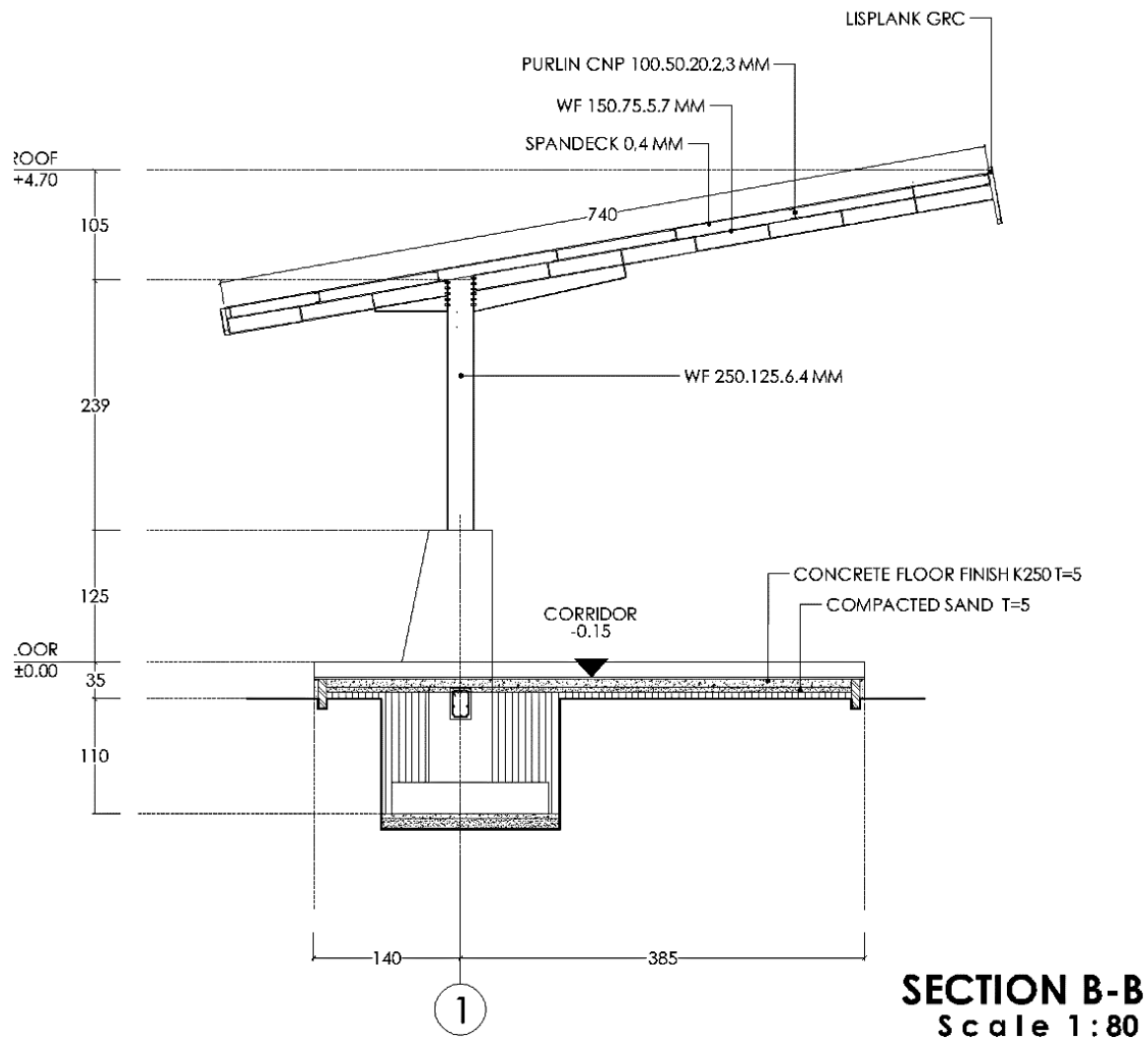
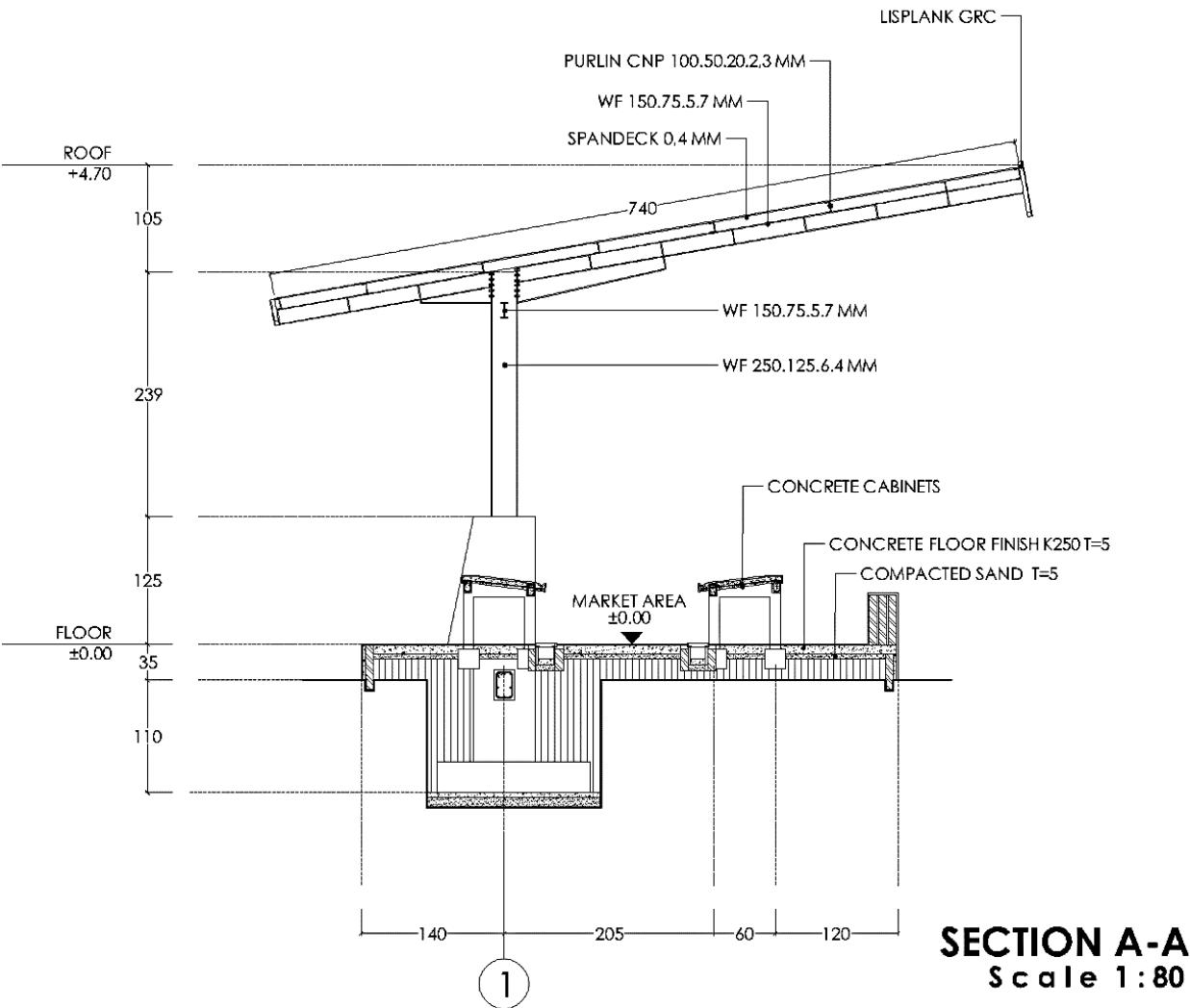


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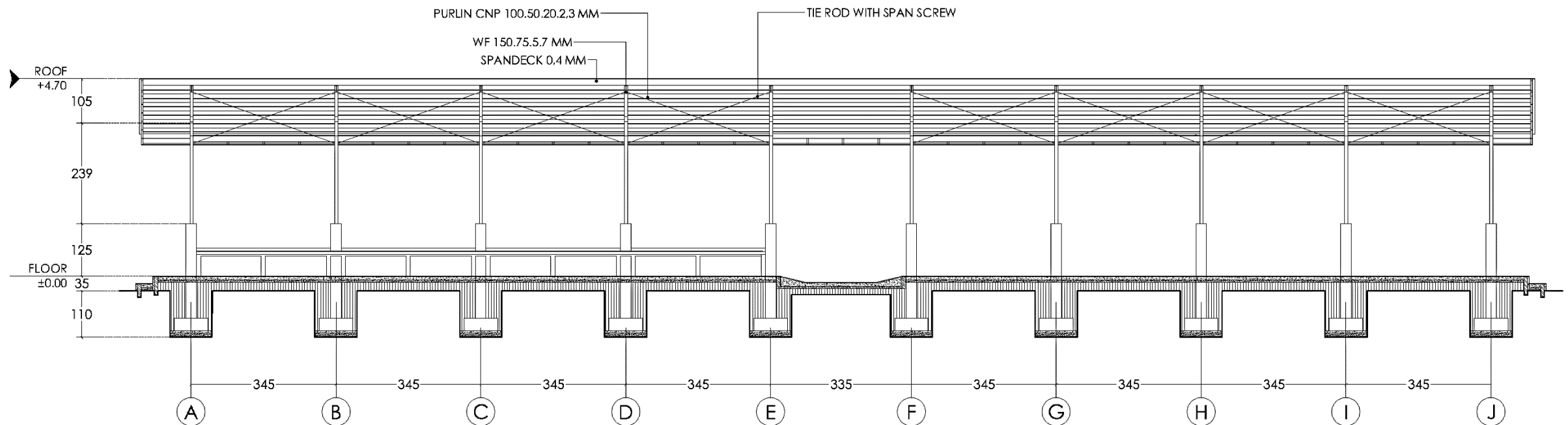
WET LOS LAYOUT
Scale 1:120

DRAWINGS





DRAWINGS

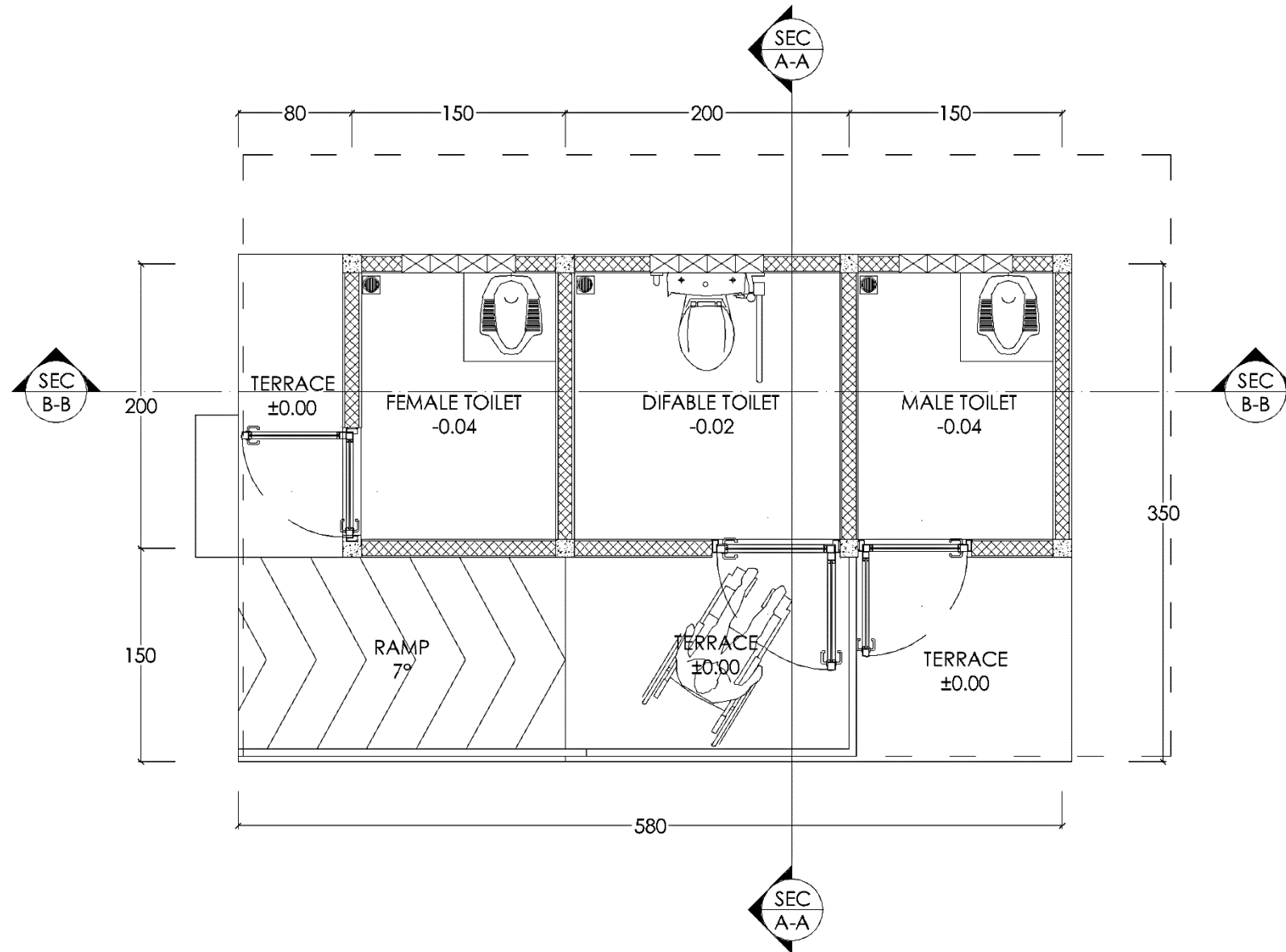


SECTION D-D
Scale 1:120





DRAWINGS

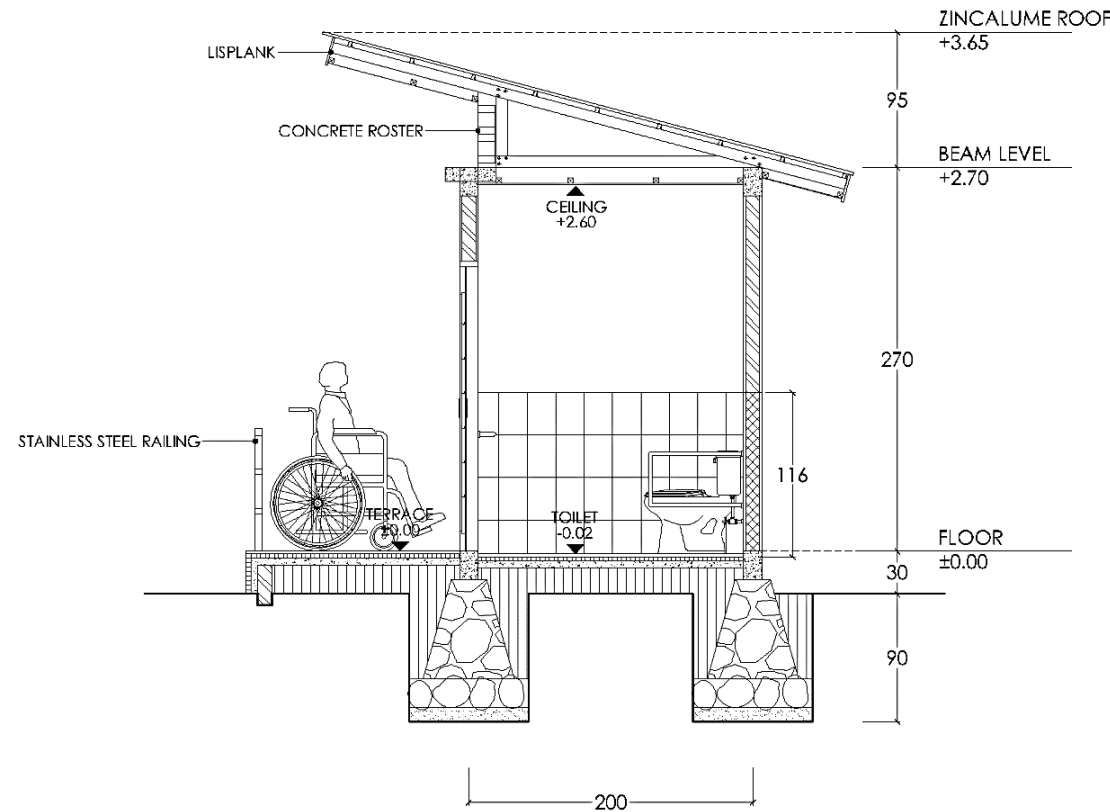


TOILET LAYOUT
Scale 1:50

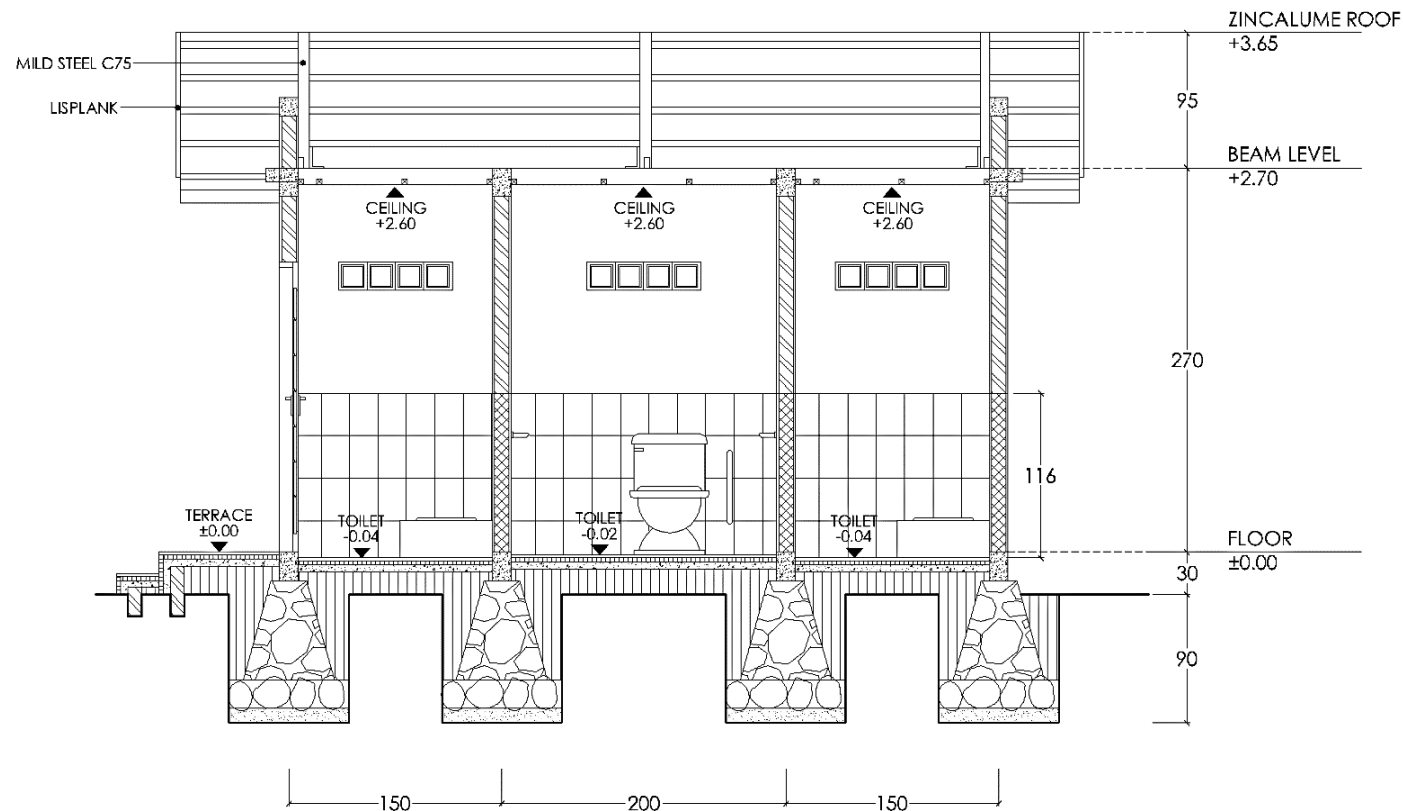




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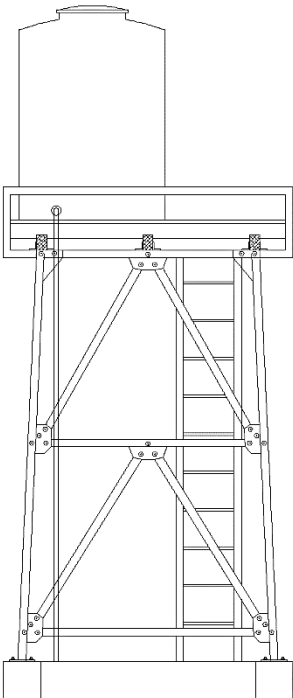
SECTION A-A
Scale 1:50



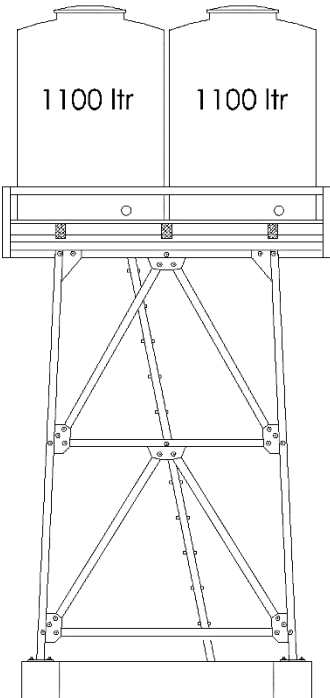
SECTION B-B
Scale 1:50

WATER TANK

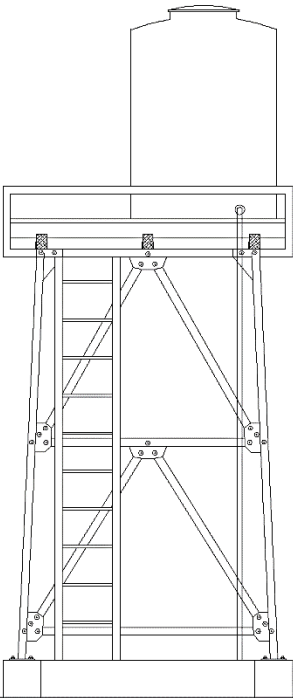
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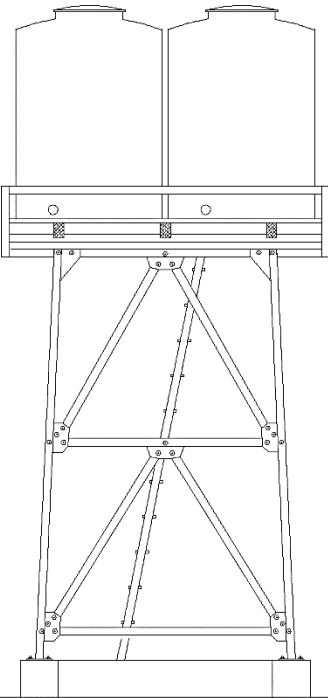
FRONT ELEVATION
Scale 1:50



RIGHT SIDE ELEVATION
Scale 1:50



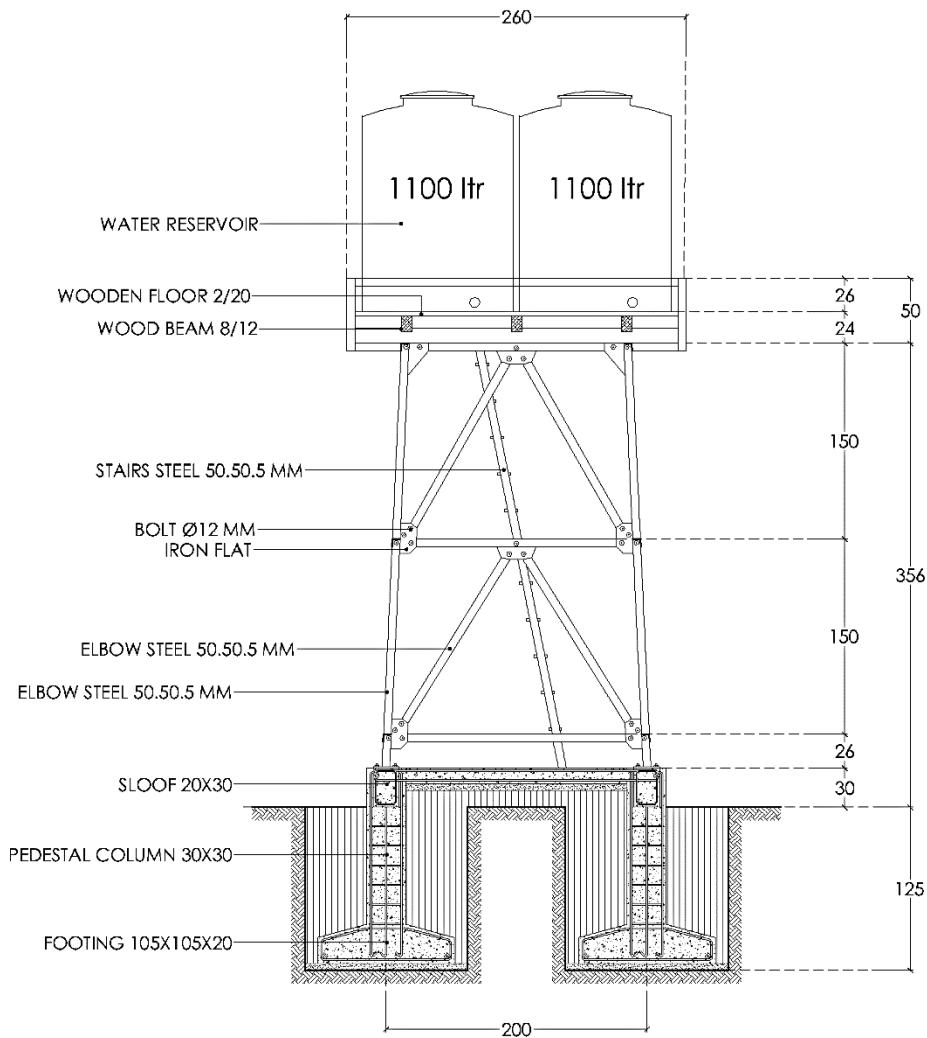
BACK ELEVATION
Scale 1:50



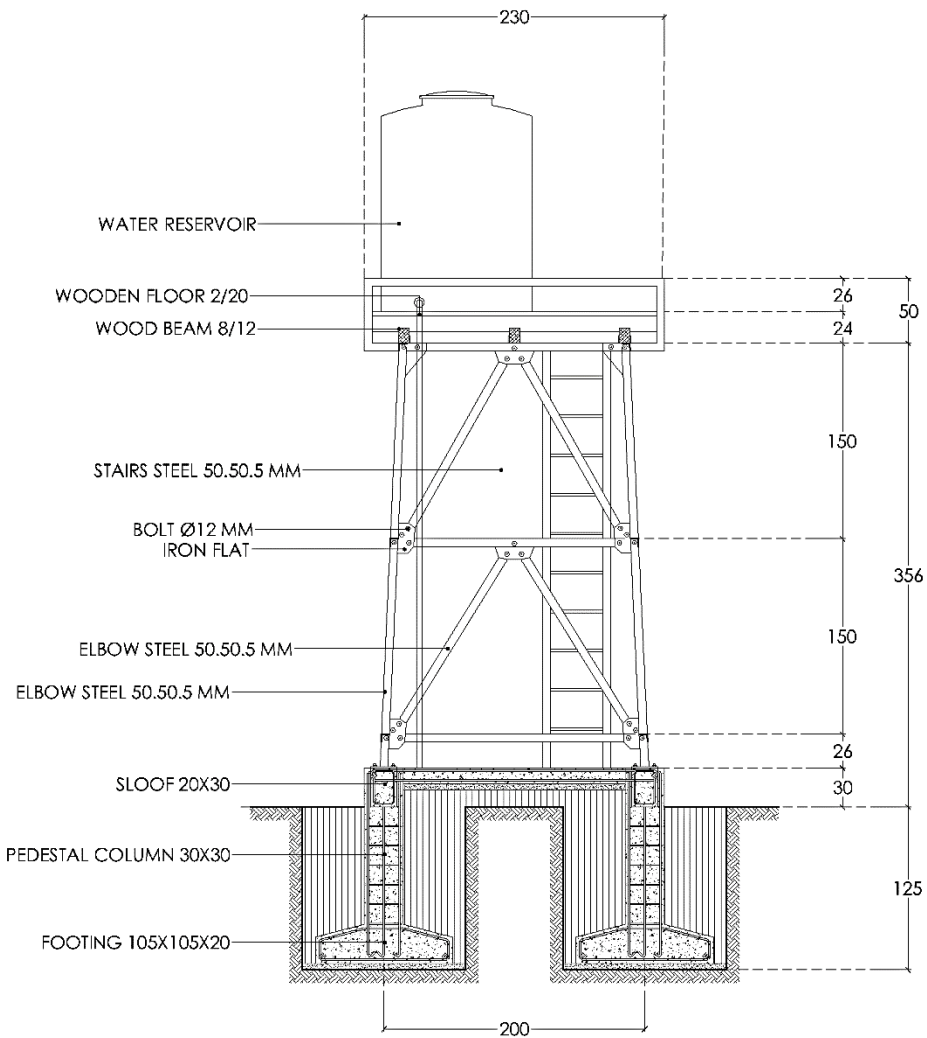
LEFT SIDE ELEVATION
Scale 1:50



DRAWINGS



SECTION A-A
Scale 1:50

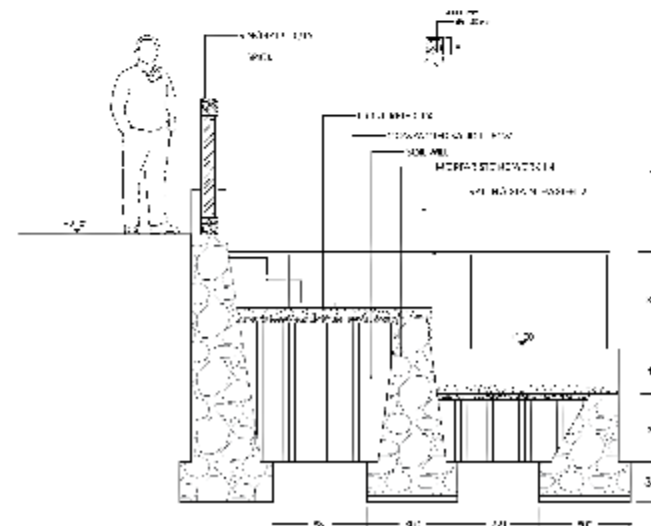
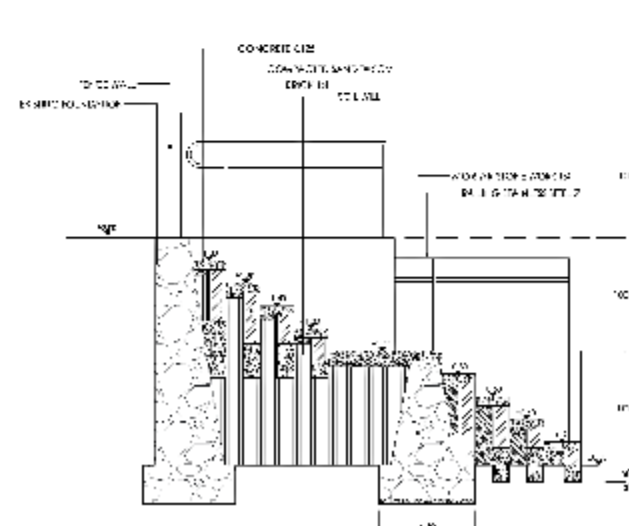
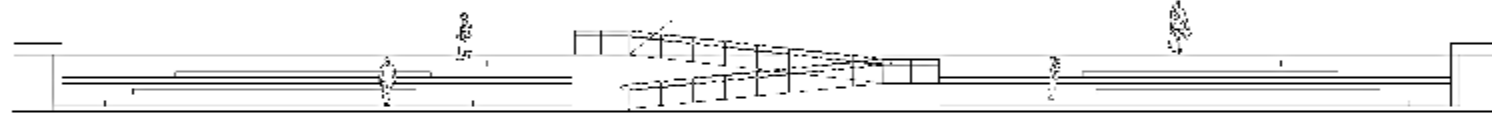
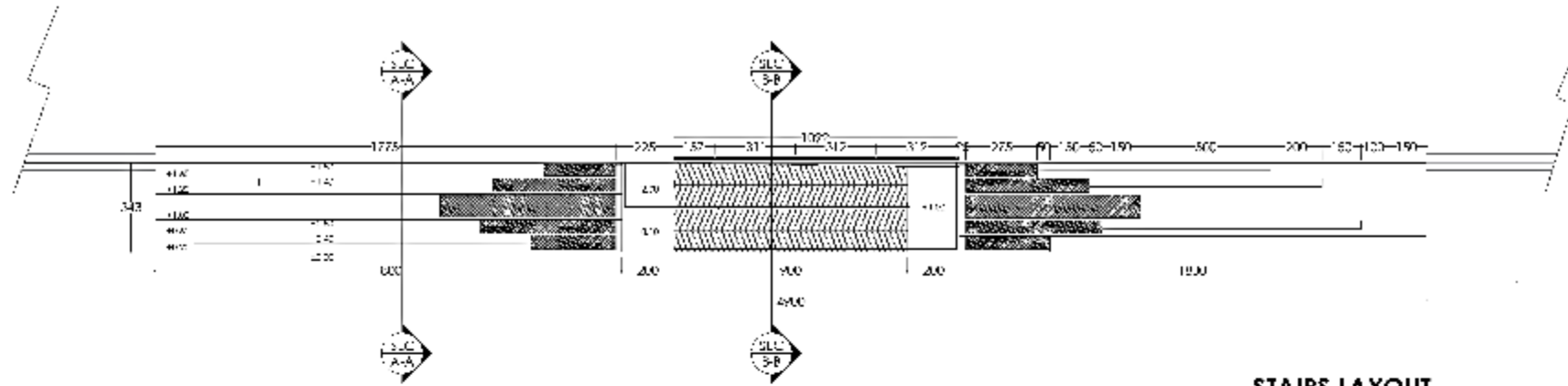


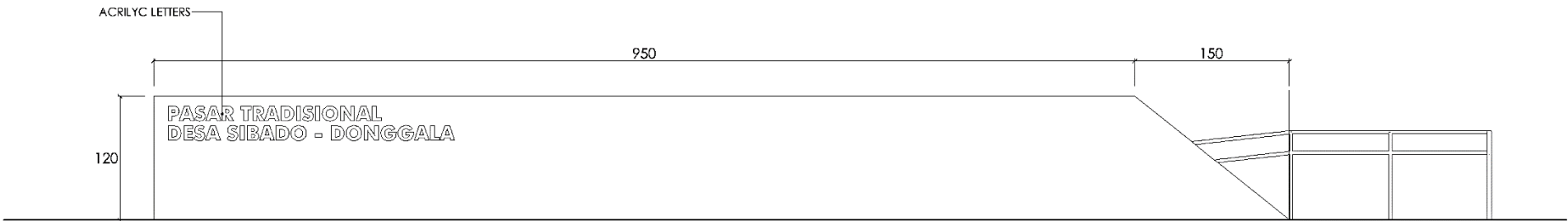
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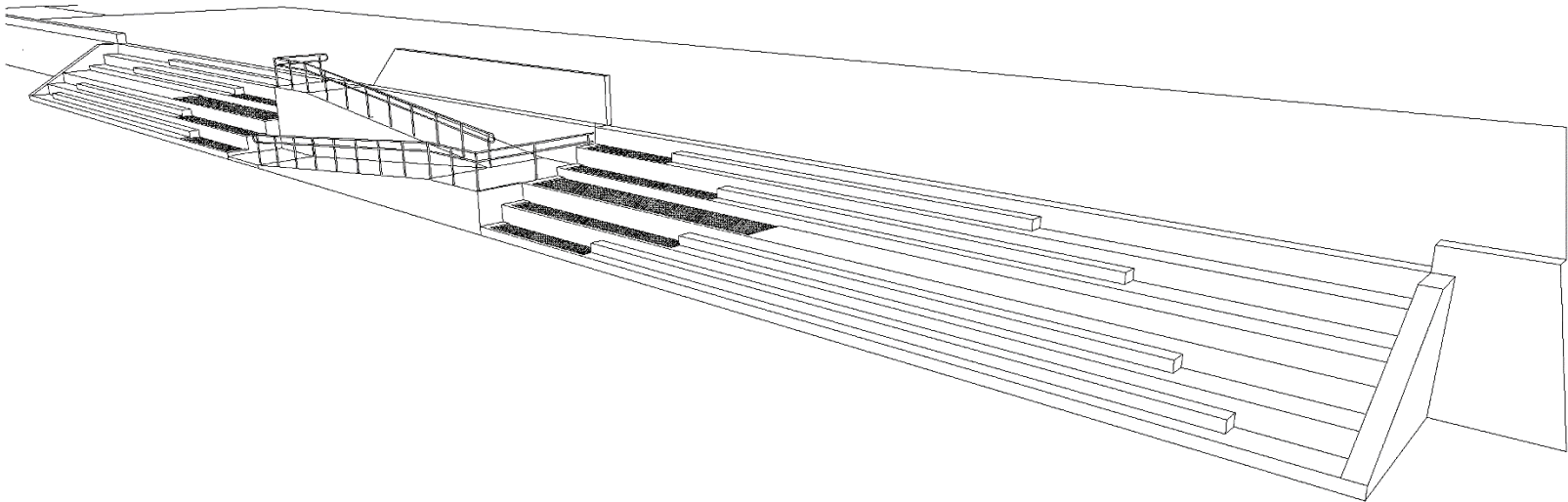
DRAWINGS





DRAWINGS

DETAIL FENCE
Scale 1:50



PARRALEL PROJECTION
Scale 1:200



PERSPEKTIF



PERSPEKTIF



PERSPEKTIF



**THANK YOU
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