

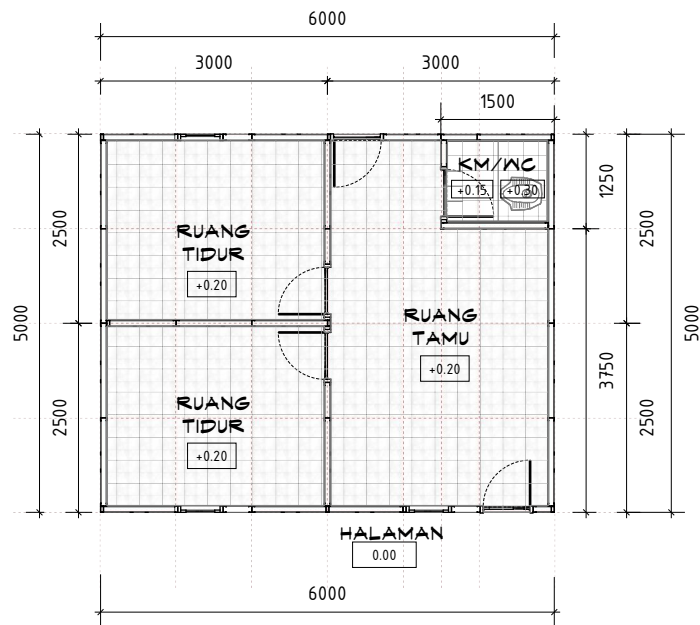
PETUNJUK PRAKTIS

Persyaratan Bangunan Tahan Gempa Dengan Rangka Struktur Baja Ringan

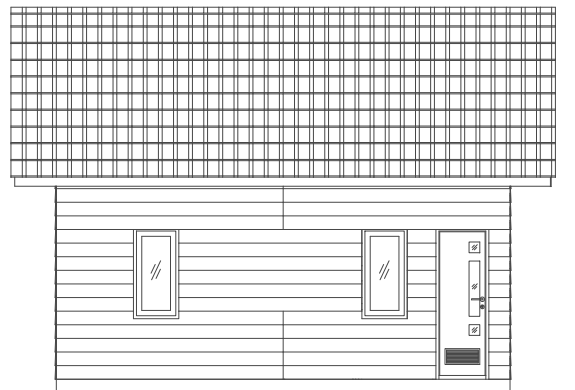
Rumah Instan Sehat Baja Ringan (Risbari)

Lokasi: Lombok, Palu dan Donggala

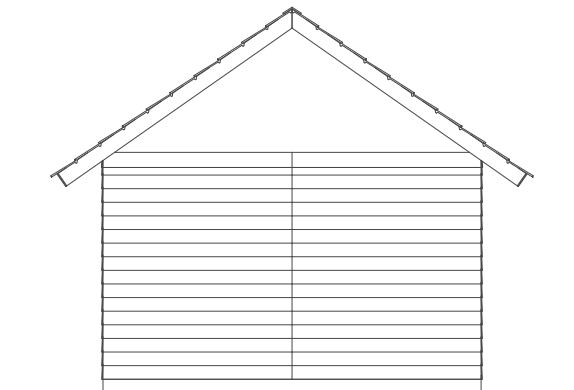
01. GAMBAR DENAH & TAMPAK



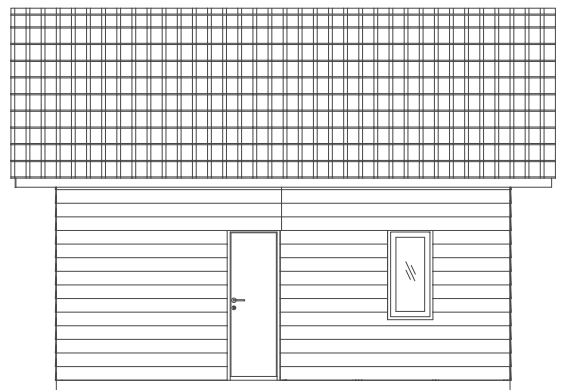
DENAH
SKALA 1:100



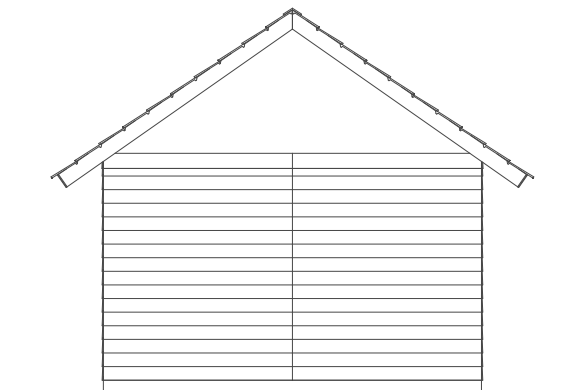
TAMPAK DEPAN
SKALA 1:100



TAMPAK SAMPING KANAN
SKALA 1:100



TAMPAK BELAKANG
SKALA 1:100



TAMPAK SAMPING KIRI
SKALA 1:100

02. FOTO REFERENSI



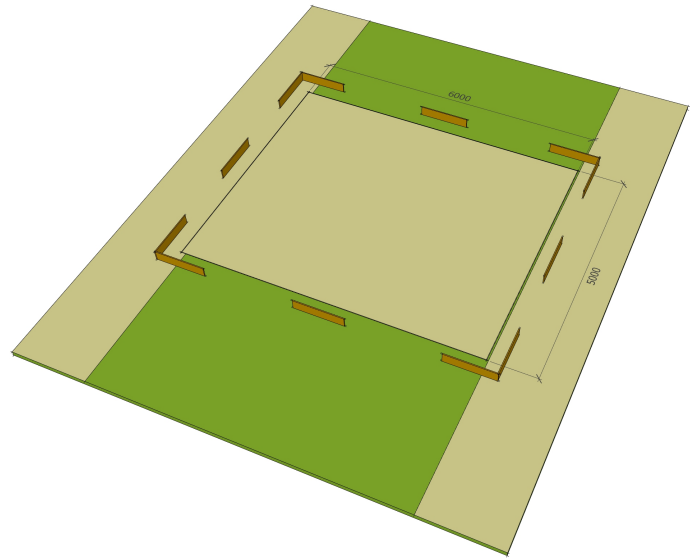
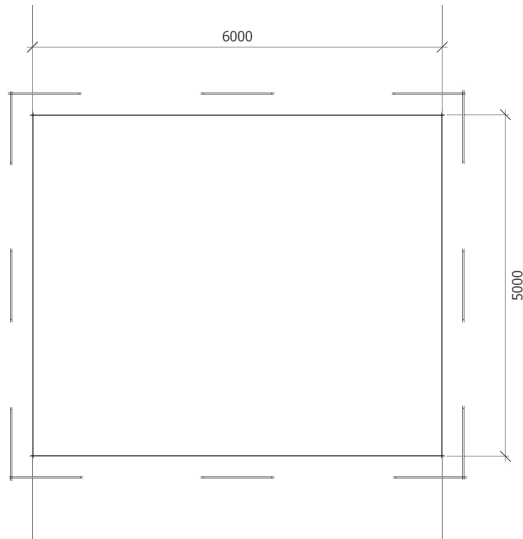
Rumah Contoh di STIP



Rumah Contoh di Pabrik untuk Uji Gempa

03. PEKERJAAN BOUWPLANK & GALIAN TANAH

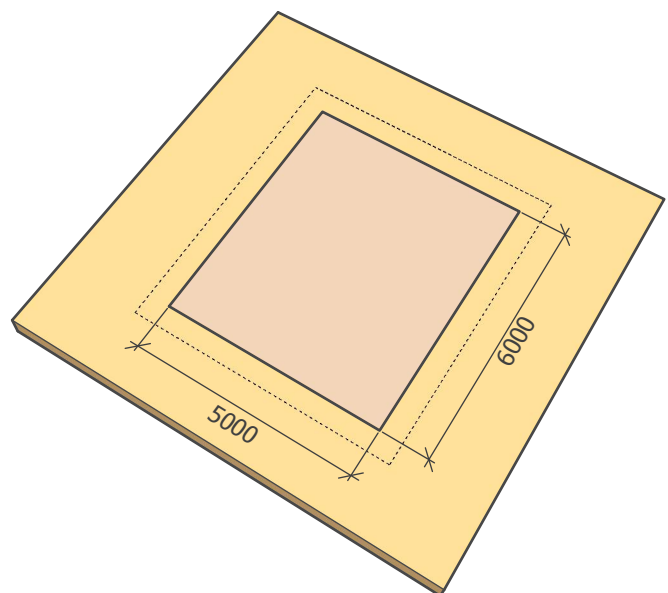
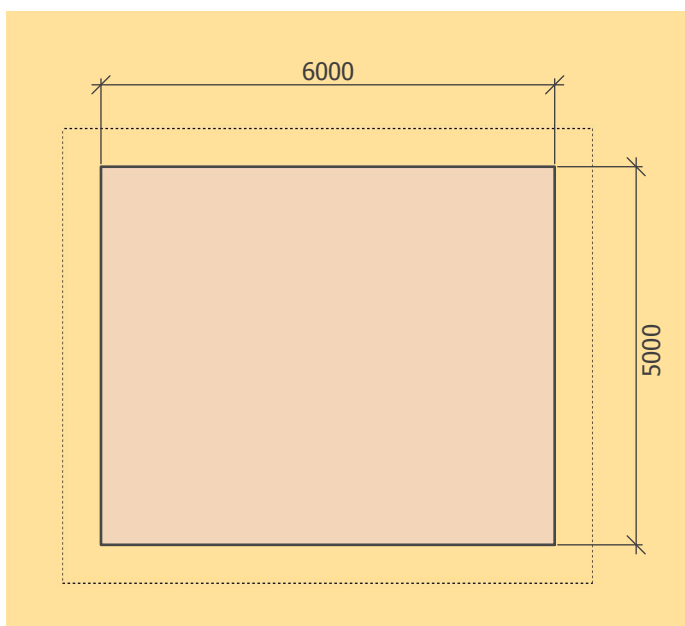
03.1. Pekerjaan Bouwplank



Ketentuan Bahan:

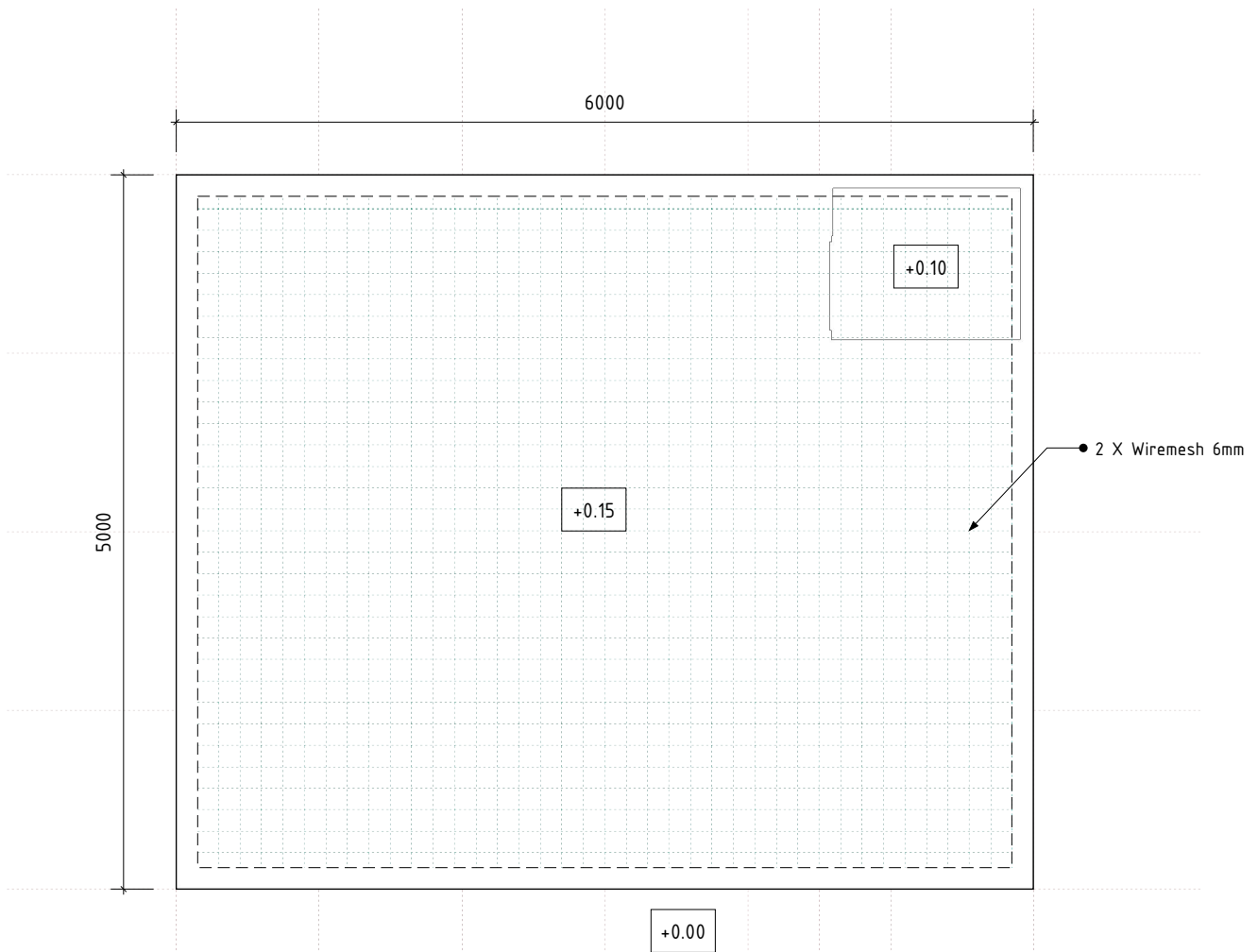
- Kayu yang digunakan memenuhi kuat kayu kelas III, dengan ukuran papan 2/20 cm dan kaso 5/7
- Untuk bouwplank dilarang menggunakan bambu

03.2. Pekerjaan Galian Tanah



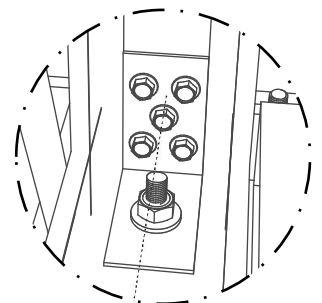
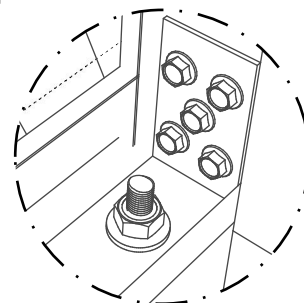
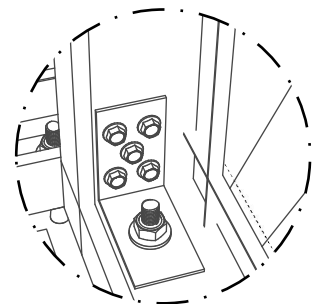
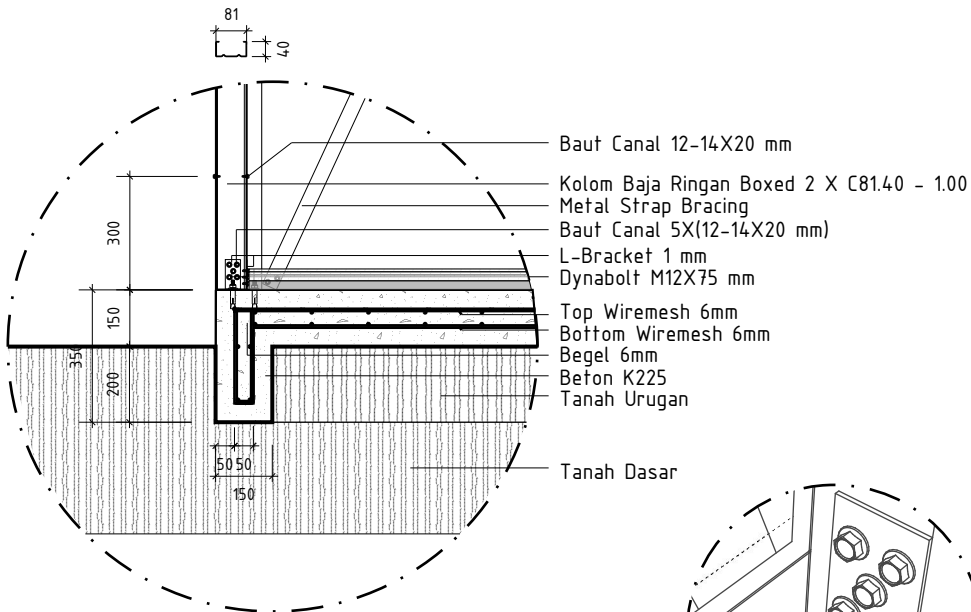
DENAH GALIAN PONDASI
SKALA 1:100

04. PEKERJAAN PONDASI



PEKERJAAN PONDASI

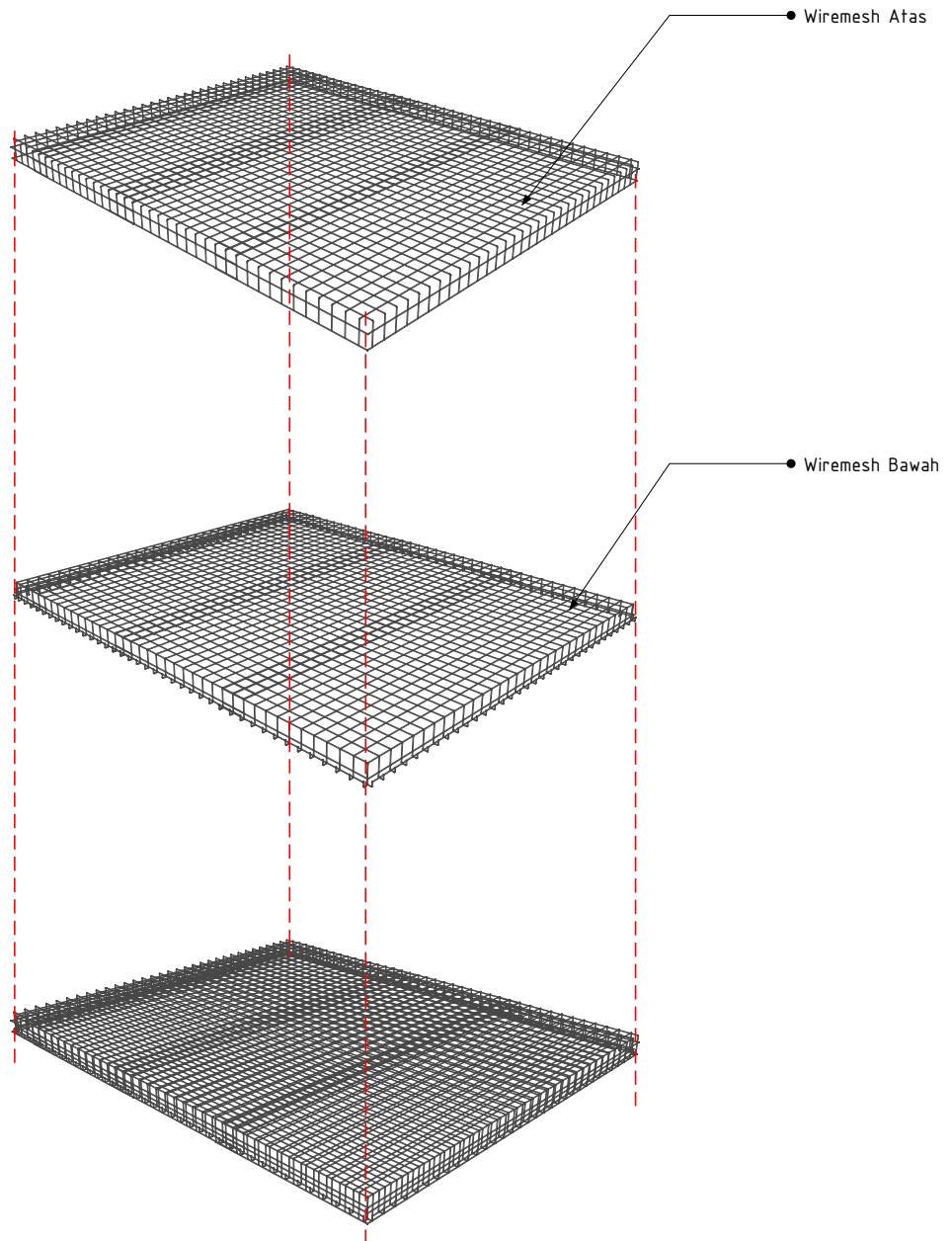
SKALA 1:50



DETAIL PEMASANGAN PLAT

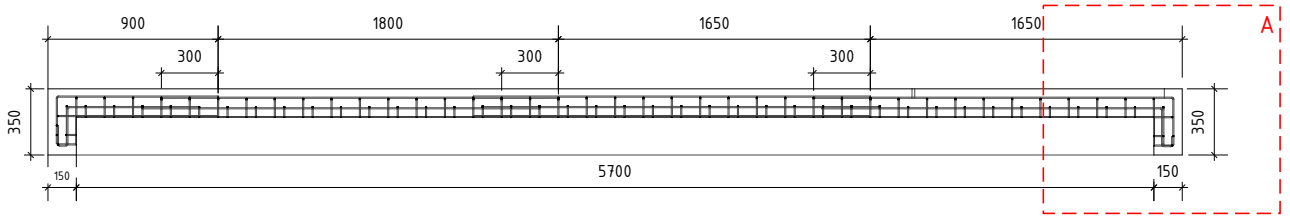
SKALA 1:20

05. PEKERJAAN PLAT WIREMESH

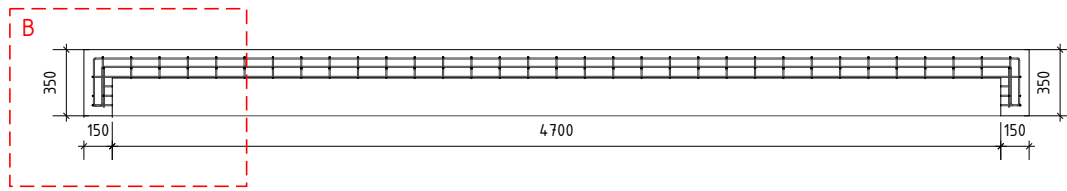


 **DETAIL PEMASANGAN PLAT**
SKALA 1:20

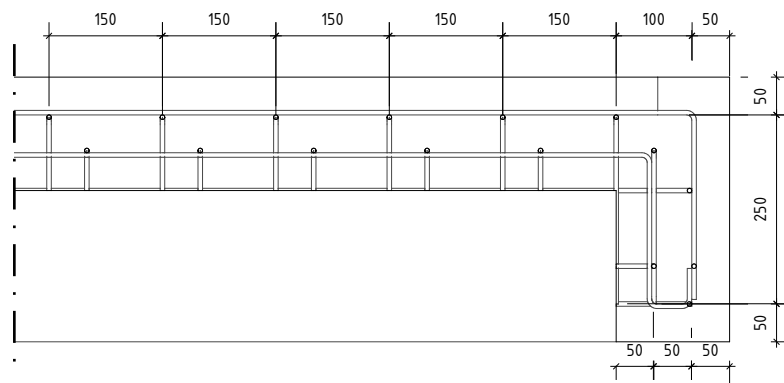
06. INFORMASI DETAIL WIREMESH



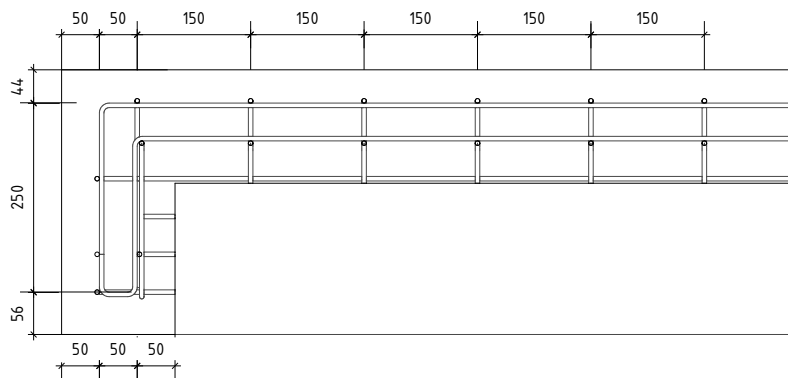
DETAIL POTONGAN A
SKALA 1:40



DETAIL POTONGAN 1
SKALA 1:40



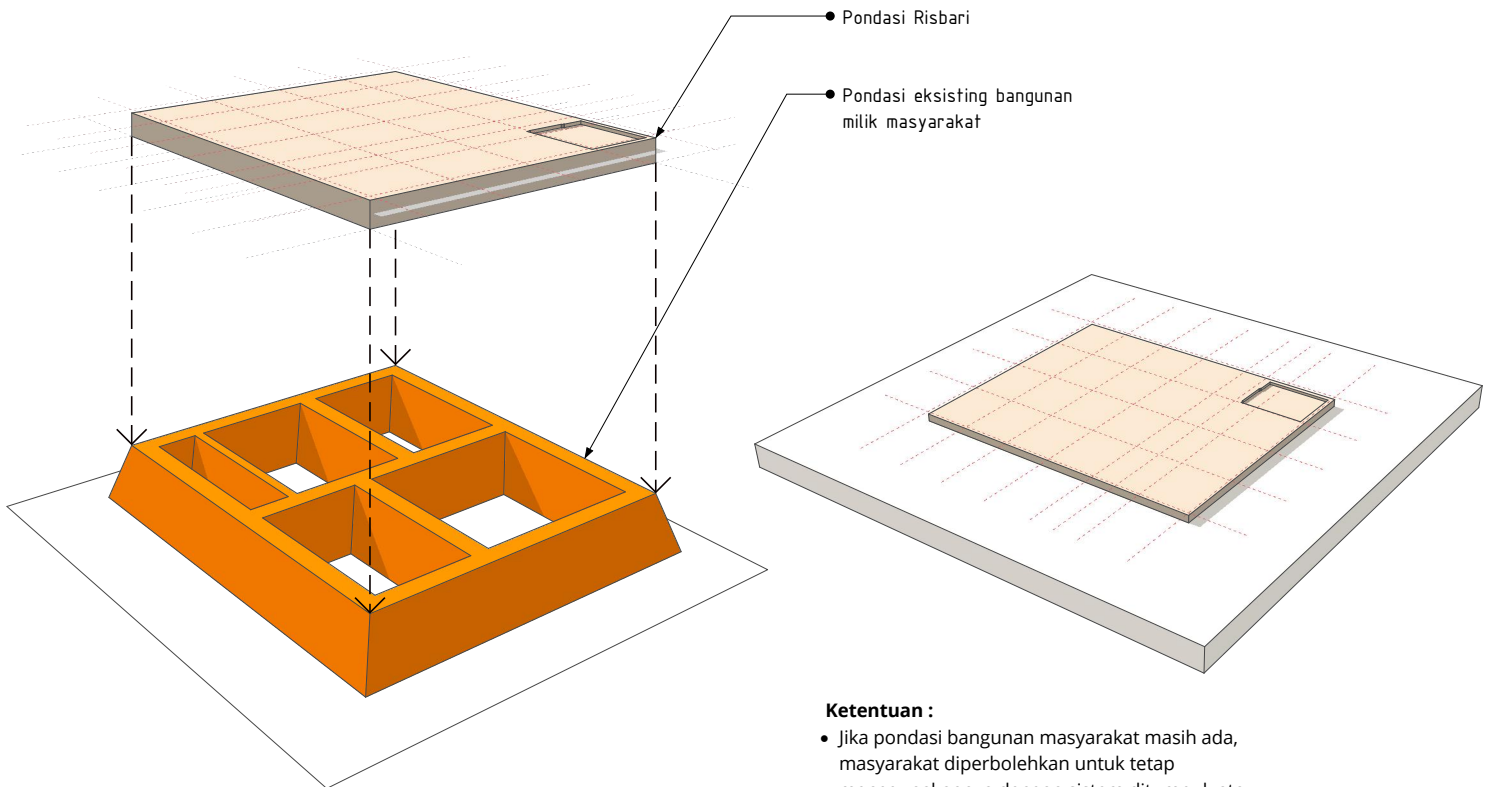
DETAIL A
SKALA 1:10



DETAIL B
SKALA 1:10

07. PEKERJAAN PONDASI ALTERNATIF

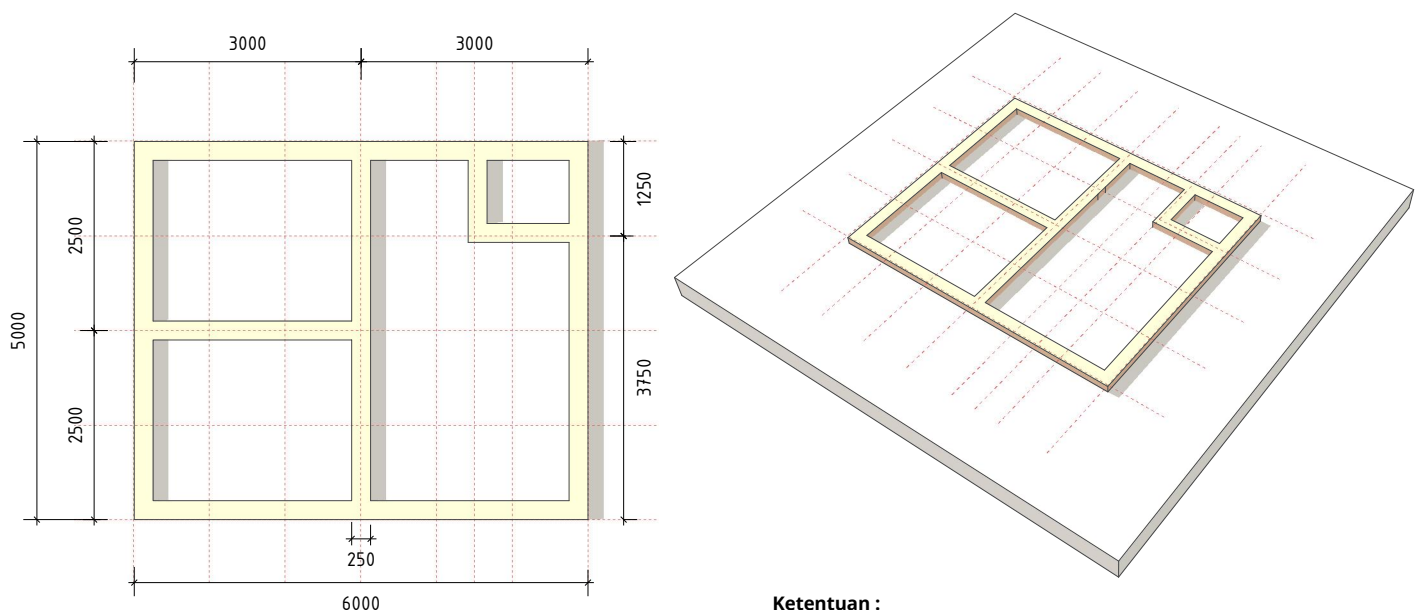
07.1. Pekerjaan Pondasi Alternatif 1



Ketentuan :

- Jika pondasi bangunan masyarakat masih ada, masyarakat diperbolehkan untuk tetap menggunakannya dengan sistem ditumpuk atau *overlay*.
- Sebelum membuat pondasi baru untuk risbari diharapkan agar pondasi lama diurug dahulu.

07.2. Pekerjaan Pondasi Alternatif 2

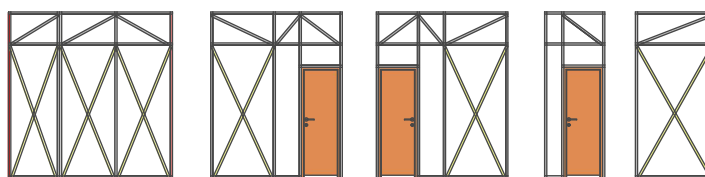
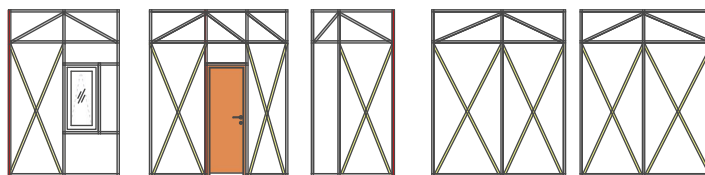


Ketentuan :

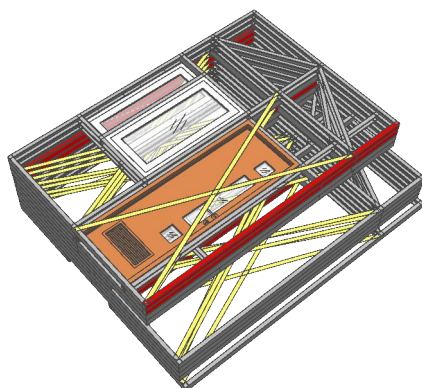
- Pondasi ini menggunakan sistem pondasi konvensional, yaitu sloof yang menerus.
- Penampang pondasi yang dianjurkan dengan dimensi lebar 25 cm dan tebal (tinggi) 35 cm.

08. PEKERJAAN PREFABRIKASI

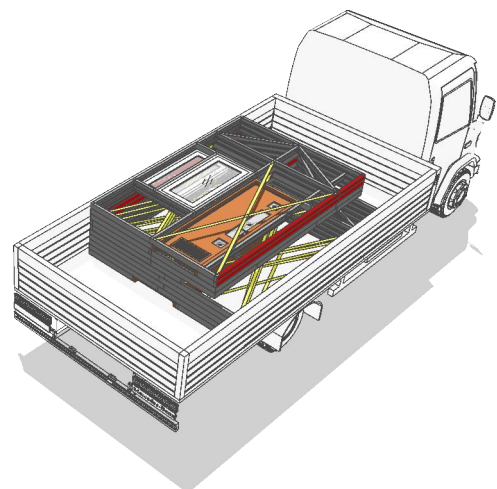
08.1. Pekerjaan Panel Dinding Prefabrikasi (di Pabrik)



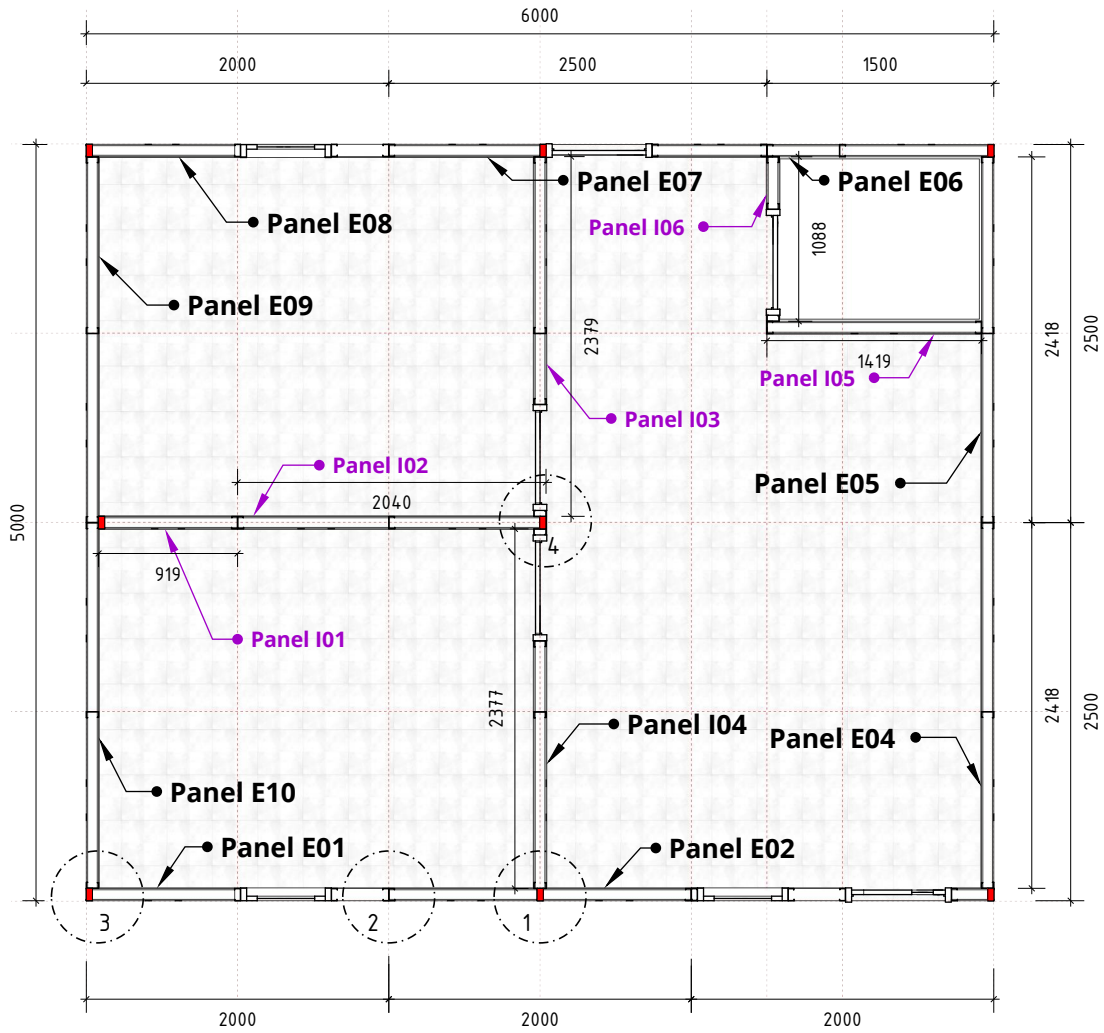
08.2. Proses Penataan Sebelum dimuat



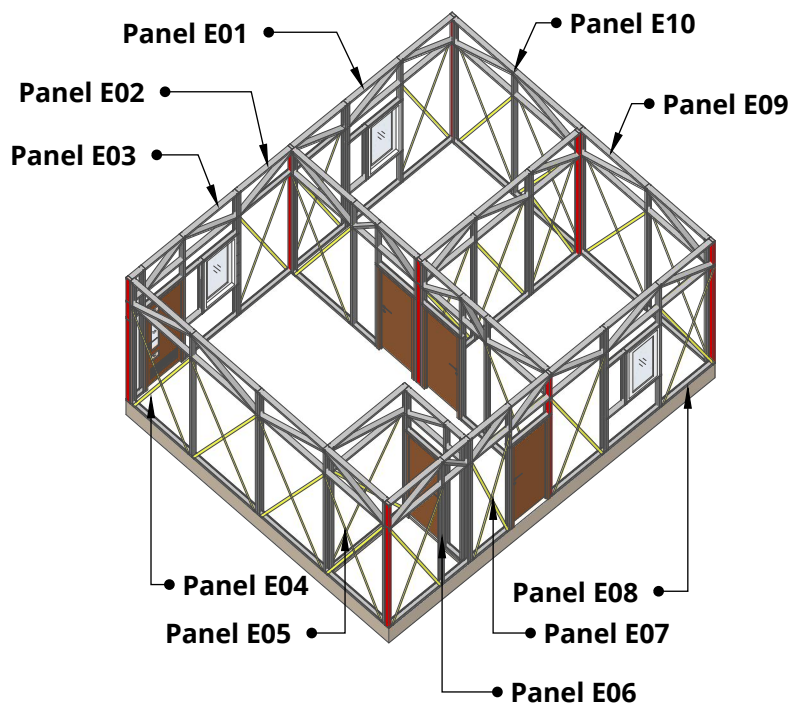
08.3. Proses Muat & Kirim



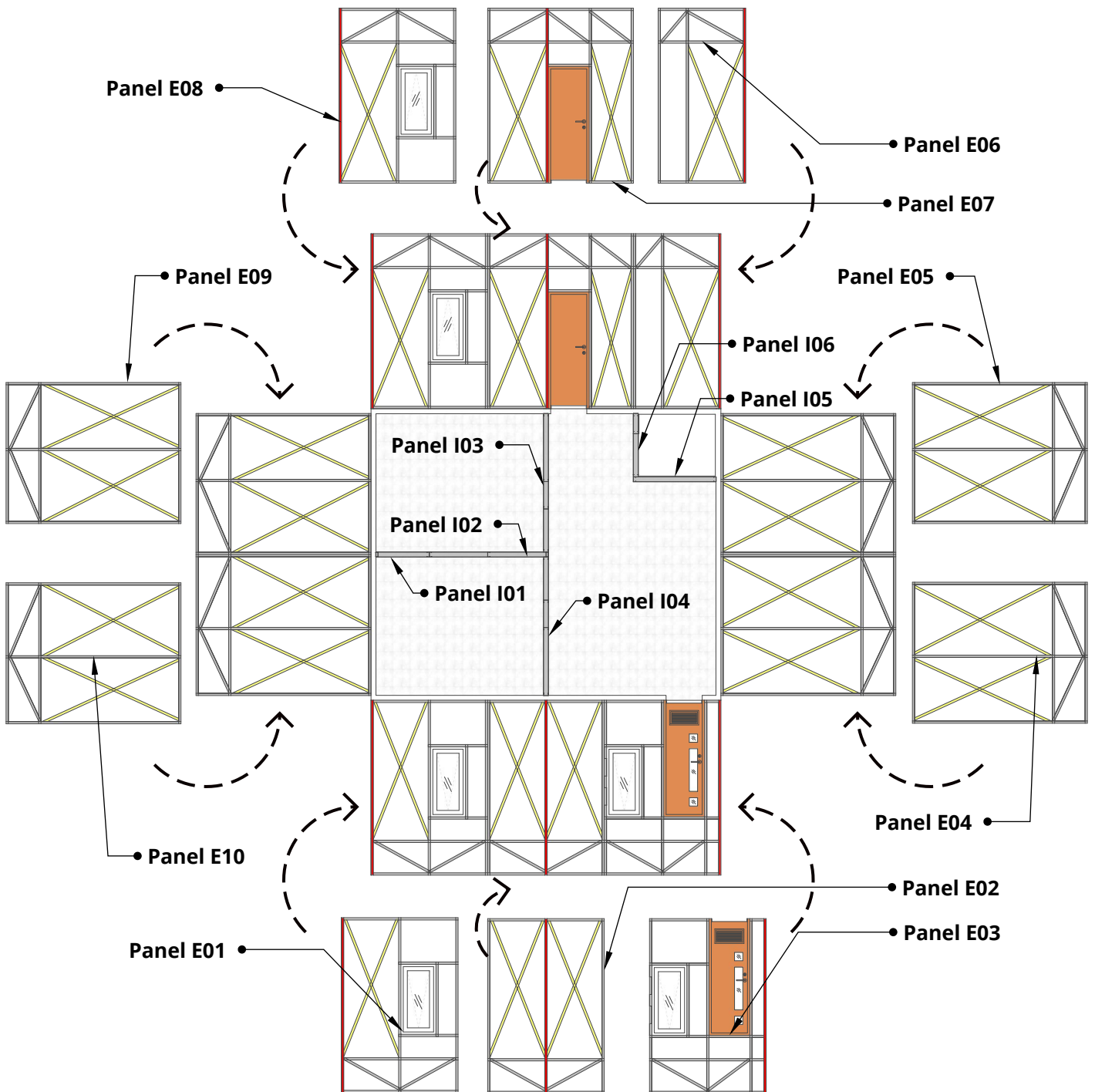
O9. DENAH PANEL DINDING



DENAH PANEL DINDING
 SKALA 1:50



10. PEKERJAAN PENATAAN PANEL

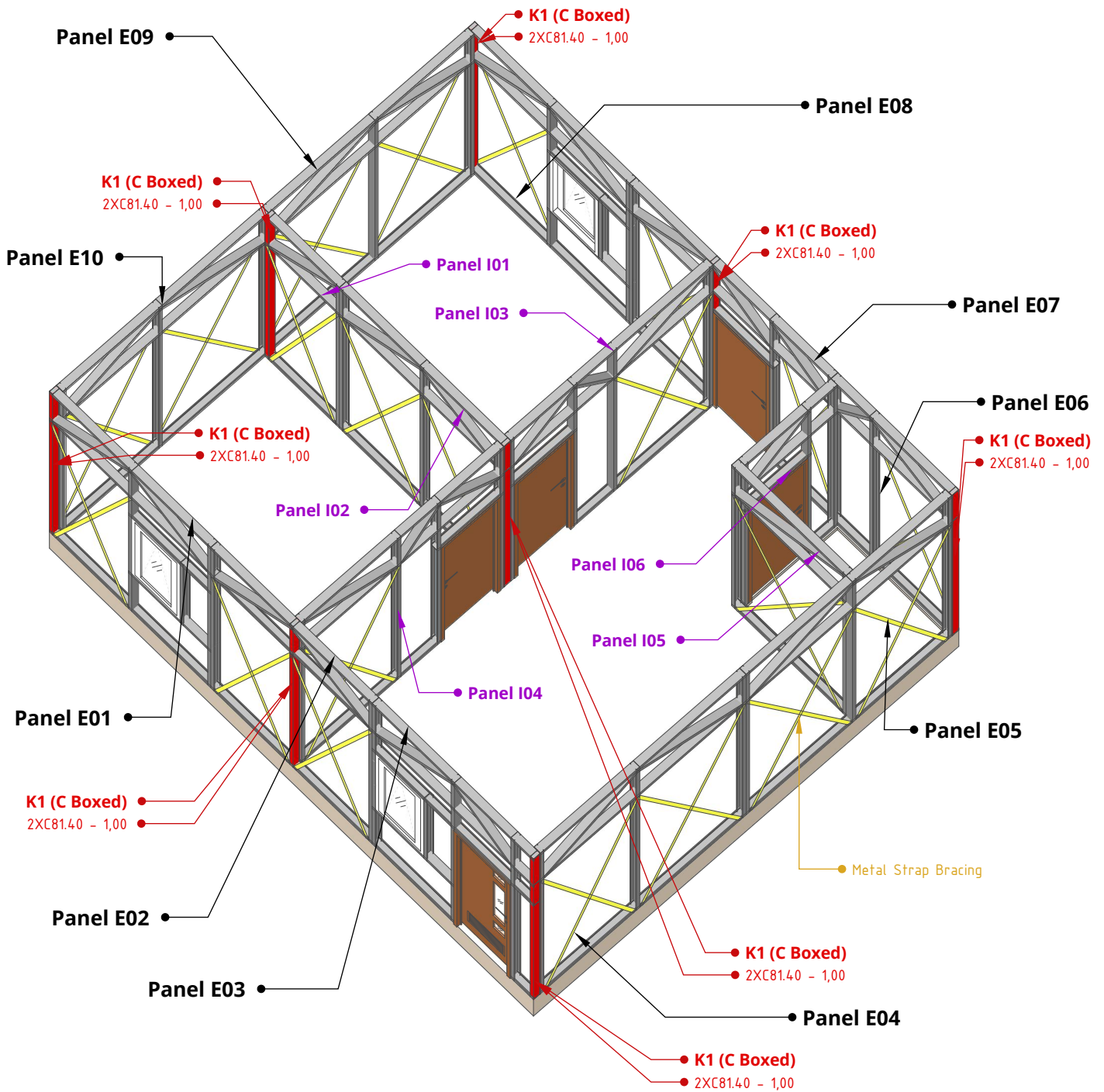


Catatan:

Semua Panel Interior harus dimasukkan ke dalam perimeter pondasi sebelum Panel Eksterior dirakit.

Setelah Panel Eksterior terpasang, Panel Interior dapat segera dirakit

11. PEKERJAAN PERAKITAN PANEL

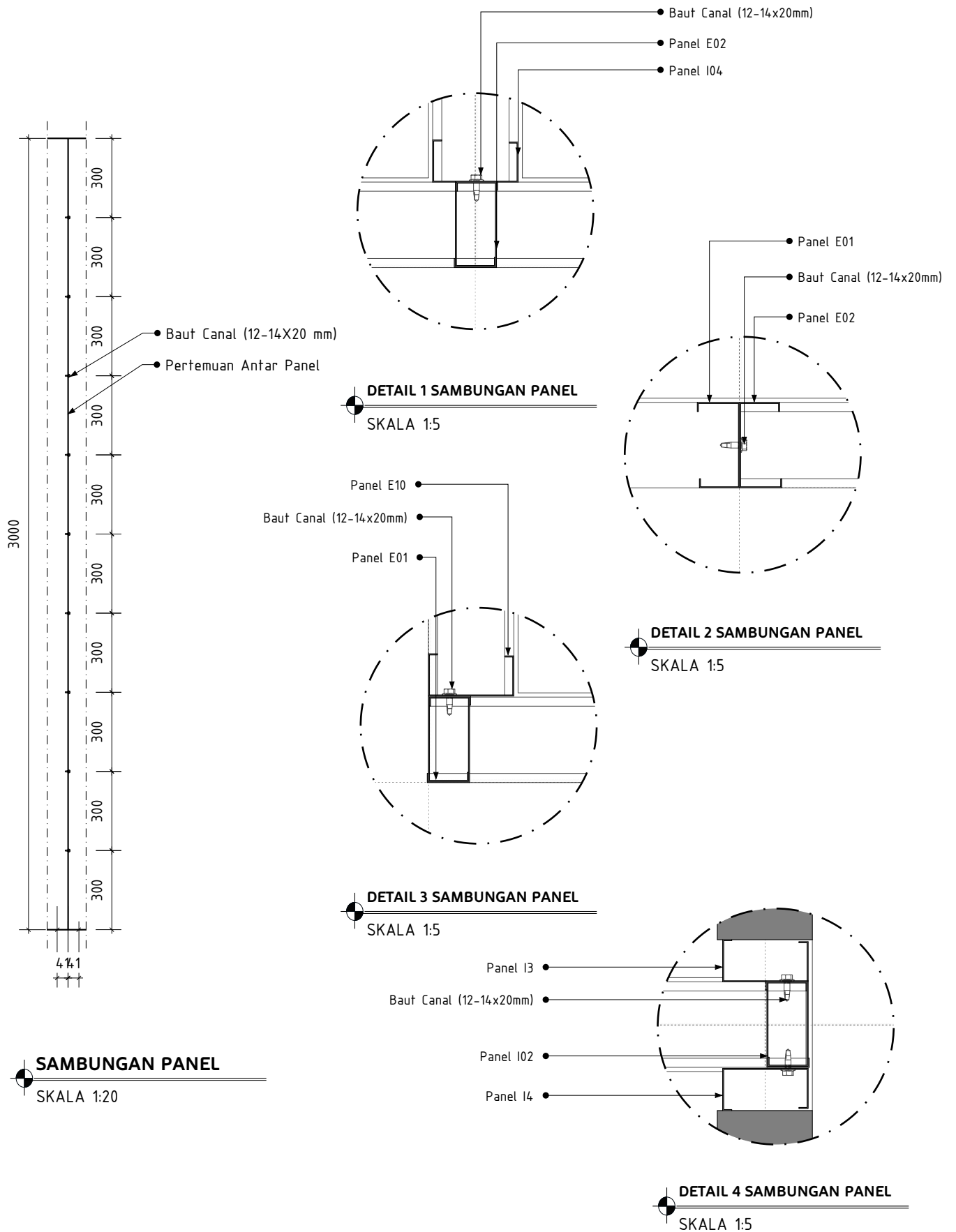


KETERANGAN

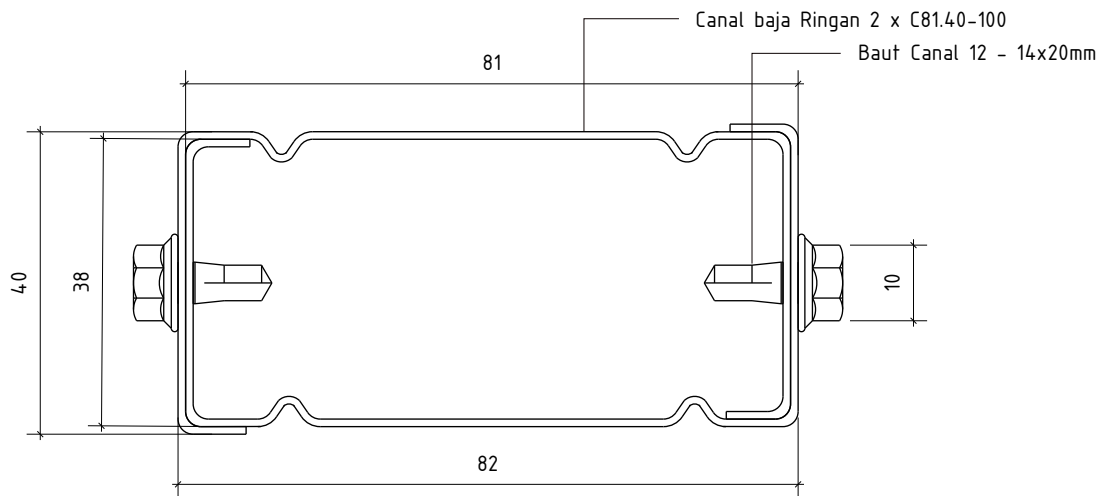
- Semua Rangka Dinding menggunakan C81.
 - Untuk Kolom Pojok menggunakan 2xC81.40 - 100 (BOXED), diberi screw dengan jarak 30cm (lihat detail)
 - Selain Kolom Pojok menggunakan C81.40 - 0,75

	K1 (C Boxed) 2XC81.40 - 1,00
	C 81.40 - 0,75
	Metal Strap Bracing

12. INFORMASI SAMBUNGAN PANEL

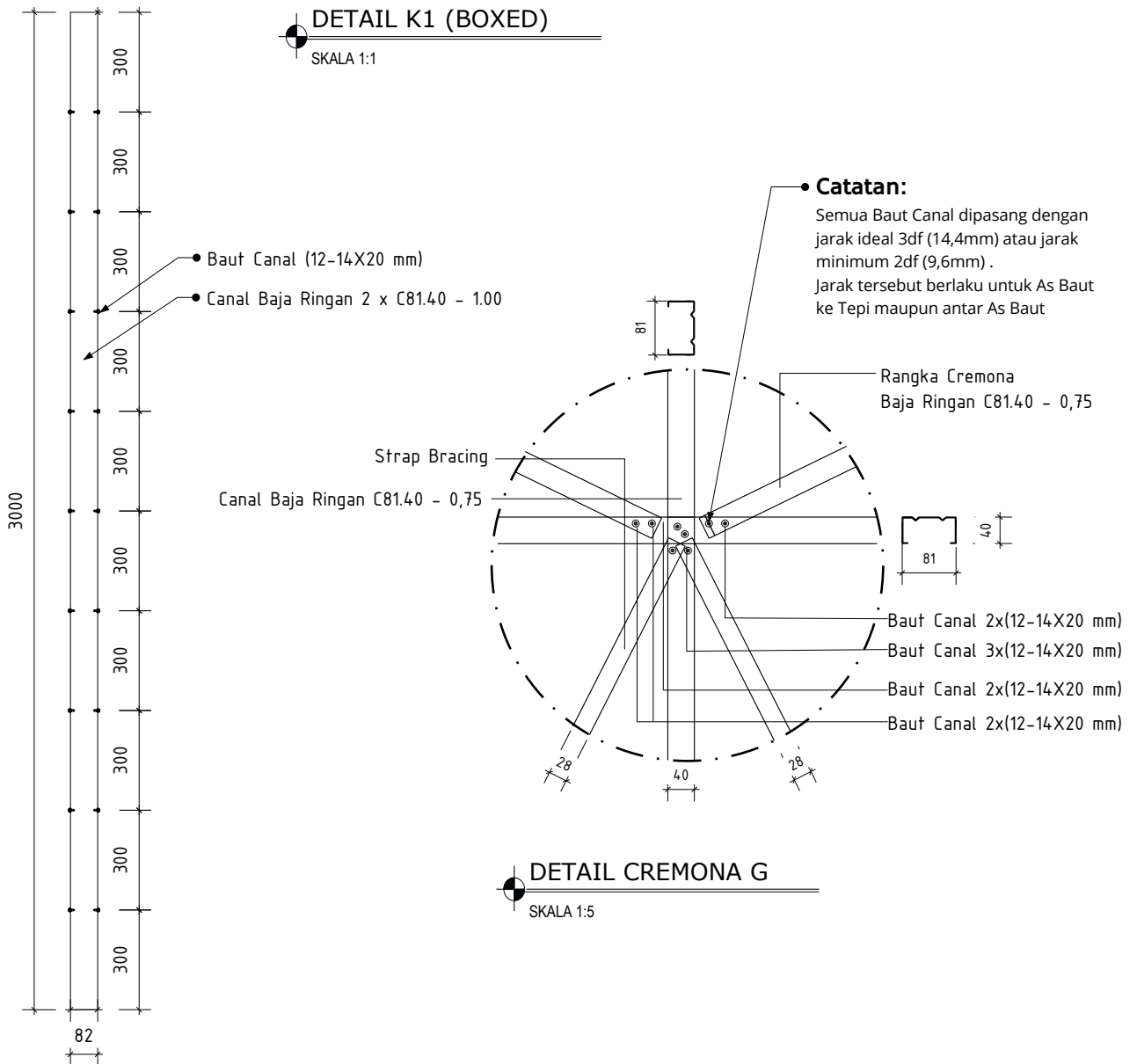


13. INFORMASI KOLOM DAN SAMBUNGAN



DETAIL K1 (BOXED)

SKALA 1:1



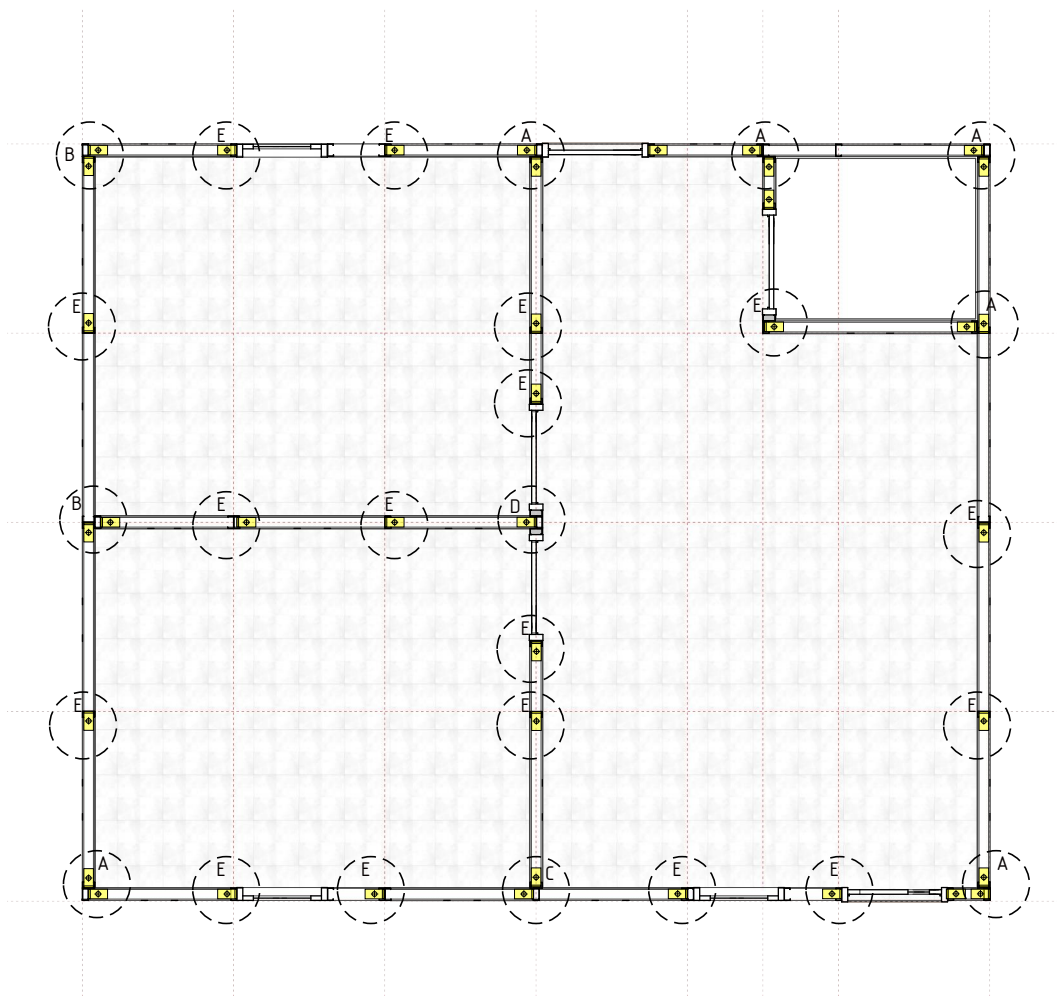
DETAIL CREMONA G

SKALA 1:5

KOLOM K1 (BOXED)

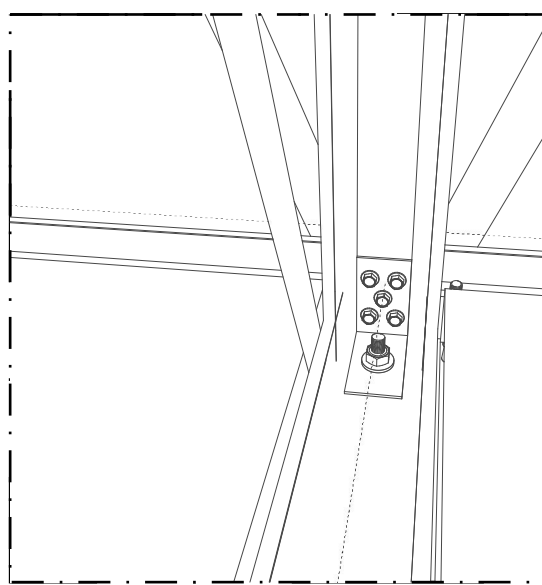
SKALA 1:20

14. INFORMASI PELETAKAN BRACKET L

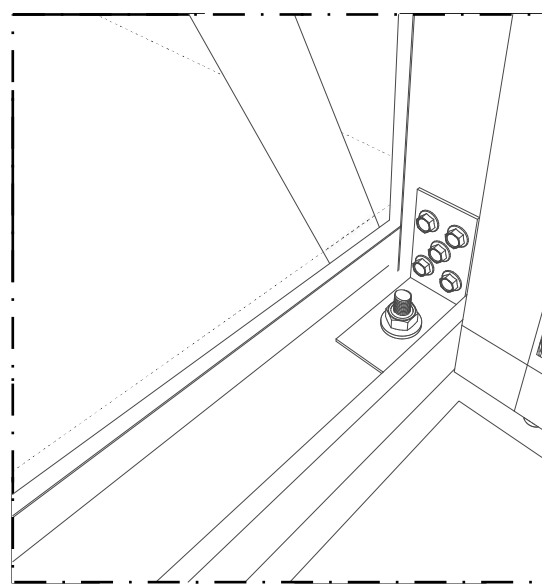


INFORMASI PELETAKAN BRACKET L

SKALA 1:50

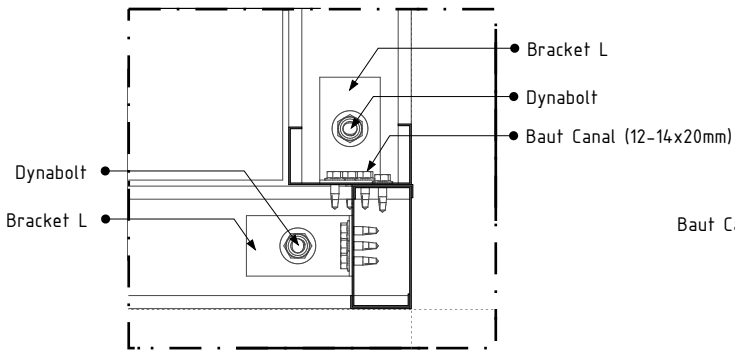


PERSPEKTIF 1

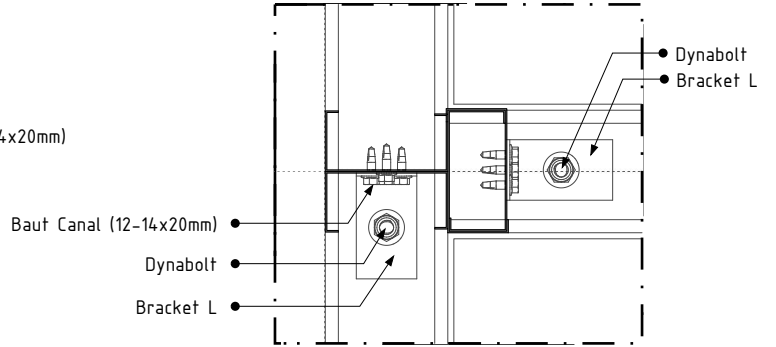


PERSPEKTIF 2

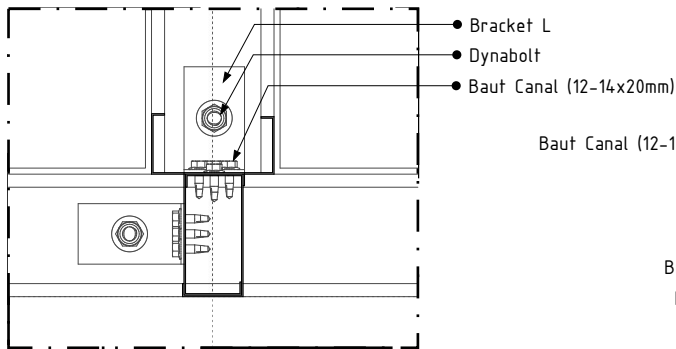
15. INFORMASI DETAIL BRAKET L



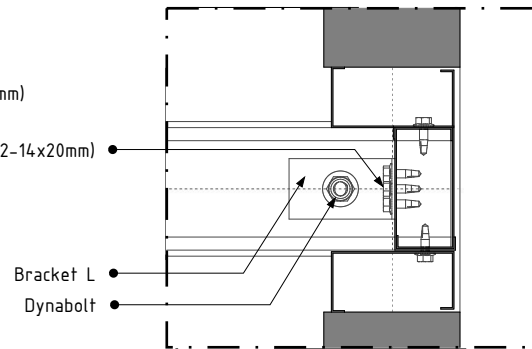
DETAIL PELETAKAN BRAKET A
SKALA 1:5



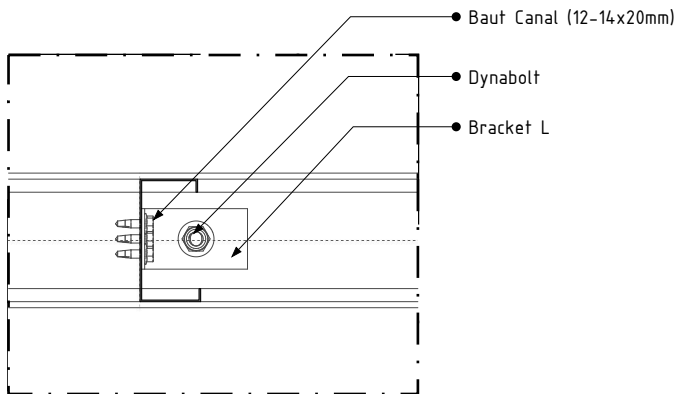
DETAIL PELETAKAN BRAKET B
SKALA 1:5



DETAIL PELETAKAN BRAKET C
SKALA 1:5

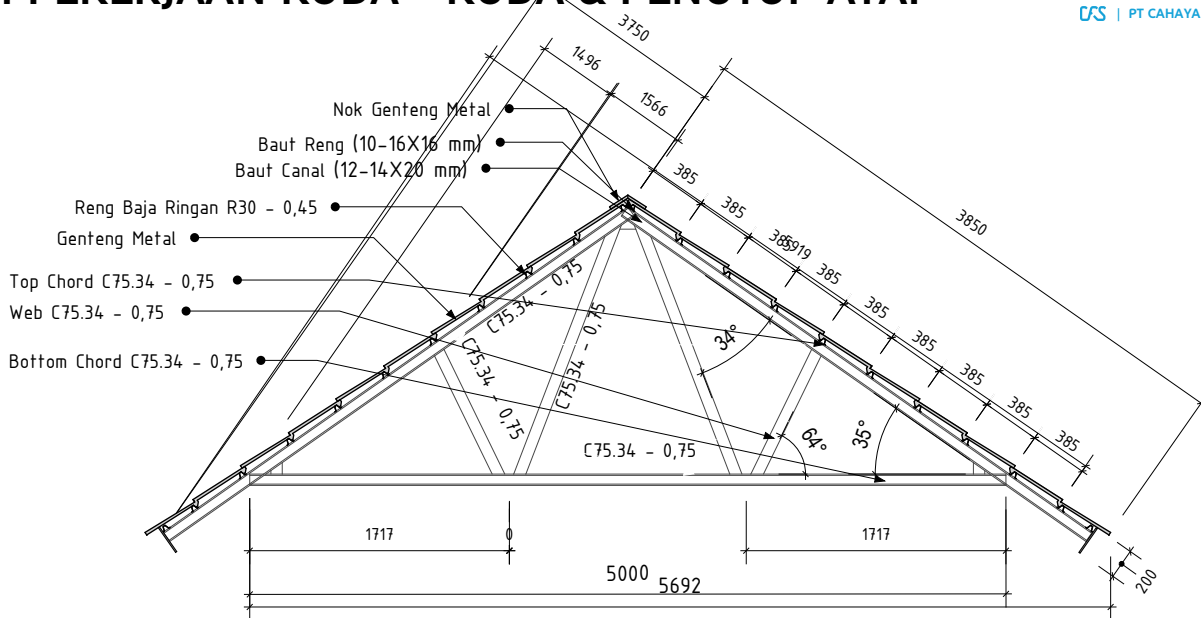


DETAIL PELETAKAN BRAKET D
SKALA 1:5



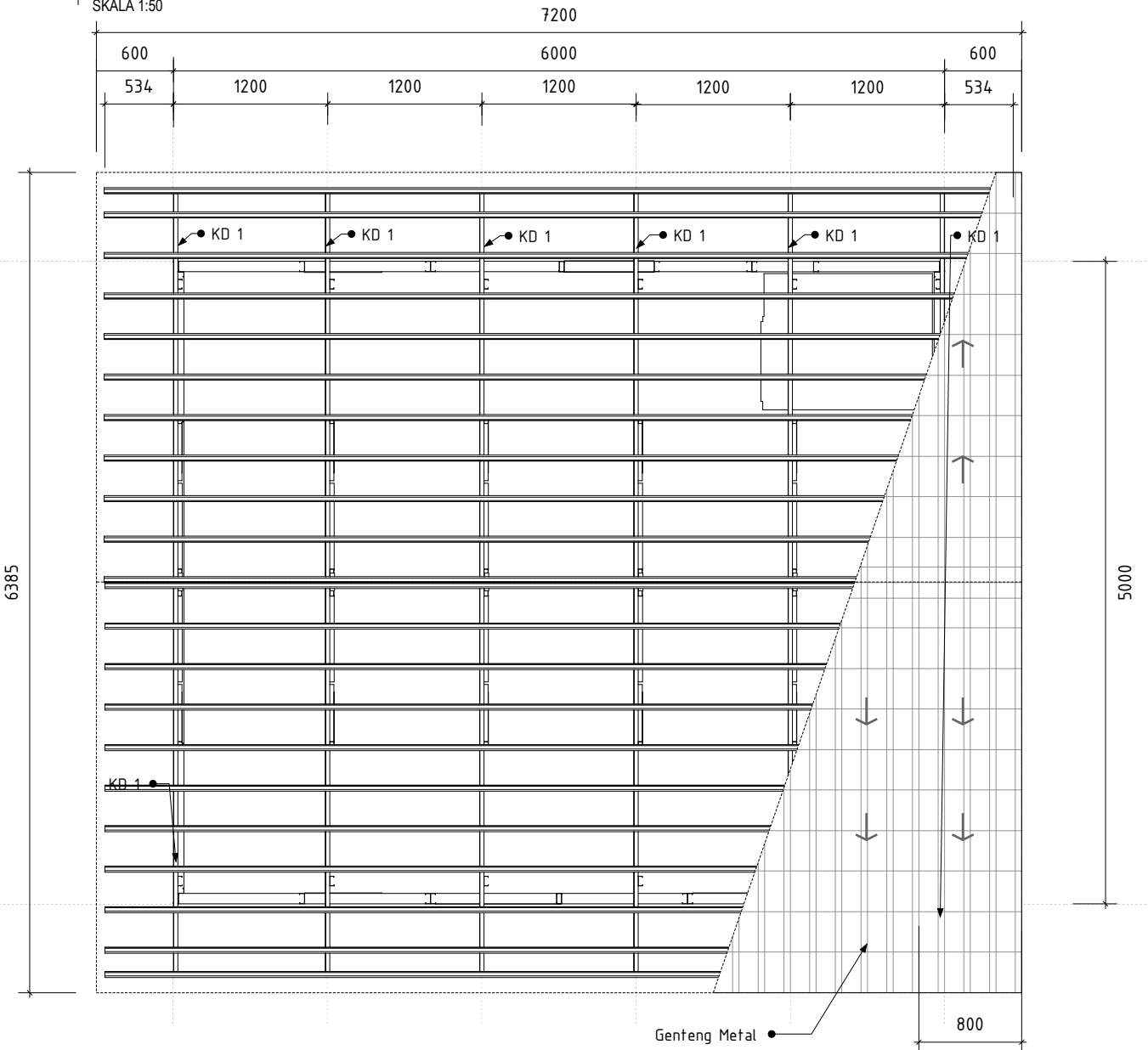
DETAIL PELETAKAN BRAKET E
SKALA 1:5

16. PEKERJAAN KUDA - KUDA & PENUTUP ATAP



KUDA-KUDA KD1

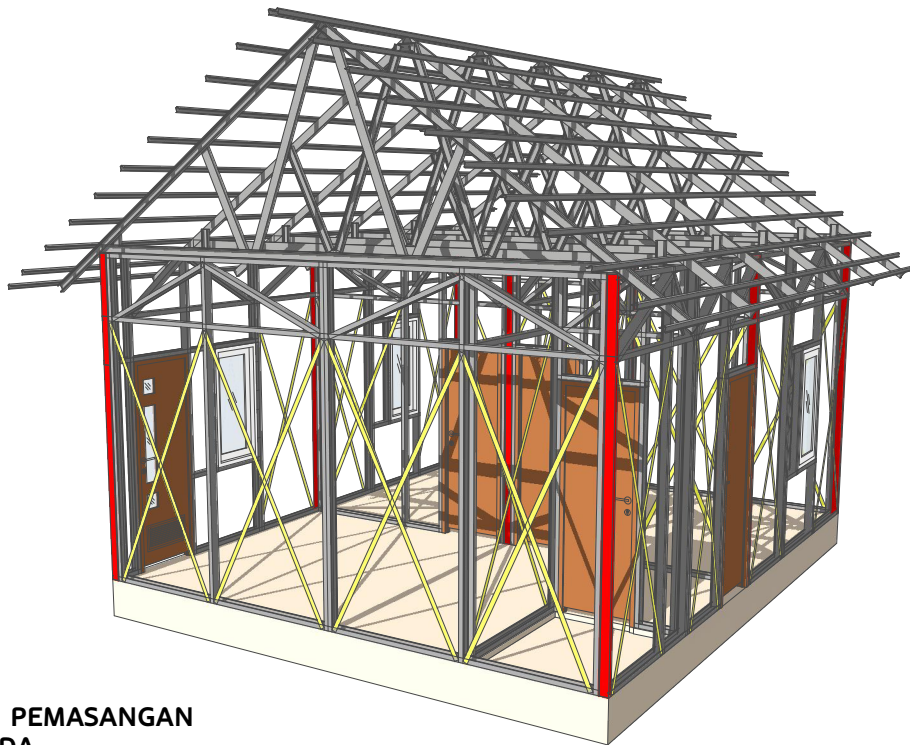
SKALA 1:50



DENAH KUDA-KUDA

SKALA 1:50

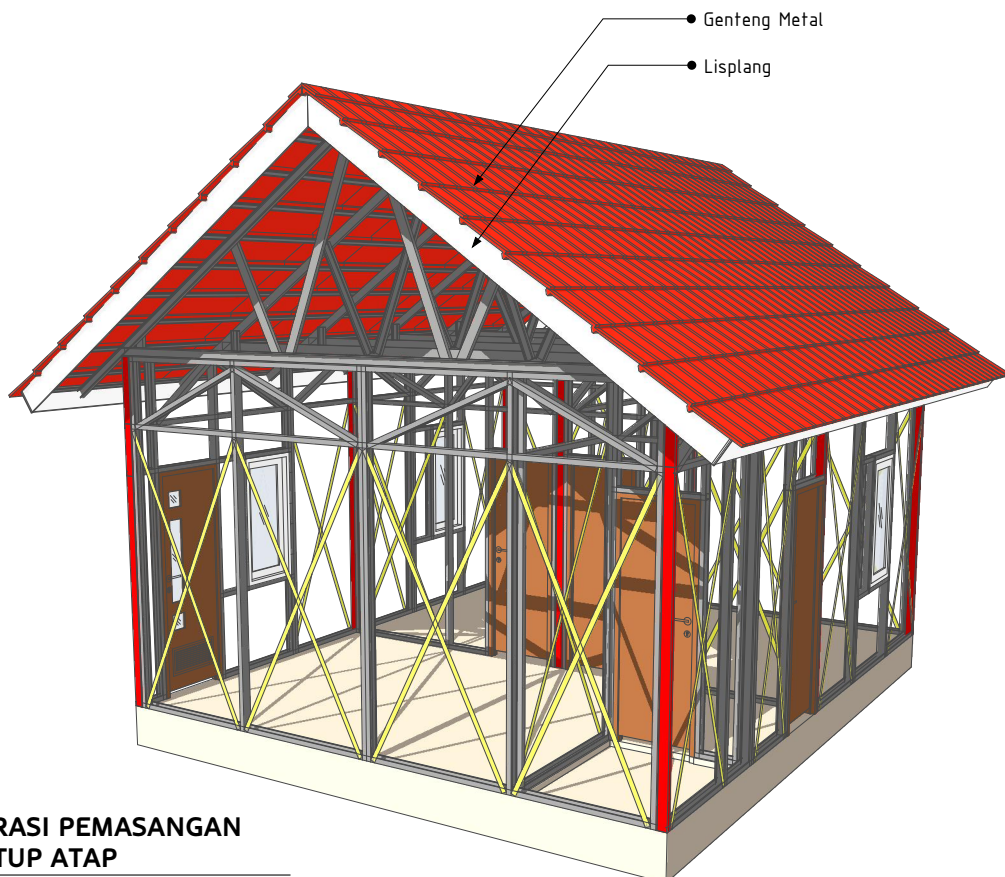
17. PEKERJAAN KUDA - KUDA & PENUTUP ATAP



**ILUSTRASI PEMASANGAN
KUDA-KUDA**



SKALA 1:75



• Genteng Metal

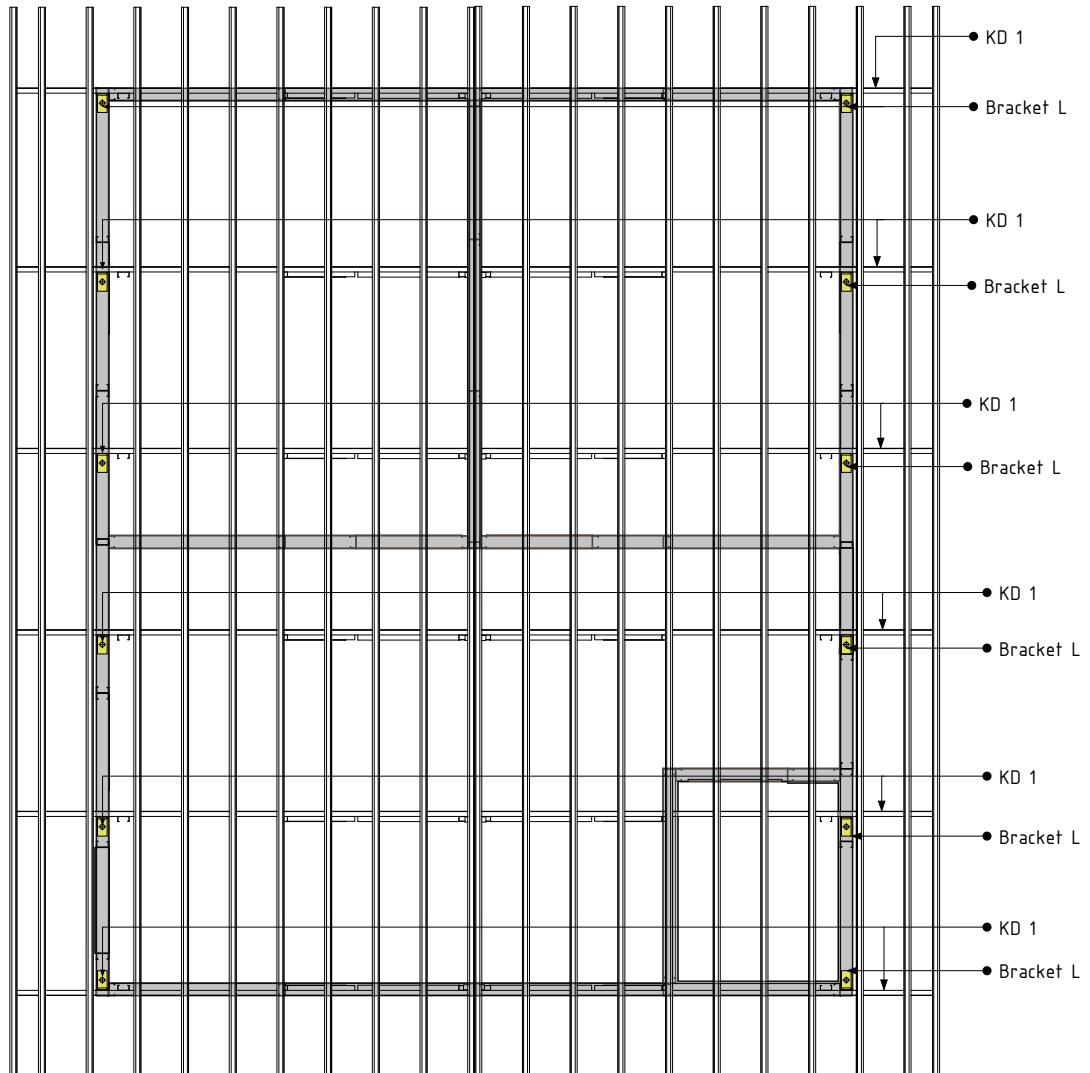
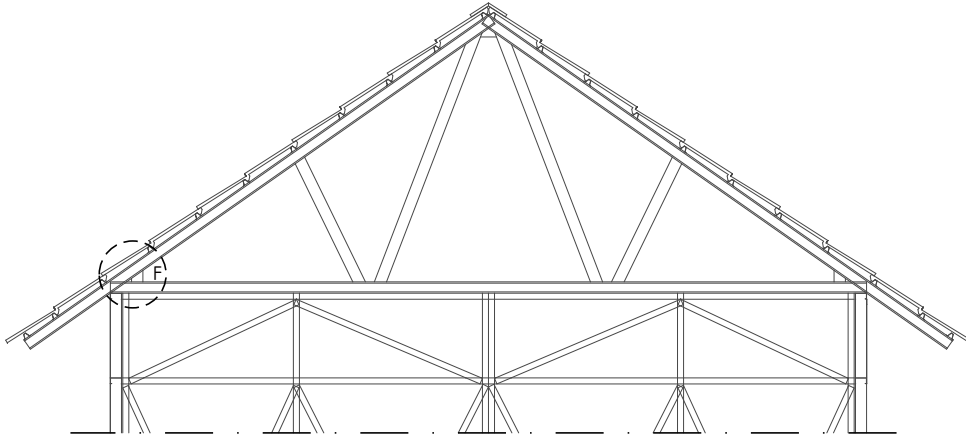
• Lisplang

**ILUSTRASI PEMASANGAN
PENUTUP ATAP**



SKALA 1:75

18. INFORMASI PELETAKAN BRACKET L KUDA-KUDA

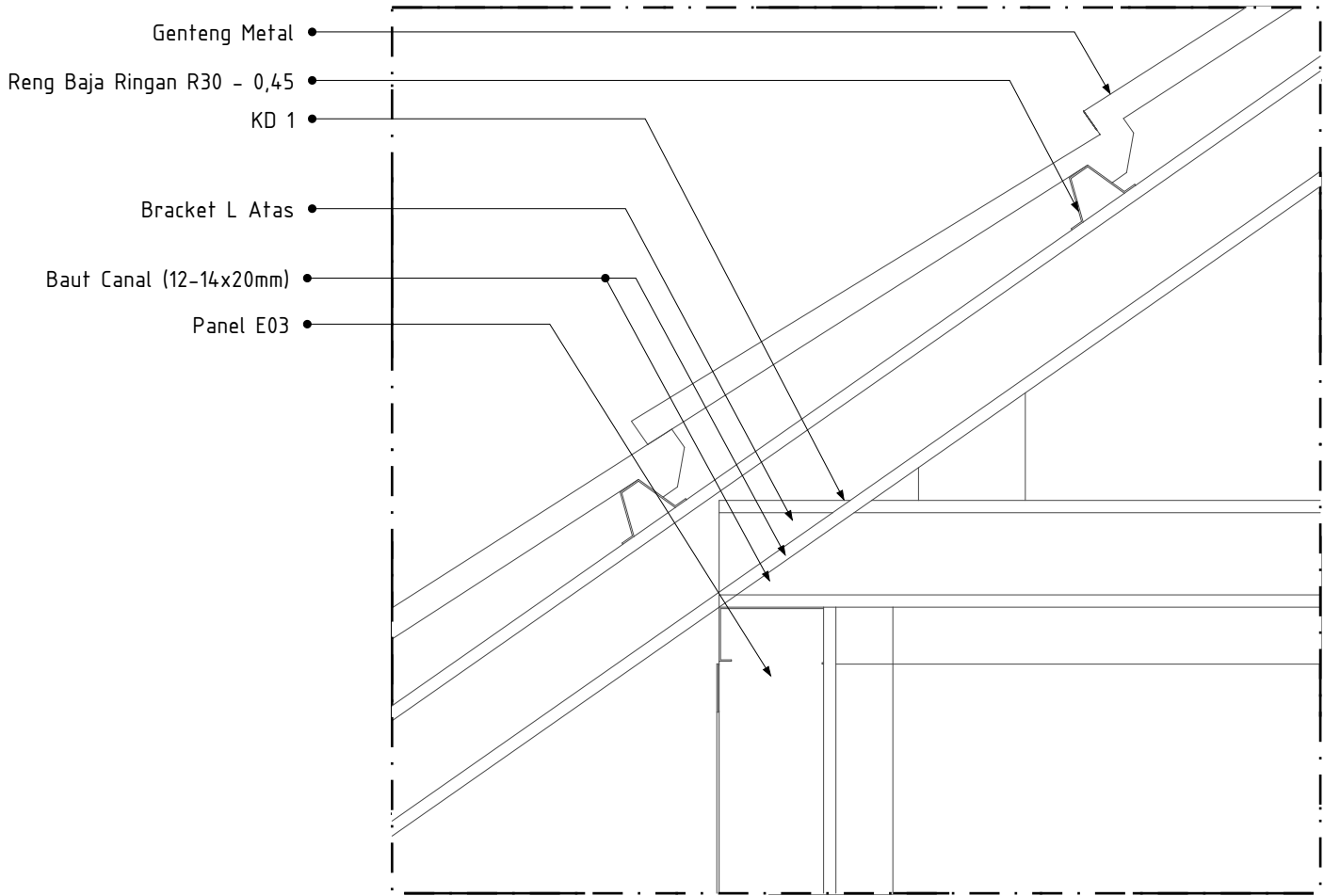


INFORMASI PELETAKAN BRACKET L KUDA-KUDA

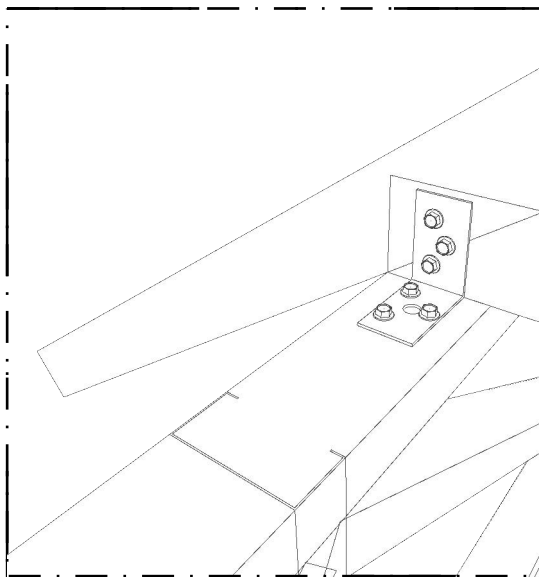


SKALA 1:50

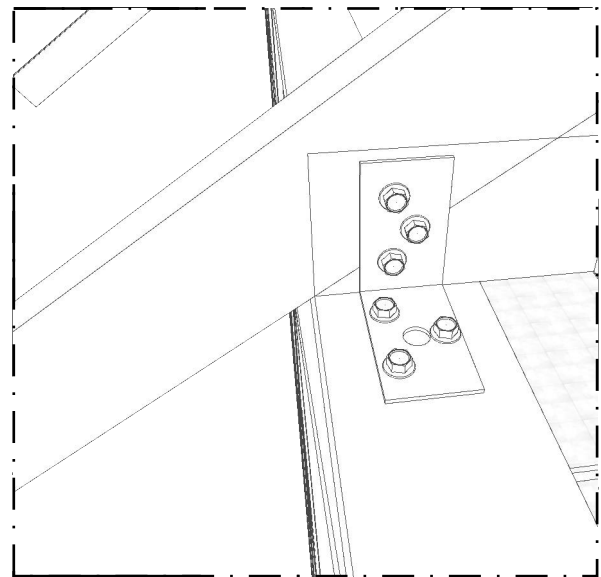
19. INFORMASI DETAIL BRACKET L KUDA-KUDA



DETAIL PELETAKAN BRACKET F
SKALA 1:5

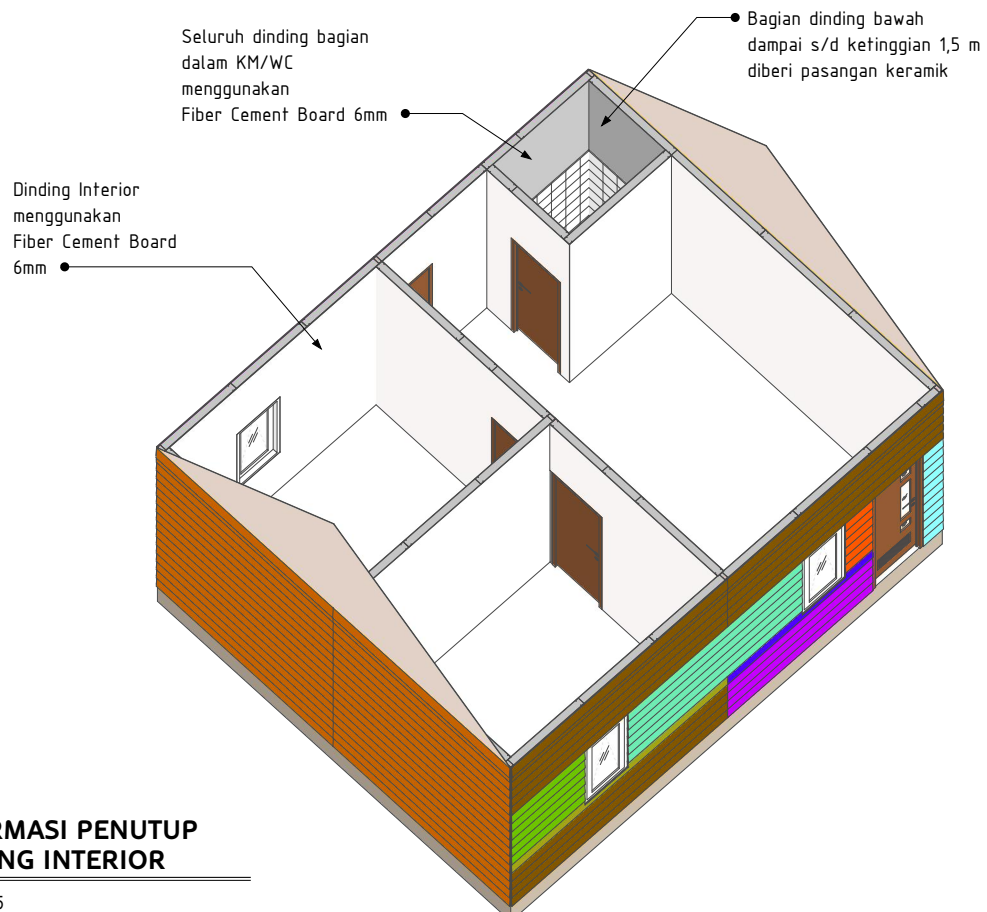
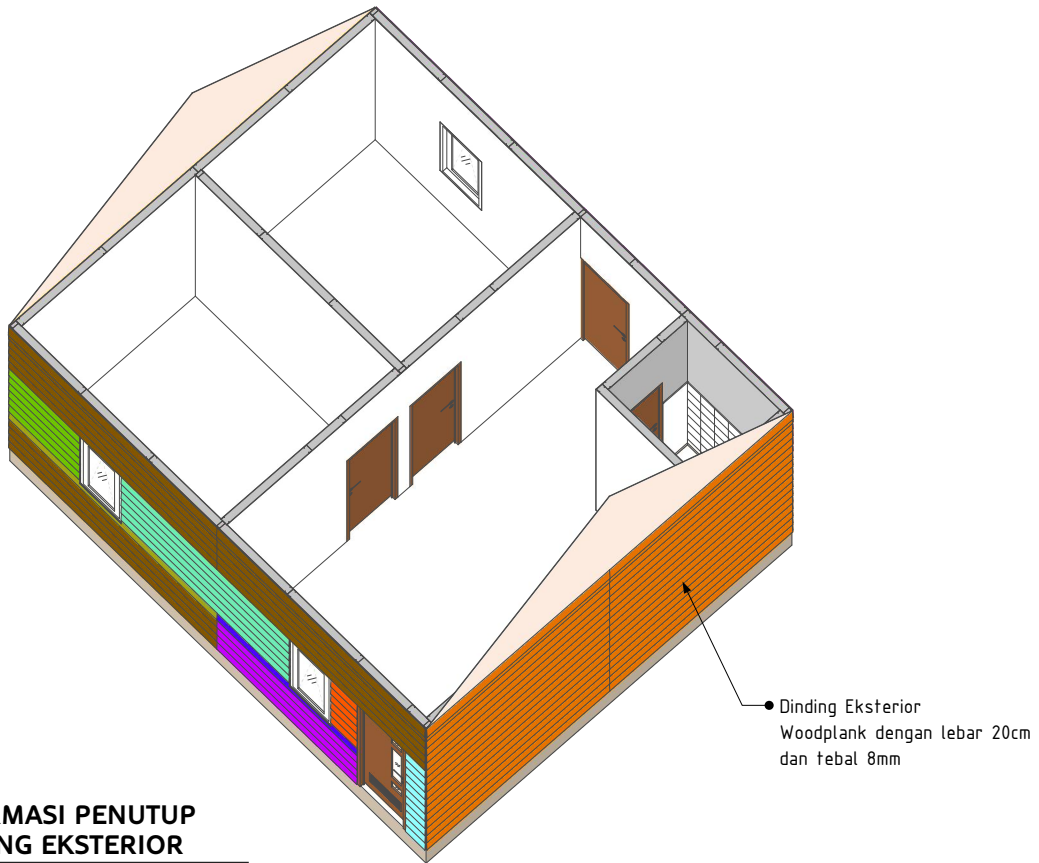


PERSPEKTIF 1



PERSPEKTIF 2

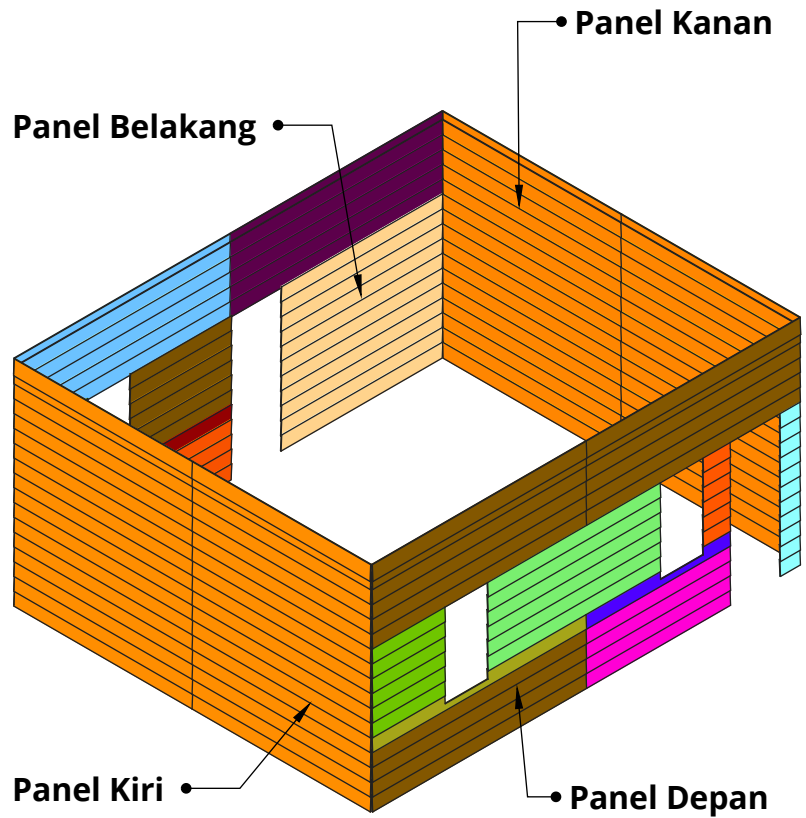
20. PEKERJAAN PENUTUP DINDING



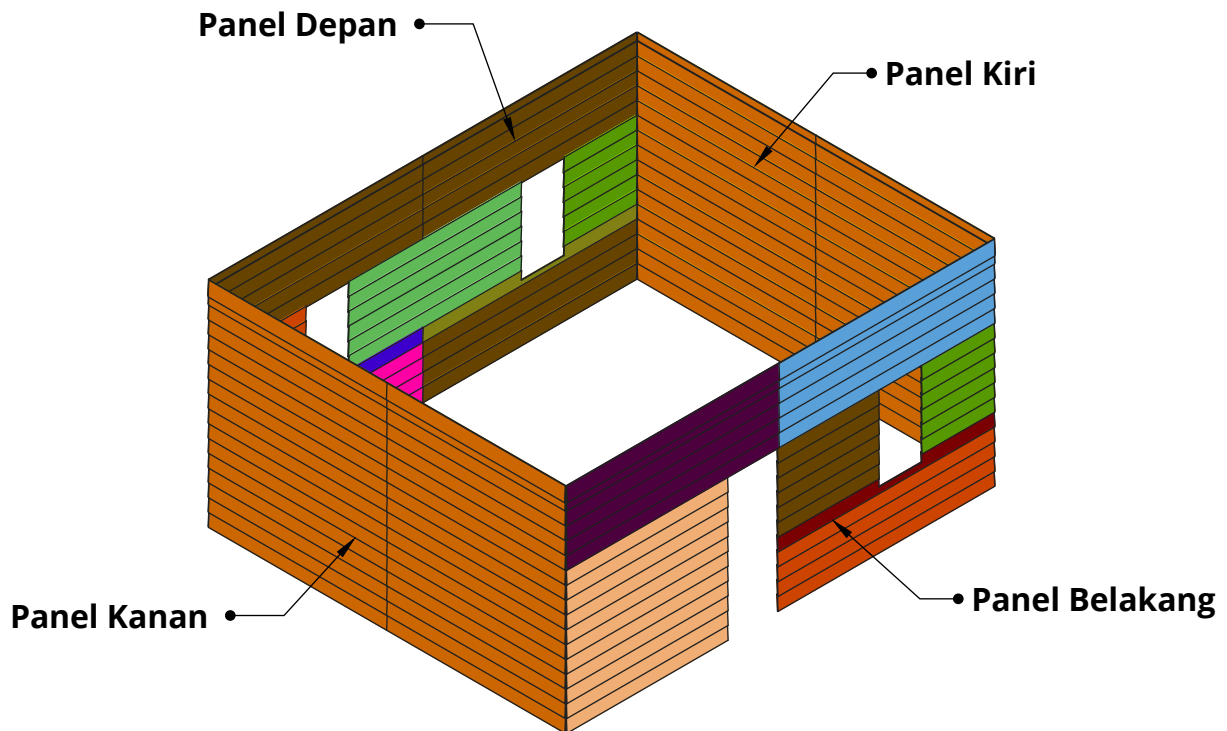
21. KEYPLAN PENUTUP DINDING EKSTERIOR

TABEL CUTTING LIST

Modul	Jumlah	Panjang (mm)
Modul A	16	3.000
Modul A1	1	3.000
Modul B	12	1.020
Modul C	6	2.420
Modul D	4	2.020
Modul D1	1	2.020
Modul E	6	379
Modul F	11	280
Modul G	68	2.500
Modul H	11	2.260
Modul I	6	2.979
Modul J	6	3.022
Modul K	6	1.420
Modul L	4	3.040
Modul L1	1	3.040
	159	

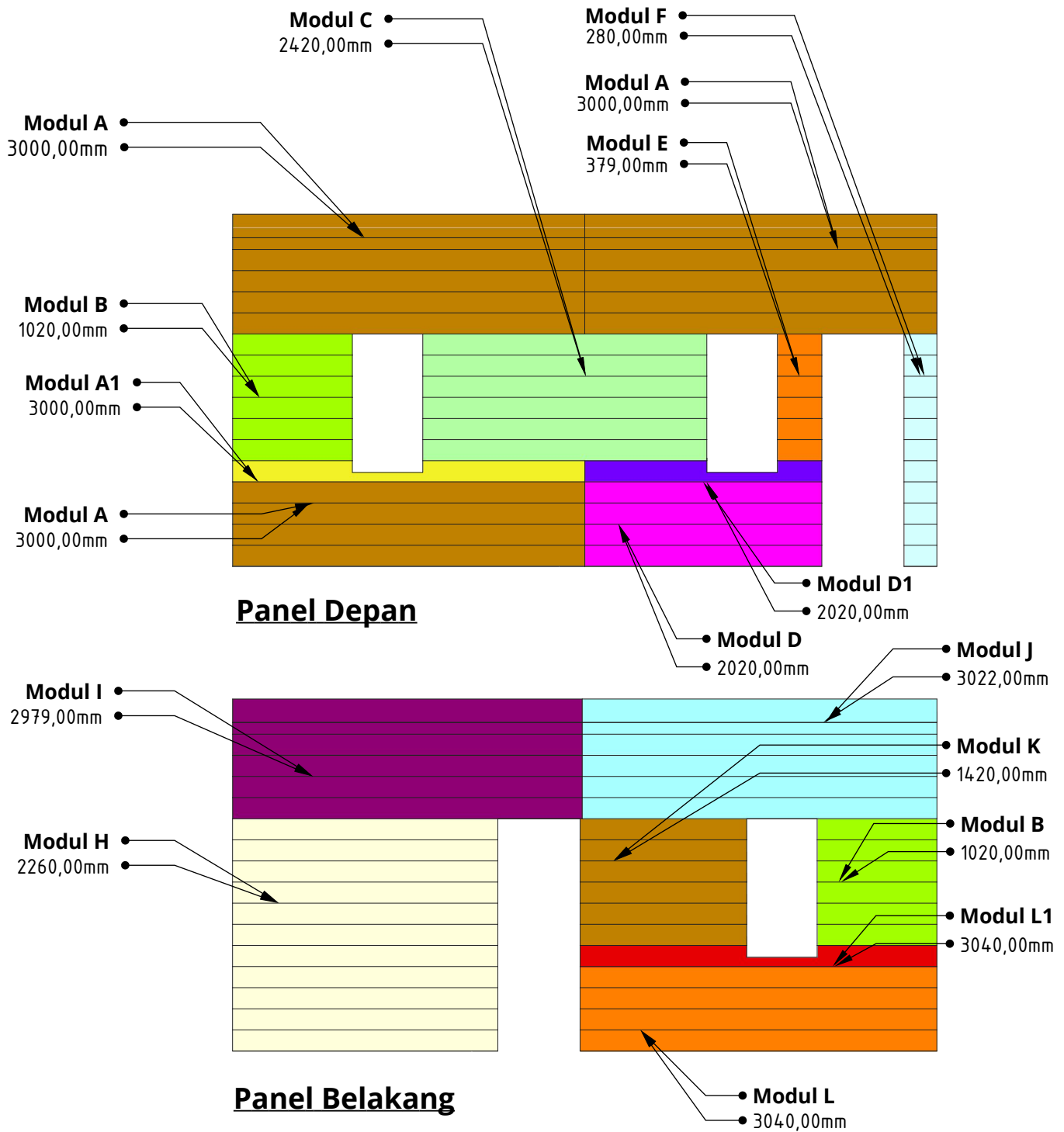


AKSONOMETRI DEPAN-KIRI
SKALA 1:75



AKSONOMETRI BELAKANG - KANAN
SKALA 1:75

22. CUTTING LIST PANEL DEPAN & BELAKANG



23. CUTTING LIST PANEL KANAN & KIRI

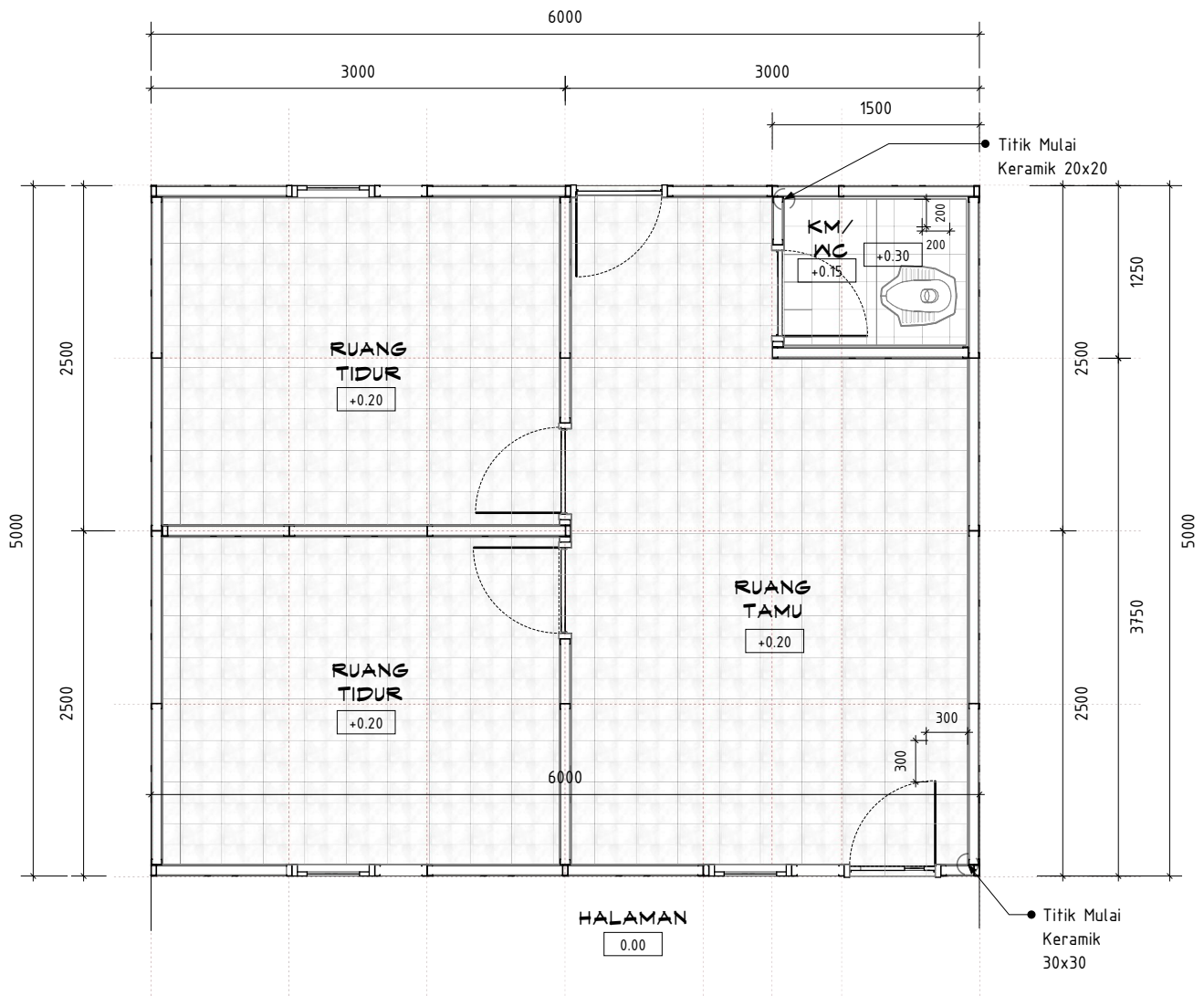
Modul G •
2500,00mm •

Panel Kanan

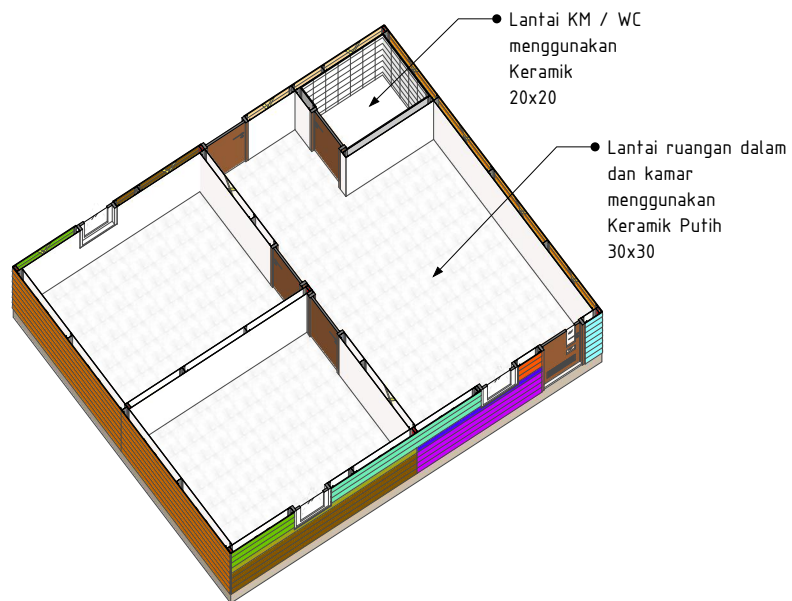
• **Modul G**
• 2500,00mm

Panel Kiri

24. PEKERJAAN LANTAI



DENAH POLA LANTAI
SKALA 1:50



Spesifikasi Teknis Risbari (Rumah Instan Sehat Baja Ringan)

1. Material Rangka Utama RISBARI
 - Kolom Utama : Baja Ringan Boxed 2 X C81.40 – 100
 - Kolom Pendukung : Baja Ringan C81.40 – 75
 - Balok : Baja Ringan C81.40 – 75
 - L Bracket 1 mm
 - Dynabolt 3/8 x 75 M12
 - Metal Strap Bracing Uk 28 mm
 - Screw SDS 12-14x20
2. Rangka Atap dan Genteng
 - Kuda Kuda Baja Ringan C75.34 – 75
 - Reng Ukuran Tinggi 30 mm
 - Screw SDS 12-14x20
 - Screw SDS 10-16x16
 - Genteng Metal Polos Warna Merah Maroon + Nok
3. Dinding dan Plafon
 - Dinding Luar : Papan Fiber Cement Motif Kayu uk lebar 20 tebal 8 mm
 - Dinding Dalam : Papan Fiber Cement Tebal 6 mm
 - Plafon : Gypsum
 - Rangka Plafon : Hollow Plafon Tebal 0.25 mm
4. Jendela dan Pintu
 - Pintu PVC uk 70 x 200
 - Jendela Kusen Alumunium uk 60 x 120
5. Lantai
 - Lantai Rumah : Keramik 30x30
 - Lantai dan Dinding (t=1,5 m) Kamar Mandi : 20x20
6. Pondasi
 - Beton mutu K225 tebal 15 cm (Top & Bottom Wiremesh 6 mm)

26. Perancangan Campuran Beton

Perancangan Campuran Beton (SNI 2834:2000)				
No	Uraian	Tabel / Grafik / Hitungan	Nilai	Satuan
1	Kuat tekan yang disyaratkan	Ditentukan	20	MPa
2	Deviasi standar	10% (1)	2	MPa
3	Nilai tambah (margin)	1.64 (2)	3,28	
4	Kekuatan rata-rata yang ditargetkan	(1) + (3)	23,28	Mpa
5	Jenis semen	PCC Tipe I		
6	a. Jenis agregat : halus	Alami	180	kg/m ³
	b. Jenis agregat : kasar	Batu pecah	210	kg/m ³
7	Faktor air semen bebas	Grafik 1	0,63	
8	Faktor air semen maksimum	Tabel 4	0,55	
9	Slump	Ditetapkan	50	mm
10	Ukuran agregat maksimum	Ditetapkan	20	mm
11	Kadar air bebas	$0.67*(6a)+0.33(6b)$	189,9	kg/m ³
12	Jumlah semen	(11):(7)	345,27	kg/m ³
13	Jumlah semen dibutuhkan	Tidak ditentukan	-	-
14	Jumlah semen minimum	Tabel 4	325	kg/m ³
15	Faktor air yang semen yang disesuaikan	Diabaikan	-	-
16	Susunan besar butir agregat halus	Gradasi Nomor 2		
17	Susunan agregat kasar atau gabungan	Grafik 9		
18	Persen agregat halus	Grafik 14	32	%
19	Berat jenis relatif agregat campuran, agregat (kering permukaan)	$[(18) \times 2,6] + \{ [1-(18)] \times 2,7\}$	2,668	
20	Berat isi beton	Grafik 16	2400	kg/m ³
21	Kadar agregat gabungan	$20-(12+11)$	1864,83	kg/m ³
22	Kadar agregat halus	$(18) \times (21)$	596,74	kg/m ³
23	Kadar agregat kasar	$(21)-(22)$	1268,08	kg/m ³
24	Proporsi campuran	Semen	345,27	kg/m ³
		Air	189,90	kg/m ³
		Agregat halus	596,74	kg/m ³
		Agregat kasar	1268,08	kg/m ³