



# Lampiran 1 Formulir Bimbingan Skripsi

12/30/24, 12:08 PM

Rekap Percakapan Bimbingan



## UNIVERSITAS PEMBANGUNAN JAYA

Jalan Cendrawasih Raya Blok B7/P, Sawah Baru, Kec. Ciputat, Kota Tangerang Selatan, Banten 15413  
Website : [www.upj.ac.id](http://www.upj.ac.id) / e-Mail : [info@upj.ac.id](mailto:info@upj.ac.id) (mailto:info@upj.ac.id) / Telepon : 021 - 7455555

### REKAP PERCAKAPAN BIMBINGAN

**Judul Proposal** : Analisis Perbandingan Rancangan Anggaran Biaya Antara Metode Konvensional dan BIM (Studi Kasus: Proyek Rehab Total SDN Pejaten Timur 11)

**Sesi / Bahasan** : ke-1 / Bimbingan mengenai revisi setelah sidang seminar proposal, revisi di latar belakang, penulisan, dan diagram alir  
**Mahasiswa** : 2021091001 - MEISYARAH KHALISA **Pembimbing Proposal** : 08.0322.007 - Dr. Ir, Lukas Beladi Sihombing, S.T, M.T.

Tidak ada data percakapan

**Sesi / Bahasan** : ke-2 / Bimbingan mengenai diagram alir yang terdapat di BAB 3  
**Mahasiswa** : 2021091001 - MEISYARAH KHALISA **Pembimbing Proposal** : 08.0322.007 - Dr. Ir, Lukas Beladi Sihombing, S.T, M.T.

Tidak ada data percakapan

**Sesi / Bahasan** : ke-3 / Bimbingan mengenai pengerjaan Autodesk Revit  
**Mahasiswa** : 2021091001 - MEISYARAH KHALISA **Pembimbing Proposal** : 08.0322.007 - Dr. Ir, Lukas Beladi Sihombing, S.T, M.T.

Tidak ada data percakapan

**Sesi / Bahasan** : ke-4 / Bimbingan mengenai isi tugas akhir bab 4  
**Mahasiswa** : 2021091001 - MEISYARAH KHALISA **Pembimbing Proposal** : 08.0322.007 - Dr. Ir, Lukas Beladi Sihombing, S.T, M.T.

Tidak ada data percakapan

**Sesi / Bahasan** : ke-5 / Bimbingan mengenai revisi dan persetujuan penulisan bab 4  
**Mahasiswa** : 2021091001 - MEISYARAH KHALISA **Pembimbing Proposal** : 08.0322.007 - Dr. Ir, Lukas Beladi Sihombing, S.T, M.T.

Tidak ada data percakapan

**Sesi / Bahasan** : ke-6 / Bimbingan mengenai penulisan skripsi bab 5  
**Mahasiswa** : 2021091001 - MEISYARAH KHALISA **Pembimbing Proposal** : 08.0322.007 - Dr. Ir, Lukas Beladi Sihombing, S.T, M.T.

Tidak ada data percakapan

**Sesi / Bahasan** : ke-7 / Bimbingan mengenai revisi dan persetujuan penulisan bab 5

Dokas oleh: MEISYARAH KHALISA, pada 30 Desember 2024 12:05:43 WIB | [http://my.upj.ac.id/data/konultasi\\_bimbingan\\_konsultasi/printall/5617](http://my.upj.ac.id/data/konultasi_bimbingan_konsultasi/printall/5617)

[https://my.upj.ac.id/siakad/list\\_bimbingankonsultasi/printall/5617](https://my.upj.ac.id/siakad/list_bimbingankonsultasi/printall/5617)

1/2

**Mahasiswa** : 2021091001 - MEISYARAH KHALISA **Pembimbing Proposal** : 08.0322.007 - Dr. Ir, Lukas Beladi Sihombing, S.T, M.T.

Tidak ada data percakapan

**Sesi / Bahasan** : ke-8 / Persetujuan skripsi menuju sidang  
**Mahasiswa** : 2021091001 - MEISYARAH KHALISA **Pembimbing Proposal** : 08.0322.007 - Dr. Ir, Lukas Beladi Sihombing, S.T, M.T.

Tidak ada data percakapan


**Sesi / Bahasan** : ke-9 /  
**Mahasiswa** : 2021091001 - MEISYARAH KHALISA **Pembimbing Proposal** : 08.0322.007 - Dr. Ir, Lukas Beladi Sihombing, S.T, M.T.

Tidak ada data percakapan

**Sesi / Bahasan** : ke-10 /  
**Mahasiswa** : 2021091001 - MEISYARAH KHALISA **Pembimbing Proposal** : 08.0322.007 - Dr. Ir, Lukas Beladi Sihombing, S.T, M.T.

Tidak ada data percakapan

Lampiran 2 Lembar Revisi Skripsi

|   |                                     |                      |
|---|-------------------------------------|----------------------|
|  | <b>FORMULIR REVISI SKRIPSI / TA</b> | SPT-1/04/SOP-06/F-05 |
|   |                                     |                      |

Nama Mahasiswa : Meisyarah Khalisa  
 Prodi/NIM : Teknik Sipil / 2021091001  
 Judul Skripsi/TA : Analisis Perbandingan Rancangan Anggaran Biaya (RAB) Antara Metode Konvensional dan BIM \* Studi Kasus: Proyek Rehab Total SDN Pejalan Timor II (\*)  
 Dosen Pembimbing : 1. Dr. Ir. Lukis Bead, S.T., M.T., MPu., M. Acc., IPMA-C., IPM  
 : 2.  
 Dosen Penguji : 1. Ir. Fredy Jon Philip, S.T., M.T.  
 : 2. Elisabeth Rutmini, Ph.D  
 : 3.  
 Jadwal Sidang : Tempat : R. Rapat FTD Lt 5 Hari/Tanggal: Rabu / 15 Januari 2025

Revisi yang dilakukan :


1. Masalah "dimana" tidak ada kata "dimana" sebagai kata subjek  
 2. Masalah "di" sebagai imbuhan/analan vs sebagai kata depan  
 3. Substansi : Analisis perbandingan bahas dan komponen yg utama  
 pasang RABet 3 komponen utama pembedanya.  
 Bukan hanya tone.

4. Substansi : Pembahasan, bandingkan dug yg lain yg khl snhala  
 form SD. Referensi perlu lbh krn. Mendalam  
 Letakkan pembahasan dan audit pandang:

- ① Apa hasil utama mu.
- ② Apa yg sudah menjawab tujuan penelitian?
- ③ Dari bag km : bandingkan dugmu. Refer yg benar.  
 To the point.

Lihat catatan saya d file word-mu.

Tangerang Selatan, 15 Jan 2025

Dosen Penguji  
 Elisabeth Rutmini

\*) Jika mempertahankan judul  
 "Blm SD" dst maka tujuan  
 1+2 bisa menjadi tujuan  
 khusus. Rementan tujuan  
 utama adalah tujuan no 3.



Universitas  
Pembangunan Jaya

FORMULIR REVISI SKRIPSI / TA

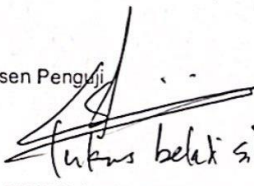
SPT-1/04/SOP-06/F-05

Nama Mahasiswa : Meisyarah Khalisa  
 Prodi/NIM : Teknik Sipil / 2021091001  
 Judul Skripsi/TA : Analisis Perbandingan Rancangan Anggaran Biaya (RAB) Antara Metode Konvensional dan BIM 5D (Studi Kasus: Proyek Rehab Total SDN Restoran Timor II)  
 Dosen Pembimbing : 1. Dr. Ir. Lukas Beladi Sihombing, S.T., M.T., M.Pu., M. ASCE., IPMA-C., IPM  
 : 2.  
 Dosen Penguji : 1. Ir. Freddy Jhon Philip, S., S.T., MT.  
 : 2. Elizabeth Rikmini, Ph.D  
 : 3.  
 Jadwal Sidang : Tempat : R. Barat ETO 415 Hari/Tanggal: Rabu / 15 Januari 2025

Revisi yang dilakukan :

+ tambah literatur ttg pemahaman BIM 5D.  
 + tambah literatur ttg hasil RQ3.  
 + hasil validasi ditambah literatur yg mendukung.  
 + selanj pertanyaan dan jawaban ditambah skema kerangka  
 + format lebih ditunjukkan.

Tangerang Selatan, 15/1/2025

Dosen Penguji  
  
 Lukas beladi sihombing



Universitas  
Pembangunan Jaya

FORMULIR REVISI SKRIPSI / TA

SPT-1/04/SOP-06/F-05

Nama Mahasiswa : Meuyarah Khalisa  
 Prodi/NIM : Teknik SIPH / 2021091001  
 Judul Skripsi/TA : Analisis Perbandingan Rancangan Anggaran Biaya (RAB) Antara Metode Konvensional dan BIM 5D (studi kasus: Proyek Rehab Total SDN Pelatan Timur II)  
 Dosen Pembimbing : 1. Dr. Ir. Lukas Boladi Sihombing, S.T., M.T., MPu., M. ASCE., IPMA-c., IPM  
 : 2.  
 Dosen Penguji : 1. Ir. Fredy Jhon Philip S., S.T., M.T.  
 : 2. Elizabeth Rukmini, Ph.D  
 : 3.  
 Jadwal Sidang : Tempat : R. Rapat FTD Lt 5 Hari/Tanggal: Rabu / 15 Januari 2025

Revisi yang dilakukan :

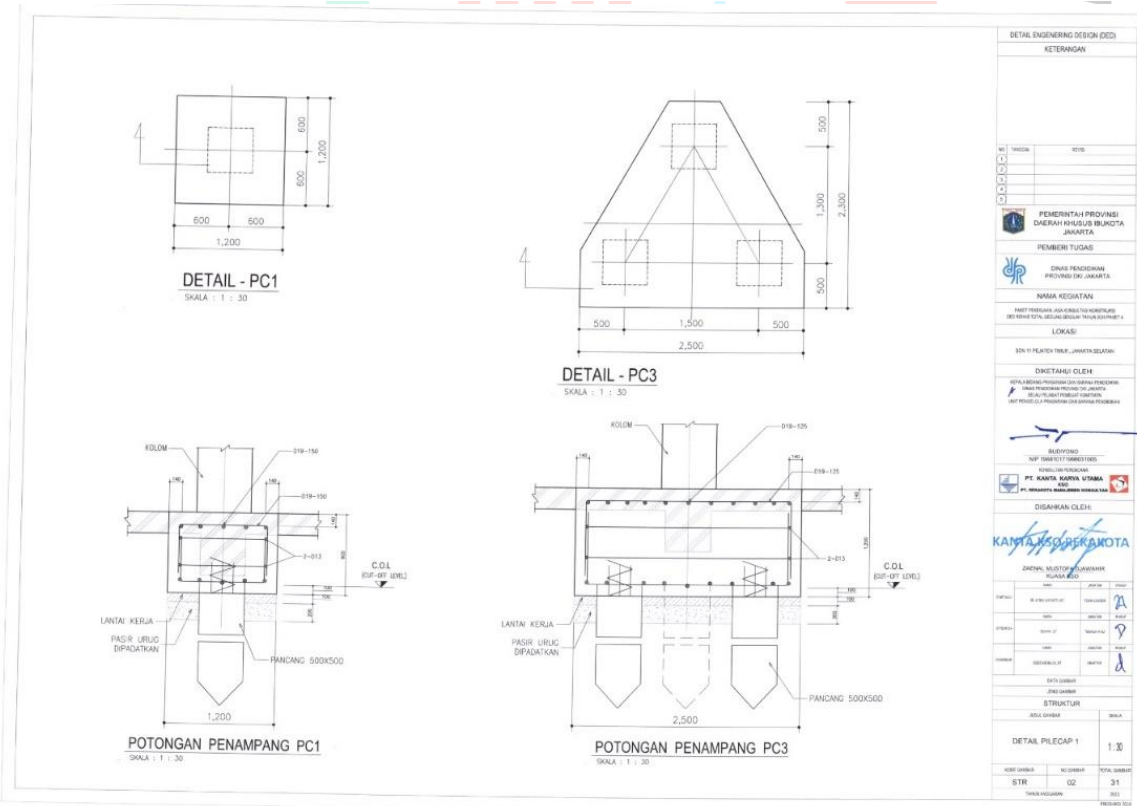
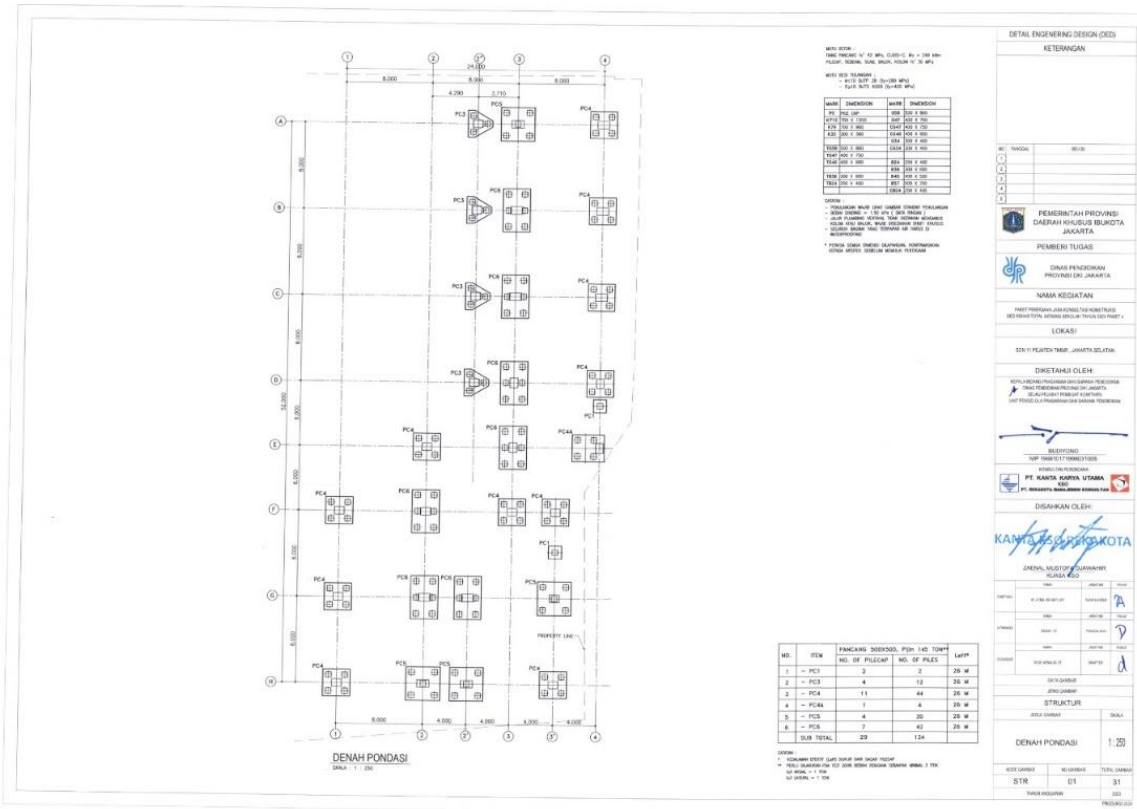
- Dalam tabel, dilengkapi satuan?
- Belum menjelaskan kenapa dan faktor apa yg menyebabkan terdapatnya perbedaan? apa hanya human error?? → engineer kurang teliti?
- mungkin bisa ditambahkan penelitian kodalulu atau pasthaka yg menjelaskan human error?
- bab 2 → faktor, lebihonlun juga dibahas ...
- PPT terlalu boring / copy paste dr word !!
- dimana aopele yg menyimpulkan point 3 di benyupula.
- Dalam jawaban jangan bolos lagi, detektim

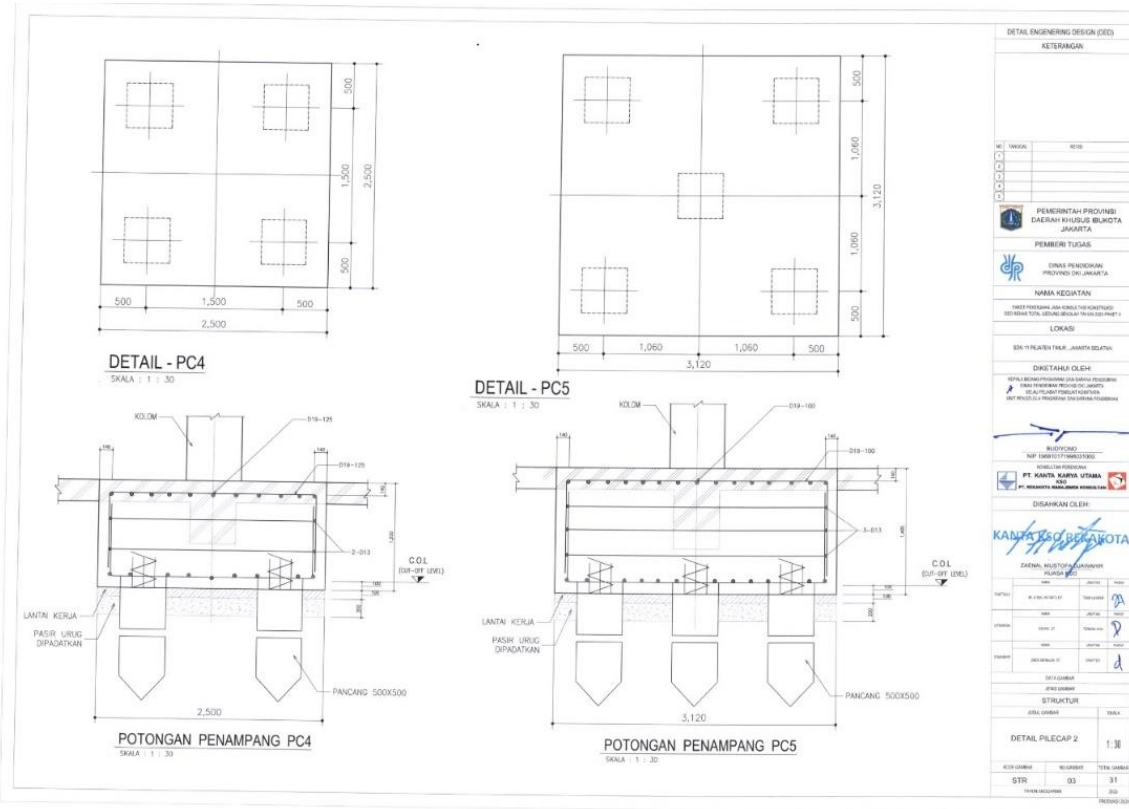
Tangerang Selatan, 15 Januari 2025.

Dosen Penguji

diteliti

Lampiran 3 Gambar Kerja 2D Proyek Rehab Total SDN Pejaten Timur 11





DETAIL ENGINEERING DESIGN (DED)

KETERANGAN

NO. 0001 0002

PEMERINTAH PROVINSI DAERAH KHUSUS BUKOTA JAKARTA

PEMBERI TUGAS

UNITAS PENGELOMPOKAN PEKERJAAN DAERAH

PEKERJAAN

LOKASI

DISAHKAN OLEH:

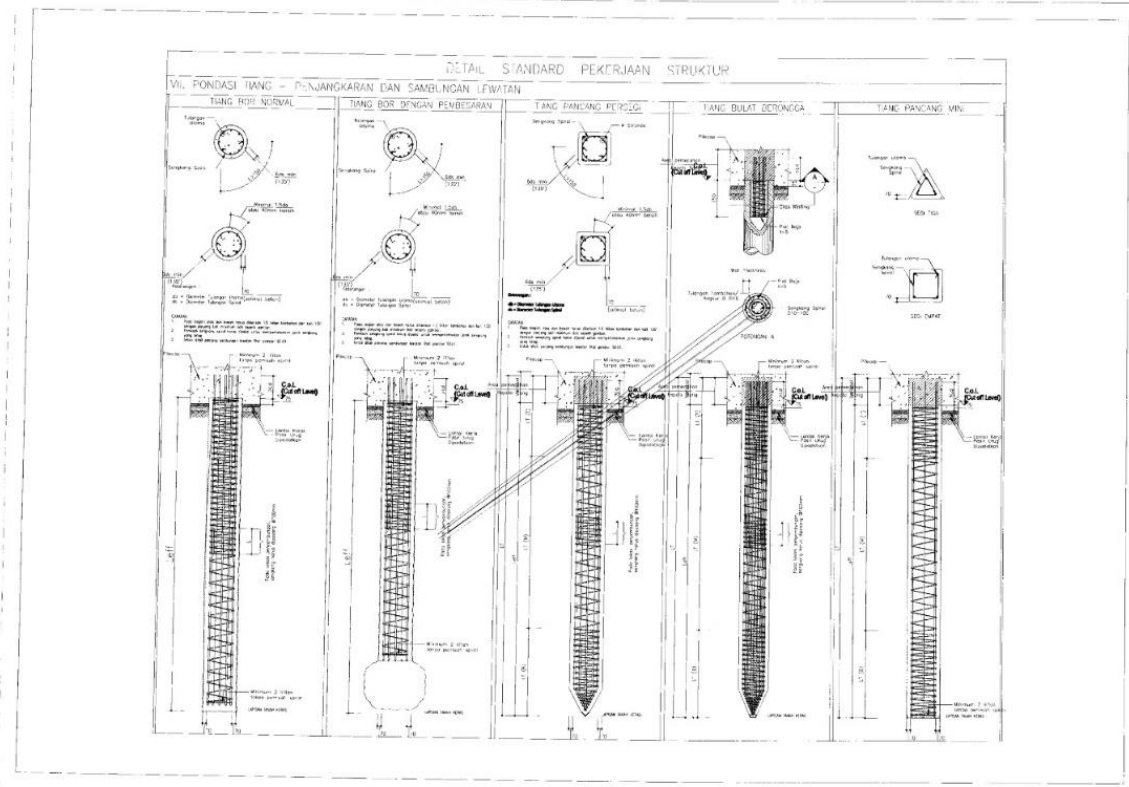
PEKERJAAN

STRUKTUR

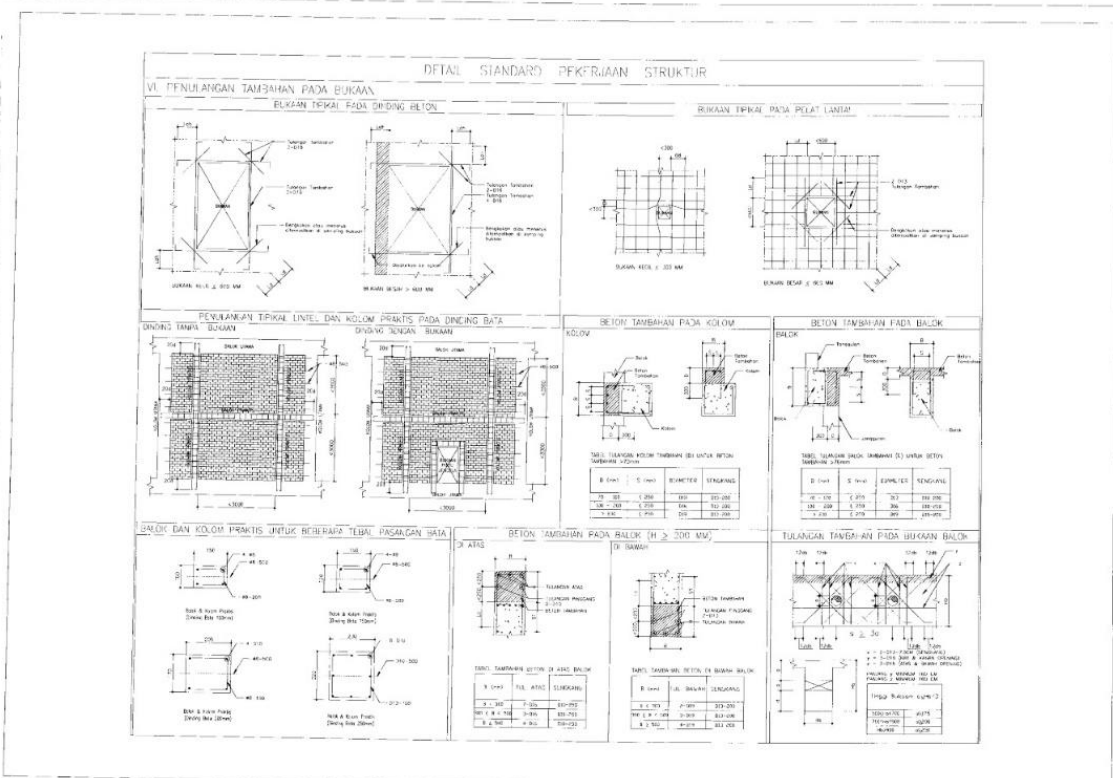
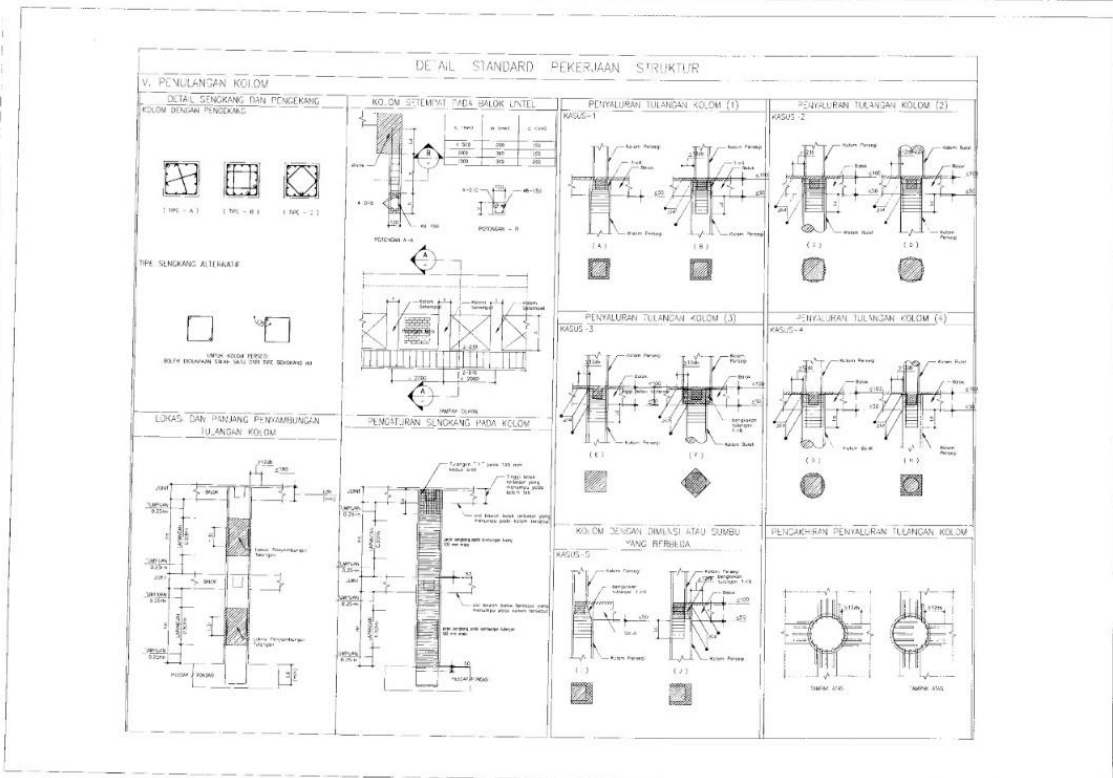
DETAIL PILECAP 2

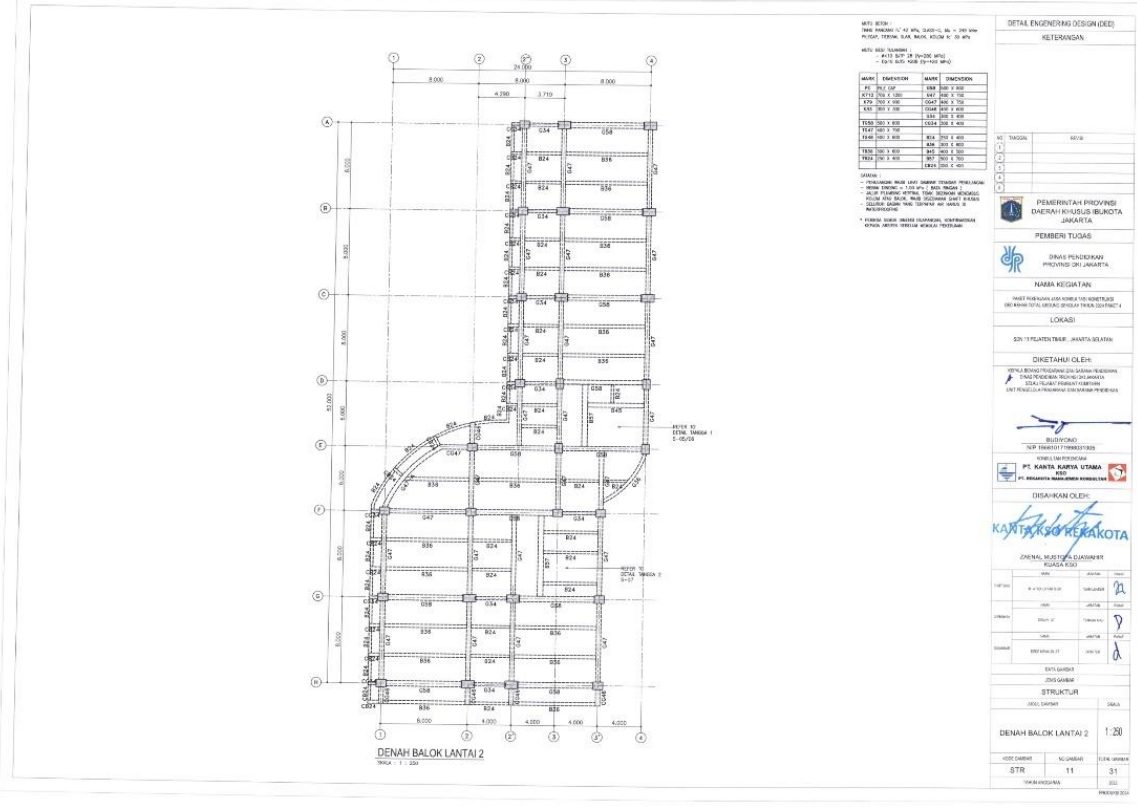
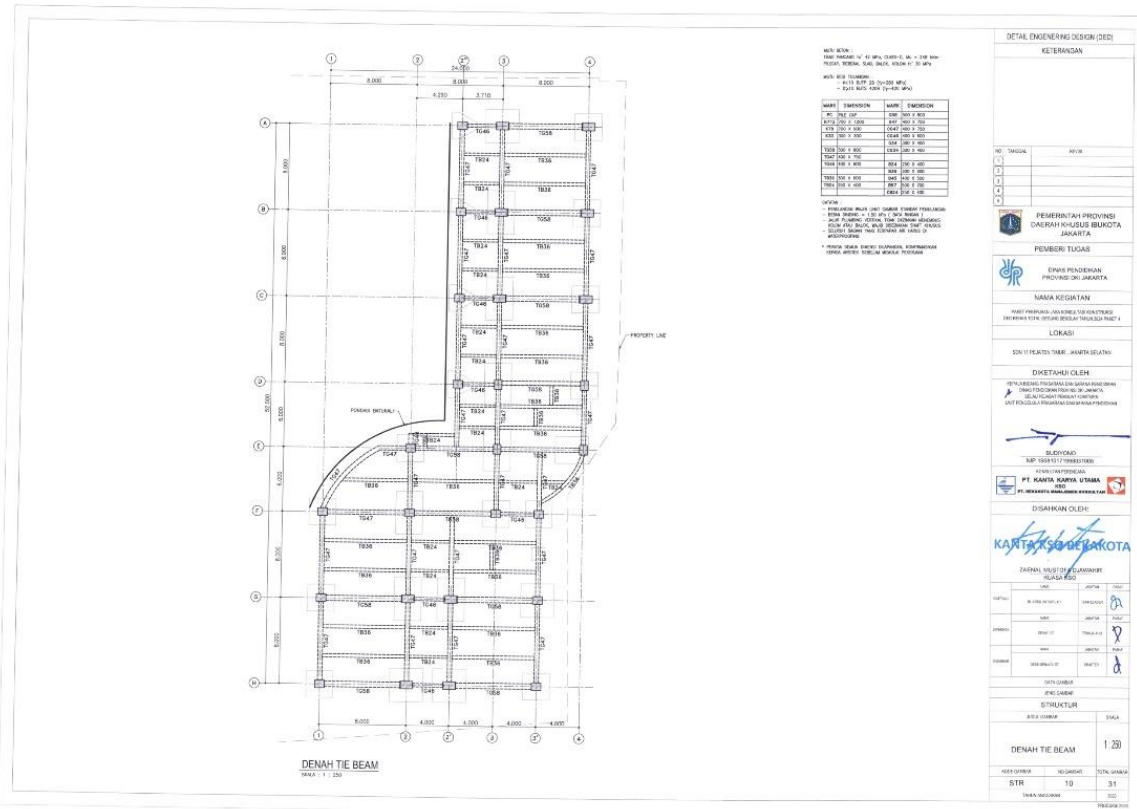
SKALA 1:30

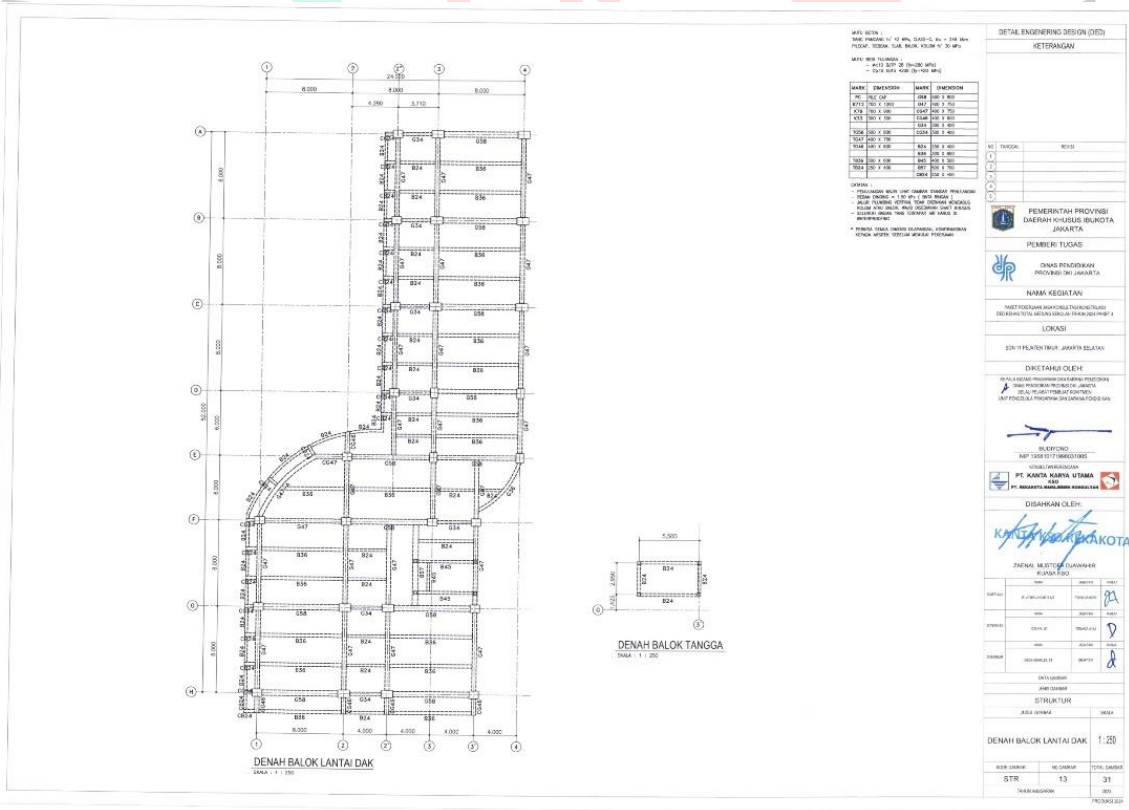
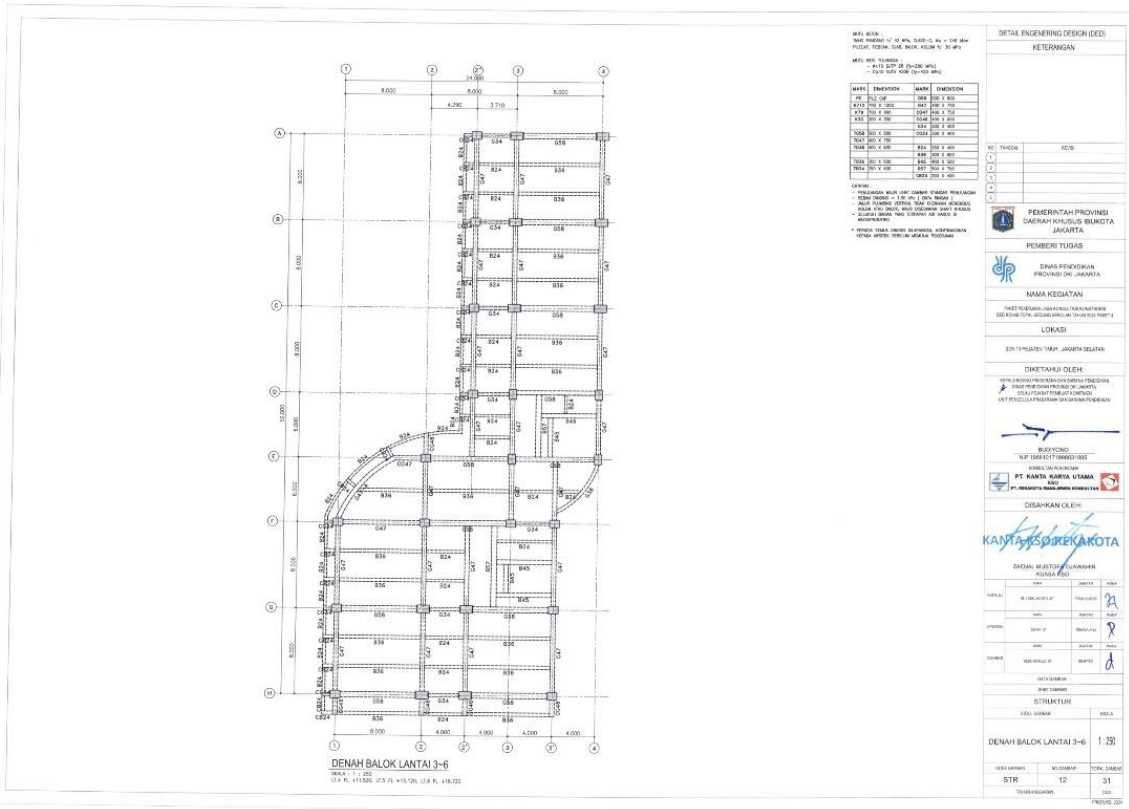
STR 03 31











DETAIL TIE-BEAM

| TYPE               | Dimensi     | TG58 500X800 |            | TG47 400X700 |          | TG46 400X600 |          | TB36 300X650 |          | TB24 250X400 |          |
|--------------------|-------------|--------------|------------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|
| PENAMPANG TIE-BEAM |             |              |            |              |          |              |          |              |          |              |          |
|                    | Posisi      | Tumpuan      | Lopongan   | Tumpuan      | Lopongan | Tumpuan      | Lopongan | Tumpuan      | Lopongan | Tumpuan      | Lopongan |
|                    | TOL. AHS    | 15-302       | 8-302      | 12-302       | 8-302    | 10-302       | 8-302    | 10-302       | 8-302    | 10-302       | 8-302    |
|                    | TOL. TENGAS | 2-013        | 2-013      | 2-013        | 2-013    | 2-205        | 2-013    | 2-013        | 2-013    | 2-013        | 2-219    |
| TOL. BAKAR         | 12-052      | 6-052        | 13-040     | 7-052        | 10-052   | 6-052        | 10-052   | 6-052        | 6-052    | 6-318        |          |
| TOL. SENGANG       | 2013-10     | 2013-150     | 1303-3-100 | 1303-12      | 303-110  | 303-130      | 3-219    | 3-219        | 3-219    | 3-219        | 303-130  |

DETAIL ENGINEERING DESIGN (DED)

KETERANGAN

|    |        |        |
|----|--------|--------|
| NO | REVISI | REVISI |
| 1  |        |        |
| 2  |        |        |
| 3  |        |        |

PERENCANAAN: **PT. KANTA KAPRA UTAMA**  
 PERENCANAAN: **PT. KANTA KAPRA UTAMA**

PEMERINTAH PROVINSI DAERAH KHUSUS IBUKOTA JAKARTA  
 PEMERINTAH DAERAH  
 DINAS PENDEKATAN PROVINSI DKI JAKARTA

NAMA KEGIATAN: **STRUKTUR**  
 LOKASI: **STRUKTUR**

DIKEMUKAKAN OLEH: **PT. KANTA KAPRA UTAMA**

DISAHKAN OLEH: **PT. KANTA KAPRA UTAMA**

DIKEMUKAKAN OLEH: **PT. KANTA KAPRA UTAMA**

DISAHKAN OLEH: **PT. KANTA KAPRA UTAMA**

DIKEMUKAKAN OLEH: **PT. KANTA KAPRA UTAMA**

DISAHKAN OLEH: **PT. KANTA KAPRA UTAMA**

DETAIL TIEBEAM 1:25

DETAIL BALOK

| TYPE                        | Dimensi     | G58 500X800 |          | G47 400X750 |          | G47A 400X750 |          | G34 300X400 |          | CG47 400X750 |             |
|-----------------------------|-------------|-------------|----------|-------------|----------|--------------|----------|-------------|----------|--------------|-------------|
| PENAMPANG BALOK LT.2 - LT.5 |             |             |          |             |          |              |          |             |          |              |             |
|                             | Posisi      | Tumpuan     | Lopongan | Tumpuan     | Lopongan | Tumpuan      | Lopongan | Tumpuan     | Lopongan | Tumpuan      | Ujung Balok |
|                             | TOL. AHS    | 15-302      | 8-302    | 11-302      | 8-302    | 10-302       | 8-302    | 10-302      | 8-302    | 10-302       | 8-302       |
|                             | TOL. TENGAS | 2-013       | 2-013    | 2-013       | 2-013    | 2-013        | 2-013    | 2-013       | 2-013    | 2-013        | 2-013       |
| TOL. BAKAR                  | 12-052      | 6-052       | 13-040   | 7-052       | 10-052   | 6-052        | 10-052   | 6-052       | 6-052    | 6-318        |             |
| TOL. SENGANG                | 2013-100    | 1303-150    | 013-100  | 013-125     | 1303-130 | 1303-130     | 013-100  | 013-100     | 1303-130 | 1303-130     |             |

DETAIL BALOK

| TYPE                        | Dimensi     | CG46 400X600 |             | CG34 300X400 |             | B57 500X700 |          | B45 400X500 |          | B36 300X600 |          |
|-----------------------------|-------------|--------------|-------------|--------------|-------------|-------------|----------|-------------|----------|-------------|----------|
| PENAMPANG BALOK LT.2 - LT.5 |             |              |             |              |             |             |          |             |          |             |          |
|                             | Posisi      | Tumpuan      | Ujung Balok | Tumpuan      | Ujung Balok | Tumpuan     | Lopongan | Tumpuan     | Lopongan | Tumpuan     | Lopongan |
|                             | TOL. AHS    | 8-319        | 2-013       | 2-013        | 2-013       | 8-319       | 8-013    | 8-319       | 8-319    | 8-319       | 8-319    |
|                             | TOL. TENGAS | 2-013        | 2-013       | 2-013        | 2-013       | 2-013       | 2-013    | 2-013       | 2-013    | 2-013       | 2-013    |
| TOL. BAKAR                  | 2-019       | 2-019        | 2-019       | 2-019        | 2-019       | 2-019       | 2-019    | 2-019       | 2-019    | 2-019       |          |
| TOL. SENGANG                | 019-100     | 019-00       | 019-00      | 019-00       | 019-00      | 1303-110    | 1303-05  | 1303-100    | 1303-100 | 019-100     | 019-100  |

DETAIL BALOK

| TYPE                        | Dimensi     | B24 250X400 |          | CS24 250X400 |             |
|-----------------------------|-------------|-------------|----------|--------------|-------------|
| PENAMPANG BALOK LT.2 - LT.5 |             |             |          |              |             |
|                             | Posisi      | Tumpuan     | Lopongan | Tumpuan      | Ujung Balok |
|                             | TOL. AHS    | 4-019       | 2-019    | 2-019        | 2-019       |
|                             | TOL. TENGAS | 2-013       | 2-013    | 2-013        | 2-013       |
| TOL. BAKAR                  | 2-019       | 2-019       | 2-019    | 2-019        |             |
| TOL. SENGANG                | 019-100     | 019-00      | 019-00   | 019-00       |             |

DETAIL ENGINEERING DESIGN (DED)

KETERANGAN

|    |        |        |
|----|--------|--------|
| NO | REVISI | REVISI |
| 1  |        |        |
| 2  |        |        |
| 3  |        |        |

PERENCANAAN: **PT. KANTA KAPRA UTAMA**  
 PERENCANAAN: **PT. KANTA KAPRA UTAMA**

PEMERINTAH PROVINSI DAERAH KHUSUS IBUKOTA JAKARTA  
 PEMERINTAH DAERAH  
 DINAS PENDEKATAN PROVINSI DKI JAKARTA

NAMA KEGIATAN: **STRUKTUR**  
 LOKASI: **STRUKTUR**

DIKEMUKAKAN OLEH: **PT. KANTA KAPRA UTAMA**

DISAHKAN OLEH: **PT. KANTA KAPRA UTAMA**

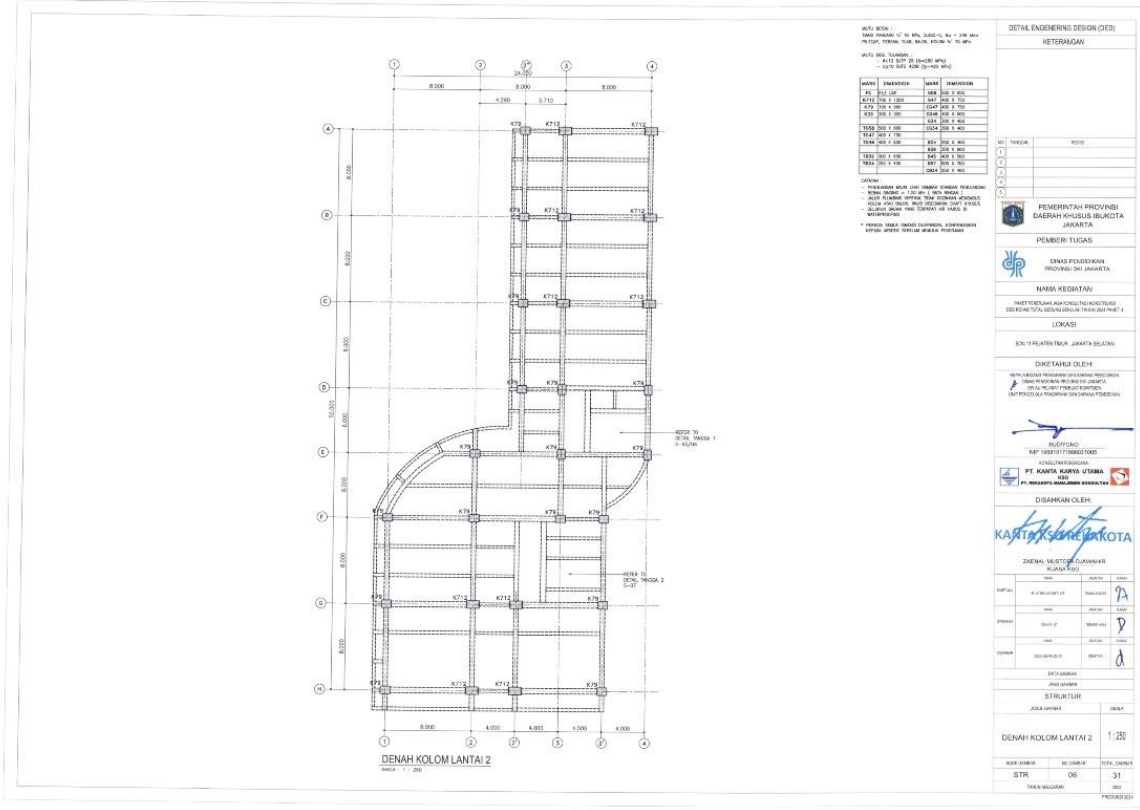
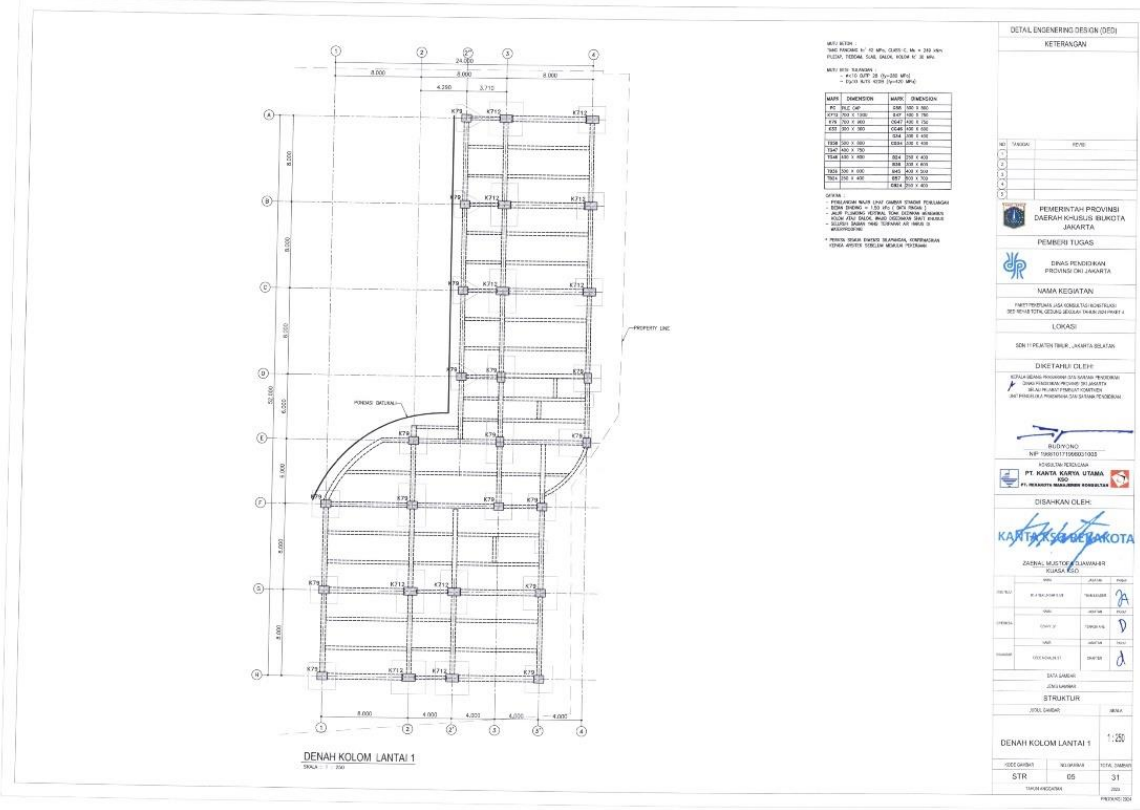
DIKEMUKAKAN OLEH: **PT. KANTA KAPRA UTAMA**

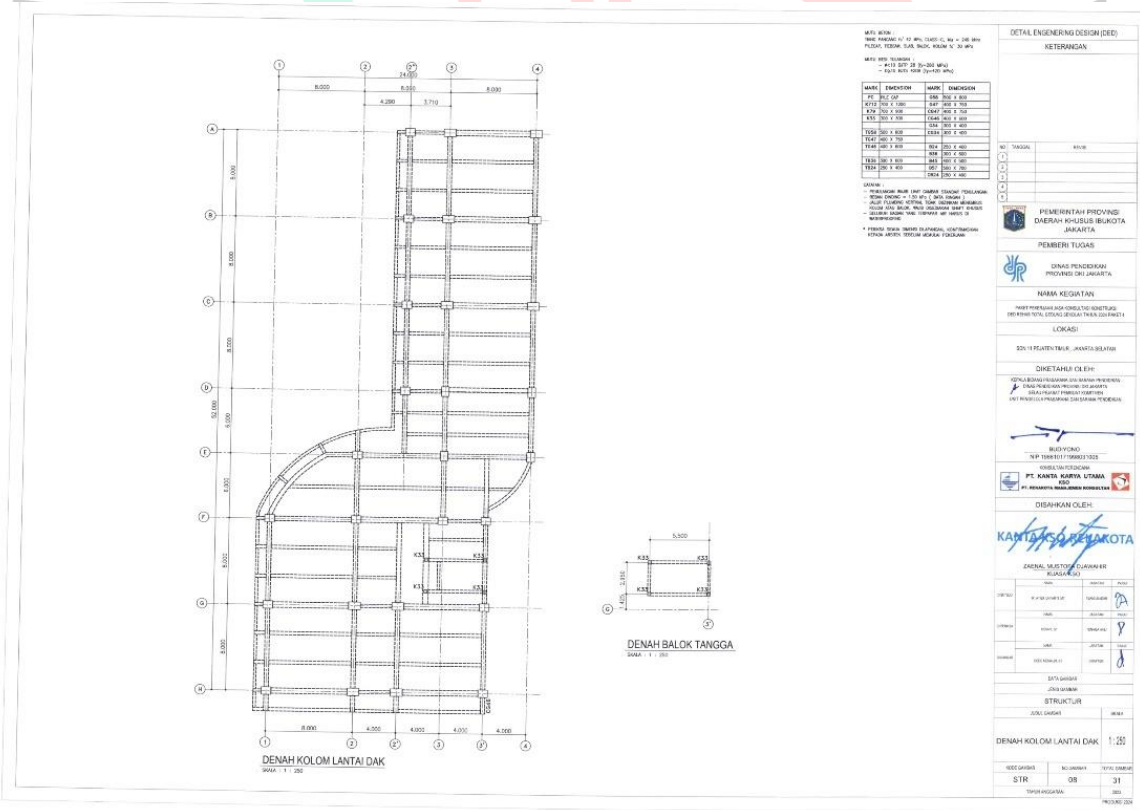
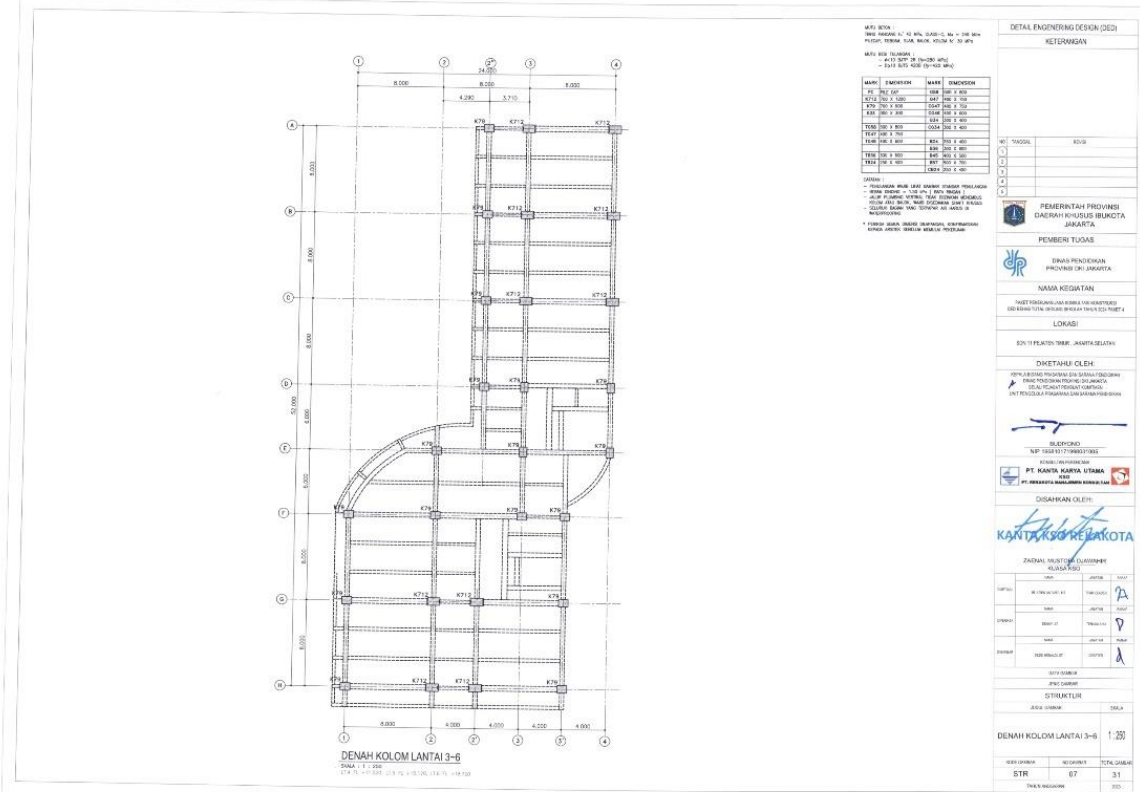
DISAHKAN OLEH: **PT. KANTA KAPRA UTAMA**

DIKEMUKAKAN OLEH: **PT. KANTA KAPRA UTAMA**

DISAHKAN OLEH: **PT. KANTA KAPRA UTAMA**

DETAIL BALOK 1:25





DETAIL KOLOM

| TIPE                                   | DIMENSI                 | TIPE                    | DIMENSI    | TIPE                                   | DIMENSI                 | TIPE                    | DIMENSI   |
|--|-------------------------|-------------------------|------------|--|-------------------------|-------------------------|-----------|
| DAR T.O.P.C<br>S/D LT.1                | 700 X 1200              | DAR LT.3<br>S/D LT.ATAP | 700 X 1200 | DAR T.O.P.C<br>S/D LT.3                | 700 X 900               | DAR LT.3<br>S/D LT.ATAP | 700 X 900 |
|  |                         |                         |            |  |                         |                         |           |
| Pada                                   | Tumpuan                 | Lopongan                |            | Pada                                   | Tumpuan                 | Lopongan                |           |
| TAL. POKOK<br>TAL. SENGANG<br>TAL. TES | 01-10<br>01-10<br>01-10 | 01-10<br>01-10<br>01-10 |            | TAL. POKOK<br>TAL. SENGANG<br>TAL. TES | 01-10<br>01-10<br>01-10 | 01-10<br>01-10<br>01-10 |           |

DETAIL KOLOM

| TIPE                                   | DIMENSI                 |                         |
|--|-------------------------|-------------------------|
| K33                                    | 300 X 300               |                         |
| DAR LT.04 ATAP<br>S/D DAK TANGGA       |                         |                         |
| Pada                                   | Tumpuan                 | Lopongan                |
| TAL. POKOK<br>TAL. SENGANG<br>TAL. TES | 01-10<br>01-10<br>01-10 | 01-10<br>01-10<br>01-10 |

DETAIL ENGINEERING DESIGN (DED)

KETERANGAN

NO. TANGGA: 01/16

PEMERINTAH PROVINSI DAERAH KHUSUS BUKARA JAKARTA

PEMBERI TUGAS: DINAS PERENCANAAN PROVINSI DKI JAKARTA

NAMA KEGIATAN: PERENCANAAN, JIKA KAWA TO KAWA TO, PERENCANAAN, JIKA KAWA TO KAWA TO, PERENCANAAN, JIKA KAWA TO KAWA TO

LOKASI: 221119 PELAYAT TAMB. JAKARTA SELATAN

DIREKTAHIL OLEH: BUDYOTOMO

PT. KANTA KOTA UTAMA

DISAHKAN OLEH: KANTA KOTA SELATAN

DETAIL KOLOM

NO. GAMBAR: 08

TOTAL GAMBAR: 31

STR: 08

TAHUN: 2024

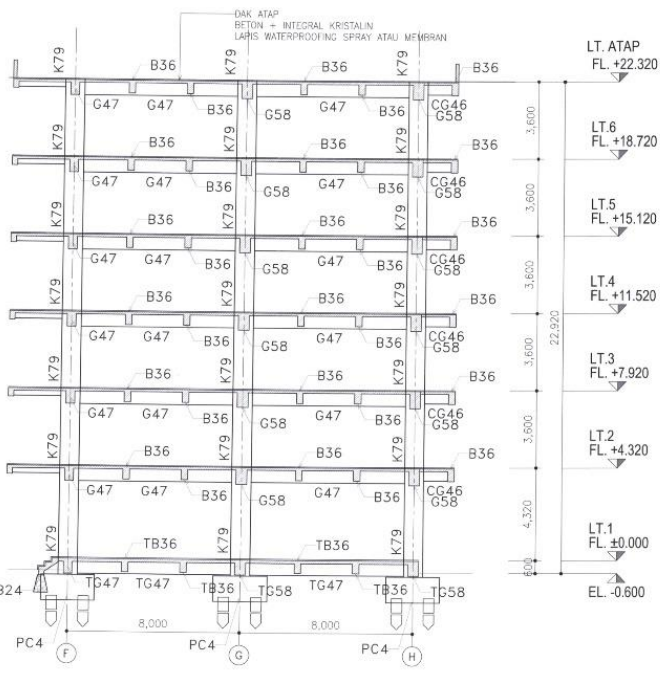
MURU BETON :  
TANGGARAN: f'c 42 MPa, CLASS C 40, w/c = 210 KH  
PILCAP, TERKAM, SABL, BALK, KOLOM R' 30 MPa

MURU BESI TILANGAN :  
- f'cd 10 BHP 28 (fy=280 MPa)  
- Dp10 8,175 4200 (fy=420 MPa)

| MARK | DIMENSION  | MARK | DIMENSION |
|------|------------|------|-----------|
| PC   | PILE CAP   | C58  | 500 X 600 |
| K712 | 700 X 1200 | G47  | 400 X 750 |
| K79  | 700 X 900  | G47  | 400 X 750 |
| K33  | 300 X 300  | G48  | 400 X 800 |
| T058 | 500 X 800  | G34  | 300 X 400 |
| T047 | 400 X 750  | B24  | 250 X 400 |
| T048 | 400 X 750  | B36  | 300 X 600 |
| T058 | 500 X 800  | B45  | 400 X 500 |
| T044 | 250 X 400  | B57  | 500 X 700 |
|      |            | CB24 | 250 X 400 |

DAFTAR :  
- PENUNJANG MURU LINTAS GAMBAR STANGAR PENUNJANG  
- RIBAN DINDING = 1.00 MPa (1.00 RINGAN)  
- JALUR PUMPAK VERTIKAL TERAK DINDING MENEMBUS  
KIDOM KAWA BALK, WAJE BEKAWAN SARTI KHUSUS  
- SUDUKA BODAN YAKI TERDIRI AIR HANGUS DI  
WATERPROOFING

\* PERIKSA SEMA DIMENSI DILAWANGI KONFERENSI  
KORUM ARKITEK SEBELUM MENULAI KONSTRUKSI



POTONGAN AS - 1  
SKALA : 1 : 125

DETAIL ENGINEERING DESIGN (DED)

KETERANGAN

NO. TANGGA: 01/16

PEMERINTAH PROVINSI DAERAH KHUSUS BUKARA JAKARTA

PEMBERI TUGAS: DINAS PERENCANAAN PROVINSI DKI JAKARTA

NAMA KEGIATAN: PERENCANAAN, JIKA KAWA TO KAWA TO, PERENCANAAN, JIKA KAWA TO KAWA TO, PERENCANAAN, JIKA KAWA TO KAWA TO

LOKASI: 221119 PELAYAT TAMB. JAKARTA SELATAN

DIREKTAHIL OLEH: BUDYOTOMO

PT. KANTA KOTA UTAMA

DISAHKAN OLEH: KANTA KOTA SELATAN

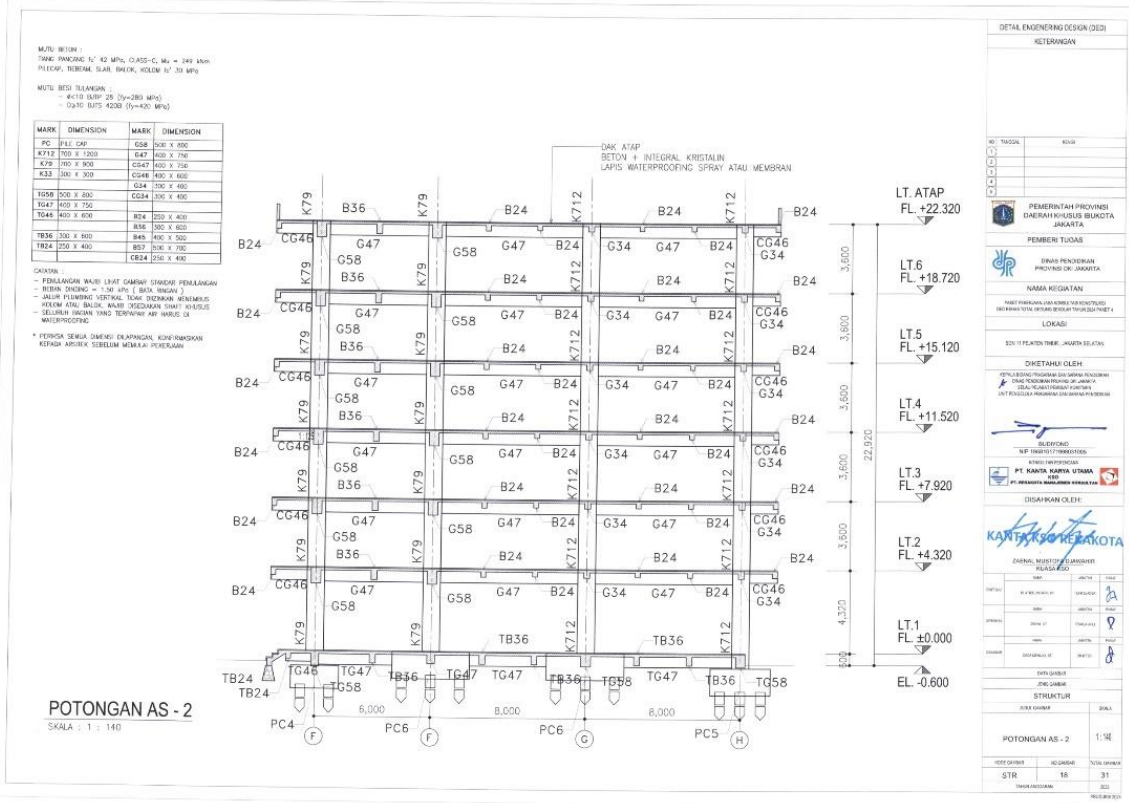
POTONGAN AS - 1

NO. GAMBAR: 08

TOTAL GAMBAR: 31

STR: 08

TAHUN: 2024



DETAIL ENGINEERING DESIGN (DED)  
 KETERANGAN

| NO | REVISI |
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PEREMBAH PROVINSI  
 DAERAH KEBUDAYAAN  
 JAKARTA

PEMBERI TUGAS  
 DINAS PENDEKATAN  
 PRIBADI DKI JAKARTA

NAMA KEGIATAN  
 RENCANA PERENCANAAN DAN PERENCANAAN  
 100 PERENCANAAN PERENCANAAN PERENCANAAN

LOKASI  
 5011 PLATAN TRUSMI, JAKARTA SELATAN

DIMITAHKAN OLEH  
 PERENCANAAN PERENCANAAN PERENCANAAN  
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DISAHKAN OLEH  
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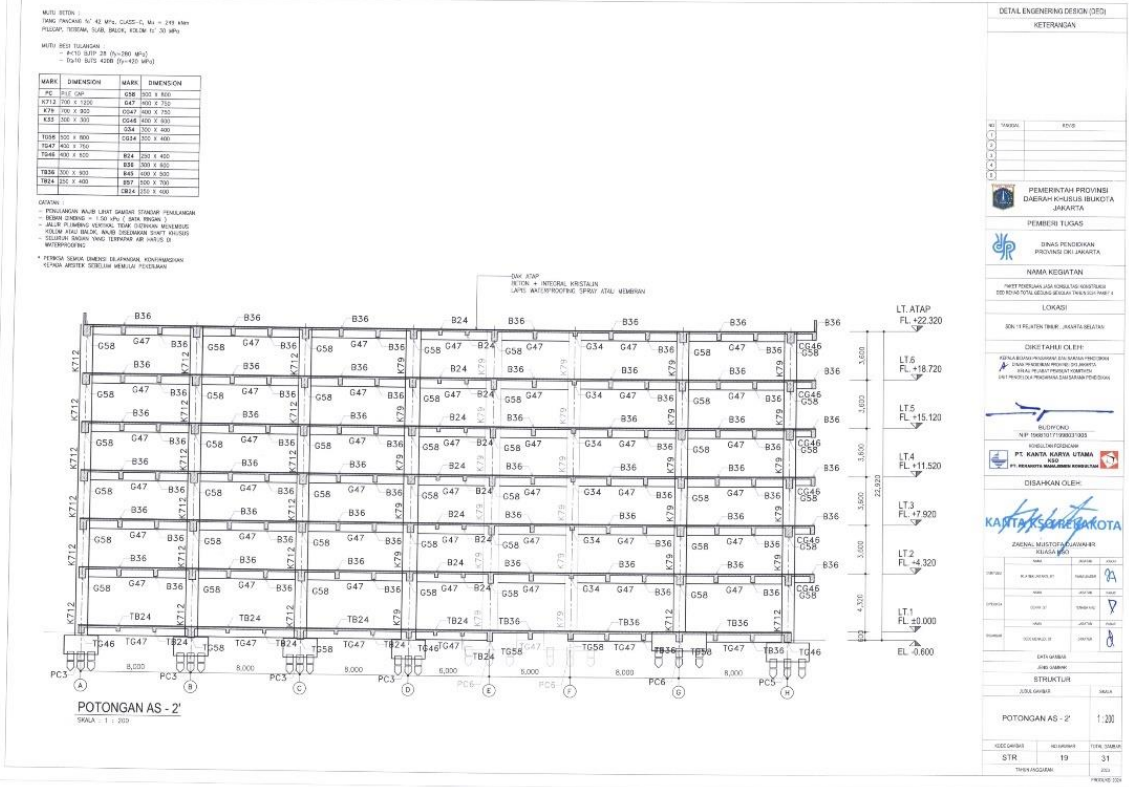
STRUKTUR

JUARA GAMBAR

POTONGAN AS - 2  
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NO. GAMBAR  
 STR 18 31

TREK PROJEKSI  
 STR



DETAIL ENGINEERING DESIGN (DED)  
 KETERANGAN

| NO | REVISI |
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PEREMBAH PROVINSI  
 DAERAH KEBUDAYAAN  
 JAKARTA

PEMBERI TUGAS  
 DINAS PENDEKATAN  
 PRIBADI DKI JAKARTA

NAMA KEGIATAN  
 RENCANA PERENCANAAN DAN PERENCANAAN  
 100 PERENCANAAN PERENCANAAN PERENCANAAN

LOKASI  
 5011 PLATAN TRUSMI, JAKARTA SELATAN

DIMITAHKAN OLEH  
 PERENCANAAN PERENCANAAN PERENCANAAN  
 PERENCANAAN PERENCANAAN PERENCANAAN  
 PERENCANAAN PERENCANAAN PERENCANAAN

DISAHKAN OLEH  
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STRUKTUR

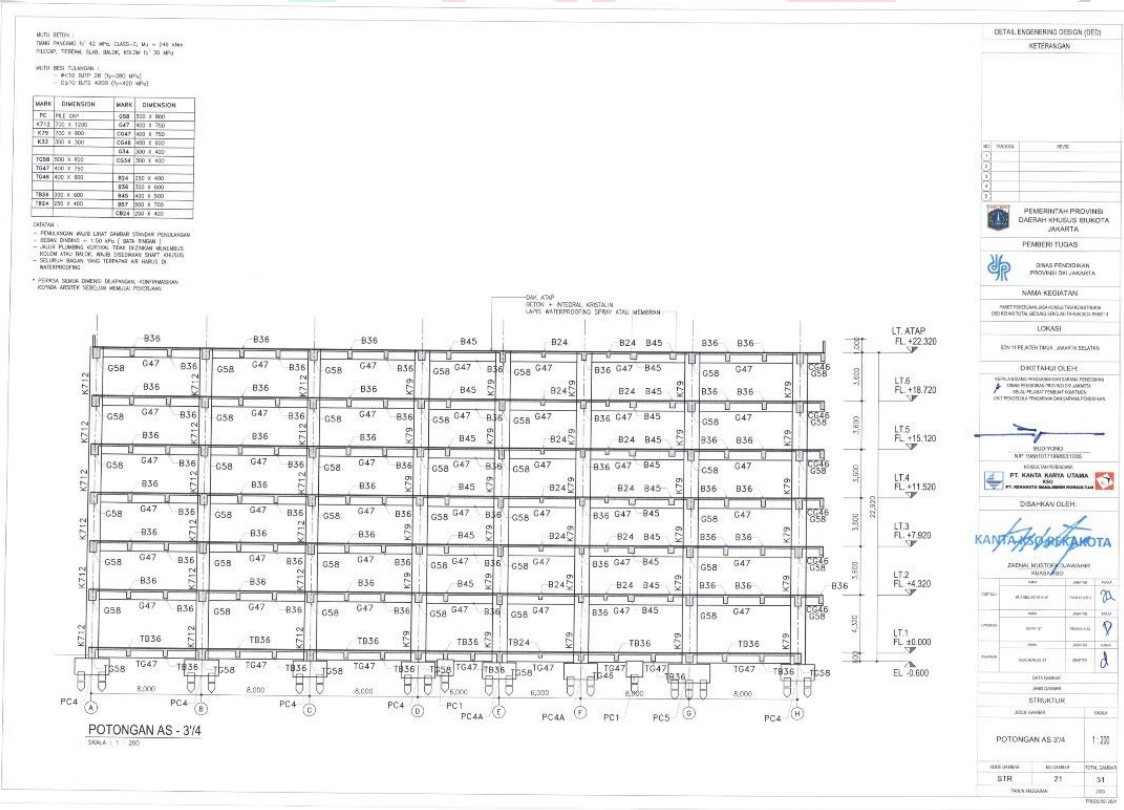
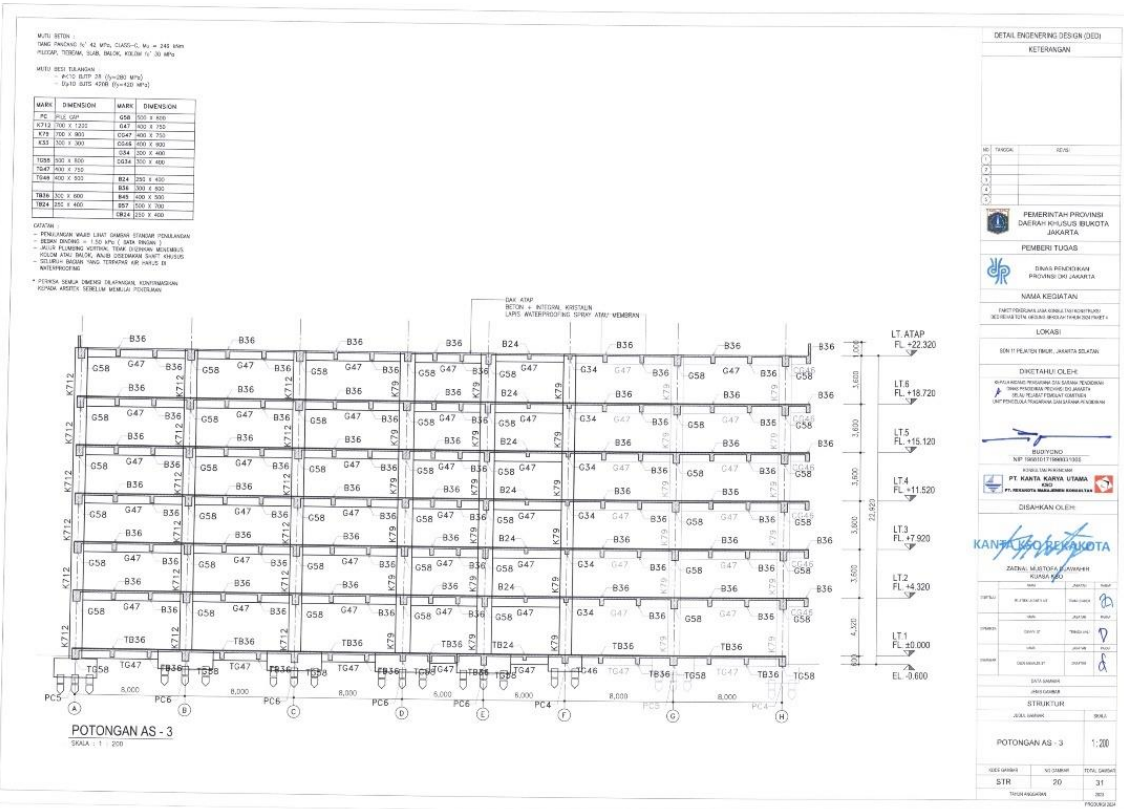
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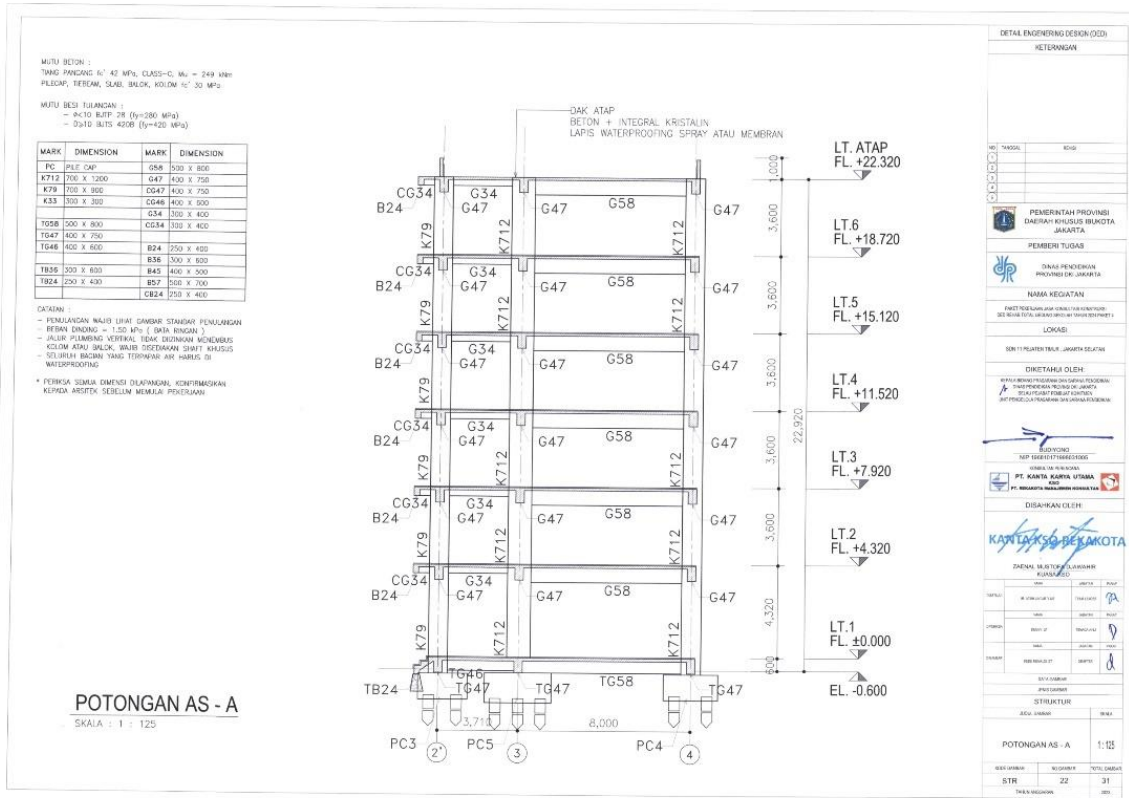
POTONGAN AS - 2'  
 1:200

NO. GAMBAR  
 STR 19 31

TREK PROJEKSI  
 STR







DETAIL ENGINEERING DESIGN (DED)

KETERANGAN

NO. REVISI

REVISI

PEREMPTORIAN PROVINSI DKI JAKARTA

PEMBERI TUGAS

DINAS PENDIDIKAN PROVINSI DKI JAKARTA

NAMA KEGIATAN

REKONSTRUKSI DAN PERLENGKAPAN BANGUNAN

LOKASI

SOS. 11 MEYER TELUK JAYA SELATAN

DIREKTORAN OLEH

PT. KANTA KAPRA UTAMA

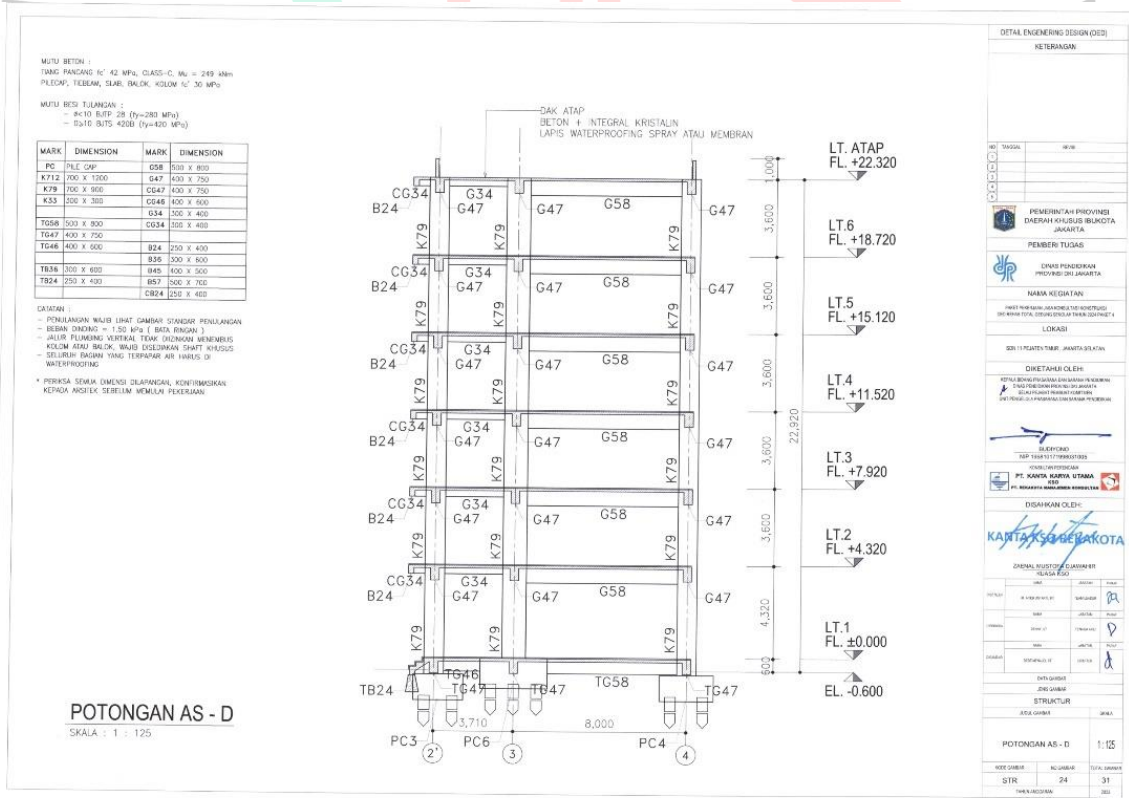
DISAHKAN OLEH

DANAN MURTOYO (KAPUR)

STRUKTUR

POTONGAN AS - A 1:125

STR 22 31



DETAIL ENGINEERING DESIGN (DED)

KETERANGAN

NO. REVISI

REVISI

PEREMPTORIAN PROVINSI DKI JAKARTA

PEMBERI TUGAS

DINAS PENDIDIKAN PROVINSI DKI JAKARTA

NAMA KEGIATAN

REKONSTRUKSI DAN PERLENGKAPAN BANGUNAN

LOKASI

SOS. 11 MEYER TELUK JAYA SELATAN

DIREKTORAN OLEH

PT. KANTA KAPRA UTAMA

DISAHKAN OLEH

DANAN MURTOYO (KAPUR)

STRUKTUR

POTONGAN AS - D 1:125

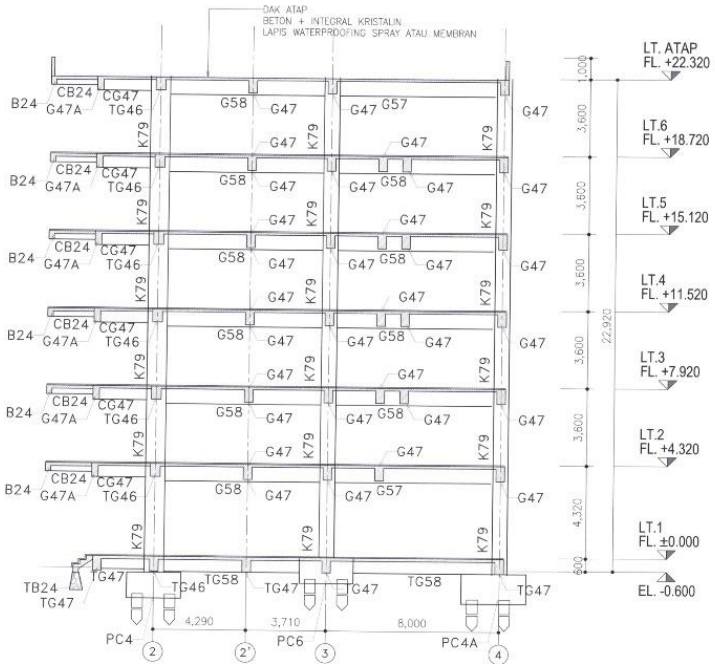
STR 24 31

MUTU BETON :  
 TANG PANGANG 1' 42 MPa, CLASS-C,  $f_{cu} = 249 \text{ MPa}$   
 PILECAP, TIRIBAL, SABL, BALKON, KOLAM 1' 30 MPa

MUTU BESI TULANGAN :  
 - K10 B31P 28 ( $f_y=280 \text{ MPa}$ )  
 - Ds10 B45 K20H ( $f_y=400 \text{ MPa}$ )

| MARK | DIMENSION | MARK | DIMENSION |
|------|-----------|------|-----------|
| PC   | PILE CAP  | G58  | 500 X 800 |
| K712 | 200 X 200 | G47  | 400 X 750 |
| K79  | 200 X 300 | CG47 | 450 X 750 |
| K33  | 300 X 300 | CG48 | 400 X 600 |
| TG68 | 200 X 800 | G54  | 300 X 400 |
| TG4  | 400 X 750 | CG34 | 300 X 400 |
| TG48 | 400 X 600 | B24  | 250 X 400 |
|      |           | B38  | 300 X 500 |
| TB36 | 300 X 600 | B45  | 400 X 600 |
| TB24 | 250 X 400 | B57  | 500 X 700 |
|      |           | CB24 | 250 X 400 |

DAFTAR :  
 - PENUNJANG WAJIB (HBT) GAWANG STANGAP POKHLANGAN  
 - BEBAN DIMANG = 120 kPa (BATA RINGAN)  
 - JALUR TUMBUH SEPTIK TANGK BEKOHAN MENEMBUS KOLAM ATAU BALOK, MUKA SEDEKATAN SHAFI KHESUS  
 - SELOUTRI DIMANG TANG TERPAPAR AIR HARUS DI WATERPROOFING  
 \* PERIKSA SEMUA DIMENS DANFANGSI, KONFRMANSI KETIKA MERESTRUKSI MELAKUKAN PEKERJAAN



**POTONGAN AS - E**  
 SKALA : 1 : 125

**DETAIL ENGINEERING DESIGN (DED)**  
**KETERANGAN**

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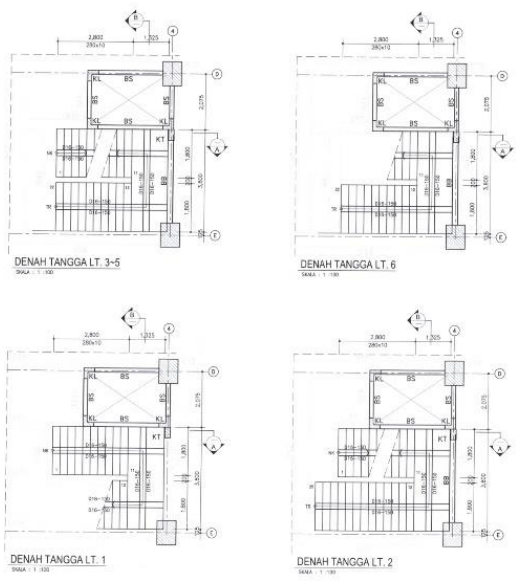
PERMINTAAN PROVINSI DAERAH KHUSUS BUKAYA JAKARTA  
 PEMERINTH TUGAS  
 DINAS PEKERJAAN PROVINSI DKI JAKARTA  
 NAMA KEGIATAN  
 PERENCANAAN DAN DESAIN STRUKTUR  
 LOKASI  
 SUNTARA TERBUKA, JAKARTA SELATAN  
 DOKUMENTASI  
 KHUSUS PERENCANAAN DAN DESAIN STRUKTUR  
 NO. 100/2017/PER/0001/2017  
 PT. KAWA BAKWA UTAMA  
 PT. KAWA BAKWA UTAMA  
 DISAHKAN OLEH  
**KANTOR KOTA**  
 JARAK MASTUR  
 STRUKTUR  
 POTONGAN AS - E  
 SKALA : 1 : 125  
 STR 25 31  
 2023

MUTU BETON :  
 TANG PANGANG 1' 42 MPa, CLASS-C,  $f_{cu} = 249 \text{ MPa}$   
 PILECAP, TIRIBAL, SABL, BALKON, KOLAM 1' 30 MPa

MUTU BESI TULANGAN :  
 - K10 B31P 28 ( $f_y=280 \text{ MPa}$ )  
 - Ds10 B45 K20H ( $f_y=400 \text{ MPa}$ )

| MARK | DIMENSION | MARK | DIMENSION |
|------|-----------|------|-----------|
| PC   | PILE CAP  | G58  | 500 X 800 |
| K712 | 200 X 200 | G47  | 400 X 750 |
| K79  | 200 X 300 | CG47 | 450 X 750 |
| K33  | 300 X 300 | CG48 | 400 X 600 |
| TG68 | 200 X 800 | G54  | 300 X 400 |
| TG4  | 400 X 750 | CG34 | 300 X 400 |
| TG48 | 400 X 600 | B24  | 250 X 400 |
|      |           | B38  | 300 X 500 |
| TB36 | 300 X 600 | B45  | 400 X 600 |
| TB24 | 250 X 400 | B57  | 500 X 700 |
|      |           | CB24 | 250 X 400 |

DAFTAR :  
 - PENUNJANG WAJIB (HBT) GAWANG STANGAP POKHLANGAN  
 - BEBAN DIMANG = 120 kPa (BATA RINGAN)  
 - JALUR TUMBUH SEPTIK TANGK BEKOHAN MENEMBUS KOLAM ATAU BALOK, MUKA SEDEKATAN SHAFI KHESUS  
 - SELOUTRI DIMANG TANG TERPAPAR AIR HARUS DI WATERPROOFING  
 \* PERIKSA SEMUA DIMENS DANFANGSI, KONFRMANSI KETIKA MERESTRUKSI MELAKUKAN PEKERJAAN



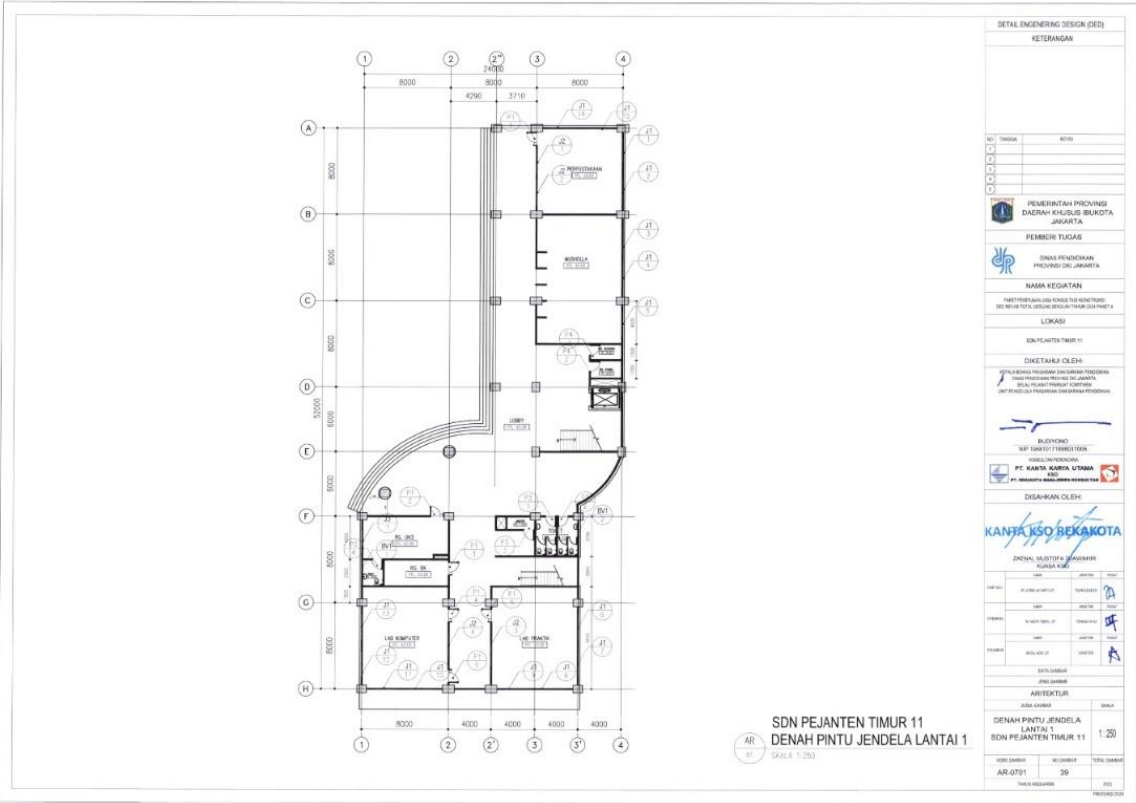
**DENAH TANGGA 1 & 2**  
 SKALA : 1 : 100

**DETAIL ENGINEERING DESIGN (DED)**  
**KETERANGAN**

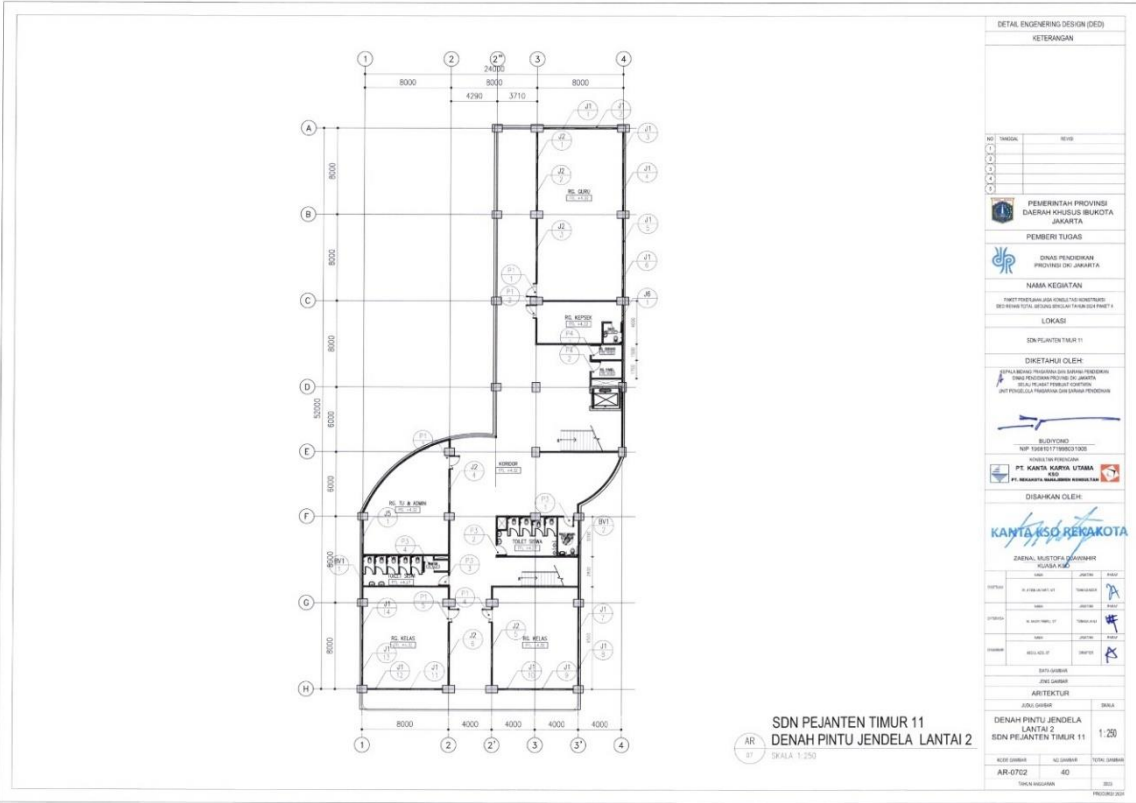
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PERMINTAAN PROVINSI DAERAH KHUSUS BUKAYA JAKARTA  
 PEMERINTH TUGAS  
 DINAS PEKERJAAN PROVINSI DKI JAKARTA  
 NAMA KEGIATAN  
 PERENCANAAN DAN DESAIN STRUKTUR  
 LOKASI  
 SUNTARA TERBUKA, JAKARTA SELATAN  
 DOKUMENTASI  
 KHUSUS PERENCANAAN DAN DESAIN STRUKTUR  
 NO. 100/2017/PER/0001/2017  
 PT. KAWA BAKWA UTAMA  
 PT. KAWA BAKWA UTAMA  
 DISAHKAN OLEH  
**KANTOR KOTA**  
 JARAK MASTUR  
 STRUKTUR  
 DENAH TANGGA 1 & 2  
 SKALA : 1 : 100  
 STR 25 31  
 2023

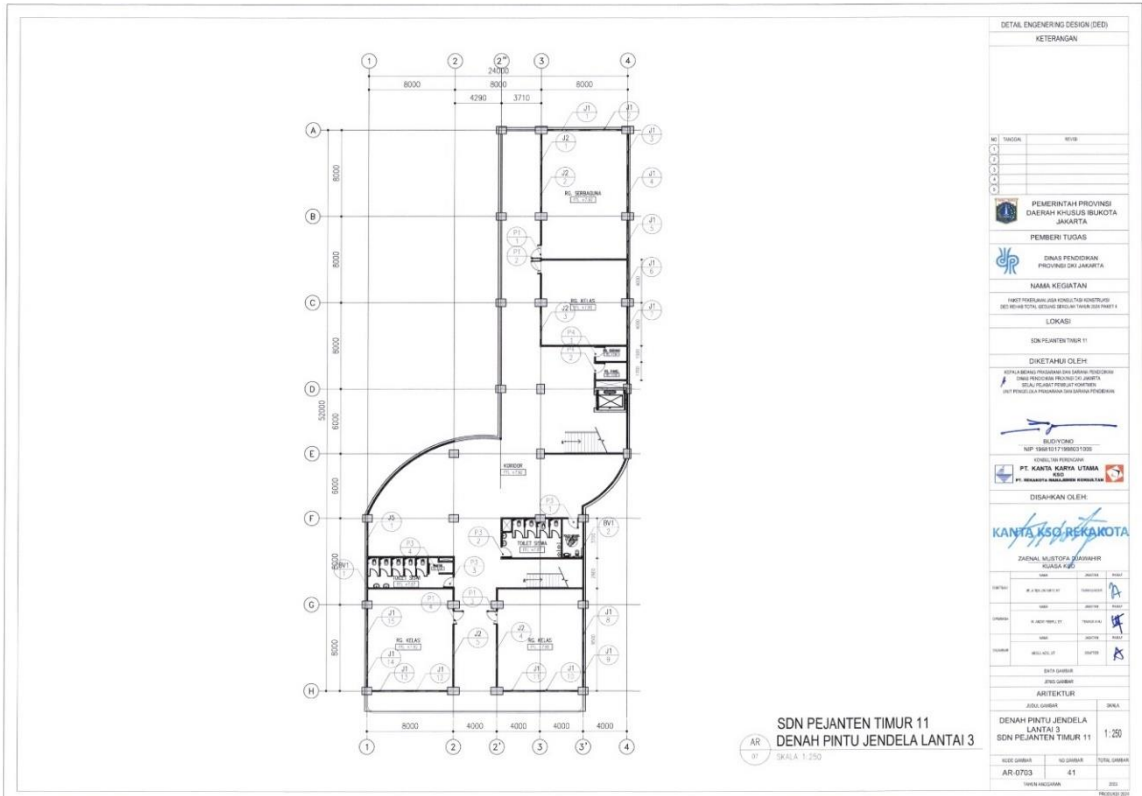




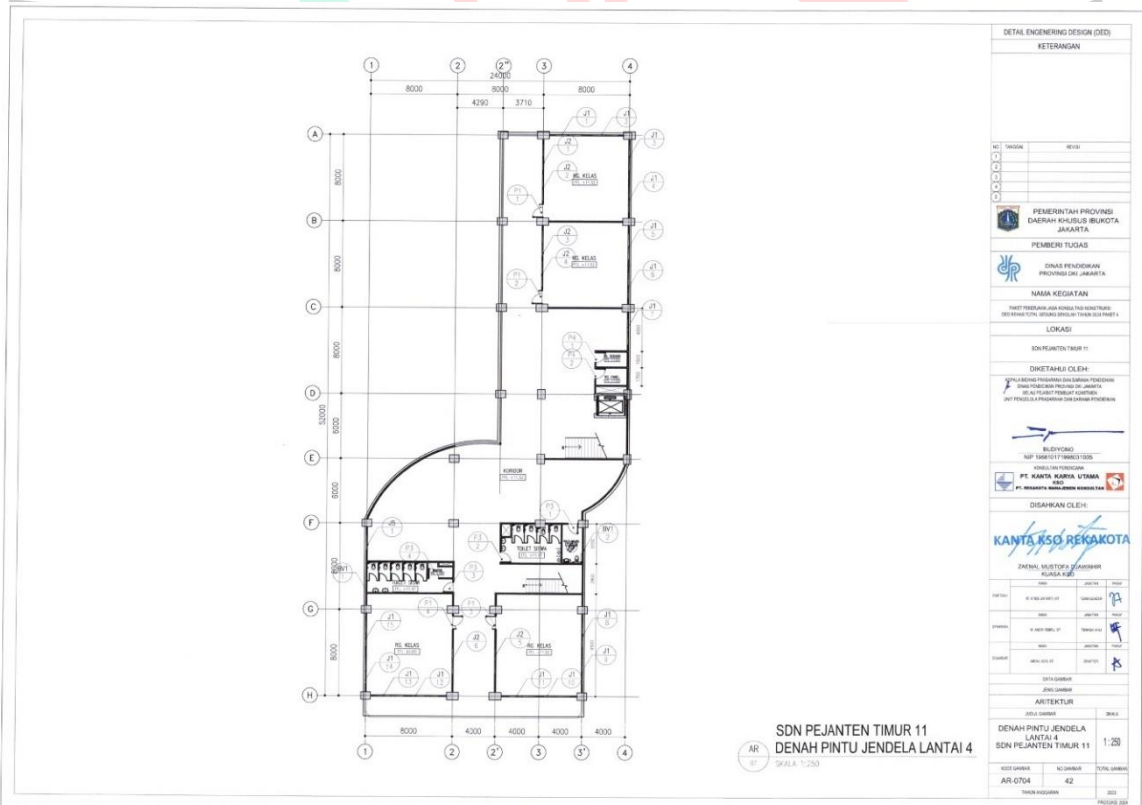
| DETAIL ENGINEERING DESIGN (DED)  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|--|--------------|------------|---------|-------|---|--|--|--|---|--|--|--|---|--|--|--|---|--|--|--|--|----|------------|---------|-------|---|--|--|--|---|--|--|--|---|--|--|--|---|--|--|--|
| KETERANGAN   |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| NO   | REVISI       |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| 01   |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| 02   |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| 03   |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| 04   |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| 05   |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| <b>PEMERINTAH PROVINSI DAERAH KHUSUS BUKOTA JAKARTA</b><br><b>PEMBERI TUGAS</b><br><b>DINAS PENDEKAR PROVINSI DKI JAKARTA</b>  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| <b>NAMA KEGIATAN</b><br>RENCANA KERJA DAN RENCANA TINDAK LANJUT<br>BERKAITAN DENGAN BANGUNAN DAN/ATAU PRASARANA  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| <b>LOKASI</b><br>SDN PEJANTEN TIMUR 11   |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| <b>DIKETAHUI OLEH</b><br>DITUA BANGUNAN, PEKERJAAN DAN/ATAU PEKERJAAN<br>BERKAITAN DENGAN BANGUNAN DAN/ATAU PRASARANA<br>BERKAITAN DENGAN BANGUNAN DAN/ATAU PRASARANA<br>BERKAITAN DENGAN BANGUNAN DAN/ATAU PRASARANA  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| <b>DISAHKAN OLEH</b><br><br><b>KANTA KSO REKAKOTA</b><br>ZENAL MUSTOFA / MANAGER<br>KANTOR KANTOR   |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| <table border="1"> <tr> <th>NO</th> <th>NO. SURTUT</th> <th>TANGGAL</th> <th>SIKAP</th> </tr> <tr> <td>1</td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>2</td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>3</td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>4</td> <td> </td> <td> </td> <td> </td> </tr> </table> | NO           | NO. SURTUT | TANGGAL | SIKAP | 1 |  |  |  | 2 |  |  |  | 3 |  |  |  | 4 |  |  |  | <table border="1"> <tr> <th>NO</th> <th>NO. SURTUT</th> <th>TANGGAL</th> <th>SIKAP</th> </tr> <tr> <td>1</td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>2</td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>3</td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>4</td> <td> </td> <td> </td> <td> </td> </tr> </table> | NO | NO. SURTUT | TANGGAL | SIKAP | 1 |  |  |  | 2 |  |  |  | 3 |  |  |  | 4 |  |  |  |
| NO   | NO. SURTUT   | TANGGAL    | SIKAP   |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| 1  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| 2  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| 3  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| 4  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| NO   | NO. SURTUT   | TANGGAL    | SIKAP   |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| 1  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| 2  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| 3  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| 4  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| <b>ARITEKTUR</b><br>JESSA GIBBER   |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| <b>DENAH PINTU JEJDELA LANTAI 1</b><br>SDN PEJANTEN TIMUR 11<br>AR-0731  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| KIDIL GIBBER   | TOTAL GIBBER |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| AR-0731  | 39           |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| TANGGAL REVISI   | 000          |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |



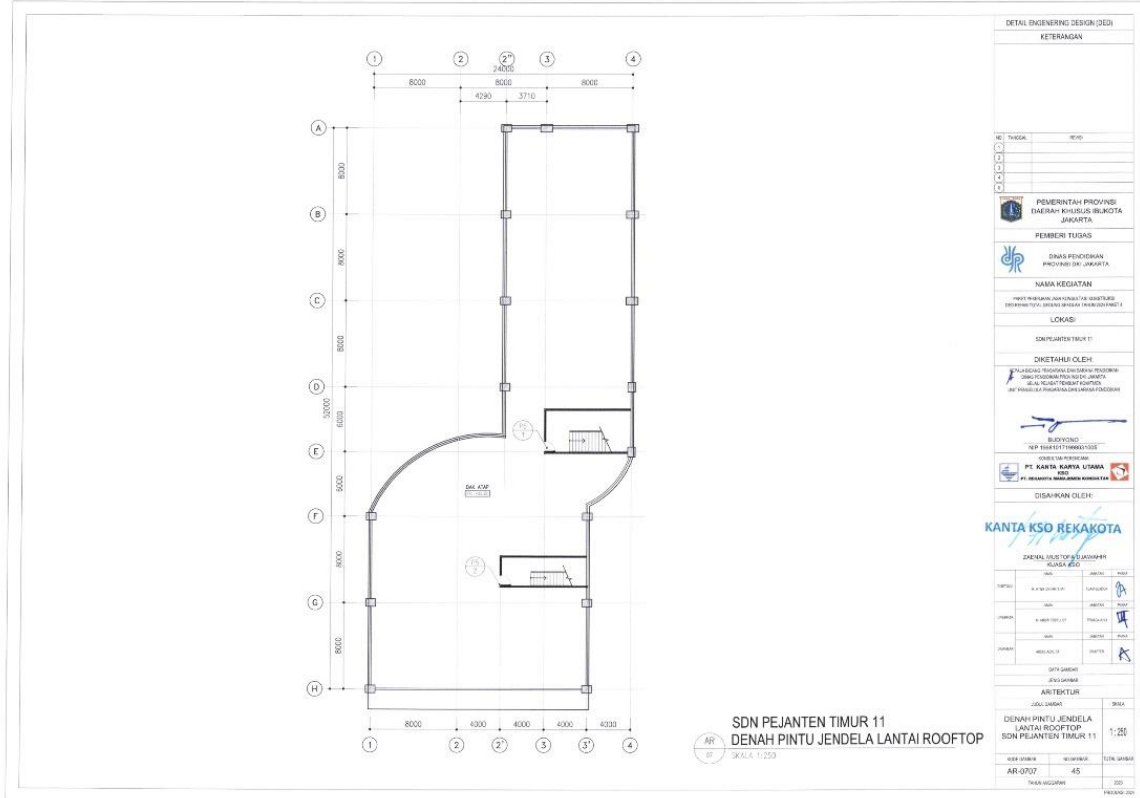
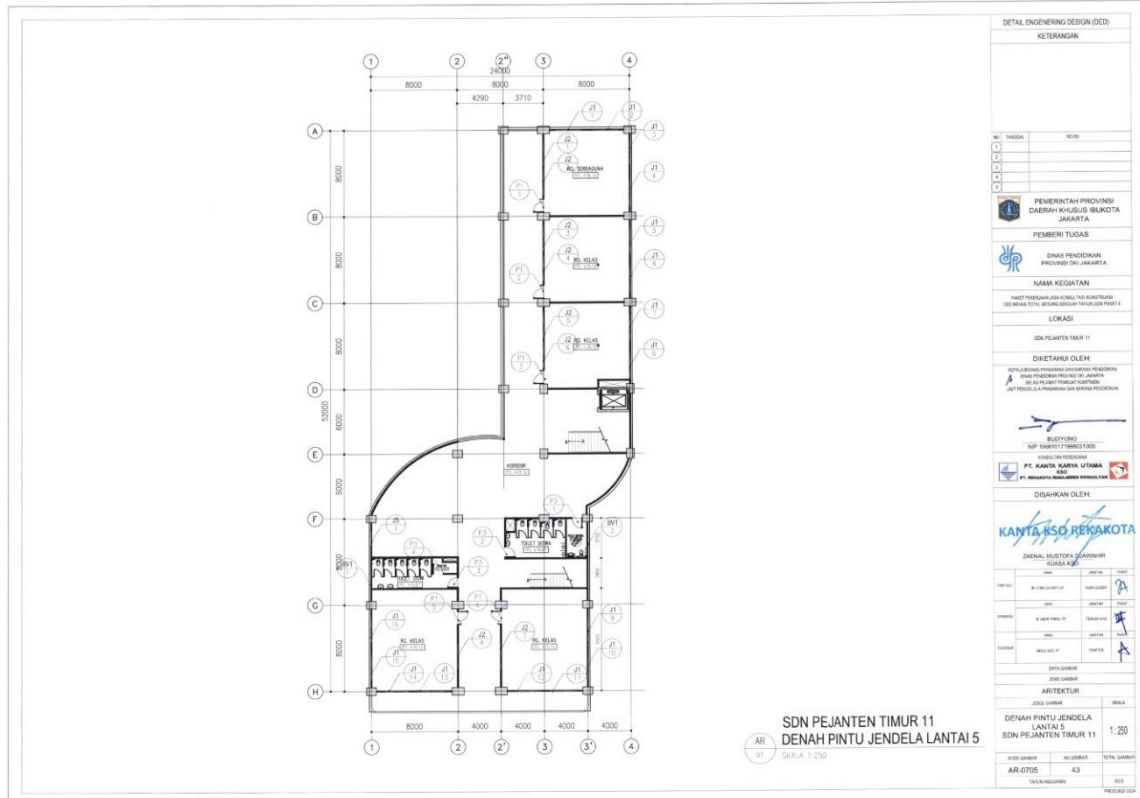
| DETAIL ENGINEERING DESIGN (DED)  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|--|--------------|------------|---------|-------|---|--|--|--|---|--|--|--|---|--|--|--|---|--|--|--|--|----|------------|---------|-------|---|--|--|--|---|--|--|--|---|--|--|--|---|--|--|--|
| KETERANGAN   |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| NO   | REVISI       |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
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| 02   |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| 03   |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| 04   |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| 05   |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| <b>PEMERINTAH PROVINSI DAERAH KHUSUS BUKOTA JAKARTA</b><br><b>PEMBERI TUGAS</b><br><b>DINAS PENDEKAR PROVINSI DKI JAKARTA</b>  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| <b>NAMA KEGIATAN</b><br>RENCANA KERJA DAN RENCANA TINDAK LANJUT<br>BERKAITAN DENGAN BANGUNAN DAN/ATAU PRASARANA  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| <b>LOKASI</b><br>SDN PEJANTEN TIMUR 11   |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| <b>DIKETAHUI OLEH</b><br>DITUA BANGUNAN, PEKERJAAN DAN/ATAU PEKERJAAN<br>BERKAITAN DENGAN BANGUNAN DAN/ATAU PRASARANA<br>BERKAITAN DENGAN BANGUNAN DAN/ATAU PRASARANA<br>BERKAITAN DENGAN BANGUNAN DAN/ATAU PRASARANA  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| <b>DISAHKAN OLEH</b><br><br><b>KANTA KSO REKAKOTA</b><br>ZENAL MUSTOFA / MANAGER<br>KANTOR KANTOR   |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| <table border="1"> <tr> <th>NO</th> <th>NO. SURTUT</th> <th>TANGGAL</th> <th>SIKAP</th> </tr> <tr> <td>1</td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>2</td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>3</td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>4</td> <td> </td> <td> </td> <td> </td> </tr> </table> | NO           | NO. SURTUT | TANGGAL | SIKAP | 1 |  |  |  | 2 |  |  |  | 3 |  |  |  | 4 |  |  |  | <table border="1"> <tr> <th>NO</th> <th>NO. SURTUT</th> <th>TANGGAL</th> <th>SIKAP</th> </tr> <tr> <td>1</td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>2</td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>3</td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>4</td> <td> </td> <td> </td> <td> </td> </tr> </table> | NO | NO. SURTUT | TANGGAL | SIKAP | 1 |  |  |  | 2 |  |  |  | 3 |  |  |  | 4 |  |  |  |
| NO   | NO. SURTUT   | TANGGAL    | SIKAP   |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
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| 2  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| 3  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| 4  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
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| 2  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| 3  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
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| <b>ARITEKTUR</b><br>JESSA GIBBER   |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| <b>DENAH PINTU JEJDELA LANTAI 2</b><br>SDN PEJANTEN TIMUR 11<br>AR-0732  |              |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| KIDIL GIBBER   | TOTAL GIBBER |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| AR-0732  | 40           |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |    |            |         |       |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
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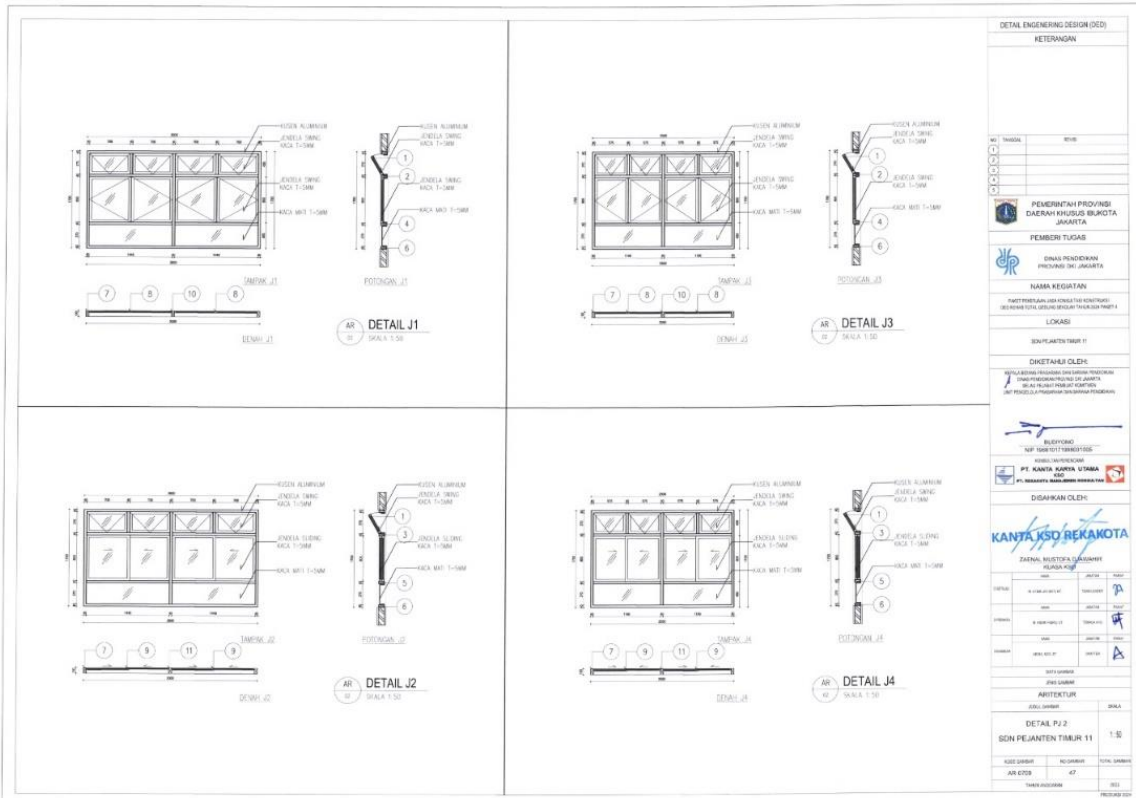


| DETAIL ENGINEERING DESIGN (DED) |        |
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DETAIL ENGINEERING DESIGN (DED)

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PEMERINTAH PROVINSI DAERAH KHUSUS IBUKOTA JAKARTA  
PEMBERI TUGAS  
DINAS PENDEKATAN PROVINSI DKI JAKARTA

NAMA KEKADATAN  
PUSAT PENELITIAN DAN PENGEMBANGAN TEKNOLOGI TERAPAN (PPTT) BERKAWAL SERTIFIKASI LOKASI

LOKASI  
SIMPANAN TAMBOR II

DIKETAHUI OLEH:  
PUSAT PENELITIAN DAN PENGEMBANGAN TEKNOLOGI TERAPAN (PPTT) BERKAWAL SERTIFIKASI LOKASI

REVISOR  
NIP. 2006011100000000

PI. KANTA KSO REKAWA  
KSO

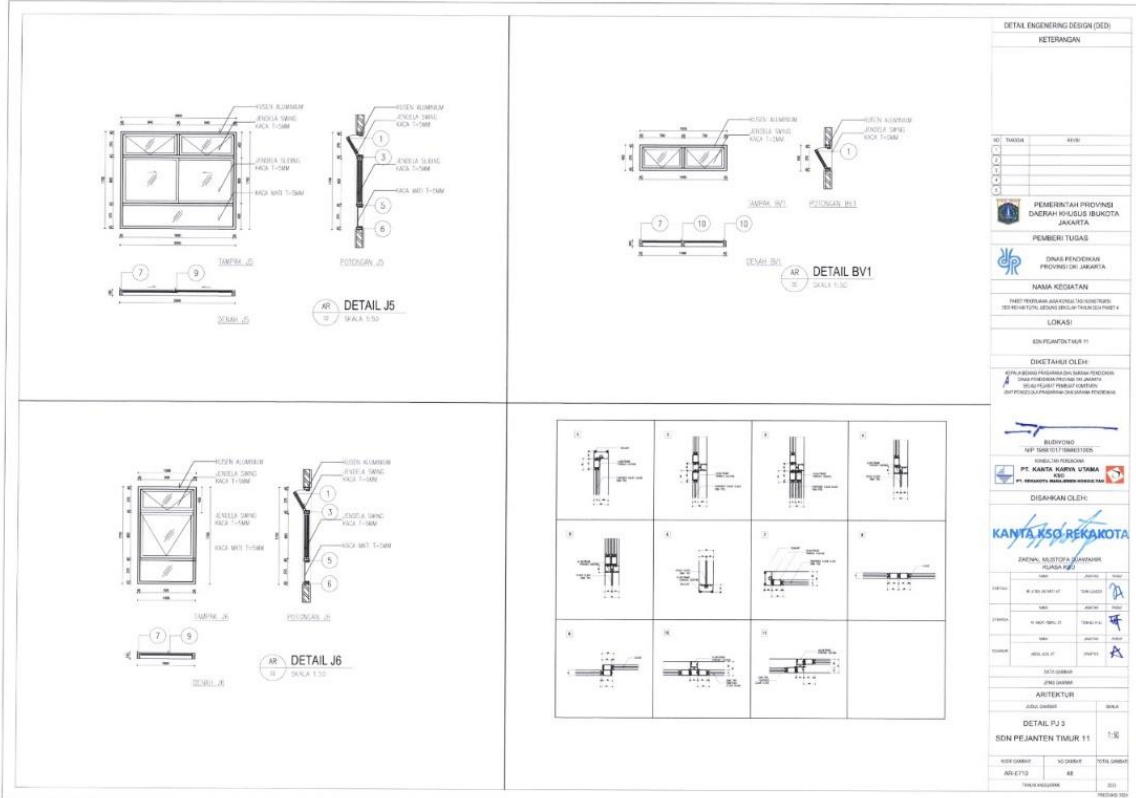
DISAHKAN OLEH:  
**KANTA KSO REKAWA**  
ZAKARIA MUSTOFA SANDHARTO  
MUSA KASIM

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ARITEKTUR  
JULIA DAMARI

DETAIL PJ 2  
SIN PEJANTEN TAMBOR II  
1:50

|                |            |              |
|----------------|------------|--------------|
| KODE GAMBAR    | KETERANGAN | TOTAL GAMBAR |
| AR-0710        | 47         | 47           |
| TAMBAH/UBAHKAN |            |              |
|                |            |              |



DETAIL ENGINEERING DESIGN (DED)

KETERANGAN

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PEMERINTAH PROVINSI DAERAH KHUSUS IBUKOTA JAKARTA  
PEMBERI TUGAS  
DINAS PENDEKATAN PROVINSI DKI JAKARTA

NAMA KEKADATAN  
PUSAT PENELITIAN DAN PENGEMBANGAN TEKNOLOGI TERAPAN (PPTT) BERKAWAL SERTIFIKASI LOKASI

LOKASI  
SIMPANAN TAMBOR II

DIKETAHUI OLEH:  
PUSAT PENELITIAN DAN PENGEMBANGAN TEKNOLOGI TERAPAN (PPTT) BERKAWAL SERTIFIKASI LOKASI

REVISOR  
NIP. 2006011100000000

PI. KANTA KSO REKAWA  
KSO

DISAHKAN OLEH:  
**KANTA KSO REKAWA**  
ZAKARIA MUSTOFA SANDHARTO  
MUSA KASIM

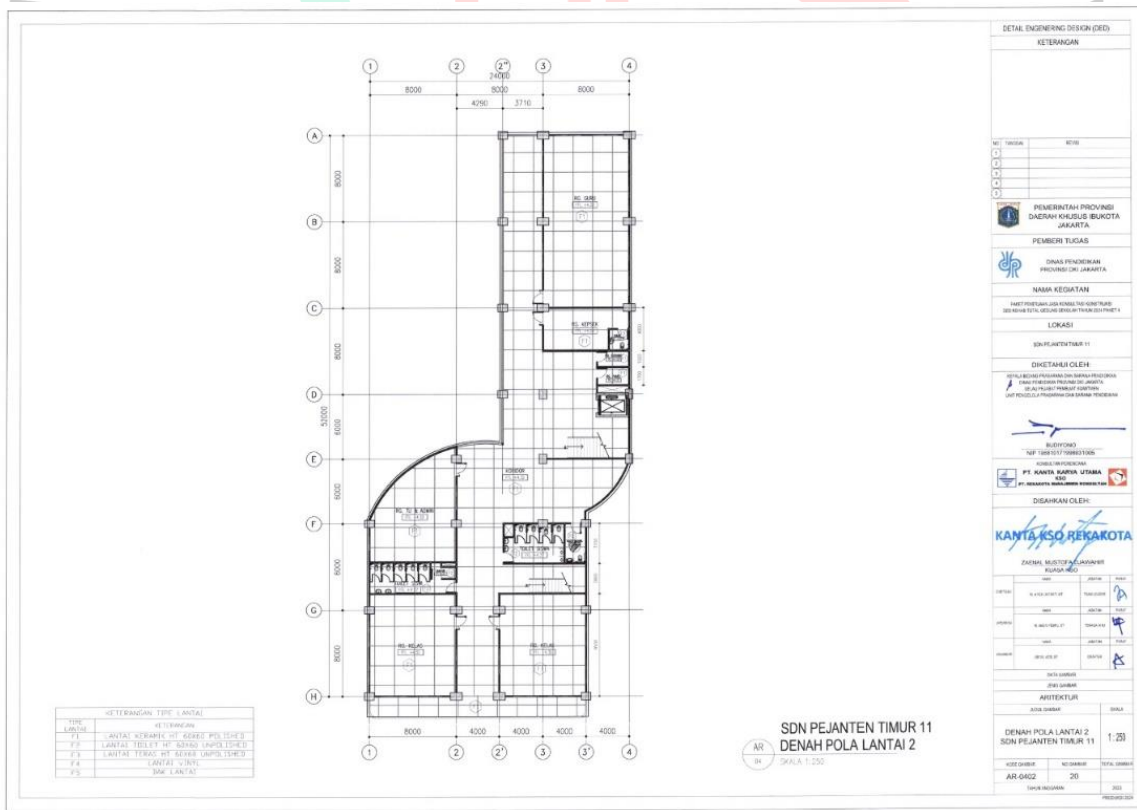
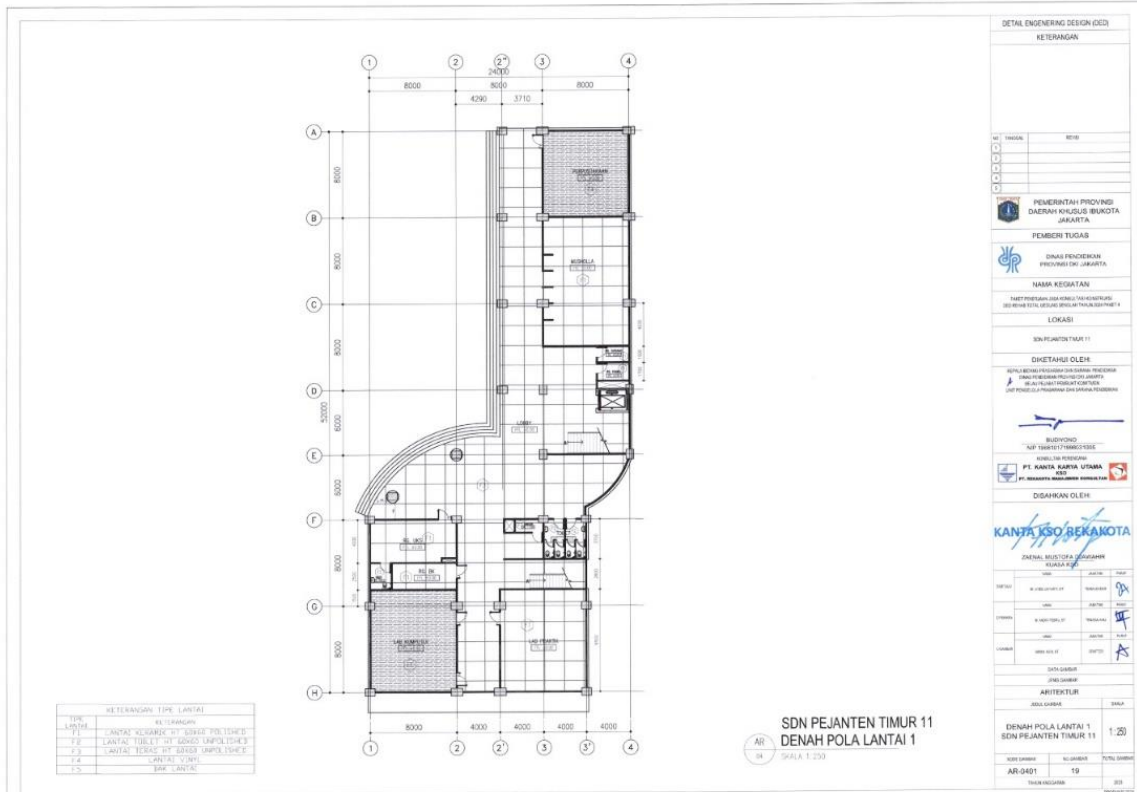
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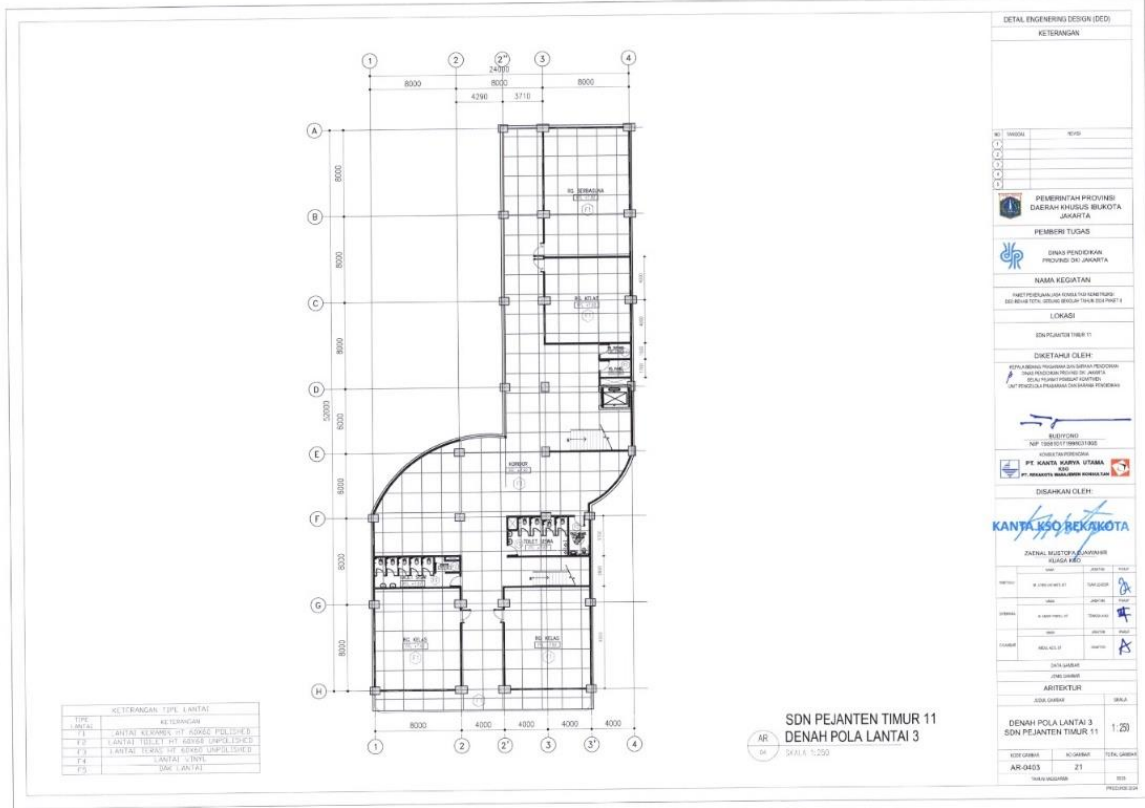
ARITEKTUR  
JULIA DAMARI

DETAIL PJ 3  
SIN PEJANTEN TAMBOR II  
1:50

|                |            |              |
|----------------|------------|--------------|
| KODE GAMBAR    | KETERANGAN | TOTAL GAMBAR |
| AR-0710        | 48         | 48           |
| TAMBAH/UBAHKAN |            |              |
|                |            |              |







**DETAIL ENGINEERING DESIGN (DED)**

**KETERANGAN**

NO. TANGGA: 11/11

PEMERINTAH PROVINSI DAERAH KHUSUS BUKOTA JAKARTA

PEMBINA TUGAS: DINAS PENDIDIKAN, PROTEKSI DAN ANAK

NAMA KEGIATAN: RENCANA TATA RUANG DAN KONSEP PERENCANAAN

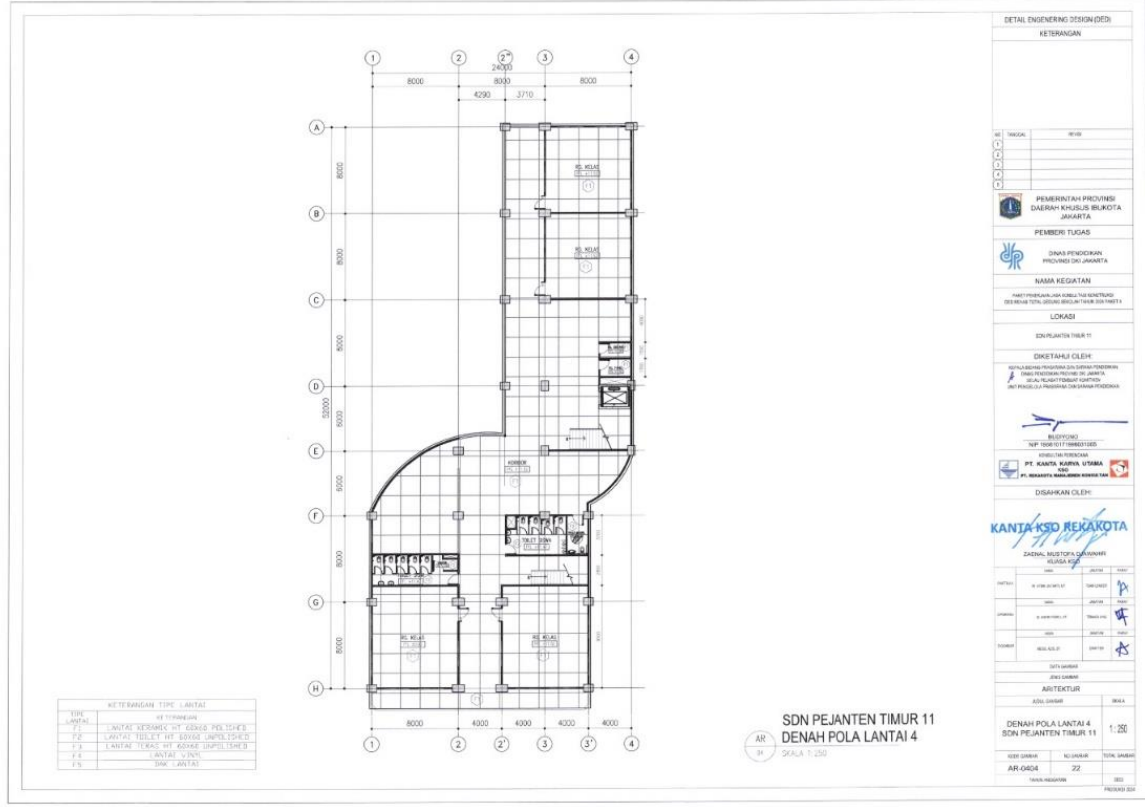
LOKASI: SDN PEJANTEN TIMUR 11

DIKETAPAH OLEH: PT. KANTA KAPITA UTAMA

DISAHKAN OLEH: KANTA KSD REKAKOTA

**DENAH POLA LANTAI 3  
SDN PEJANTEN TIMUR 11**  
SKALA 1:250

NO. GAMBAR: AR-0403  
TANGGA: 21  
PROJEKSI: 2024



**DETAIL ENGINEERING DESIGN (DED)**

**KETERANGAN**

NO. TANGGA: 11/11

PEMERINTAH PROVINSI DAERAH KHUSUS BUKOTA JAKARTA

PEMBINA TUGAS: DINAS PENDIDIKAN, PROTEKSI DAN ANAK

NAMA KEGIATAN: RENCANA TATA RUANG DAN KONSEP PERENCANAAN

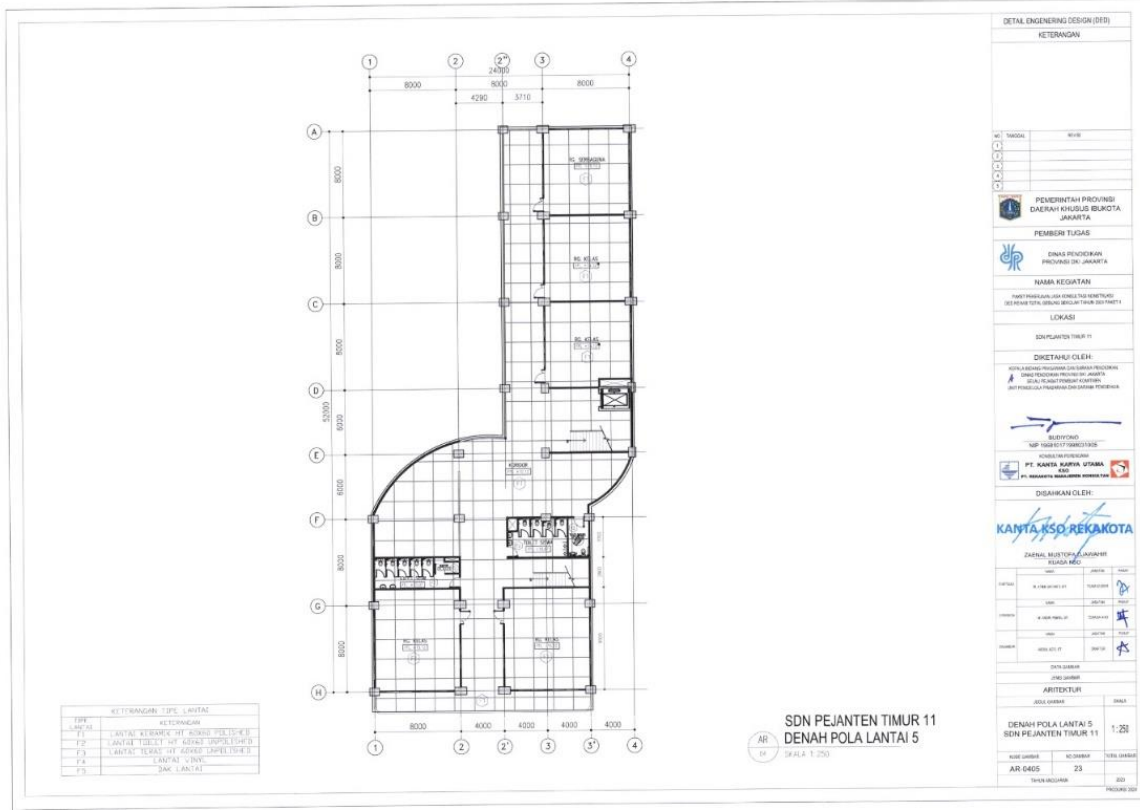
LOKASI: SDN PEJANTEN TIMUR 11

DIKETAPAH OLEH: PT. KANTA KAPITA UTAMA

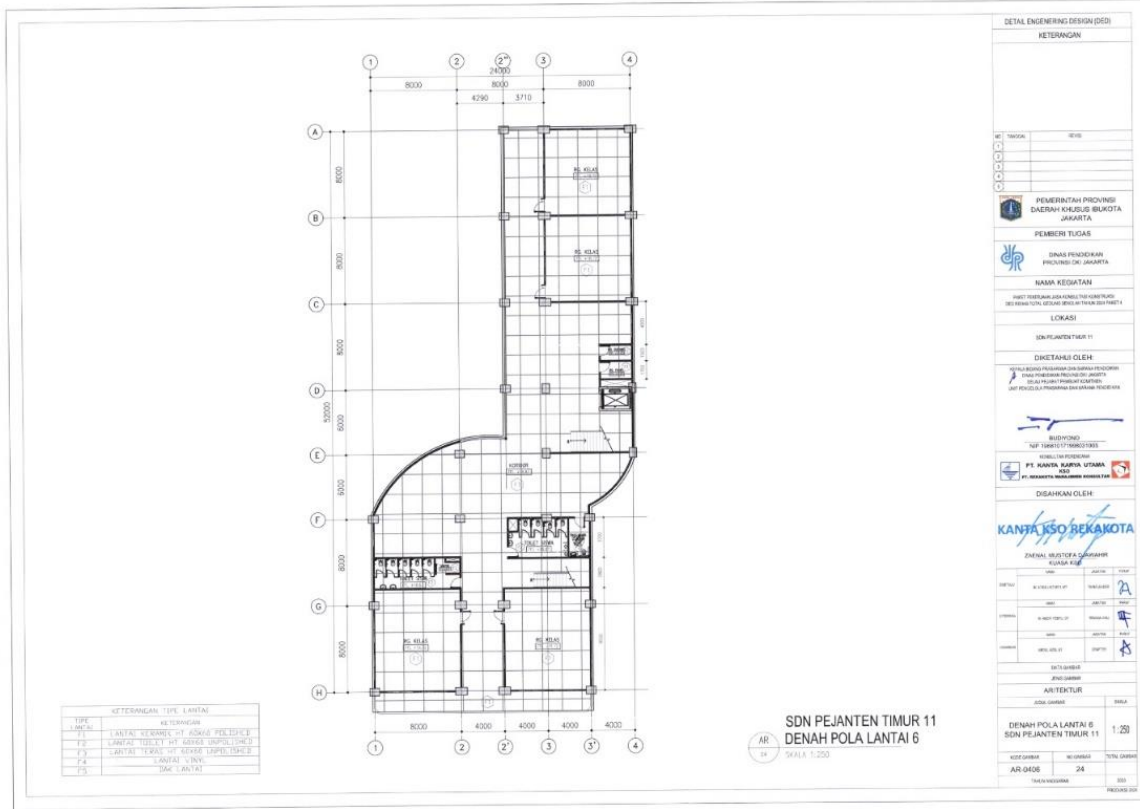
DISAHKAN OLEH: KANTA KSD REKAKOTA

**DENAH POLA LANTAI 4  
SDN PEJANTEN TIMUR 11**  
SKALA 1:250

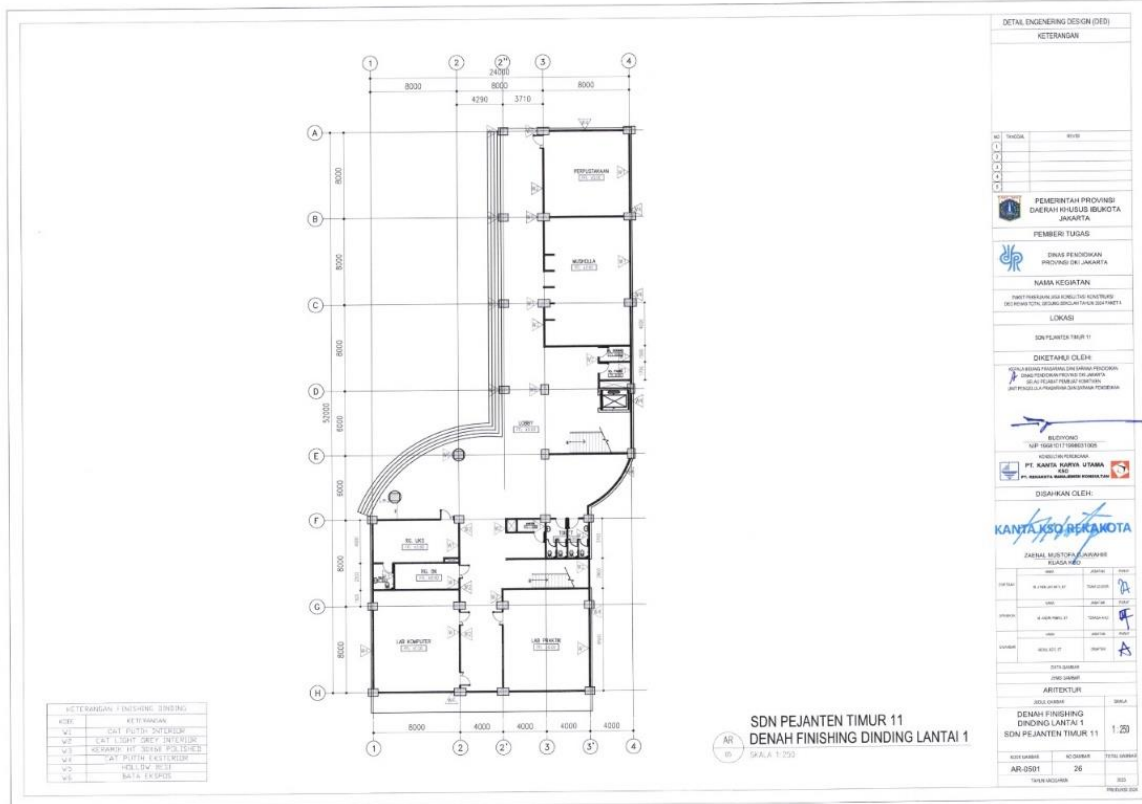
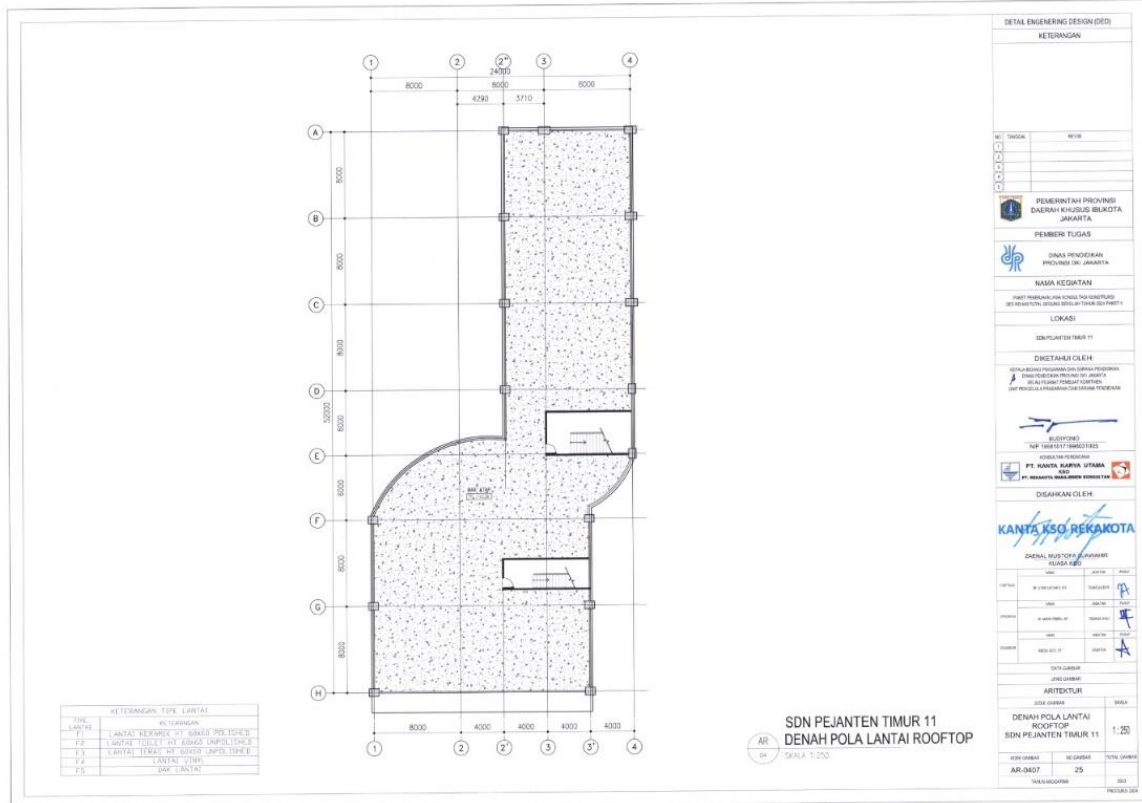
NO. GAMBAR: AR-0404  
TANGGA: 22  
PROJEKSI: 2024

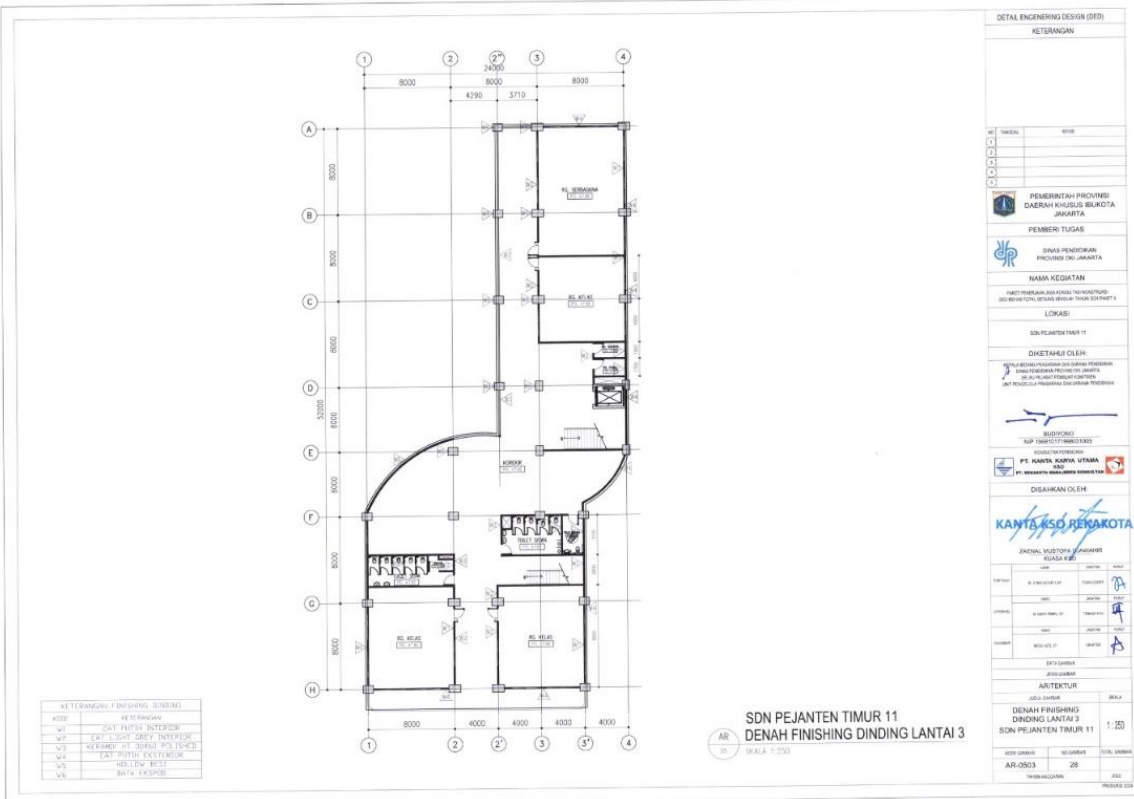
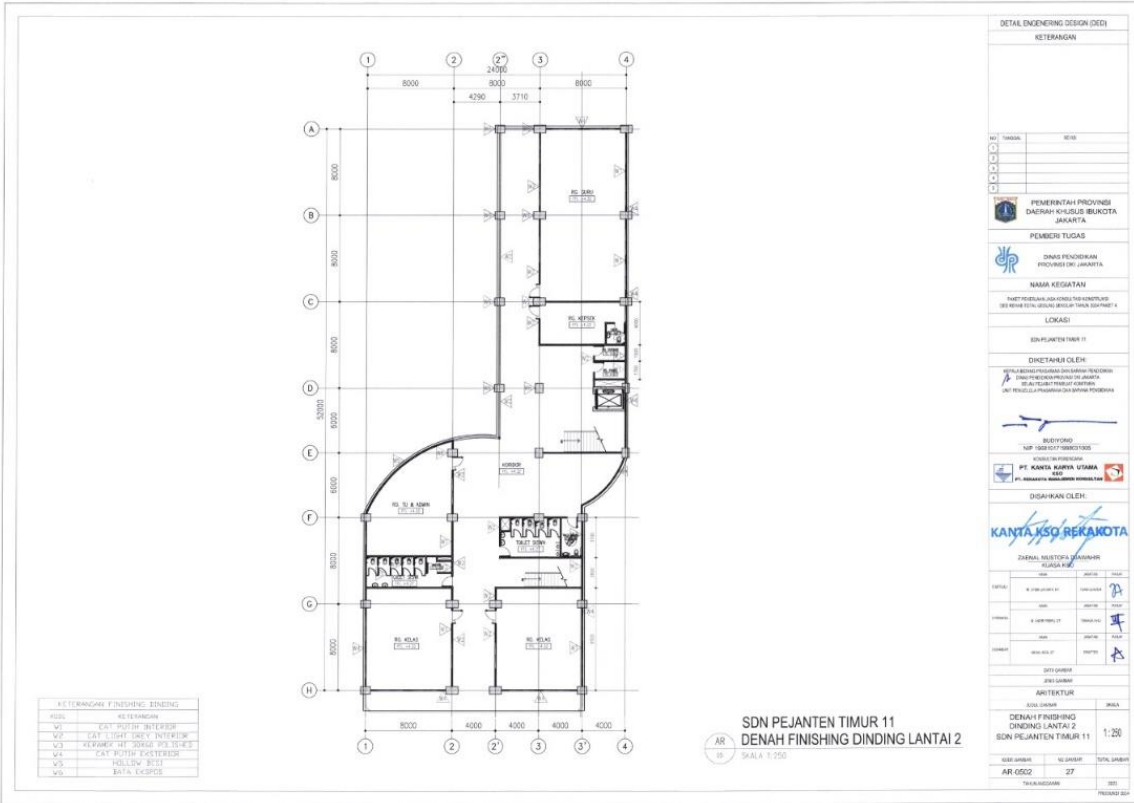


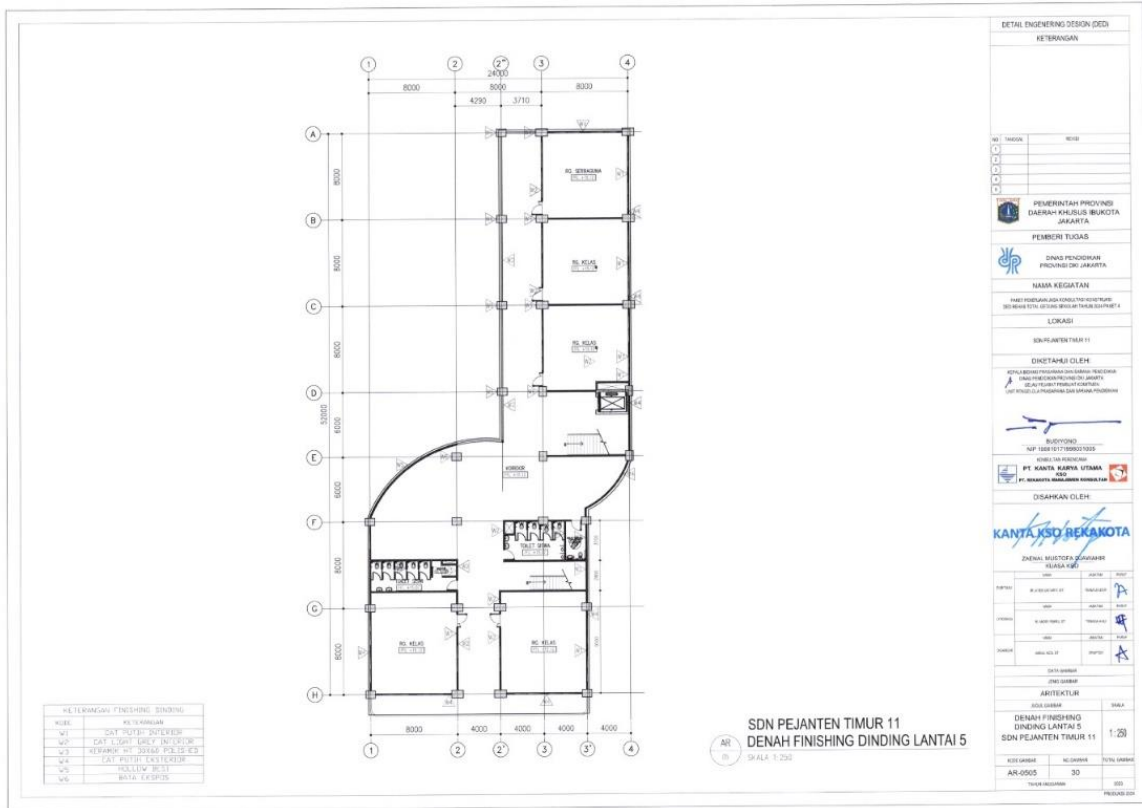
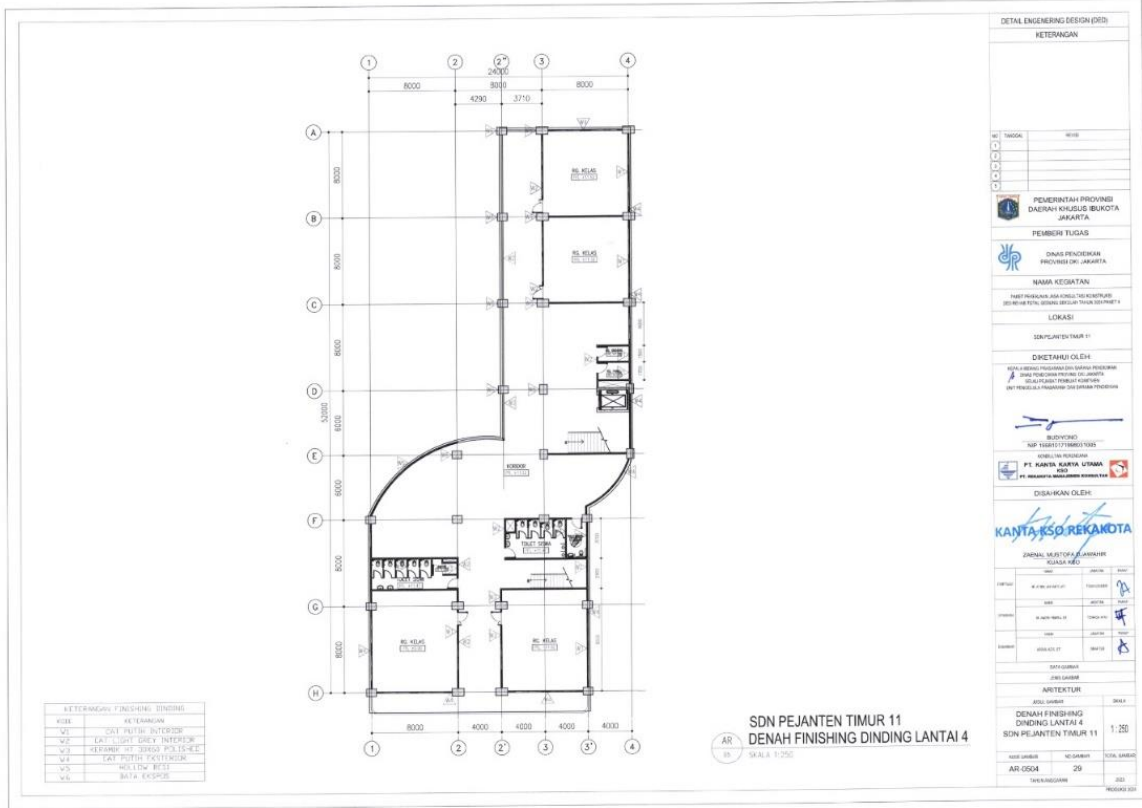
| DETAIL ENGINEERING DESIGN (DED)   |        |
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| PEMERINTAH PROVINSI DAERAH KHUSUS BUKOTA JAKARTA<br>PEMBIER TUGAS<br>DINAS PENDIDIKAN, PROVINSI DKI JAKARTA<br>NAMA KEGIATAN<br>PROJEK PEMBANGUNAN DAN PENYALAHURAN RENCANA<br>DENAH POLA LANTAI GEDUNG SDN PEJANTEN TIMUR 11<br>LOKASI<br>SDN PEJANTEN TIMUR 11<br>DIKETAHUI OLEH:<br>NAMA & RANGKAIAN (NAMA DAN GELAR/KELOMPOK)<br>NAMA & RANGKAIAN (NAMA DAN GELAR/KELOMPOK)<br>NAMA & RANGKAIAN (NAMA DAN GELAR/KELOMPOK)<br>NAMA & RANGKAIAN (NAMA DAN GELAR/KELOMPOK) |        |
| BUDIDYAKSI<br>NIP. 19601217198031983<br>NAMA & RANGKAIAN (NAMA DAN GELAR/KELOMPOK)<br>NAMA & RANGKAIAN (NAMA DAN GELAR/KELOMPOK)  |        |
| DISAHKAN OLEH:<br><b>KANTO KSO REKAKOTA</b><br>ZAHARI MUSTOFA, ANGGARAN<br>KLASA MDC  |        |
| NO  | REVISI |
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| DENAH POLA LANTAI 5<br>SDN PEJANTEN TIMUR 11<br>1:250<br>AR 0405 23<br>TANGGAL DESAIN<br>DESAIN   |        |

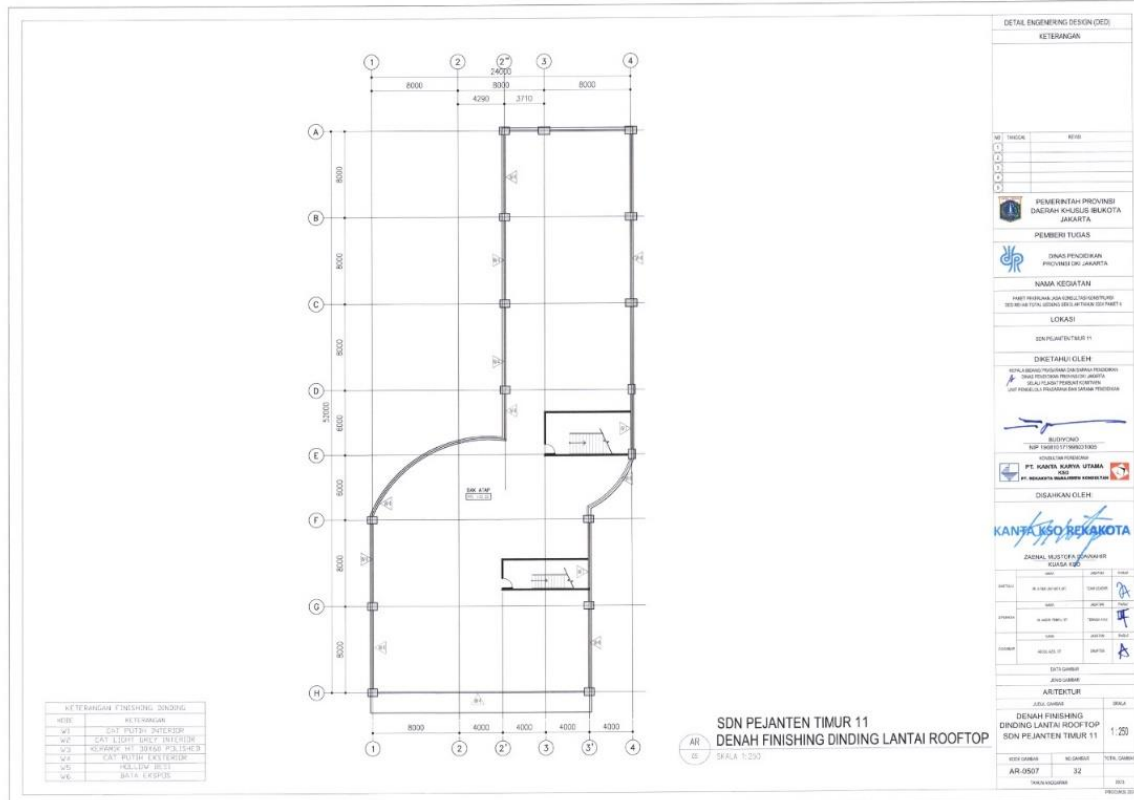
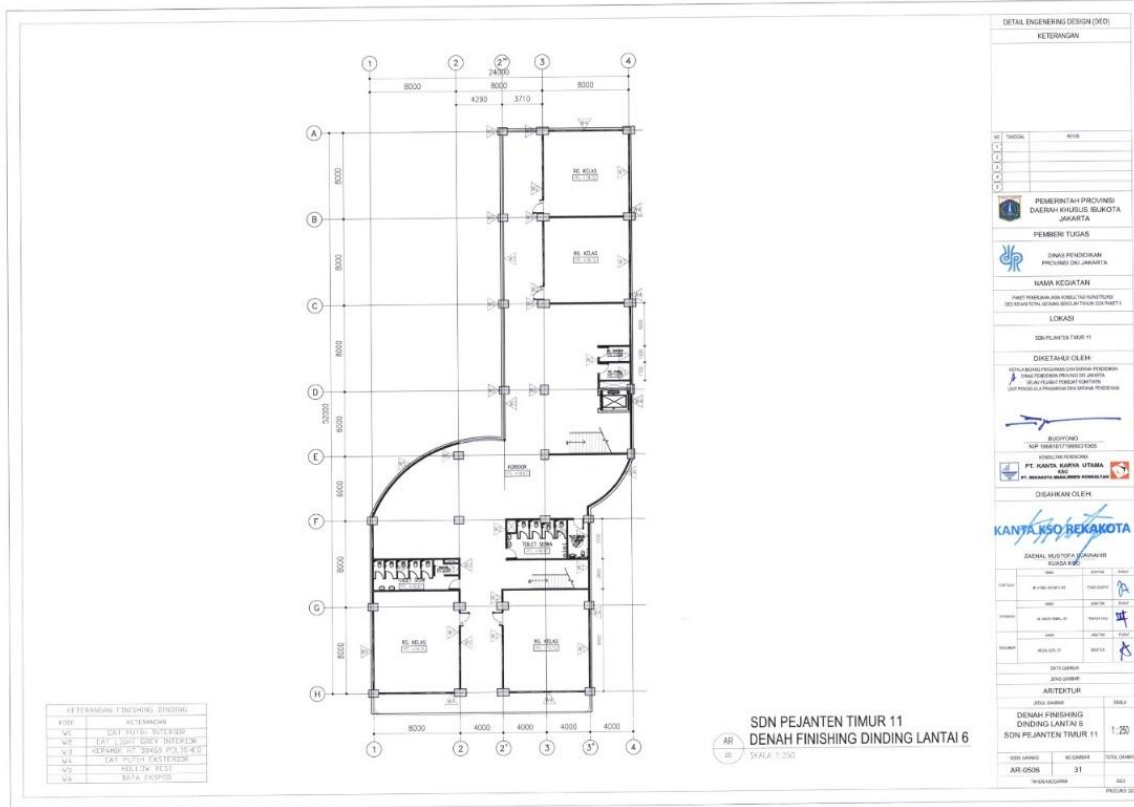


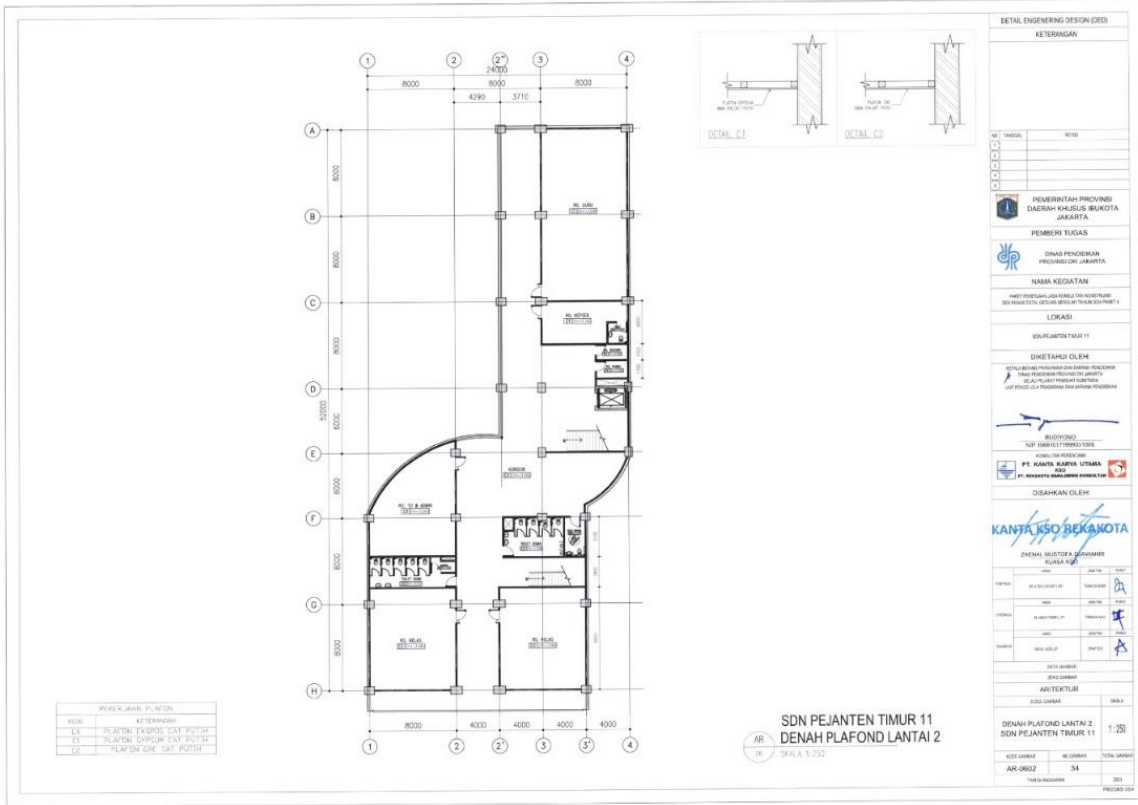
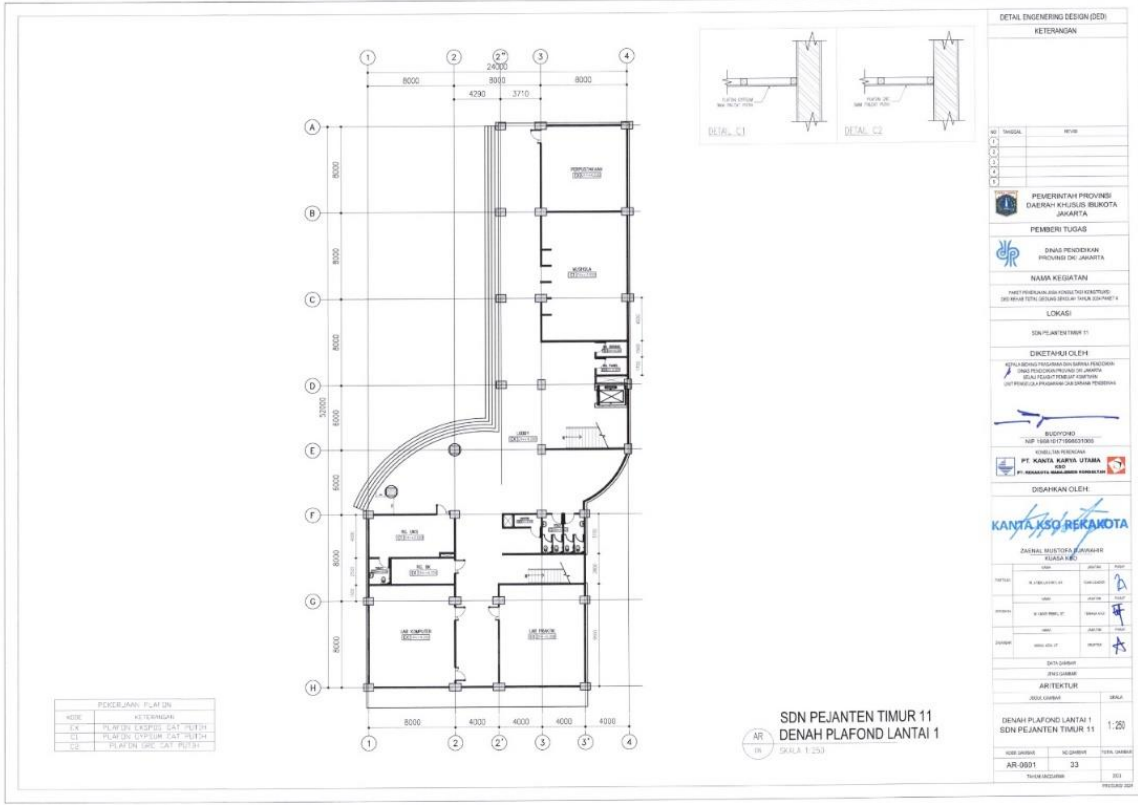
| DETAIL ENGINEERING DESIGN (DED)   |        |
|---|--------|
| KETERANGAN  |        |
| NO  | REVISI |
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| PEMERINTAH PROVINSI DAERAH KHUSUS BUKOTA JAKARTA<br>PEMBIER TUGAS<br>DINAS PENDIDIKAN, PROVINSI DKI JAKARTA<br>NAMA KEGIATAN<br>PROJEK PEMBANGUNAN DAN PENYALAHURAN RENCANA<br>DENAH POLA LANTAI GEDUNG SDN PEJANTEN TIMUR 11<br>LOKASI<br>SDN PEJANTEN TIMUR 11<br>DIKETAHUI OLEH:<br>NAMA & RANGKAIAN (NAMA DAN GELAR/KELOMPOK)<br>NAMA & RANGKAIAN (NAMA DAN GELAR/KELOMPOK)<br>NAMA & RANGKAIAN (NAMA DAN GELAR/KELOMPOK)<br>NAMA & RANGKAIAN (NAMA DAN GELAR/KELOMPOK) |        |
| BUDIDYAKSI<br>NIP. 19601217198031983<br>NAMA & RANGKAIAN (NAMA DAN GELAR/KELOMPOK)<br>NAMA & RANGKAIAN (NAMA DAN GELAR/KELOMPOK)  |        |
| DISAHKAN OLEH:<br><b>KANTO KSO REKAKOTA</b><br>ZAHARI MUSTOFA, ANGGARAN<br>KLASA MDC  |        |
| NO  | REVISI |
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| DENAH POLA LANTAI 6<br>SDN PEJANTEN TIMUR 11<br>1:250<br>AR 0406 24<br>TANGGAL DESAIN<br>DESAIN   |        |



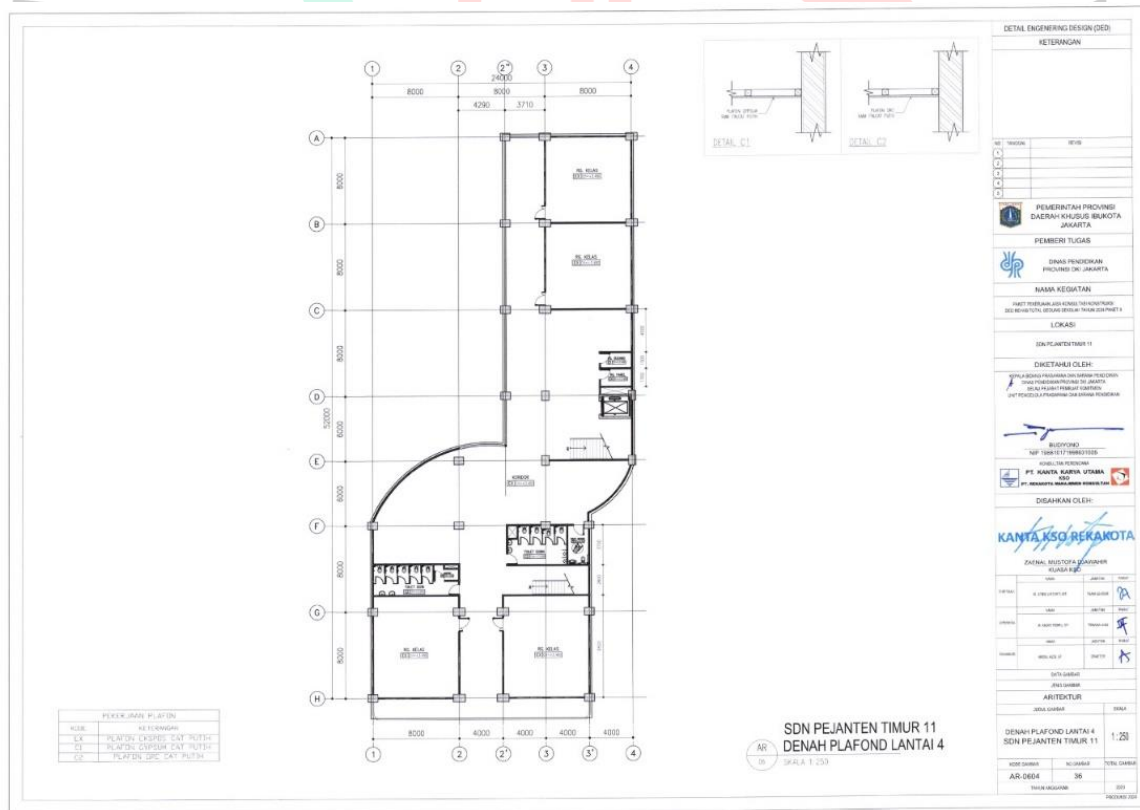
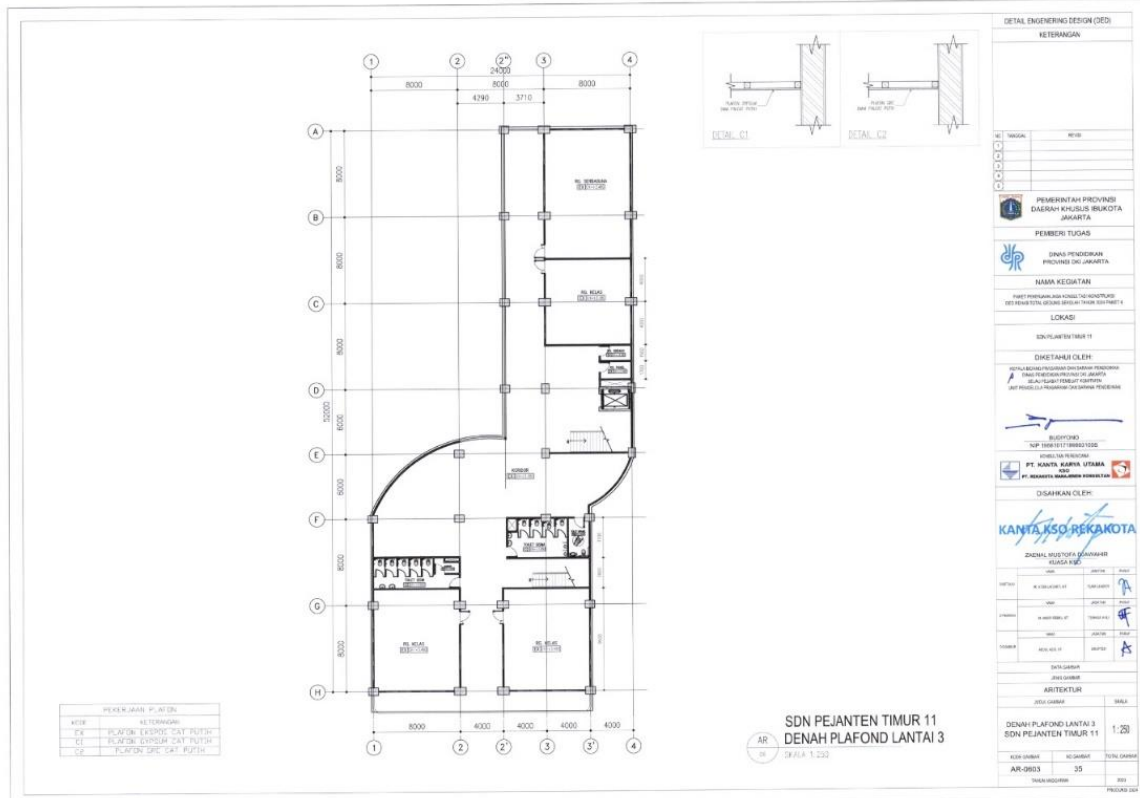


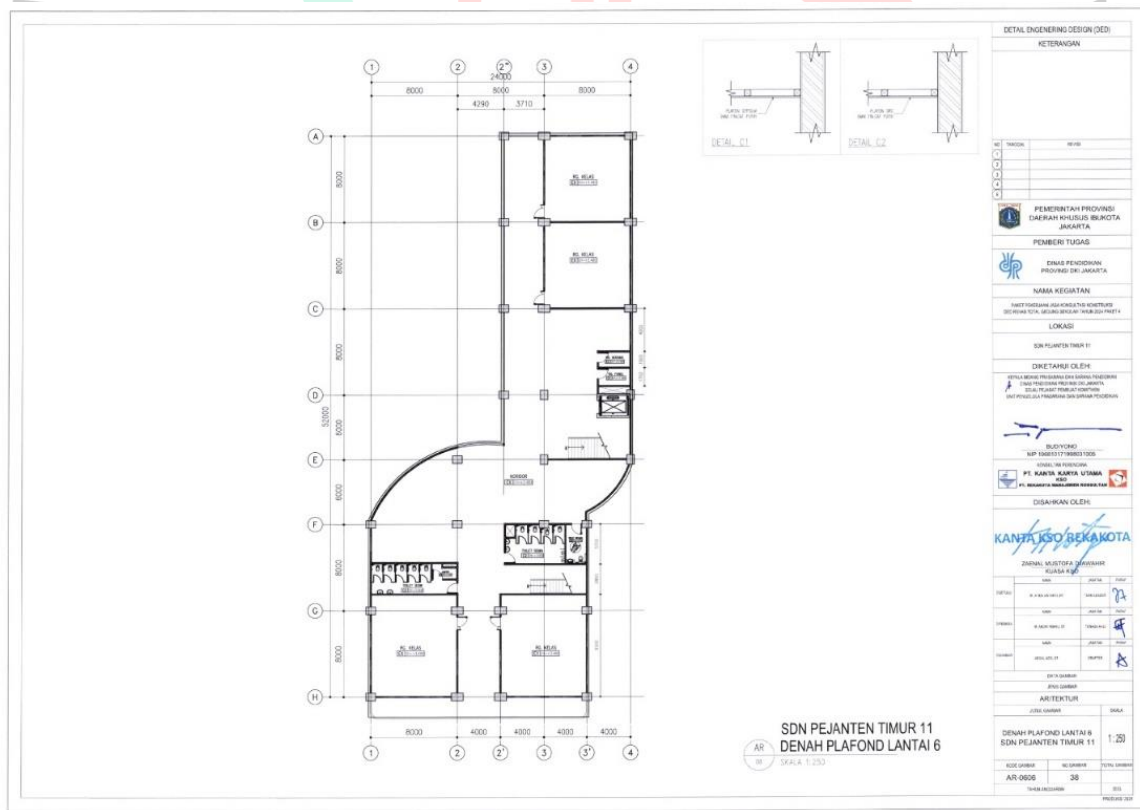
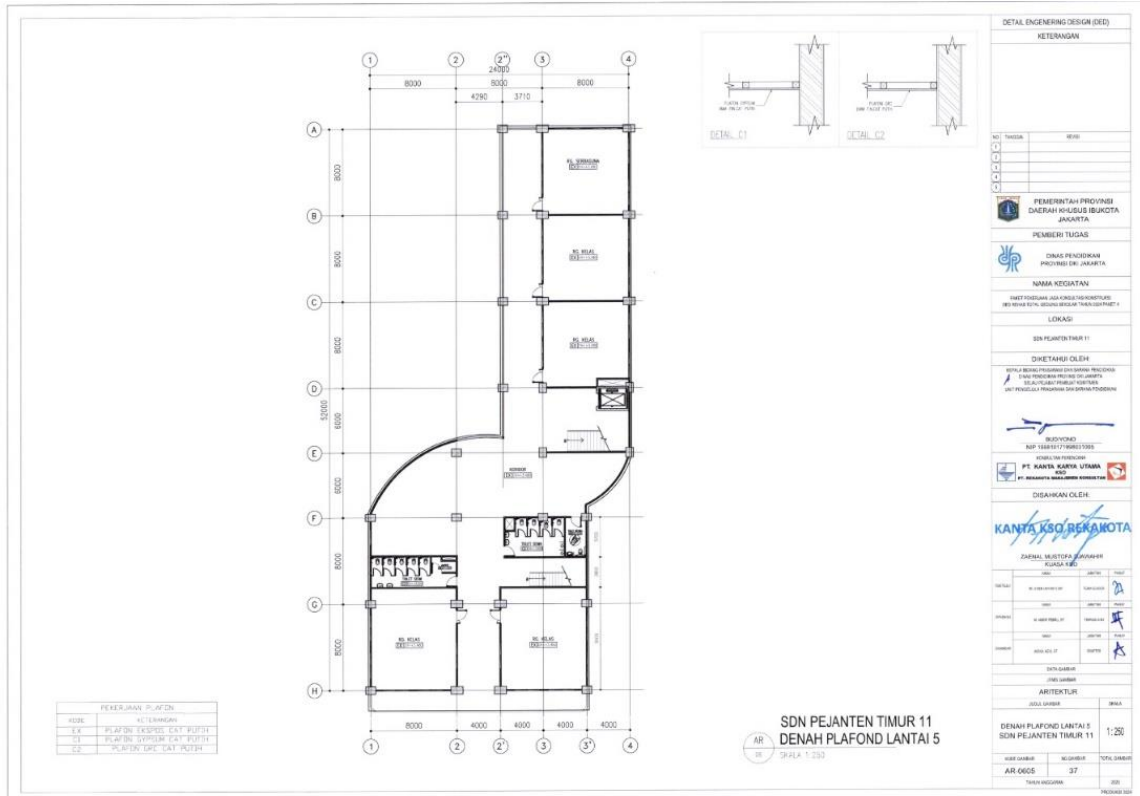












Lampiran 4. *Quantity Take-Off* dari Autodesk Revit

**Quantity Take-Off Pembesian**

1. Tulangan Pondasi *Pile Cap*

1.1. PC1

| <Tulangan Pondasi PC 1> |              |            |                       |                  |                         |               |            |
|-------------------------|--------------|------------|-----------------------|------------------|-------------------------|---------------|------------|
| A                       | B            | C          | D                     | E                | F                       | G             | H          |
| Type                    | Bar Diameter | Bar Length | Host Category         | Total Bar Length | Reinforcement Volu      | Schedule Mark | Berat Besi |
| 19M                     | 19 mm        | 1950 mm    | Structural Foundation | 15600 mm         | 4469.73 cm <sup>3</sup> | 1             | 35.09 kg   |
| 19M                     | 19 mm        | 1830 mm    | Structural Foundation | 14640 mm         | 4194.67 cm <sup>3</sup> | 1             | 32.93 kg   |
| 19M                     | 19 mm        | 1780 mm    | Structural Foundation | 14240 mm         | 4080.06 cm <sup>3</sup> | 1             | 32.03 kg   |
| 19M                     | 19 mm        | 1720 mm    | Structural Foundation | 13760 mm         | 3942.53 cm <sup>3</sup> | 1             | 30.95 kg   |
| 19M                     | 19 mm        | 2650 mm    | Structural Foundation | 5300 mm          | 1518.56 cm <sup>3</sup> | 1             | 11.92 kg   |
| 19M                     | 19 mm        | 2660 mm    | Structural Foundation | 5320 mm          | 1524.29 cm <sup>3</sup> | 1             | 11.97 kg   |
| 19M                     | 19 mm        | 1950 mm    | Structural Foundation | 15600 mm         | 4469.73 cm <sup>3</sup> | 1             | 35.09 kg   |
| 19M                     | 19 mm        | 1830 mm    | Structural Foundation | 14640 mm         | 4194.67 cm <sup>3</sup> | 1             | 32.93 kg   |
| 19M                     | 19 mm        | 1780 mm    | Structural Foundation | 14240 mm         | 4080.06 cm <sup>3</sup> | 1             | 32.03 kg   |
| 19M                     | 19 mm        | 1720 mm    | Structural Foundation | 13760 mm         | 3942.53 cm <sup>3</sup> | 1             | 30.95 kg   |
| 19M                     | 19 mm        | 2650 mm    | Structural Foundation | 5300 mm          | 1518.56 cm <sup>3</sup> | 1             | 11.92 kg   |
| 19M                     | 19 mm        | 2660 mm    | Structural Foundation | 5320 mm          | 1524.29 cm <sup>3</sup> | 1             | 11.97 kg   |

1.2. PC3

| <Tulangan Pondasi PC 3> |            |      |                         |                  |                       |            |
|-------------------------|------------|------|-------------------------|------------------|-----------------------|------------|
| A                       | B          | C    | D                       | E                | F                     | G          |
| Bar Diameter            | Bar Length | Type | Reinforcement Volu      | Total Bar Length | Host Category         | Berat Besi |
| 19 mm                   | 3510 mm    | 19M  | 1005.04 cm <sup>3</sup> | 3510 mm          | Structural Foundation | 7.89 kg    |
| 19 mm                   | 3720 mm    | 19M  | 1066.38 cm <sup>3</sup> | 3720 mm          | Structural Foundation | 8.37 kg    |
| 19 mm                   | 3940 mm    | 19M  | 1127.72 cm <sup>3</sup> | 3940 mm          | Structural Foundation | 8.85 kg    |
| 19 mm                   | 4150 mm    | 19M  | 1189.06 cm <sup>3</sup> | 4150 mm          | Structural Foundation | 9.33 kg    |
| 19 mm                   | 4360 mm    | 19M  | 1250.40 cm <sup>3</sup> | 4360 mm          | Structural Foundation | 9.82 kg    |
| 19 mm                   | 4580 mm    | 19M  | 1311.74 cm <sup>3</sup> | 4580 mm          | Structural Foundation | 10.30 kg   |
| 19 mm                   | 4790 mm    | 19M  | 1373.08 cm <sup>3</sup> | 4790 mm          | Structural Foundation | 10.78 kg   |
| 19 mm                   | 5010 mm    | 19M  | 1434.42 cm <sup>3</sup> | 5010 mm          | Structural Foundation | 11.26 kg   |
| 19 mm                   | 5220 mm    | 19M  | 1495.76 cm <sup>3</sup> | 5220 mm          | Structural Foundation | 11.74 kg   |
| 19 mm                   | 5430 mm    | 19M  | 1557.10 cm <sup>3</sup> | 5430 mm          | Structural Foundation | 12.22 kg   |
| 19 mm                   | 5650 mm    | 19M  | 1618.44 cm <sup>3</sup> | 5650 mm          | Structural Foundation | 12.70 kg   |
| 19 mm                   | 5860 mm    | 19M  | 1679.78 cm <sup>3</sup> | 5860 mm          | Structural Foundation | 13.19 kg   |
| 19 mm                   | 6080 mm    | 19M  | 1741.12 cm <sup>3</sup> | 6080 mm          | Structural Foundation | 13.67 kg   |
| 19 mm                   | 6100 mm    | 19M  | 1747.91 cm <sup>3</sup> | 6100 mm          | Structural Foundation | 13.72 kg   |
| 19 mm                   | 5750 mm    | 19M  | 1647.06 cm <sup>3</sup> | 5750 mm          | Structural Foundation | 12.93 kg   |
| 19 mm                   | 5400 mm    | 19M  | 1546.20 cm <sup>3</sup> | 5400 mm          | Structural Foundation | 12.14 kg   |
| 19 mm                   | 5040 mm    | 19M  | 1445.34 cm <sup>3</sup> | 5040 mm          | Structural Foundation | 11.35 kg   |
| 19 mm                   | 4690 mm    | 19M  | 1344.49 cm <sup>3</sup> | 4690 mm          | Structural Foundation | 10.55 kg   |
| 19 mm                   | 6150 mm    | 19M  | 3524.21 cm <sup>3</sup> | 12300 mm         | Structural Foundation | 27.67 kg   |
| 19 mm                   | 6080 mm    | 19M  | 1743.28 cm <sup>3</sup> | 6080 mm          | Structural Foundation | 13.68 kg   |
| 19 mm                   | 5730 mm    | 19M  | 1642.43 cm <sup>3</sup> | 5730 mm          | Structural Foundation | 12.89 kg   |
| 19 mm                   | 5380 mm    | 19M  | 1541.57 cm <sup>3</sup> | 5380 mm          | Structural Foundation | 12.10 kg   |
| 19 mm                   | 5030 mm    | 19M  | 1440.71 cm <sup>3</sup> | 5030 mm          | Structural Foundation | 11.31 kg   |
| 19 mm                   | 4680 mm    | 19M  | 1339.86 cm <sup>3</sup> | 4680 mm          | Structural Foundation | 10.52 kg   |
| 19 mm                   | 3510 mm    | 19M  | 1005.04 cm <sup>3</sup> | 3510 mm          | Structural Foundation | 7.89 kg    |
| 19 mm                   | 3720 mm    | 19M  | 1066.38 cm <sup>3</sup> | 3720 mm          | Structural Foundation | 8.37 kg    |
| 19 mm                   | 3940 mm    | 19M  | 1127.72 cm <sup>3</sup> | 3940 mm          | Structural Foundation | 8.85 kg    |
| 19 mm                   | 4150 mm    | 19M  | 1189.06 cm <sup>3</sup> | 4150 mm          | Structural Foundation | 9.33 kg    |
| 19 mm                   | 4360 mm    | 19M  | 1250.40 cm <sup>3</sup> | 4360 mm          | Structural Foundation | 9.82 kg    |
| 19 mm                   | 4580 mm    | 19M  | 1311.74 cm <sup>3</sup> | 4580 mm          | Structural Foundation | 10.30 kg   |

|       |         |     |                          |          |                       |          |
|-------|---------|-----|--------------------------|----------|-----------------------|----------|
| 19 mm | 4790 mm | 19M | 1373.08 cm <sup>3</sup>  | 4790 mm  | Structural Foundation | 10.78 kg |
| 19 mm | 5010 mm | 19M | 1434.42 cm <sup>3</sup>  | 5010 mm  | Structural Foundation | 11.26 kg |
| 19 mm | 5220 mm | 19M | 1495.76 cm <sup>3</sup>  | 5220 mm  | Structural Foundation | 11.74 kg |
| 19 mm | 5430 mm | 19M | 1557.10 cm <sup>3</sup>  | 5430 mm  | Structural Foundation | 12.22 kg |
| 19 mm | 5650 mm | 19M | 1618.44 cm <sup>3</sup>  | 5650 mm  | Structural Foundation | 12.70 kg |
| 19 mm | 5860 mm | 19M | 1679.78 cm <sup>3</sup>  | 5860 mm  | Structural Foundation | 13.19 kg |
| 19 mm | 6080 mm | 19M | 1741.12 cm <sup>3</sup>  | 6080 mm  | Structural Foundation | 13.67 kg |
| 19 mm | 6150 mm | 19M | 3524.21 cm <sup>3</sup>  | 12300 mm | Structural Foundation | 27.67 kg |
| 19 mm | 5860 mm | 19M | 11753.10 cm <sup>3</sup> | 41020 mm | Structural Foundation | 92.26 kg |
| 19 mm | 3510 mm | 19M | 1005.04 cm <sup>3</sup>  | 3510 mm  | Structural Foundation | 7.89 kg  |
| 19 mm | 3720 mm | 19M | 1066.38 cm <sup>3</sup>  | 3720 mm  | Structural Foundation | 8.37 kg  |
| 19 mm | 3940 mm | 19M | 1127.72 cm <sup>3</sup>  | 3940 mm  | Structural Foundation | 8.85 kg  |
| 19 mm | 4150 mm | 19M | 1189.06 cm <sup>3</sup>  | 4150 mm  | Structural Foundation | 9.33 kg  |
| 19 mm | 4360 mm | 19M | 1250.40 cm <sup>3</sup>  | 4360 mm  | Structural Foundation | 9.82 kg  |
| 19 mm | 4580 mm | 19M | 1311.74 cm <sup>3</sup>  | 4580 mm  | Structural Foundation | 10.30 kg |
| 19 mm | 4790 mm | 19M | 1373.08 cm <sup>3</sup>  | 4790 mm  | Structural Foundation | 10.78 kg |
| 19 mm | 5010 mm | 19M | 1434.42 cm <sup>3</sup>  | 5010 mm  | Structural Foundation | 11.26 kg |
| 19 mm | 5220 mm | 19M | 1495.76 cm <sup>3</sup>  | 5220 mm  | Structural Foundation | 11.74 kg |
| 19 mm | 5430 mm | 19M | 1557.10 cm <sup>3</sup>  | 5430 mm  | Structural Foundation | 12.22 kg |
| 19 mm | 5650 mm | 19M | 1618.44 cm <sup>3</sup>  | 5650 mm  | Structural Foundation | 12.70 kg |
| 19 mm | 5860 mm | 19M | 1679.78 cm <sup>3</sup>  | 5860 mm  | Structural Foundation | 13.19 kg |
| 19 mm | 6080 mm | 19M | 1741.12 cm <sup>3</sup>  | 6080 mm  | Structural Foundation | 13.67 kg |
| 19 mm | 6100 mm | 19M | 1747.91 cm <sup>3</sup>  | 6100 mm  | Structural Foundation | 13.72 kg |
| 19 mm | 5750 mm | 19M | 1647.06 cm <sup>3</sup>  | 5750 mm  | Structural Foundation | 12.93 kg |
| 19 mm | 5400 mm | 19M | 1546.20 cm <sup>3</sup>  | 5400 mm  | Structural Foundation | 12.14 kg |
| 19 mm | 5040 mm | 19M | 1445.34 cm <sup>3</sup>  | 5040 mm  | Structural Foundation | 11.35 kg |
| 19 mm | 4690 mm | 19M | 1344.49 cm <sup>3</sup>  | 4690 mm  | Structural Foundation | 10.55 kg |
| 19 mm | 6150 mm | 19M | 3524.21 cm <sup>3</sup>  | 12300 mm | Structural Foundation | 27.67 kg |
| 19 mm | 6080 mm | 19M | 1743.28 cm <sup>3</sup>  | 6080 mm  | Structural Foundation | 13.68 kg |
| 19 mm | 5730 mm | 19M | 1642.43 cm <sup>3</sup>  | 5730 mm  | Structural Foundation | 12.89 kg |
| 19 mm | 5380 mm | 19M | 1541.57 cm <sup>3</sup>  | 5380 mm  | Structural Foundation | 12.10 kg |
| 19 mm | 5030 mm | 19M | 1440.71 cm <sup>3</sup>  | 5030 mm  | Structural Foundation | 11.31 kg |
| 19 mm | 4680 mm | 19M | 1339.86 cm <sup>3</sup>  | 4680 mm  | Structural Foundation | 10.52 kg |
| 19 mm | 3510 mm | 19M | 1005.04 cm <sup>3</sup>  | 3510 mm  | Structural Foundation | 7.89 kg  |
| 19 mm | 3720 mm | 19M | 1066.38 cm <sup>3</sup>  | 3720 mm  | Structural Foundation | 8.37 kg  |
| 19 mm | 3940 mm | 19M | 1127.72 cm <sup>3</sup>  | 3940 mm  | Structural Foundation | 8.85 kg  |
| 19 mm | 4150 mm | 19M | 1189.06 cm <sup>3</sup>  | 4150 mm  | Structural Foundation | 9.33 kg  |
| 19 mm | 4360 mm | 19M | 1250.40 cm <sup>3</sup>  | 4360 mm  | Structural Foundation | 9.82 kg  |
| 19 mm | 4580 mm | 19M | 1311.74 cm <sup>3</sup>  | 4580 mm  | Structural Foundation | 10.30 kg |
| 19 mm | 4790 mm | 19M | 1373.08 cm <sup>3</sup>  | 4790 mm  | Structural Foundation | 10.78 kg |
| 19 mm | 5010 mm | 19M | 1434.42 cm <sup>3</sup>  | 5010 mm  | Structural Foundation | 11.26 kg |
| 19 mm | 5220 mm | 19M | 1495.76 cm <sup>3</sup>  | 5220 mm  | Structural Foundation | 11.74 kg |
| 19 mm | 5430 mm | 19M | 1557.10 cm <sup>3</sup>  | 5430 mm  | Structural Foundation | 12.22 kg |
| 19 mm | 5650 mm | 19M | 1618.44 cm <sup>3</sup>  | 5650 mm  | Structural Foundation | 12.70 kg |
| 19 mm | 5860 mm | 19M | 1679.78 cm <sup>3</sup>  | 5860 mm  | Structural Foundation | 13.19 kg |
| 19 mm | 6080 mm | 19M | 1741.12 cm <sup>3</sup>  | 6080 mm  | Structural Foundation | 13.67 kg |
| 19 mm | 6150 mm | 19M | 3524.21 cm <sup>3</sup>  | 12300 mm | Structural Foundation | 27.67 kg |
| 19 mm | 5860 mm | 19M | 11753.10 cm <sup>3</sup> | 41020 mm | Structural Foundation | 92.26 kg |
| 19 mm | 3510 mm | 19M | 1005.04 cm <sup>3</sup>  | 3510 mm  | Structural Foundation | 7.89 kg  |
| 19 mm | 3720 mm | 19M | 1066.38 cm <sup>3</sup>  | 3720 mm  | Structural Foundation | 8.37 kg  |
| 19 mm | 3940 mm | 19M | 1127.72 cm <sup>3</sup>  | 3940 mm  | Structural Foundation | 8.85 kg  |
| 19 mm | 4150 mm | 19M | 1189.06 cm <sup>3</sup>  | 4150 mm  | Structural Foundation | 9.33 kg  |
| 19 mm | 4360 mm | 19M | 1250.40 cm <sup>3</sup>  | 4360 mm  | Structural Foundation | 9.82 kg  |
| 19 mm | 4580 mm | 19M | 1311.74 cm <sup>3</sup>  | 4580 mm  | Structural Foundation | 10.30 kg |
| 19 mm | 4790 mm | 19M | 1373.08 cm <sup>3</sup>  | 4790 mm  | Structural Foundation | 10.78 kg |
| 19 mm | 5010 mm | 19M | 1434.42 cm <sup>3</sup>  | 5010 mm  | Structural Foundation | 11.26 kg |
| 19 mm | 5220 mm | 19M | 1495.76 cm <sup>3</sup>  | 5220 mm  | Structural Foundation | 11.74 kg |
| 19 mm | 5430 mm | 19M | 1557.10 cm <sup>3</sup>  | 5430 mm  | Structural Foundation | 12.22 kg |
| 19 mm | 5650 mm | 19M | 1618.44 cm <sup>3</sup>  | 5650 mm  | Structural Foundation | 12.70 kg |
| 19 mm | 5860 mm | 19M | 1679.78 cm <sup>3</sup>  | 5860 mm  | Structural Foundation | 13.19 kg |



1.3. PC4

| <Tulangan Pondasi PC 4> |            |                       |                  |                          |      |            |
|-------------------------|------------|-----------------------|------------------|--------------------------|------|------------|
| A                       | B          | C                     | D                | E                        | F    | G          |
| Bar Diameter            | Bar Length | Host Category         | Total Bar Length | Reinforcement Volu       | Type | Berat Besi |
| 19 mm                   | 3860 mm    | Structural Foundation | 77200 mm         | 22119.43 cm <sup>3</sup> | 19M  | 173.64 kg  |
| 19 mm                   | 3720 mm    | Structural Foundation | 74400 mm         | 21317.17 cm <sup>3</sup> | 19M  | 167.34 kg  |
| 19 mm                   | 3840 mm    | Structural Foundation | 72960 mm         | 20904.58 cm <sup>3</sup> | 19M  | 164.10 kg  |
| 19 mm                   | 3710 mm    | Structural Foundation | 70490 mm         | 20196.87 cm <sup>3</sup> | 19M  | 158.55 kg  |
| 19 mm                   | 6220 mm    | Structural Foundation | 12440 mm         | 3564.32 cm <sup>3</sup>  | 19M  | 27.98 kg   |
| 19 mm                   | 6270 mm    | Structural Foundation | 12540 mm         | 3592.97 cm <sup>3</sup>  | 19M  | 28.20 kg   |
| 13 mm                   | 6480 mm    | Structural Foundation | 12960 mm         | 1641.73 cm <sup>3</sup>  | 13M  | 12.89 kg   |
| 13 mm                   | 6530 mm    | Structural Foundation | 13060 mm         | 1654.40 cm <sup>3</sup>  | 13M  | 12.99 kg   |
| 19 mm                   | 3860 mm    | Structural Foundation | 77200 mm         | 22119.43 cm <sup>3</sup> | 19M  | 173.64 kg  |
| 19 mm                   | 3720 mm    | Structural Foundation | 74400 mm         | 21317.17 cm <sup>3</sup> | 19M  | 167.34 kg  |
| 19 mm                   | 3840 mm    | Structural Foundation | 72960 mm         | 20904.58 cm <sup>3</sup> | 19M  | 164.10 kg  |
| 19 mm                   | 3710 mm    | Structural Foundation | 70490 mm         | 20196.87 cm <sup>3</sup> | 19M  | 158.55 kg  |
| 19 mm                   | 6220 mm    | Structural Foundation | 12440 mm         | 3564.32 cm <sup>3</sup>  | 19M  | 27.98 kg   |
| 19 mm                   | 6270 mm    | Structural Foundation | 12540 mm         | 3592.97 cm <sup>3</sup>  | 19M  | 28.20 kg   |
| 13 mm                   | 6480 mm    | Structural Foundation | 12960 mm         | 1641.73 cm <sup>3</sup>  | 13M  | 12.89 kg   |
| 13 mm                   | 6530 mm    | Structural Foundation | 13060 mm         | 1654.40 cm <sup>3</sup>  | 13M  | 12.99 kg   |
| 19 mm                   | 3860 mm    | Structural Foundation | 77200 mm         | 22119.43 cm <sup>3</sup> | 19M  | 173.64 kg  |
| 19 mm                   | 3720 mm    | Structural Foundation | 74400 mm         | 21317.17 cm <sup>3</sup> | 19M  | 167.34 kg  |
| 19 mm                   | 3840 mm    | Structural Foundation | 72960 mm         | 20904.58 cm <sup>3</sup> | 19M  | 164.10 kg  |
| 19 mm                   | 3710 mm    | Structural Foundation | 70490 mm         | 20196.87 cm <sup>3</sup> | 19M  | 158.55 kg  |
| 19 mm                   | 6220 mm    | Structural Foundation | 12440 mm         | 3564.32 cm <sup>3</sup>  | 19M  | 27.98 kg   |
| 19 mm                   | 6270 mm    | Structural Foundation | 12540 mm         | 3592.97 cm <sup>3</sup>  | 19M  | 28.20 kg   |
| 13 mm                   | 6480 mm    | Structural Foundation | 12960 mm         | 1641.73 cm <sup>3</sup>  | 13M  | 12.89 kg   |
| 13 mm                   | 6530 mm    | Structural Foundation | 13060 mm         | 1654.40 cm <sup>3</sup>  | 13M  | 12.99 kg   |
| 19 mm                   | 3860 mm    | Structural Foundation | 77200 mm         | 22119.43 cm <sup>3</sup> | 19M  | 173.64 kg  |
| 19 mm                   | 3720 mm    | Structural Foundation | 74400 mm         | 21317.17 cm <sup>3</sup> | 19M  | 167.34 kg  |
| 19 mm                   | 3840 mm    | Structural Foundation | 72960 mm         | 20904.58 cm <sup>3</sup> | 19M  | 164.10 kg  |
| 19 mm                   | 3710 mm    | Structural Foundation | 70490 mm         | 20196.87 cm <sup>3</sup> | 19M  | 158.55 kg  |
| 19 mm                   | 6220 mm    | Structural Foundation | 12440 mm         | 3564.32 cm <sup>3</sup>  | 19M  | 27.98 kg   |
| 19 mm                   | 6270 mm    | Structural Foundation | 12540 mm         | 3592.97 cm <sup>3</sup>  | 19M  | 28.20 kg   |
| 13 mm                   | 6480 mm    | Structural Foundation | 12960 mm         | 1641.73 cm <sup>3</sup>  | 13M  | 12.89 kg   |
| 13 mm                   | 6530 mm    | Structural Foundation | 13060 mm         | 1654.40 cm <sup>3</sup>  | 13M  | 12.99 kg   |
| 19 mm                   | 3860 mm    | Structural Foundation | 77200 mm         | 22119.43 cm <sup>3</sup> | 19M  | 173.64 kg  |
| 19 mm                   | 3720 mm    | Structural Foundation | 74400 mm         | 21317.17 cm <sup>3</sup> | 19M  | 167.34 kg  |
| 19 mm                   | 3840 mm    | Structural Foundation | 72960 mm         | 20904.58 cm <sup>3</sup> | 19M  | 164.10 kg  |
| 19 mm                   | 3710 mm    | Structural Foundation | 70490 mm         | 20196.87 cm <sup>3</sup> | 19M  | 158.55 kg  |
| 19 mm                   | 6220 mm    | Structural Foundation | 12440 mm         | 3564.32 cm <sup>3</sup>  | 19M  | 27.98 kg   |
| 19 mm                   | 6270 mm    | Structural Foundation | 12540 mm         | 3592.97 cm <sup>3</sup>  | 19M  | 28.20 kg   |
| 13 mm                   | 6480 mm    | Structural Foundation | 12960 mm         | 1641.73 cm <sup>3</sup>  | 13M  | 12.89 kg   |
| 13 mm                   | 6530 mm    | Structural Foundation | 13060 mm         | 1654.40 cm <sup>3</sup>  | 13M  | 12.99 kg   |
| 19 mm                   | 3860 mm    | Structural Foundation | 77200 mm         | 22119.43 cm <sup>3</sup> | 19M  | 173.64 kg  |
| 19 mm                   | 3720 mm    | Structural Foundation | 74400 mm         | 21317.17 cm <sup>3</sup> | 19M  | 167.34 kg  |
| 19 mm                   | 3840 mm    | Structural Foundation | 72960 mm         | 20904.58 cm <sup>3</sup> | 19M  | 164.10 kg  |
| 19 mm                   | 3710 mm    | Structural Foundation | 70490 mm         | 20196.87 cm <sup>3</sup> | 19M  | 158.55 kg  |

|       |         |                       |          |                          |     |           |
|-------|---------|-----------------------|----------|--------------------------|-----|-----------|
| 19 mm | 6220 mm | Structural Foundation | 12440 mm | 3564.32 cm <sup>2</sup>  | 19M | 27.98 kg  |
| 19 mm | 6270 mm | Structural Foundation | 12540 mm | 3592.97 cm <sup>2</sup>  | 19M | 28.20 kg  |
| 13 mm | 6480 mm | Structural Foundation | 12960 mm | 1641.73 cm <sup>2</sup>  | 13M | 12.89 kg  |
| 13 mm | 6530 mm | Structural Foundation | 13060 mm | 1654.40 cm <sup>2</sup>  | 13M | 12.99 kg  |
| 19 mm | 3860 mm | Structural Foundation | 77200 mm | 22119.43 cm <sup>2</sup> | 19M | 173.64 kg |
| 19 mm | 3720 mm | Structural Foundation | 74400 mm | 21317.17 cm <sup>2</sup> | 19M | 167.34 kg |
| 19 mm | 3840 mm | Structural Foundation | 72960 mm | 20904.58 cm <sup>2</sup> | 19M | 164.10 kg |
| 19 mm | 3710 mm | Structural Foundation | 70490 mm | 20196.87 cm <sup>2</sup> | 19M | 158.55 kg |
| 19 mm | 6220 mm | Structural Foundation | 12440 mm | 3564.32 cm <sup>2</sup>  | 19M | 27.98 kg  |
| 19 mm | 6270 mm | Structural Foundation | 12540 mm | 3592.97 cm <sup>2</sup>  | 19M | 28.20 kg  |
| 13 mm | 6480 mm | Structural Foundation | 12960 mm | 1641.73 cm <sup>2</sup>  | 13M | 12.89 kg  |
| 13 mm | 6530 mm | Structural Foundation | 13060 mm | 1654.40 cm <sup>2</sup>  | 13M | 12.99 kg  |
| 19 mm | 3860 mm | Structural Foundation | 77200 mm | 22119.43 cm <sup>2</sup> | 19M | 173.64 kg |
| 19 mm | 3720 mm | Structural Foundation | 74400 mm | 21317.17 cm <sup>2</sup> | 19M | 167.34 kg |
| 19 mm | 3840 mm | Structural Foundation | 72960 mm | 20904.58 cm <sup>2</sup> | 19M | 164.10 kg |
| 19 mm | 3710 mm | Structural Foundation | 70490 mm | 20196.87 cm <sup>2</sup> | 19M | 158.55 kg |
| 19 mm | 6220 mm | Structural Foundation | 12440 mm | 3564.32 cm <sup>2</sup>  | 19M | 27.98 kg  |
| 19 mm | 6270 mm | Structural Foundation | 12540 mm | 3592.97 cm <sup>2</sup>  | 19M | 28.20 kg  |
| 13 mm | 6480 mm | Structural Foundation | 12960 mm | 1641.73 cm <sup>2</sup>  | 13M | 12.89 kg  |
| 13 mm | 6530 mm | Structural Foundation | 13060 mm | 1654.40 cm <sup>2</sup>  | 13M | 12.99 kg  |
| 19 mm | 3860 mm | Structural Foundation | 77200 mm | 22119.43 cm <sup>2</sup> | 19M | 173.64 kg |
| 19 mm | 3720 mm | Structural Foundation | 74400 mm | 21317.17 cm <sup>2</sup> | 19M | 167.34 kg |
| 19 mm | 3840 mm | Structural Foundation | 72960 mm | 20904.58 cm <sup>2</sup> | 19M | 164.10 kg |
| 19 mm | 3710 mm | Structural Foundation | 70490 mm | 20196.87 cm <sup>2</sup> | 19M | 158.55 kg |
| 19 mm | 6220 mm | Structural Foundation | 12440 mm | 3564.32 cm <sup>2</sup>  | 19M | 27.98 kg  |
| 19 mm | 6270 mm | Structural Foundation | 12540 mm | 3592.97 cm <sup>2</sup>  | 19M | 28.20 kg  |
| 13 mm | 6480 mm | Structural Foundation | 12960 mm | 1641.73 cm <sup>2</sup>  | 13M | 12.89 kg  |
| 13 mm | 6530 mm | Structural Foundation | 13060 mm | 1654.40 cm <sup>2</sup>  | 13M | 12.99 kg  |

#### 1.4. PC5

| <Tulangan Pondasi PC 5> |            |                      |                          |                  |      |            |
|-------------------------|------------|----------------------|--------------------------|------------------|------|------------|
| A                       | B          | C                    | D                        | E                | F    | G          |
| Bar Diameter            | Bar Length | Host Category        | Reinforcement Volu       | Total Bar Length | Type | Berat Besi |
| 19 mm                   | 4600 mm    | Structural Foundatio | 39539.91 cm <sup>2</sup> | 138000 mm        | 19M  | 310.39 kg  |
| 19 mm                   | 4540 mm    | Structural Foundatio | 39024.17 cm <sup>2</sup> | 136200 mm        | 19M  | 306.34 kg  |
| 19 mm                   | 4600 mm    | Structural Foundatio | 39539.91 cm <sup>2</sup> | 138000 mm        | 19M  | 310.39 kg  |
| 19 mm                   | 4540 mm    | Structural Foundatio | 39024.17 cm <sup>2</sup> | 136200 mm        | 19M  | 306.34 kg  |
| 19 mm                   | 8340 mm    | Structural Foundatio | 7168.76 cm <sup>2</sup>  | 25020 mm         | 19M  | 56.27 kg   |
| 19 mm                   | 8340 mm    | Structural Foundatio | 7168.76 cm <sup>2</sup>  | 25020 mm         | 19M  | 56.27 kg   |
| 19 mm                   | 4600 mm    | Structural Foundatio | 39539.91 cm <sup>2</sup> | 138000 mm        | 19M  | 310.39 kg  |
| 19 mm                   | 4540 mm    | Structural Foundatio | 39024.17 cm <sup>2</sup> | 136200 mm        | 19M  | 306.34 kg  |
| 19 mm                   | 4600 mm    | Structural Foundatio | 39539.91 cm <sup>2</sup> | 138000 mm        | 19M  | 310.39 kg  |
| 19 mm                   | 4540 mm    | Structural Foundatio | 39024.17 cm <sup>2</sup> | 136200 mm        | 19M  | 306.34 kg  |
| 19 mm                   | 8340 mm    | Structural Foundatio | 7168.76 cm <sup>2</sup>  | 25020 mm         | 19M  | 56.27 kg   |
| 19 mm                   | 8340 mm    | Structural Foundatio | 7168.76 cm <sup>2</sup>  | 25020 mm         | 19M  | 56.27 kg   |
| 19 mm                   | 8340 mm    | Structural Foundatio | 7168.76 cm <sup>2</sup>  | 25020 mm         | 19M  | 56.27 kg   |
| 19 mm                   | 8340 mm    | Structural Foundatio | 7168.76 cm <sup>2</sup>  | 25020 mm         | 19M  | 56.27 kg   |
| 19 mm                   | 4600 mm    | Structural Foundatio | 39539.91 cm <sup>2</sup> | 138000 mm        | 19M  | 310.39 kg  |
| 19 mm                   | 4540 mm    | Structural Foundatio | 39024.17 cm <sup>2</sup> | 136200 mm        | 19M  | 306.34 kg  |
| 19 mm                   | 4600 mm    | Structural Foundatio | 39539.91 cm <sup>2</sup> | 138000 mm        | 19M  | 310.39 kg  |
| 19 mm                   | 4540 mm    | Structural Foundatio | 39024.17 cm <sup>2</sup> | 136200 mm        | 19M  | 306.34 kg  |
| 19 mm                   | 4600 mm    | Structural Foundatio | 39539.91 cm <sup>2</sup> | 138000 mm        | 19M  | 310.39 kg  |
| 19 mm                   | 4540 mm    | Structural Foundatio | 39024.17 cm <sup>2</sup> | 136200 mm        | 19M  | 306.34 kg  |
| 19 mm                   | 8340 mm    | Structural Foundatio | 7168.76 cm <sup>2</sup>  | 25020 mm         | 19M  | 56.27 kg   |
| 19 mm                   | 8340 mm    | Structural Foundatio | 7168.76 cm <sup>2</sup>  | 25020 mm         | 19M  | 56.27 kg   |

1.5. PC6

| <Tulangan Pondasi PC 6> |            |                      |                          |                  |      |            |
|-------------------------|------------|----------------------|--------------------------|------------------|------|------------|
| A                       | B          | C                    | D                        | E                | F    | G          |
| Bar Diameter            | Bar Length | Host Category        | Reinforcement Volu       | Total Bar Length | Type | Berat Besi |
| 25 mm                   | 5730 mm    | Structural Foundatio | 66778.98 cm <sup>3</sup> | 131790 mm        | 25M  | 524.21 kg  |
| 25 mm                   | 5600 mm    | Structural Foundatio | 65263.92 cm <sup>3</sup> | 128800 mm        | 25M  | 512.32 kg  |
| 25 mm                   | 4430 mm    | Structural Foundatio | 85299.14 cm <sup>3</sup> | 168340 mm        | 25M  | 669.60 kg  |
| 13 mm                   | 9450 mm    | Structural Foundatio | 3591.29 cm <sup>3</sup>  | 28350 mm         | 13M  | 28.19 kg   |
| 13 mm                   | 9500 mm    | Structural Foundatio | 3610.29 cm <sup>3</sup>  | 28500 mm         | 13M  | 28.34 kg   |
| 25 mm                   | 5730 mm    | Structural Foundatio | 66778.98 cm <sup>3</sup> | 131790 mm        | 25M  | 524.21 kg  |
| 25 mm                   | 5600 mm    | Structural Foundatio | 65263.92 cm <sup>3</sup> | 128800 mm        | 25M  | 512.32 kg  |
| 25 mm                   | 4430 mm    | Structural Foundatio | 85299.14 cm <sup>3</sup> | 168340 mm        | 25M  | 669.60 kg  |
| 13 mm                   | 9450 mm    | Structural Foundatio | 3591.29 cm <sup>3</sup>  | 28350 mm         | 13M  | 28.19 kg   |
| 13 mm                   | 9500 mm    | Structural Foundatio | 3610.29 cm <sup>3</sup>  | 28500 mm         | 13M  | 28.34 kg   |
| 25 mm                   | 5730 mm    | Structural Foundatio | 66778.98 cm <sup>3</sup> | 131790 mm        | 25M  | 524.21 kg  |
| 25 mm                   | 5600 mm    | Structural Foundatio | 65263.92 cm <sup>3</sup> | 128800 mm        | 25M  | 512.32 kg  |
| 25 mm                   | 4430 mm    | Structural Foundatio | 85299.14 cm <sup>3</sup> | 168340 mm        | 25M  | 669.60 kg  |
| 13 mm                   | 9450 mm    | Structural Foundatio | 3591.29 cm <sup>3</sup>  | 28350 mm         | 13M  | 28.19 kg   |
| 13 mm                   | 9500 mm    | Structural Foundatio | 3610.29 cm <sup>3</sup>  | 28500 mm         | 13M  | 28.34 kg   |
| 25 mm                   | 5730 mm    | Structural Foundatio | 66778.98 cm <sup>3</sup> | 131790 mm        | 25M  | 524.21 kg  |
| 25 mm                   | 5600 mm    | Structural Foundatio | 65263.92 cm <sup>3</sup> | 128800 mm        | 25M  | 512.32 kg  |
| 25 mm                   | 4430 mm    | Structural Foundatio | 85299.14 cm <sup>3</sup> | 168340 mm        | 25M  | 669.60 kg  |
| 13 mm                   | 9450 mm    | Structural Foundatio | 3591.29 cm <sup>3</sup>  | 28350 mm         | 13M  | 28.19 kg   |
| 13 mm                   | 9500 mm    | Structural Foundatio | 3610.29 cm <sup>3</sup>  | 28500 mm         | 13M  | 28.34 kg   |
| 25 mm                   | 5730 mm    | Structural Foundatio | 66778.98 cm <sup>3</sup> | 131790 mm        | 25M  | 524.21 kg  |
| 25 mm                   | 5600 mm    | Structural Foundatio | 65263.92 cm <sup>3</sup> | 128800 mm        | 25M  | 512.32 kg  |
| 25 mm                   | 4430 mm    | Structural Foundatio | 85299.14 cm <sup>3</sup> | 168340 mm        | 25M  | 669.60 kg  |
| 13 mm                   | 9450 mm    | Structural Foundatio | 3591.29 cm <sup>3</sup>  | 28350 mm         | 13M  | 28.19 kg   |
| 13 mm                   | 9500 mm    | Structural Foundatio | 3610.29 cm <sup>3</sup>  | 28500 mm         | 13M  | 28.34 kg   |
| 25 mm                   | 5730 mm    | Structural Foundatio | 66778.98 cm <sup>3</sup> | 131790 mm        | 25M  | 524.21 kg  |
| 25 mm                   | 5600 mm    | Structural Foundatio | 65263.92 cm <sup>3</sup> | 128800 mm        | 25M  | 512.32 kg  |
| 25 mm                   | 4430 mm    | Structural Foundatio | 85299.14 cm <sup>3</sup> | 168340 mm        | 25M  | 669.60 kg  |
| 13 mm                   | 9450 mm    | Structural Foundatio | 3591.29 cm <sup>3</sup>  | 28350 mm         | 13M  | 28.19 kg   |
| 13 mm                   | 9500 mm    | Structural Foundatio | 3610.29 cm <sup>3</sup>  | 28500 mm         | 13M  | 28.34 kg   |
| 25 mm                   | 5730 mm    | Structural Foundatio | 66778.98 cm <sup>3</sup> | 131790 mm        | 25M  | 524.21 kg  |
| 25 mm                   | 5600 mm    | Structural Foundatio | 65263.92 cm <sup>3</sup> | 128800 mm        | 25M  | 512.32 kg  |
| 25 mm                   | 4430 mm    | Structural Foundatio | 85299.14 cm <sup>3</sup> | 168340 mm        | 25M  | 669.60 kg  |
| 13 mm                   | 9450 mm    | Structural Foundatio | 3591.29 cm <sup>3</sup>  | 28350 mm         | 13M  | 28.19 kg   |
| 13 mm                   | 9500 mm    | Structural Foundatio | 3610.29 cm <sup>3</sup>  | 28500 mm         | 13M  | 28.34 kg   |

1.6. PC4A

| <Tulangan Pondasi PC 4A> |            |                      |                          |                  |      |            |
|--------------------------|------------|----------------------|--------------------------|------------------|------|------------|
| A                        | B          | C                    | D                        | E                | F    | G          |
| Bar Diameter             | Bar Length | Host Category        | Reinforcement Volu       | Total Bar Length | Type | Berat Besi |
| 19 mm                    | 4060 mm    | Structural Foundatio | 27918.62 cm <sup>3</sup> | 97440 mm         | 19M  | 219.16 kg  |
| 19 mm                    | 4130 mm    | Structural Foundatio | 18933.31 cm <sup>3</sup> | 66080 mm         | 19M  | 148.63 kg  |
| 19 mm                    | 3680 mm    | Structural Foundatio | 20033.56 cm <sup>3</sup> | 69920 mm         | 19M  | 157.26 kg  |
| 19 mm                    | 3620 mm    | Structural Foundatio | 19706.92 cm <sup>3</sup> | 68780 mm         | 19M  | 154.70 kg  |
| 13 mm                    | 6910 mm    | Structural Foundatio | 1750.67 cm <sup>3</sup>  | 13820 mm         | 13M  | 13.74 kg   |
| 13 mm                    | 6980 mm    | Structural Foundatio | 1768.41 cm <sup>3</sup>  | 13960 mm         | 13M  | 13.88 kg   |



2. Tulangan Tie Beam

2.1. Tulangan Utama Tie Beam TG58

| <Tulangan Utama TG 58> |            |                         |         |                    |            |
|------------------------|------------|-------------------------|---------|--------------------|------------|
| A                      | B          | C                       | D       | E                  | F          |
| Bar Diameter           | Bar Length | Total Bar Length        | Type    | Reinforcement Volu | Berat Besi |
| 22 mm                  | 8030 mm    | 3108.22 cm <sup>2</sup> | 8030 mm | 22M                | 24.40 kg   |
| 22 mm                  | 8030 mm    | 3108.22 cm <sup>2</sup> | 8030 mm | 22M                | 24.40 kg   |
| 22 mm                  | 8030 mm    | 3108.22 cm <sup>2</sup> | 8030 mm | 22M                | 24.40 kg   |
| 22 mm                  | 8030 mm    | 3108.22 cm <sup>2</sup> | 8030 mm | 22M                | 24.40 kg   |
| 22 mm                  | 8030 mm    | 3108.22 cm <sup>2</sup> | 8030 mm | 22M                | 24.40 kg   |
| 22 mm                  | 8030 mm    | 3108.22 cm <sup>2</sup> | 8030 mm | 22M                | 24.40 kg   |
| 22 mm                  | 8030 mm    | 3108.22 cm <sup>2</sup> | 8030 mm | 22M                | 24.40 kg   |
| 22 mm                  | 8030 mm    | 3108.22 cm <sup>2</sup> | 8030 mm | 22M                | 24.40 kg   |
| 22 mm                  | 8030 mm    | 3108.22 cm <sup>2</sup> | 8030 mm | 22M                | 24.40 kg   |
| 22 mm                  | 8030 mm    | 3108.22 cm <sup>2</sup> | 8030 mm | 22M                | 24.40 kg   |
| 22 mm                  | 8030 mm    | 3108.22 cm <sup>2</sup> | 8030 mm | 22M                | 24.40 kg   |
| 22 mm                  | 8030 mm    | 3108.22 cm <sup>2</sup> | 8030 mm | 22M                | 24.40 kg   |
| 22 mm                  | 8030 mm    | 3108.22 cm <sup>2</sup> | 8030 mm | 22M                | 24.40 kg   |
| 22 mm                  | 8030 mm    | 3108.22 cm <sup>2</sup> | 8030 mm | 22M                | 24.40 kg   |
| 22 mm                  | 8030 mm    | 3108.22 cm <sup>2</sup> | 8030 mm | 22M                | 24.40 kg   |
| 22 mm                  | 8030 mm    | 3108.22 cm <sup>2</sup> | 8030 mm | 22M                | 24.40 kg   |
| 22 mm                  | 8030 mm    | 3108.22 cm <sup>2</sup> | 8030 mm | 22M                | 24.40 kg   |
| 13 mm                  | 8030 mm    | 1017.22 cm <sup>2</sup> | 8030 mm | 13M                | 7.99 kg    |
| 13 mm                  | 8030 mm    | 1017.22 cm <sup>2</sup> | 8030 mm | 13M                | 7.99 kg    |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |
| 22 mm                  | 8210 mm    | 3177.89 cm <sup>2</sup> | 8210 mm | 22M                | 24.95 kg   |





|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 22 mm | 8030 mm | 3108.22 cm <sup>2</sup> | 8030 mm | 22M | 24.40 kg |
| 22 mm | 8030 mm | 3108.22 cm <sup>2</sup> | 8030 mm | 22M | 24.40 kg |
| 22 mm | 8030 mm | 3108.22 cm <sup>2</sup> | 8030 mm | 22M | 24.40 kg |
| 22 mm | 8030 mm | 3108.22 cm <sup>2</sup> | 8030 mm | 22M | 24.40 kg |
| 22 mm | 8030 mm | 3108.22 cm <sup>2</sup> | 8030 mm | 22M | 24.40 kg |
| 13 mm | 8030 mm | 1017.22 cm <sup>2</sup> | 8030 mm | 13M | 7.99 kg  |
| 13 mm | 8030 mm | 1017.22 cm <sup>2</sup> | 8030 mm | 13M | 7.99 kg  |
| 22 mm | 8000 mm | 3096.61 cm <sup>2</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>2</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>2</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>2</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>2</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>2</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>2</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>2</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>2</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>2</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>2</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>2</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>2</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>2</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>2</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>2</sup> | 8000 mm | 22M | 24.31 kg |
| 13 mm | 8000 mm | 1013.41 cm <sup>2</sup> | 8000 mm | 13M | 7.96 kg  |
| 13 mm | 8000 mm | 1013.41 cm <sup>2</sup> | 8000 mm | 13M | 7.96 kg  |

2.2. Tulangan Sengkang Tie Beam TG58

| <Tulangan Sengkang TG 58> |            |                  |      |                          |            |
|---------------------------|------------|------------------|------|--------------------------|------------|
| A                         | B          | C                | D    | E                        | F          |
| Bar Diameter              | Bar Length | Total Bar Length | Type | Reinforcement Volu       | Berat Besi |
| 13 mm                     | 2430 mm    | 92340 mm         | 13M  | 11697.34 cm <sup>3</sup> | 91.82 kg   |
| 13 mm                     | 1020 mm    | 38760 mm         | 13M  | 4910.00 cm <sup>3</sup>  | 38.54 kg   |
| 13 mm                     | 1020 mm    | 38760 mm         | 13M  | 4910.00 cm <sup>3</sup>  | 38.54 kg   |
| 13 mm                     | 2430 mm    | 94770 mm         | 13M  | 12005.17 cm <sup>3</sup> | 94.24 kg   |
| 13 mm                     | 1020 mm    | 39780 mm         | 13M  | 5039.21 cm <sup>3</sup>  | 39.56 kg   |
| 13 mm                     | 1020 mm    | 39780 mm         | 13M  | 5039.21 cm <sup>3</sup>  | 39.56 kg   |
| 13 mm                     | 2430 mm    | 92340 mm         | 13M  | 11697.34 cm <sup>3</sup> | 91.82 kg   |
| 13 mm                     | 1020 mm    | 38760 mm         | 13M  | 4910.00 cm <sup>3</sup>  | 38.54 kg   |
| 13 mm                     | 1020 mm    | 38760 mm         | 13M  | 4910.00 cm <sup>3</sup>  | 38.54 kg   |
| 13 mm                     | 2430 mm    | 99630 mm         | 13M  | 12620.82 cm <sup>3</sup> | 99.07 kg   |
| 13 mm                     | 1020 mm    | 41820 mm         | 13M  | 5297.63 cm <sup>3</sup>  | 41.59 kg   |
| 13 mm                     | 1020 mm    | 41820 mm         | 13M  | 5297.63 cm <sup>3</sup>  | 41.59 kg   |
| 13 mm                     | 2430 mm    | 77760 mm         | 13M  | 9850.39 cm <sup>3</sup>  | 77.33 kg   |
| 13 mm                     | 1020 mm    | 32640 mm         | 13M  | 4134.73 cm <sup>3</sup>  | 32.46 kg   |
| 13 mm                     | 1020 mm    | 32640 mm         | 13M  | 4134.73 cm <sup>3</sup>  | 32.46 kg   |
| 13 mm                     | 2430 mm    | 92340 mm         | 13M  | 11697.34 cm <sup>3</sup> | 91.82 kg   |
| 13 mm                     | 1020 mm    | 38760 mm         | 13M  | 4910.00 cm <sup>3</sup>  | 38.54 kg   |
| 13 mm                     | 1020 mm    | 38760 mm         | 13M  | 4910.00 cm <sup>3</sup>  | 38.54 kg   |
| 13 mm                     | 2430 mm    | 99630 mm         | 13M  | 12620.82 cm <sup>3</sup> | 99.07 kg   |
| 13 mm                     | 1020 mm    | 41820 mm         | 13M  | 5297.63 cm <sup>3</sup>  | 41.59 kg   |
| 13 mm                     | 1020 mm    | 41820 mm         | 13M  | 5297.63 cm <sup>3</sup>  | 41.59 kg   |
| 13 mm                     | 2430 mm    | 99630 mm         | 13M  | 12620.82 cm <sup>3</sup> | 99.07 kg   |
| 13 mm                     | 1020 mm    | 41820 mm         | 13M  | 5297.63 cm <sup>3</sup>  | 41.59 kg   |
| 13 mm                     | 1020 mm    | 41820 mm         | 13M  | 5297.63 cm <sup>3</sup>  | 41.59 kg   |
| 13 mm                     | 2430 mm    | 94770 mm         | 13M  | 12005.17 cm <sup>3</sup> | 94.24 kg   |
| 13 mm                     | 1020 mm    | 39780 mm         | 13M  | 5039.21 cm <sup>3</sup>  | 39.56 kg   |
| 13 mm                     | 1020 mm    | 39780 mm         | 13M  | 5039.21 cm <sup>3</sup>  | 39.56 kg   |
| 13 mm                     | 2430 mm    | 94770 mm         | 13M  | 12005.17 cm <sup>3</sup> | 94.24 kg   |
| 13 mm                     | 1020 mm    | 39780 mm         | 13M  | 5039.21 cm <sup>3</sup>  | 39.56 kg   |
| 13 mm                     | 1020 mm    | 39780 mm         | 13M  | 5039.21 cm <sup>3</sup>  | 39.56 kg   |
| 13 mm                     | 2430 mm    | 87480 mm         | 13M  | 11081.69 cm <sup>3</sup> | 86.99 kg   |
| 13 mm                     | 1020 mm    | 36720 mm         | 13M  | 4651.57 cm <sup>3</sup>  | 36.51 kg   |
| 13 mm                     | 1020 mm    | 36720 mm         | 13M  | 4651.57 cm <sup>3</sup>  | 36.51 kg   |















2.4. Tulangan Sengkang *Tie Beam* TG47

| <Tulangan Sengkang TG 47> |            |                    |                          |                  |      |            |
|---------------------------|------------|--------------------|--------------------------|------------------|------|------------|
| A                         | B          | C                  | D                        | E                | F    | G          |
| Bar Diameter              | Bar Length | Host Category      | Reinforcement Volu       | Total Bar Length | Type | Berat Besi |
| 13 mm                     | 2130 mm    | Structural Framing | 13760.91 cm <sup>3</sup> | 108630 mm        | 13M  | 108.02 kg  |
| 13 mm                     | 970 mm     | Structural Framing | 6266.70 cm <sup>3</sup>  | 49470 mm         | 13M  | 49.19 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 13221.26 cm <sup>3</sup> | 104370 mm        | 13M  | 103.79 kg  |
| 13 mm                     | 970 mm     | Structural Framing | 5898.08 cm <sup>3</sup>  | 46560 mm         | 13M  | 46.30 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 12681.62 cm <sup>3</sup> | 100110 mm        | 13M  | 99.55 kg   |
| 13 mm                     | 970 mm     | Structural Framing | 5775.20 cm <sup>3</sup>  | 45590 mm         | 13M  | 45.34 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 14030.73 cm <sup>3</sup> | 110760 mm        | 13M  | 110.14 kg  |
| 13 mm                     | 970 mm     | Structural Framing | 6389.58 cm <sup>3</sup>  | 50440 mm         | 13M  | 50.16 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 12681.62 cm <sup>3</sup> | 100110 mm        | 13M  | 99.55 kg   |
| 13 mm                     | 970 mm     | Structural Framing | 5775.20 cm <sup>3</sup>  | 45590 mm         | 13M  | 45.34 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 6475.72 cm <sup>3</sup>  | 51120 mm         | 13M  | 50.83 kg   |
| 13 mm                     | 970 mm     | Structural Framing | 2949.04 cm <sup>3</sup>  | 23280 mm         | 13M  | 23.15 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 7015.37 cm <sup>3</sup>  | 55380 mm         | 13M  | 55.07 kg   |
| 13 mm                     | 970 mm     | Structural Framing | 3071.91 cm <sup>3</sup>  | 24250 mm         | 13M  | 24.11 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 10523.05 cm <sup>3</sup> | 83070 mm         | 13M  | 82.61 kg   |
| 13 mm                     | 970 mm     | Structural Framing | 4792.19 cm <sup>3</sup>  | 37830 mm         | 13M  | 37.62 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 11602.33 cm <sup>3</sup> | 91590 mm         | 13M  | 91.08 kg   |
| 13 mm                     | 970 mm     | Structural Framing | 5283.69 cm <sup>3</sup>  | 41710 mm         | 13M  | 41.48 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 9713.58 cm <sup>3</sup>  | 76680 mm         | 13M  | 76.25 kg   |
| 13 mm                     | 970 mm     | Structural Framing | 4423.56 cm <sup>3</sup>  | 34920 mm         | 13M  | 34.72 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 9983.40 cm <sup>3</sup>  | 78810 mm         | 13M  | 78.37 kg   |
| 13 mm                     | 970 mm     | Structural Framing | 4546.43 cm <sup>3</sup>  | 35890 mm         | 13M  | 35.69 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 5126.61 cm <sup>3</sup>  | 40470 mm         | 13M  | 40.24 kg   |
| 13 mm                     | 970 mm     | Structural Framing | 2334.65 cm <sup>3</sup>  | 18430 mm         | 13M  | 18.33 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 8364.47 cm <sup>3</sup>  | 66030 mm         | 13M  | 65.66 kg   |
| 13 mm                     | 970 mm     | Structural Framing | 3809.17 cm <sup>3</sup>  | 30070 mm         | 13M  | 29.90 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 11602.33 cm <sup>3</sup> | 91590 mm         | 13M  | 91.08 kg   |
| 13 mm                     | 970 mm     | Structural Framing | 5160.82 cm <sup>3</sup>  | 40740 mm         | 13M  | 40.51 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 11602.33 cm <sup>3</sup> | 91590 mm         | 13M  | 91.08 kg   |
| 13 mm                     | 970 mm     | Structural Framing | 5160.82 cm <sup>3</sup>  | 40740 mm         | 13M  | 40.51 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 12411.80 cm <sup>3</sup> | 97980 mm         | 13M  | 97.43 kg   |
| 13 mm                     | 970 mm     | Structural Framing | 5652.32 cm <sup>3</sup>  | 44620 mm         | 13M  | 44.37 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 11062.69 cm <sup>3</sup> | 87330 mm         | 13M  | 86.84 kg   |
| 13 mm                     | 970 mm     | Structural Framing | 5037.94 cm <sup>3</sup>  | 39770 mm         | 13M  | 39.55 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 13491.09 cm <sup>3</sup> | 106500 mm        | 13M  | 105.91 kg  |
| 13 mm                     | 970 mm     | Structural Framing | 6143.83 cm <sup>3</sup>  | 48500 mm         | 13M  | 48.23 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 9983.40 cm <sup>3</sup>  | 78810 mm         | 13M  | 78.37 kg   |
| 13 mm                     | 970 mm     | Structural Framing | 4546.43 cm <sup>3</sup>  | 35890 mm         | 13M  | 35.69 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 13221.26 cm <sup>3</sup> | 104370 mm        | 13M  | 103.79 kg  |
| 13 mm                     | 970 mm     | Structural Framing | 6020.95 cm <sup>3</sup>  | 47530 mm         | 13M  | 47.26 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 9983.40 cm <sup>3</sup>  | 78810 mm         | 13M  | 78.37 kg   |
| 13 mm                     | 970 mm     | Structural Framing | 4546.43 cm <sup>3</sup>  | 35890 mm         | 13M  | 35.69 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 13221.26 cm <sup>3</sup> | 104370 mm        | 13M  | 103.79 kg  |
| 13 mm                     | 970 mm     | Structural Framing | 6020.95 cm <sup>3</sup>  | 47530 mm         | 13M  | 47.26 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 12411.80 cm <sup>3</sup> | 97980 mm         | 13M  | 97.43 kg   |
| 13 mm                     | 970 mm     | Structural Framing | 5652.32 cm <sup>3</sup>  | 44620 mm         | 13M  | 44.37 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 4047.33 cm <sup>3</sup>  | 31950 mm         | 13M  | 31.77 kg   |
| 13 mm                     | 970 mm     | Structural Framing | 1843.15 cm <sup>3</sup>  | 14550 mm         | 13M  | 14.47 kg   |
| 13 mm                     | 2130 mm    | Structural Framing | 11602.33 cm <sup>3</sup> | 91590 mm         | 13M  | 91.08 kg   |
| 13 mm                     | 970 mm     | Structural Framing | 5283.69 cm <sup>3</sup>  | 41710 mm         | 13M  | 41.48 kg   |
| 13 mm                     | 2180 mm    | Structural Framing | 17967.85 cm <sup>3</sup> | 141840 mm        | 13M  | 141.05 kg  |



|       |         |                    |                         |         |     |          |
|-------|---------|--------------------|-------------------------|---------|-----|----------|
| 22 mm | 4000 mm | Structural Framing | 1548.30 cm <sup>2</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | Structural Framing | 1548.30 cm <sup>2</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | Structural Framing | 1548.30 cm <sup>2</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | Structural Framing | 1548.30 cm <sup>2</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | Structural Framing | 1548.30 cm <sup>2</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | Structural Framing | 1548.30 cm <sup>2</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | Structural Framing | 1548.30 cm <sup>2</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | Structural Framing | 1548.30 cm <sup>2</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | Structural Framing | 1548.30 cm <sup>2</sup> | 4000 mm | 22M | 12.15 kg |
| 13 mm | 4000 mm | Structural Framing | 506.71 cm <sup>2</sup>  | 4000 mm | 13M | 3.98 kg  |
| 13 mm | 4000 mm | Structural Framing | 506.71 cm <sup>2</sup>  | 4000 mm | 13M | 3.98 kg  |
| 22 mm | 4010 mm | Structural Framing | 1552.17 cm <sup>2</sup> | 4010 mm | 22M | 12.18 kg |
| 22 mm | 4010 mm | Structural Framing | 1552.17 cm <sup>2</sup> | 4010 mm | 22M | 12.18 kg |
| 22 mm | 4010 mm | Structural Framing | 1552.17 cm <sup>2</sup> | 4010 mm | 22M | 12.18 kg |
| 22 mm | 4010 mm | Structural Framing | 1552.17 cm <sup>2</sup> | 4010 mm | 22M | 12.18 kg |
| 22 mm | 4010 mm | Structural Framing | 1552.17 cm <sup>2</sup> | 4010 mm | 22M | 12.18 kg |
| 22 mm | 4010 mm | Structural Framing | 1552.17 cm <sup>2</sup> | 4010 mm | 22M | 12.18 kg |
| 22 mm | 4010 mm | Structural Framing | 1552.17 cm <sup>2</sup> | 4010 mm | 22M | 12.18 kg |
| 22 mm | 4010 mm | Structural Framing | 1552.17 cm <sup>2</sup> | 4010 mm | 22M | 12.18 kg |
| 22 mm | 4010 mm | Structural Framing | 1552.17 cm <sup>2</sup> | 4010 mm | 22M | 12.18 kg |
| 13 mm | 4010 mm | Structural Framing | 507.97 cm <sup>2</sup>  | 4010 mm | 13M | 3.99 kg  |
| 13 mm | 4010 mm | Structural Framing | 507.97 cm <sup>2</sup>  | 4010 mm | 13M | 3.99 kg  |
| 22 mm | 1130 mm | Structural Framing | 437.40 cm <sup>2</sup>  | 1130 mm | 22M | 3.43 kg  |
| 22 mm | 1130 mm | Structural Framing | 437.40 cm <sup>2</sup>  | 1130 mm | 22M | 3.43 kg  |
| 22 mm | 1130 mm | Structural Framing | 437.40 cm <sup>2</sup>  | 1130 mm | 22M | 3.43 kg  |
| 22 mm | 1130 mm | Structural Framing | 437.40 cm <sup>2</sup>  | 1130 mm | 22M | 3.43 kg  |
| 22 mm | 1130 mm | Structural Framing | 437.40 cm <sup>2</sup>  | 1130 mm | 22M | 3.43 kg  |
| 22 mm | 1130 mm | Structural Framing | 437.40 cm <sup>2</sup>  | 1130 mm | 22M | 3.43 kg  |
| 22 mm | 1130 mm | Structural Framing | 437.40 cm <sup>2</sup>  | 1130 mm | 22M | 3.43 kg  |
| 22 mm | 1130 mm | Structural Framing | 437.40 cm <sup>2</sup>  | 1130 mm | 22M | 3.43 kg  |
| 22 mm | 1130 mm | Structural Framing | 437.40 cm <sup>2</sup>  | 1130 mm | 22M | 3.43 kg  |
| 22 mm | 1130 mm | Structural Framing | 437.40 cm <sup>2</sup>  | 1130 mm | 22M | 3.43 kg  |
| 22 mm | 1130 mm | Structural Framing | 437.40 cm <sup>2</sup>  | 1130 mm | 22M | 3.43 kg  |
| 13 mm | 1130 mm | Structural Framing | 143.14 cm <sup>2</sup>  | 1130 mm | 13M | 1.12 kg  |
| 13 mm | 1130 mm | Structural Framing | 143.14 cm <sup>2</sup>  | 1130 mm | 13M | 1.12 kg  |

## 2.6. Tulangan Sengkang Tie Beam TG46

| <Tulangan Sengkang TG 46> |            |                    |                         |                  |      |            |
|---------------------------|------------|--------------------|-------------------------|------------------|------|------------|
| A                         | B          | C                  | D                       | E                | F    | G          |
| Bar Diameter              | Bar Length | Host Category      | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 13 mm                     | 1830 mm    | Structural Framing | 2318.19 cm <sup>2</sup> | 18300 mm         | 13M  | 18.20 kg   |
| 13 mm                     | 1570 mm    | Structural Framing | 1988.83 cm <sup>2</sup> | 15700 mm         | 13M  | 15.61 kg   |
| 13 mm                     | 1830 mm    | Structural Framing | 4636.37 cm <sup>2</sup> | 36600 mm         | 13M  | 36.40 kg   |
| 13 mm                     | 1570 mm    | Structural Framing | 3977.65 cm <sup>2</sup> | 31400 mm         | 13M  | 31.22 kg   |
| 13 mm                     | 1830 mm    | Structural Framing | 4404.55 cm <sup>2</sup> | 34770 mm         | 13M  | 34.58 kg   |
| 13 mm                     | 1570 mm    | Structural Framing | 3778.77 cm <sup>2</sup> | 29830 mm         | 13M  | 29.66 kg   |
| 13 mm                     | 1830 mm    | Structural Framing | 3709.10 cm <sup>2</sup> | 29280 mm         | 13M  | 29.12 kg   |
| 13 mm                     | 1570 mm    | Structural Framing | 3182.12 cm <sup>2</sup> | 25120 mm         | 13M  | 24.98 kg   |
| 13 mm                     | 1830 mm    | Structural Framing | 4404.55 cm <sup>2</sup> | 34770 mm         | 13M  | 34.58 kg   |
| 13 mm                     | 1570 mm    | Structural Framing | 3778.77 cm <sup>2</sup> | 29830 mm         | 13M  | 29.66 kg   |
| 13 mm                     | 1830 mm    | Structural Framing | 4404.55 cm <sup>2</sup> | 34770 mm         | 13M  | 34.58 kg   |
| 13 mm                     | 1570 mm    | Structural Framing | 3778.77 cm <sup>2</sup> | 29830 mm         | 13M  | 29.66 kg   |
| 13 mm                     | 1830 mm    | Structural Framing | 1854.55 cm <sup>2</sup> | 14640 mm         | 13M  | 14.56 kg   |
| 13 mm                     | 1570 mm    | Structural Framing | 1591.06 cm <sup>2</sup> | 12560 mm         | 13M  | 12.49 kg   |
| 13 mm                     | 1830 mm    | Structural Framing | 4636.37 cm <sup>2</sup> | 36600 mm         | 13M  | 36.40 kg   |
| 13 mm                     | 1570 mm    | Structural Framing | 3977.65 cm <sup>2</sup> | 31400 mm         | 13M  | 31.22 kg   |









|       |         |                    |                         |         |     |          |
|-------|---------|--------------------|-------------------------|---------|-----|----------|
| 19 mm | 3000 mm | Structural Framing | 859.56 cm <sup>2</sup>  | 3000 mm | 19M | 6.75 kg  |
| 19 mm | 3000 mm | Structural Framing | 859.56 cm <sup>2</sup>  | 3000 mm | 19M | 6.75 kg  |
| 19 mm | 3000 mm | Structural Framing | 859.56 cm <sup>2</sup>  | 3000 mm | 19M | 6.75 kg  |
| 19 mm | 3000 mm | Structural Framing | 859.56 cm <sup>2</sup>  | 3000 mm | 19M | 6.75 kg  |
| 19 mm | 3000 mm | Structural Framing | 859.56 cm <sup>2</sup>  | 3000 mm | 19M | 6.75 kg  |
| 19 mm | 3000 mm | Structural Framing | 859.56 cm <sup>2</sup>  | 3000 mm | 19M | 6.75 kg  |
| 19 mm | 3000 mm | Structural Framing | 859.56 cm <sup>2</sup>  | 3000 mm | 19M | 6.75 kg  |
| 19 mm | 3000 mm | Structural Framing | 859.56 cm <sup>2</sup>  | 3000 mm | 19M | 6.75 kg  |
| 13 mm | 3000 mm | Structural Framing | 380.03 cm <sup>2</sup>  | 3000 mm | 13M | 2.98 kg  |
| 13 mm | 3000 mm | Structural Framing | 380.03 cm <sup>2</sup>  | 3000 mm | 13M | 2.98 kg  |
| 19 mm | 2000 mm | Structural Framing | 573.04 cm <sup>2</sup>  | 2000 mm | 19M | 4.50 kg  |
| 19 mm | 2000 mm | Structural Framing | 573.04 cm <sup>2</sup>  | 2000 mm | 19M | 4.50 kg  |
| 19 mm | 2000 mm | Structural Framing | 573.04 cm <sup>2</sup>  | 2000 mm | 19M | 4.50 kg  |
| 19 mm | 2000 mm | Structural Framing | 573.04 cm <sup>2</sup>  | 2000 mm | 19M | 4.50 kg  |
| 19 mm | 2000 mm | Structural Framing | 573.04 cm <sup>2</sup>  | 2000 mm | 19M | 4.50 kg  |
| 19 mm | 2000 mm | Structural Framing | 573.04 cm <sup>2</sup>  | 2000 mm | 19M | 4.50 kg  |
| 19 mm | 2000 mm | Structural Framing | 573.04 cm <sup>2</sup>  | 2000 mm | 19M | 4.50 kg  |
| 19 mm | 2000 mm | Structural Framing | 573.04 cm <sup>2</sup>  | 2000 mm | 19M | 4.50 kg  |
| 19 mm | 2000 mm | Structural Framing | 573.04 cm <sup>2</sup>  | 2000 mm | 19M | 4.50 kg  |
| 13 mm | 2000 mm | Structural Framing | 253.35 cm <sup>2</sup>  | 2000 mm | 13M | 1.99 kg  |
| 13 mm | 2000 mm | Structural Framing | 253.35 cm <sup>2</sup>  | 2000 mm | 13M | 1.99 kg  |
| 19 mm | 2180 mm | Structural Framing | 624.62 cm <sup>2</sup>  | 2180 mm | 19M | 4.90 kg  |
| 19 mm | 2180 mm | Structural Framing | 624.62 cm <sup>2</sup>  | 2180 mm | 19M | 4.90 kg  |
| 19 mm | 2180 mm | Structural Framing | 624.62 cm <sup>2</sup>  | 2180 mm | 19M | 4.90 kg  |
| 19 mm | 2180 mm | Structural Framing | 624.62 cm <sup>2</sup>  | 2180 mm | 19M | 4.90 kg  |
| 19 mm | 2180 mm | Structural Framing | 624.62 cm <sup>2</sup>  | 2180 mm | 19M | 4.90 kg  |
| 19 mm | 2180 mm | Structural Framing | 624.62 cm <sup>2</sup>  | 2180 mm | 19M | 4.90 kg  |
| 19 mm | 2180 mm | Structural Framing | 624.62 cm <sup>2</sup>  | 2180 mm | 19M | 4.90 kg  |
| 13 mm | 2180 mm | Structural Framing | 276.16 cm <sup>2</sup>  | 2180 mm | 13M | 2.17 kg  |
| 13 mm | 2180 mm | Structural Framing | 276.16 cm <sup>2</sup>  | 2180 mm | 13M | 2.17 kg  |
| 19 mm | 6720 mm | Structural Framing | 1925.42 cm <sup>2</sup> | 6720 mm | 19M | 15.11 kg |
| 19 mm | 6350 mm | Structural Framing | 1819.41 cm <sup>2</sup> | 6350 mm | 19M | 14.28 kg |
| 19 mm | 6590 mm | Structural Framing | 1888.17 cm <sup>2</sup> | 6590 mm | 19M | 14.82 kg |
| 19 mm | 6720 mm | Structural Framing | 1925.42 cm <sup>2</sup> | 6720 mm | 19M | 15.11 kg |
| 19 mm | 6350 mm | Structural Framing | 1819.41 cm <sup>2</sup> | 6350 mm | 19M | 14.28 kg |
| 19 mm | 6590 mm | Structural Framing | 1888.17 cm <sup>2</sup> | 6590 mm | 19M | 14.82 kg |
| 19 mm | 6720 mm | Structural Framing | 1925.42 cm <sup>2</sup> | 6720 mm | 19M | 15.11 kg |
| 19 mm | 6350 mm | Structural Framing | 1819.41 cm <sup>2</sup> | 6350 mm | 19M | 14.28 kg |
| 13 mm | 6700 mm | Structural Framing | 848.74 cm <sup>2</sup>  | 6700 mm | 13M | 6.66 kg  |
| 13 mm | 6330 mm | Structural Framing | 801.86 cm <sup>2</sup>  | 6330 mm | 13M | 6.29 kg  |

## 2.8. Tulangan Sengkang Tie Beam TB36

| <Tulangan Sengkang TB 36> |            |                    |                         |                  |      |            |
|---------------------------|------------|--------------------|-------------------------|------------------|------|------------|
| A                         | B          | C                  | D                       | E                | F    | G          |
| Bar Diameter              | Bar Length | Host Category      | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                     | 1640 mm    | Structural Framing | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 4301.13 cm <sup>2</sup> | 60680 mm         | 10M  | 33.76 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 4533.62 cm <sup>2</sup> | 63960 mm         | 10M  | 35.59 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 4998.61 cm <sup>2</sup> | 70520 mm         | 10M  | 39.24 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 1976.20 cm <sup>2</sup> | 27880 mm         | 10M  | 15.51 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 1278.71 cm <sup>2</sup> | 18040 mm         | 10M  | 10.04 kg   |
| 10 mm                     | 1640 mm    | Structural Framing | 1278.71 cm <sup>2</sup> | 18040 mm         | 10M  | 10.04 kg   |
| 10 mm                     | 1660 mm    | Structural Framing | 3405.89 cm <sup>2</sup> | 48050 mm         | 10M  | 26.74 kg   |



|       |         |                    |                         |         |     |         |
|-------|---------|--------------------|-------------------------|---------|-----|---------|
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |
| 19 mm | 4000 mm | Structural Framing | 1146.08 cm <sup>2</sup> | 4000 mm | 19M | 9.00 kg |

2.10. Tulangan Senggang Tie Beam TB24

| <Tulangan Senggang TB 24> |            |                      |                         |                  |      |            |
|---------------------------|------------|----------------------|-------------------------|------------------|------|------------|
| A                         | B          | C                    | D                       | E                | F    | G          |
| Bar Diameter              | Bar Length | Host Category        | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                     | 500 mm     | Structural Foundatio | 35.44 cm <sup>2</sup>   | 500 mm           | 10M  | 0.28 kg    |
| 10 mm                     | 1140 mm    | Structural Framing   | 2989.81 cm <sup>2</sup> | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                     | 1140 mm    | Structural Framing   | 2989.81 cm <sup>2</sup> | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                     | 1140 mm    | Structural Framing   | 2989.81 cm <sup>2</sup> | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                     | 1140 mm    | Structural Framing   | 2989.81 cm <sup>2</sup> | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                     | 1140 mm    | Structural Framing   | 2989.81 cm <sup>2</sup> | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                     | 1140 mm    | Structural Framing   | 1696.92 cm <sup>2</sup> | 23940 mm         | 10M  | 13.32 kg   |
| 10 mm                     | 1140 mm    | Structural Framing   | 2181.75 cm <sup>2</sup> | 30780 mm         | 10M  | 17.13 kg   |
| 10 mm                     | 1140 mm    | Structural Framing   | 2181.75 cm <sup>2</sup> | 30780 mm         | 10M  | 17.13 kg   |
| 10 mm                     | 1140 mm    | Structural Framing   | 2989.81 cm <sup>2</sup> | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                     | 1140 mm    | Structural Framing   | 2989.81 cm <sup>2</sup> | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                     | 1140 mm    | Structural Framing   | 2989.81 cm <sup>2</sup> | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                     | 1140 mm    | Structural Framing   | 2989.81 cm <sup>2</sup> | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                     | 1140 mm    | Structural Framing   | 2989.81 cm <sup>2</sup> | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                     | 1140 mm    | Structural Framing   | 2989.81 cm <sup>2</sup> | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                     | 1140 mm    | Structural Framing   | 2989.81 cm <sup>2</sup> | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                     | 1140 mm    | Structural Framing   | 2989.81 cm <sup>2</sup> | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                     | 1140 mm    | Structural Framing   | 2989.81 cm <sup>2</sup> | 42180 mm         | 10M  | 23.47 kg   |















|       |         |                      |           |     |                          |           |
|-------|---------|----------------------|-----------|-----|--------------------------|-----------|
| 13 mm | 920 mm  | Structural Foundatio | 41400 mm  | 13M | 5244.42 cm <sup>3</sup>  | 41.17 kg  |
| 13 mm | 1420 mm | Structural Foundatio | 63900 mm  | 13M | 8094.65 cm <sup>3</sup>  | 63.54 kg  |
| 13 mm | 1420 mm | Structural Foundatio | 63900 mm  | 13M | 8094.65 cm <sup>3</sup>  | 63.54 kg  |
| 13 mm | 3630 mm | Structural Column    | 163350 mm | 13M | 20692.67 cm <sup>3</sup> | 162.44 kg |
| 13 mm | 920 mm  | Structural Foundatio | 41400 mm  | 13M | 5244.42 cm <sup>3</sup>  | 41.17 kg  |
| 13 mm | 920 mm  | Structural Foundatio | 41400 mm  | 13M | 5244.42 cm <sup>3</sup>  | 41.17 kg  |
| 13 mm | 910 mm  | Structural Foundatio | 40950 mm  | 13M | 5187.42 cm <sup>3</sup>  | 40.72 kg  |
| 13 mm | 920 mm  | Structural Foundatio | 41400 mm  | 13M | 5244.42 cm <sup>3</sup>  | 41.17 kg  |
| 13 mm | 1420 mm | Structural Foundatio | 63900 mm  | 13M | 8094.65 cm <sup>3</sup>  | 63.54 kg  |
| 13 mm | 1420 mm | Structural Foundatio | 63900 mm  | 13M | 8094.65 cm <sup>3</sup>  | 63.54 kg  |

c. Tulangan Utama Kolom K79

| <Tul. Utama K79> |            |                   |                         |                  |      |            |
|------------------|------------|-------------------|-------------------------|------------------|------|------------|
| A                | B          | C                 | D                       | E                | F    | G          |
| Bar Diameter     | Bar Length | Host Category     | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |
| 25 mm            | 4320 mm    | Structural Column | 2188.98 cm <sup>3</sup> | 4320 mm          | 25M  | 17.18 kg   |

















































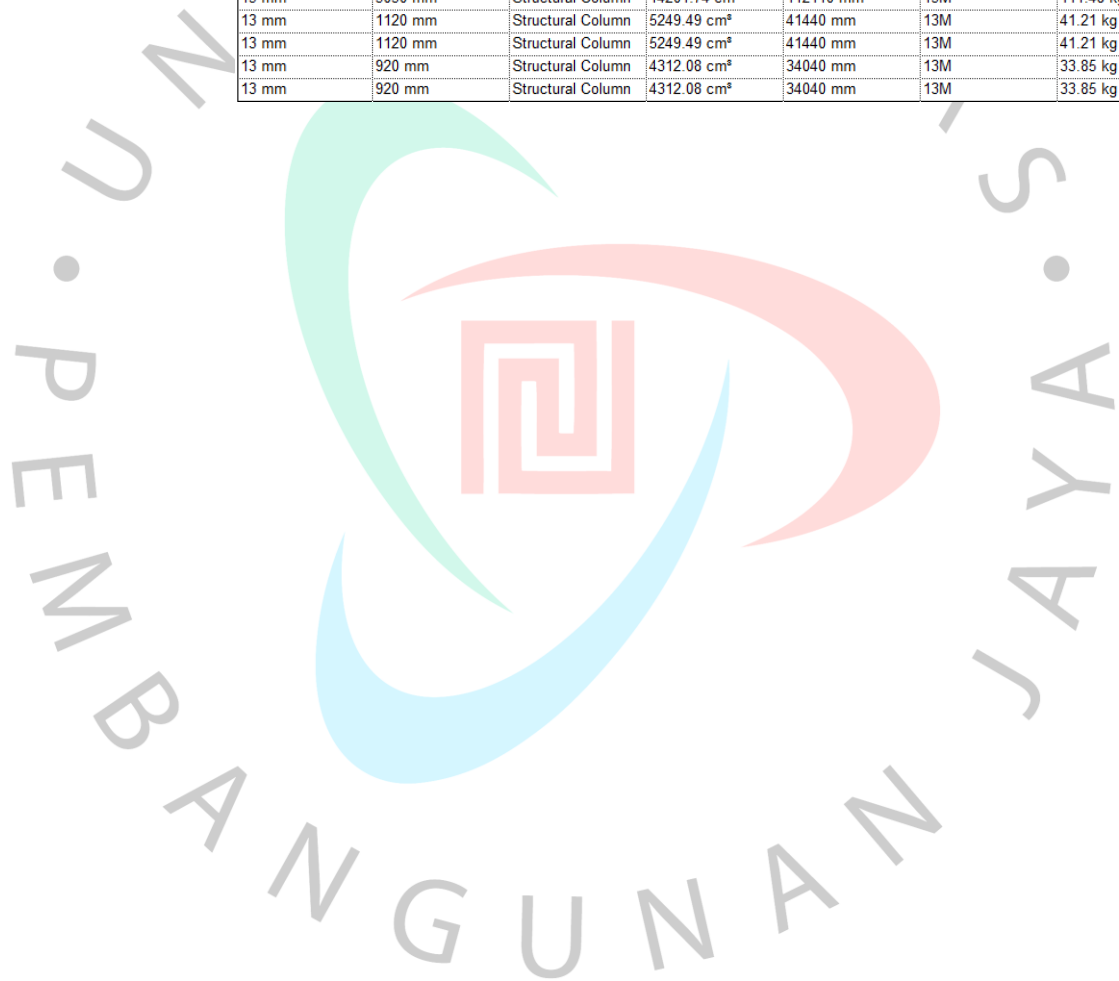








|       |         |                   |                          |           |     |           |
|-------|---------|-------------------|--------------------------|-----------|-----|-----------|
| 13 mm | 3030 mm | Structural Column | 14201.74 cm <sup>2</sup> | 112110 mm | 13M | 111.48 kg |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 3030 mm | Structural Column | 14201.74 cm <sup>2</sup> | 112110 mm | 13M | 111.48 kg |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 3030 mm | Structural Column | 14201.74 cm <sup>2</sup> | 112110 mm | 13M | 111.48 kg |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 3030 mm | Structural Column | 14201.74 cm <sup>2</sup> | 112110 mm | 13M | 111.48 kg |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 3030 mm | Structural Column | 14201.74 cm <sup>2</sup> | 112110 mm | 13M | 111.48 kg |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |



































































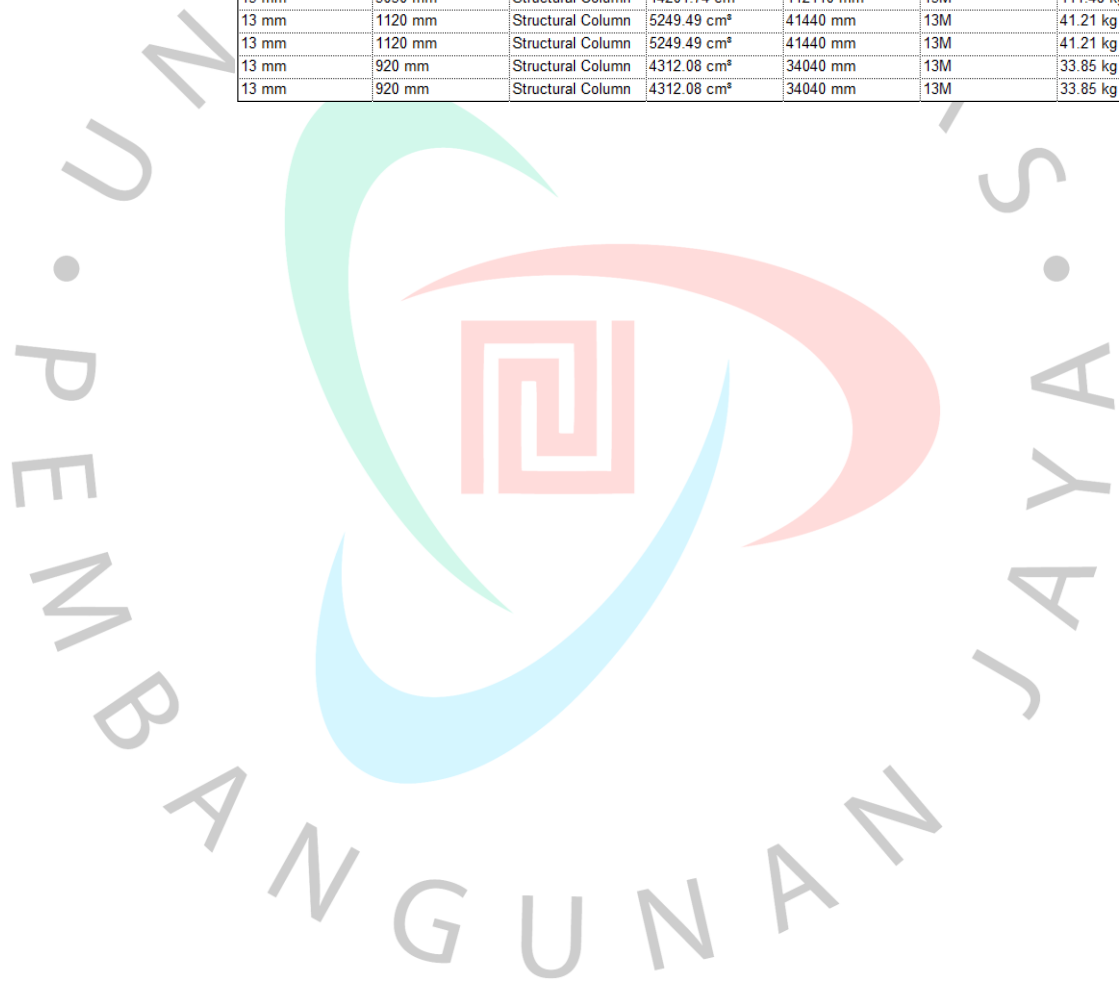








|       |         |                   |                          |           |     |           |
|-------|---------|-------------------|--------------------------|-----------|-----|-----------|
| 13 mm | 3030 mm | Structural Column | 14201.74 cm <sup>2</sup> | 112110 mm | 13M | 111.48 kg |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 3030 mm | Structural Column | 14201.74 cm <sup>2</sup> | 112110 mm | 13M | 111.48 kg |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
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| 13 mm | 3030 mm | Structural Column | 14201.74 cm <sup>2</sup> | 112110 mm | 13M | 111.48 kg |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 3030 mm | Structural Column | 14201.74 cm <sup>2</sup> | 112110 mm | 13M | 111.48 kg |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 3030 mm | Structural Column | 14201.74 cm <sup>2</sup> | 112110 mm | 13M | 111.48 kg |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |





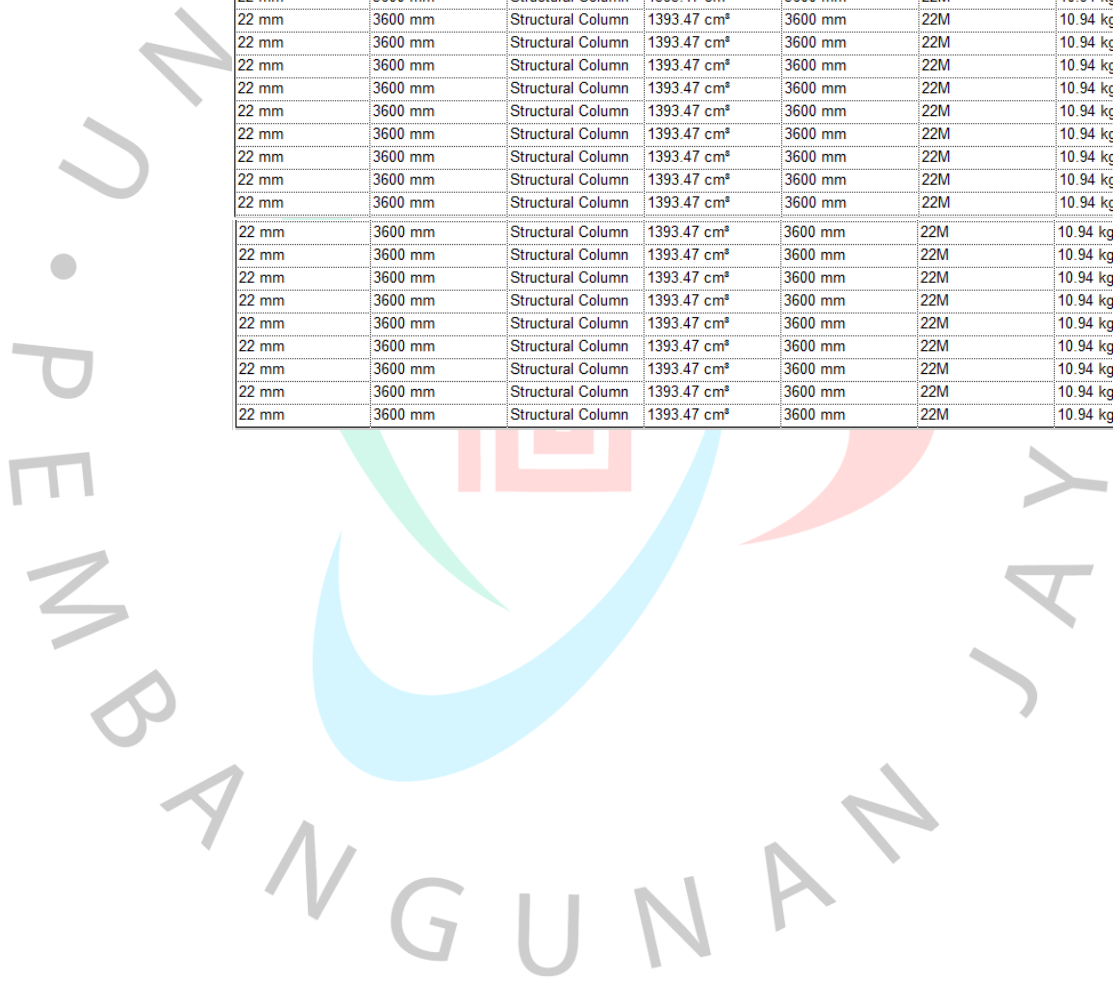








|       |         |                   |                         |         |     |          |
|-------|---------|-------------------|-------------------------|---------|-----|----------|
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |
| 22 mm | 3600 mm | Structural Column | 1393.47 cm <sup>2</sup> | 3600 mm | 22M | 10.94 kg |



















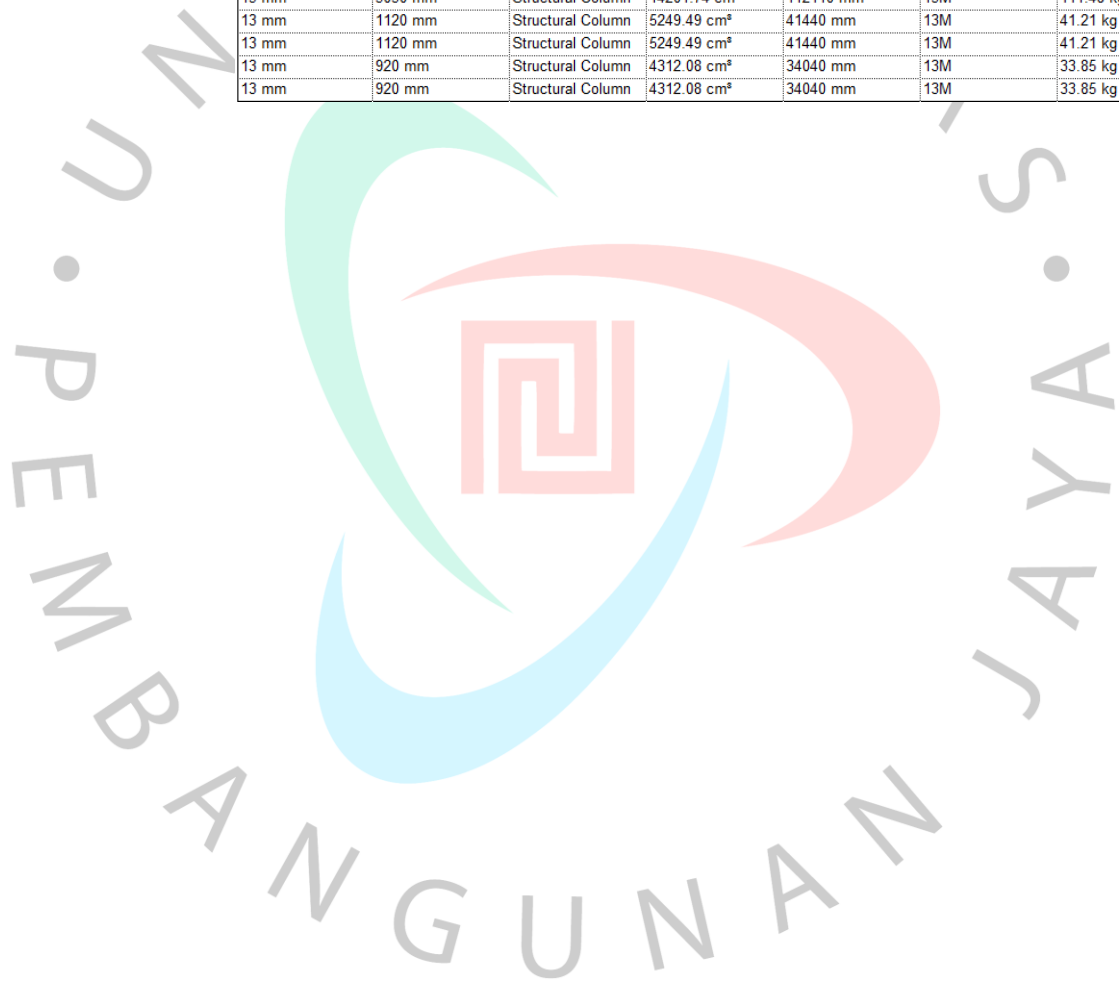








|       |         |                   |                          |           |     |           |
|-------|---------|-------------------|--------------------------|-----------|-----|-----------|
| 13 mm | 3030 mm | Structural Column | 14201.74 cm <sup>2</sup> | 112110 mm | 13M | 111.48 kg |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 3030 mm | Structural Column | 14201.74 cm <sup>2</sup> | 112110 mm | 13M | 111.48 kg |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 3030 mm | Structural Column | 14201.74 cm <sup>2</sup> | 112110 mm | 13M | 111.48 kg |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 3030 mm | Structural Column | 14201.74 cm <sup>2</sup> | 112110 mm | 13M | 111.48 kg |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 3030 mm | Structural Column | 14201.74 cm <sup>2</sup> | 112110 mm | 13M | 111.48 kg |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 1120 mm | Structural Column | 5249.49 cm <sup>2</sup>  | 41440 mm  | 13M | 41.21 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |
| 13 mm | 920 mm  | Structural Column | 4312.08 cm <sup>2</sup>  | 34040 mm  | 13M | 33.85 kg  |















































4. Tulangan Balok

4.1. Lantai 1

a. Tulangan Utama Balok G58

| <Tulangan Utama Balok G58> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 13 mm                      | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 13 mm                      | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 13 mm                      | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 13 mm                      | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                      | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |





b. Tulangan Sengkang Balok G58

| <Tulangan Sengkang Balok G58> |            |                          |                  |      |            |
|-------------------------------|------------|--------------------------|------------------|------|------------|
| A                             | B          | C                        | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu       | Total Bar Length | Type | Berat Besi |
| 13 mm                         | 2430 mm    | 16006.89 cm <sup>3</sup> | 126360 mm        | 13M  | 125.65 kg  |
| 13 mm                         | 1020 mm    | 6718.94 cm <sup>3</sup>  | 53040 mm         | 13M  | 52.74 kg   |
| 13 mm                         | 2430 mm    | 16006.89 cm <sup>3</sup> | 126360 mm        | 13M  | 125.65 kg  |
| 13 mm                         | 1020 mm    | 6718.94 cm <sup>3</sup>  | 53040 mm         | 13M  | 52.74 kg   |
| 13 mm                         | 2430 mm    | 15083.41 cm <sup>3</sup> | 119070 mm        | 13M  | 118.40 kg  |
| 13 mm                         | 1020 mm    | 6718.94 cm <sup>3</sup>  | 53040 mm         | 13M  | 52.74 kg   |
| 13 mm                         | 2430 mm    | 16006.89 cm <sup>3</sup> | 126360 mm        | 13M  | 125.65 kg  |
| 13 mm                         | 1020 mm    | 6718.94 cm <sup>3</sup>  | 53040 mm         | 13M  | 52.74 kg   |
| 13 mm                         | 2430 mm    | 16006.89 cm <sup>3</sup> | 126360 mm        | 13M  | 125.65 kg  |
| 13 mm                         | 1020 mm    | 6718.94 cm <sup>3</sup>  | 53040 mm         | 13M  | 52.74 kg   |
| 13 mm                         | 2430 mm    | 16930.36 cm <sup>3</sup> | 133650 mm        | 13M  | 132.90 kg  |
| 13 mm                         | 1020 mm    | 7106.57 cm <sup>3</sup>  | 56100 mm         | 13M  | 55.79 kg   |
| 13 mm                         | 2430 mm    | 16006.89 cm <sup>3</sup> | 126360 mm        | 13M  | 125.65 kg  |
| 13 mm                         | 1020 mm    | 6718.94 cm <sup>3</sup>  | 53040 mm         | 13M  | 52.74 kg   |
| 13 mm                         | 2430 mm    | 16006.89 cm <sup>3</sup> | 126360 mm        | 13M  | 125.65 kg  |
| 13 mm                         | 1020 mm    | 6718.94 cm <sup>3</sup>  | 53040 mm         | 13M  | 52.74 kg   |
| 13 mm                         | 2430 mm    | 16006.89 cm <sup>3</sup> | 126360 mm        | 13M  | 125.65 kg  |
| 13 mm                         | 1020 mm    | 6718.94 cm <sup>3</sup>  | 53040 mm         | 13M  | 52.74 kg   |
| 13 mm                         | 2430 mm    | 16006.89 cm <sup>3</sup> | 126360 mm        | 13M  | 125.65 kg  |
| 13 mm                         | 1020 mm    | 6718.94 cm <sup>3</sup>  | 53040 mm         | 13M  | 52.74 kg   |
| 13 mm                         | 2430 mm    | 14775.59 cm <sup>3</sup> | 116640 mm        | 13M  | 115.99 kg  |
| 13 mm                         | 1020 mm    | 6718.94 cm <sup>3</sup>  | 53040 mm         | 13M  | 52.74 kg   |













d. Tulangan Senggang Balok G47

| <Tulangan Senggang Balok G47> |            |                          |                  |      |            |
|-------------------------------|------------|--------------------------|------------------|------|------------|
| A                             | B          | C                        | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu       | Total Bar Length | Type | Berat Besi |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15172.09 cm <sup>3</sup> | 119770 mm        | 13M  | 119.10 kg  |
| 13 mm                         | 2030 mm    | 15172.09 cm <sup>3</sup> | 119770 mm        | 13M  | 119.10 kg  |
| 13 mm                         | 2030 mm    | 10800.47 cm <sup>3</sup> | 85260 mm         | 13M  | 84.78 kg   |
| 13 mm                         | 2030 mm    | 10800.47 cm <sup>3</sup> | 85260 mm         | 13M  | 84.78 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 2030 mm    | 11314.78 cm <sup>3</sup> | 89320 mm         | 13M  | 88.82 kg   |
| 13 mm                         | 2030 mm    | 11057.62 cm <sup>3</sup> | 87290 mm         | 13M  | 86.80 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |

e. Tulangan Utama Balok G34





g. Tulangan Utama Balok CG47

| <Tulangan Utama Balok CG47> |            |                         |                  |      |            |
|-----------------------------|------------|-------------------------|------------------|------|------------|
| A                           | B          | C                       | D                | E    | F          |
| Bar Diameter                | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |

h. Tulangan Senggang Balok CG47

| <Tulangan Senggang Balok CG47> |            |                         |                  |      |            |
|--------------------------------|------------|-------------------------|------------------|------|------------|
| A                              | B          | C                       | D                | E    | F          |
| Bar Diameter                   | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 13 mm                          | 2030 mm    | 6943.16 cm <sup>3</sup> | 54810 mm         | 13M  | 54.50 kg   |
| 13 mm                          | 920 mm     | 3030.11 cm <sup>3</sup> | 23920 mm         | 13M  | 23.79 kg   |
| 13 mm                          | 320 mm     | 1053.95 cm <sup>3</sup> | 8320 mm          | 13M  | 8.27 kg    |

i. Tulangan Utama Balok CG46

| <Tulangan Utama Balok CG46> |            |                    |                  |      |            |
|-----------------------------|------------|--------------------|------------------|------|------------|
| A                           | B          | C                  | D                | E    | F          |
| Bar Diameter                | Bar Length | Reinforcement Volu | Total Bar Length | Type | Berat Besi |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm³         | 1660 mm          | 13M  | 1.65 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm³         | 1660 mm          | 13M  | 1.65 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm³         | 1660 mm          | 13M  | 1.65 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm³         | 1660 mm          | 13M  | 1.65 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm³         | 1660 mm          | 13M  | 1.65 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm³         | 1660 mm          | 13M  | 1.65 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm³         | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm³         | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm³         | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm³         | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm³         | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm³         | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm³         | 2180 mm          | 19M  | 4.90 kg    |
| 13 mm                       | 2180 mm    | 276.16 cm³         | 2180 mm          | 13M  | 2.17 kg    |
| 13 mm                       | 2180 mm    | 276.16 cm³         | 2180 mm          | 13M  | 2.17 kg    |

j. Tulangan Senggang Balok CG46

| <Tulangan Senggang Balok CG46> |            |                    |                  |      |            |
|--------------------------------|------------|--------------------|------------------|------|------------|
| A                              | B          | C                  | D                | E    | F          |
| Bar Diameter                   | Bar Length | Reinforcement Volu | Total Bar Length | Type | Berat Besi |
| 10 mm                          | 1840 mm    | 1565.08 cm³        | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 1565.08 cm³        | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 1565.08 cm³        | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 1565.08 cm³        | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 2347.62 cm³        | 33120 mm         | 10M  | 18.43 kg   |







o. Tulangan Utama Balok B45

| <Tulangan Utama Balok B45> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 5870 mm    | 1681.88 cm <sup>3</sup> | 5870 mm          | 19M  | 13.20 kg   |
| 19 mm                      | 5870 mm    | 1681.88 cm <sup>3</sup> | 5870 mm          | 19M  | 13.20 kg   |
| 19 mm                      | 5870 mm    | 1681.88 cm <sup>3</sup> | 5870 mm          | 19M  | 13.20 kg   |
| 19 mm                      | 5870 mm    | 1681.88 cm <sup>3</sup> | 5870 mm          | 19M  | 13.20 kg   |
| 19 mm                      | 5870 mm    | 1681.88 cm <sup>3</sup> | 5870 mm          | 19M  | 13.20 kg   |
| 19 mm                      | 5870 mm    | 1681.88 cm <sup>3</sup> | 5870 mm          | 19M  | 13.20 kg   |
| 19 mm                      | 5870 mm    | 1681.88 cm <sup>3</sup> | 5870 mm          | 19M  | 13.20 kg   |
| 19 mm                      | 5870 mm    | 1681.88 cm <sup>3</sup> | 5870 mm          | 19M  | 13.20 kg   |
| 19 mm                      | 5870 mm    | 1681.88 cm <sup>3</sup> | 5870 mm          | 19M  | 13.20 kg   |
| 19 mm                      | 5870 mm    | 1681.88 cm <sup>3</sup> | 5870 mm          | 19M  | 13.20 kg   |
| 19 mm                      | 5870 mm    | 1681.88 cm <sup>3</sup> | 5870 mm          | 19M  | 13.20 kg   |
| 13 mm                      | 5870 mm    | 743.59 cm <sup>3</sup>  | 5870 mm          | 13M  | 5.84 kg    |
| 13 mm                      | 5870 mm    | 743.59 cm <sup>3</sup>  | 5870 mm          | 13M  | 5.84 kg    |

p. Tulangan Sengkang Balok B45

| <Tulangan Sengkang Balok B45> |            |                         |                  |      |            |
|-------------------------------|------------|-------------------------|------------------|------|------------|
| A                             | B          | C                       | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 1640 mm    | 6509.82 cm <sup>3</sup> | 91840 mm         | 10M  | 51.10 kg   |

q. Tulangan Utama Balok B36

| <Tulangan Utama Balok B36> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 13 mm                      | 7990 mm    | 1012.15 cm <sup>3</sup> | 7990 mm          | 13M  | 7.95 kg    |
| 13 mm                      | 7990 mm    | 1012.15 cm <sup>3</sup> | 7990 mm          | 13M  | 7.95 kg    |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |

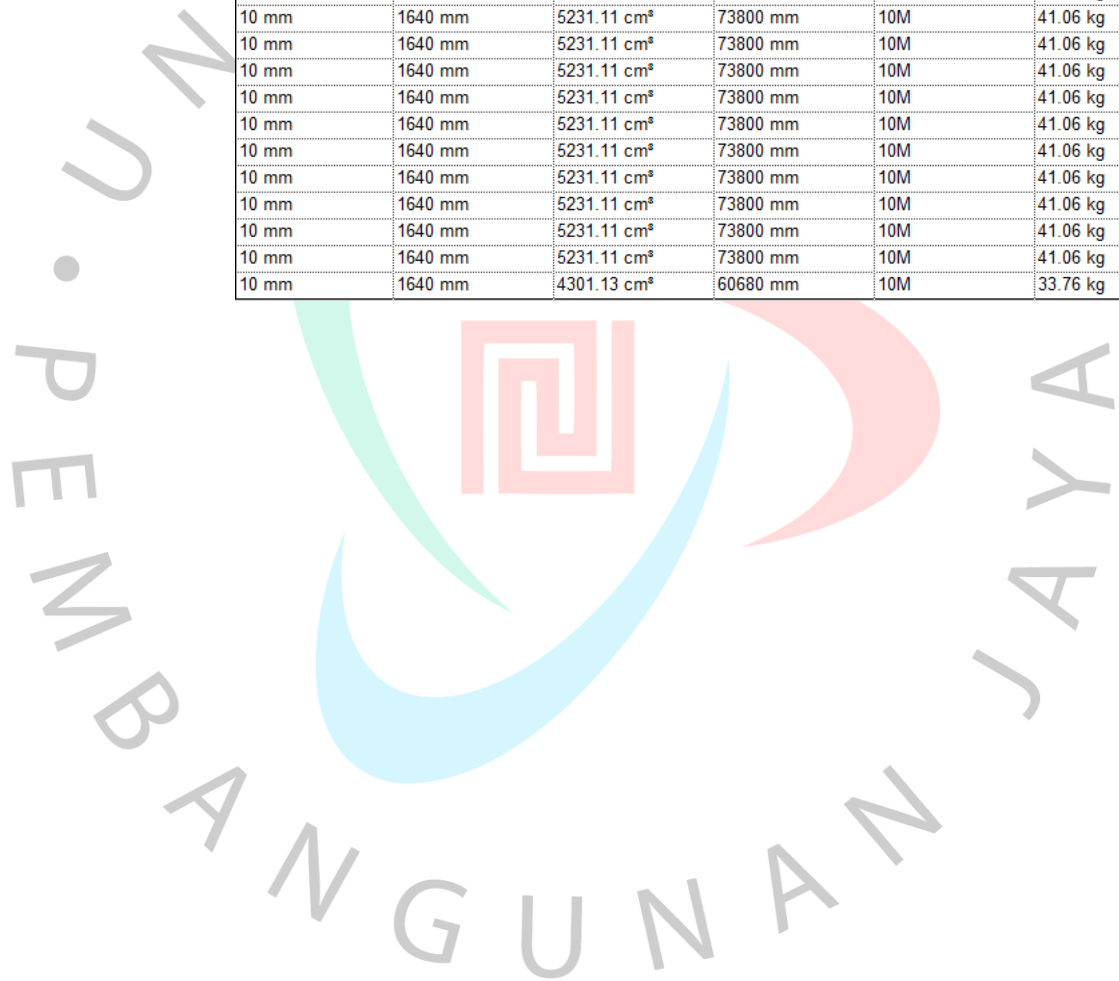




|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 19 mm | 8000 mm | 2292.17 cm <sup>2</sup> | 8000 mm | 19M | 17.99 kg |
| 19 mm | 8000 mm | 2292.17 cm <sup>2</sup> | 8000 mm | 19M | 17.99 kg |
| 19 mm | 8000 mm | 2292.17 cm <sup>2</sup> | 8000 mm | 19M | 17.99 kg |
| 13 mm | 8000 mm | 1013.41 cm <sup>2</sup> | 8000 mm | 13M | 7.96 kg  |
| 13 mm | 8000 mm | 1013.41 cm <sup>2</sup> | 8000 mm | 13M | 7.96 kg  |

r. Tulangan Sengkang Balok B36

| <Tulangan Sengkang Balok B36> |            |                         |                  |      |            |
|-------------------------------|------------|-------------------------|------------------|------|------------|
| A                             | B          | C                       | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 4301.13 cm <sup>2</sup> | 60680 mm         | 10M  | 33.76 kg   |









|       |          |                         |          |     |          |
|-------|----------|-------------------------|----------|-----|----------|
| 13 mm | 5700 mm  | 722.06 cm <sup>2</sup>  | 5700 mm  | 13M | 5.67 kg  |
| 13 mm | 5700 mm  | 722.06 cm <sup>2</sup>  | 5700 mm  | 13M | 5.67 kg  |
| 13 mm | 5700 mm  | 722.06 cm <sup>2</sup>  | 5700 mm  | 13M | 5.67 kg  |
| 13 mm | 5700 mm  | 722.06 cm <sup>2</sup>  | 5700 mm  | 13M | 5.67 kg  |
| 13 mm | 5700 mm  | 722.06 cm <sup>2</sup>  | 5700 mm  | 13M | 5.67 kg  |
| 13 mm | 5700 mm  | 722.06 cm <sup>2</sup>  | 5700 mm  | 13M | 5.67 kg  |
| 13 mm | 5700 mm  | 722.06 cm <sup>2</sup>  | 5700 mm  | 13M | 5.67 kg  |
| 13 mm | 5700 mm  | 722.06 cm <sup>2</sup>  | 5700 mm  | 13M | 5.67 kg  |
| 13 mm | 5700 mm  | 722.06 cm <sup>2</sup>  | 5700 mm  | 13M | 5.67 kg  |
| 13 mm | 5700 mm  | 722.06 cm <sup>2</sup>  | 5700 mm  | 13M | 5.67 kg  |
| 13 mm | 5700 mm  | 722.06 cm <sup>2</sup>  | 5700 mm  | 13M | 5.67 kg  |
| 13 mm | 5700 mm  | 722.06 cm <sup>2</sup>  | 5700 mm  | 13M | 5.67 kg  |
| 13 mm | 5700 mm  | 722.06 cm <sup>2</sup>  | 5700 mm  | 13M | 5.67 kg  |
| 13 mm | 5700 mm  | 722.06 cm <sup>2</sup>  | 5700 mm  | 13M | 5.67 kg  |
| 13 mm | 5700 mm  | 722.06 cm <sup>2</sup>  | 5700 mm  | 13M | 5.67 kg  |
| 13 mm | 1750 mm  | 221.68 cm <sup>2</sup>  | 1750 mm  | 13M | 1.74 kg  |
| 13 mm | 1750 mm  | 221.68 cm <sup>2</sup>  | 1750 mm  | 13M | 1.74 kg  |
| 13 mm | 1750 mm  | 221.68 cm <sup>2</sup>  | 1750 mm  | 13M | 1.74 kg  |
| 13 mm | 1750 mm  | 221.68 cm <sup>2</sup>  | 1750 mm  | 13M | 1.74 kg  |
| 13 mm | 1750 mm  | 221.68 cm <sup>2</sup>  | 1750 mm  | 13M | 1.74 kg  |
| 13 mm | 1750 mm  | 221.68 cm <sup>2</sup>  | 1750 mm  | 13M | 1.74 kg  |
| 13 mm | 27700 mm | 3508.95 cm <sup>2</sup> | 27700 mm | 13M | 27.55 kg |
| 13 mm | 27700 mm | 3508.95 cm <sup>2</sup> | 27700 mm | 13M | 27.55 kg |
| 13 mm | 27700 mm | 3508.95 cm <sup>2</sup> | 27700 mm | 13M | 27.55 kg |
| 13 mm | 27700 mm | 3508.95 cm <sup>2</sup> | 27700 mm | 13M | 27.55 kg |
| 13 mm | 27700 mm | 3508.95 cm <sup>2</sup> | 27700 mm | 13M | 27.55 kg |
| 13 mm | 27700 mm | 3508.95 cm <sup>2</sup> | 27700 mm | 13M | 27.55 kg |
| 13 mm | 16000 mm | 2026.83 cm <sup>2</sup> | 16000 mm | 13M | 15.91 kg |
| 13 mm | 16000 mm | 2026.83 cm <sup>2</sup> | 16000 mm | 13M | 15.91 kg |
| 13 mm | 16000 mm | 2026.83 cm <sup>2</sup> | 16000 mm | 13M | 15.91 kg |
| 13 mm | 16000 mm | 2026.83 cm <sup>2</sup> | 16000 mm | 13M | 15.91 kg |
| 13 mm | 16000 mm | 2026.83 cm <sup>2</sup> | 16000 mm | 13M | 15.91 kg |
| 13 mm | 16000 mm | 2026.83 cm <sup>2</sup> | 16000 mm | 13M | 15.91 kg |
| 19 mm | 15880 mm | 4549.96 cm <sup>2</sup> | 15880 mm | 19M | 35.72 kg |
| 19 mm | 15860 mm | 4544.22 cm <sup>2</sup> | 15860 mm | 19M | 35.67 kg |
| 19 mm | 15710 mm | 4501.25 cm <sup>2</sup> | 15710 mm | 19M | 35.33 kg |
| 19 mm | 15860 mm | 4544.22 cm <sup>2</sup> | 15860 mm | 19M | 35.67 kg |
| 19 mm | 16010 mm | 4587.20 cm <sup>2</sup> | 16010 mm | 19M | 36.01 kg |
| 19 mm | 15860 mm | 4544.22 cm <sup>2</sup> | 15860 mm | 19M | 35.67 kg |

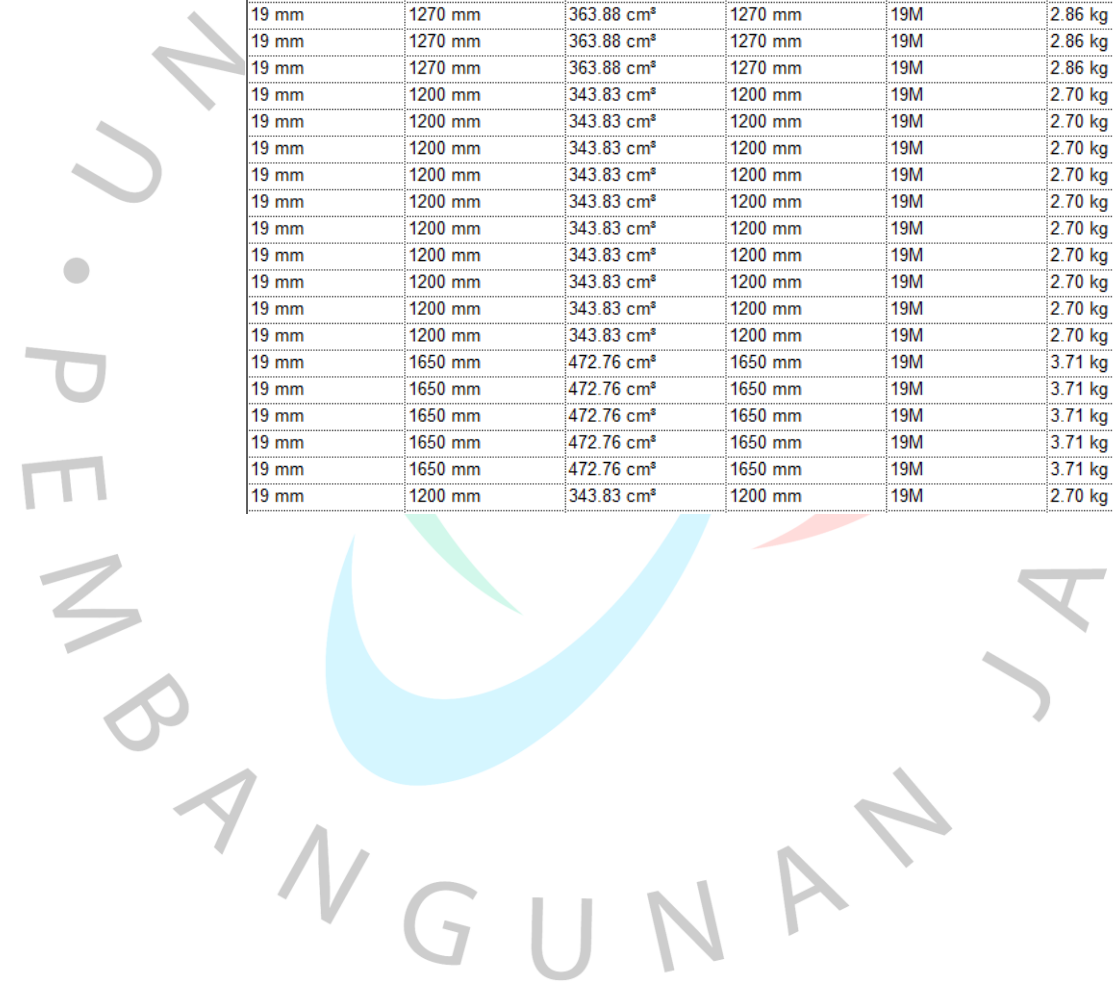
t. Tulangan Sengkang Balok B24

| <Tulangan Sengkang Balok B24> |            |                          |                  |      |            |
|-------------------------------|------------|--------------------------|------------------|------|------------|
| A                             | B          | C                        | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu       | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 1131.28 cm <sup>3</sup>  | 15960 mm         | 10M  | 8.88 kg    |
| 10 mm                         | 1140 mm    | 2989.81 cm <sup>3</sup>  | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                         | 1140 mm    | 2989.81 cm <sup>3</sup>  | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                         | 1140 mm    | 2989.81 cm <sup>3</sup>  | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                         | 1040 mm    | 737.17 cm <sup>3</sup>   | 10400 mm         | 10M  | 5.79 kg    |
| 10 mm                         | 1140 mm    | 14787.44 cm <sup>3</sup> | 208620 mm        | 10M  | 116.08 kg  |
| 10 mm                         | 1110 mm    | 8340.00 cm <sup>3</sup>  | 117660 mm        | 10M  | 65.47 kg   |
| 10 mm                         | 1160 mm    | 8527.13 cm <sup>3</sup>  | 120300 mm        | 10M  | 66.94 kg   |

u. Tulangan Utama Balok CB24

<Tulangan Utama Balok CB24>

| A            | B          | C                      | D                | E    | F          |
|--------------|------------|------------------------|------------------|------|------------|
| Bar Diameter | Bar Length | Reinforcement Volu     | Total Bar Length | Type | Berat Besi |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm        | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm        | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm        | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm        | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm        | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm        | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm        | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm        | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm        | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm        | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm        | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |



|       |         |                        |         |     |         |
|-------|---------|------------------------|---------|-----|---------|
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 1200 mm | 343.83 cm <sup>3</sup> | 1200 mm | 19M | 2.70 kg |
| 19 mm | 880 mm  | 252.14 cm <sup>3</sup> | 880 mm  | 19M | 1.98 kg |
| 19 mm | 840 mm  | 240.68 cm <sup>3</sup> | 840 mm  | 19M | 1.89 kg |
| 19 mm | 860 mm  | 246.41 cm <sup>3</sup> | 860 mm  | 19M | 1.93 kg |
| 19 mm | 880 mm  | 252.14 cm <sup>3</sup> | 880 mm  | 19M | 1.98 kg |
| 19 mm | 840 mm  | 240.68 cm <sup>3</sup> | 840 mm  | 19M | 1.89 kg |
| 19 mm | 980 mm  | 280.79 cm <sup>3</sup> | 980 mm  | 19M | 2.20 kg |
| 19 mm | 910 mm  | 260.73 cm <sup>3</sup> | 910 mm  | 19M | 2.05 kg |
| 19 mm | 890 mm  | 255.00 cm <sup>3</sup> | 890 mm  | 19M | 2.00 kg |
| 19 mm | 980 mm  | 280.79 cm <sup>3</sup> | 980 mm  | 19M | 2.20 kg |
| 19 mm | 910 mm  | 260.73 cm <sup>3</sup> | 910 mm  | 19M | 2.05 kg |

v. Tulangan Sengkang Balok CB24

| <Tulangan Sengkang Balok CB24> |            |                         |                  |      |            |
|--------------------------------|------------|-------------------------|------------------|------|------------|
| A                              | B          | C                       | D                | E    | F          |
| Bar Diameter                   | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1070 mm    | 758.44 cm <sup>3</sup>  | 10700 mm         | 10M  | 5.95 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 1292.89 cm <sup>3</sup> | 18240 mm         | 10M  | 10.15 kg   |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 900 mm     | 699.61 cm <sup>3</sup>  | 9870 mm          | 10M  | 5.49 kg    |
| 10 mm                          | 1160 mm    | 574.15 cm <sup>3</sup>  | 8100 mm          | 10M  | 4.51 kg    |

4.2. Lantai 2

a. Tulangan Utama Balok G58

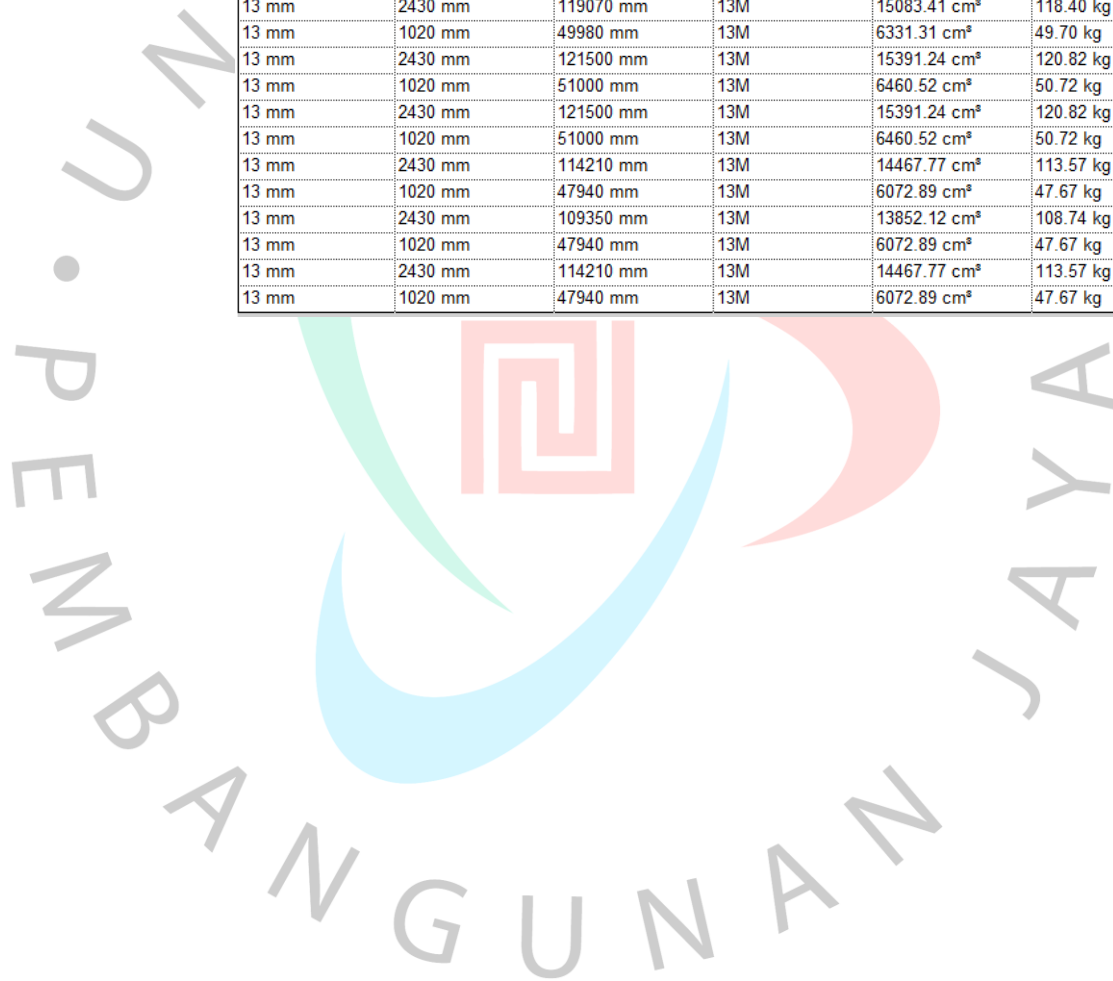
| <Tulangan Utama Balok G58> |            |                  |      |                         |            |
|----------------------------|------------|------------------|------|-------------------------|------------|
| A                          | B          | C                | D    | E                       | F          |
| Bar Diameter               | Bar Length | Total Bar Length | Type | Reinforcement Volu      | Berat Besi |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 13 mm                      | 8030 mm    | 8030 mm          | 13M  | 1017.22 cm <sup>3</sup> | 7.99 kg    |
| 13 mm                      | 8030 mm    | 8030 mm          | 13M  | 1017.22 cm <sup>3</sup> | 7.99 kg    |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 13 mm                      | 8030 mm    | 8030 mm          | 13M  | 1017.22 cm <sup>3</sup> | 7.99 kg    |
| 13 mm                      | 8030 mm    | 8030 mm          | 13M  | 1017.22 cm <sup>3</sup> | 7.99 kg    |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |





b. Tulangan Sengkang Balok G58

| <Tulangan Sengkang Balok G58> |            |                  |      |                          |            |
|-------------------------------|------------|------------------|------|--------------------------|------------|
| A                             | B          | C                | D    | E                        | F          |
| Bar Diameter                  | Bar Length | Total Bar Length | Type | Reinforcement Volu       | Berat Besi |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 119070 mm        | 13M  | 15083.41 cm <sup>3</sup> | 118.40 kg  |
| 13 mm                         | 1020 mm    | 49980 mm         | 13M  | 6331.31 cm <sup>3</sup>  | 49.70 kg   |
| 13 mm                         | 2430 mm    | 119070 mm        | 13M  | 15083.41 cm <sup>3</sup> | 118.40 kg  |
| 13 mm                         | 1020 mm    | 49980 mm         | 13M  | 6331.31 cm <sup>3</sup>  | 49.70 kg   |
| 13 mm                         | 2430 mm    | 121500 mm        | 13M  | 15391.24 cm <sup>3</sup> | 120.82 kg  |
| 13 mm                         | 1020 mm    | 51000 mm         | 13M  | 6460.52 cm <sup>3</sup>  | 50.72 kg   |
| 13 mm                         | 2430 mm    | 121500 mm        | 13M  | 15391.24 cm <sup>3</sup> | 120.82 kg  |
| 13 mm                         | 1020 mm    | 51000 mm         | 13M  | 6460.52 cm <sup>3</sup>  | 50.72 kg   |
| 13 mm                         | 2430 mm    | 114210 mm        | 13M  | 14467.77 cm <sup>3</sup> | 113.57 kg  |
| 13 mm                         | 1020 mm    | 47940 mm         | 13M  | 6072.89 cm <sup>3</sup>  | 47.67 kg   |
| 13 mm                         | 2430 mm    | 109350 mm        | 13M  | 13852.12 cm <sup>3</sup> | 108.74 kg  |
| 13 mm                         | 1020 mm    | 47940 mm         | 13M  | 6072.89 cm <sup>3</sup>  | 47.67 kg   |
| 13 mm                         | 2430 mm    | 114210 mm        | 13M  | 14467.77 cm <sup>3</sup> | 113.57 kg  |
| 13 mm                         | 1020 mm    | 47940 mm         | 13M  | 6072.89 cm <sup>3</sup>  | 47.67 kg   |





c. Tulangan Utama Balok G47

| <Tulangan Utama G47> |            |                         |                  |      |            |
|----------------------|------------|-------------------------|------------------|------|------------|
| A                    | B          | C                       | D                | E    | F          |
| Bar Diameter         | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 13 mm                | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 13 mm                | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 13 mm                | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 13 mm                | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |









|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |

d. Tulangan Sengkang Balok G47

| <Tulangan Sengkang Balok G47> |            |                          |                  |      |            |
|-------------------------------|------------|--------------------------|------------------|------|------------|
| A                             | B          | C                        | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu       | Total Bar Length | Type | Berat Besi |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15172.09 cm <sup>3</sup> | 119770 mm        | 13M  | 119.10 kg  |
| 13 mm                         | 2030 mm    | 15172.09 cm <sup>3</sup> | 119770 mm        | 13M  | 119.10 kg  |
| 13 mm                         | 2030 mm    | 10800.47 cm <sup>3</sup> | 85260 mm         | 13M  | 84.78 kg   |
| 13 mm                         | 2030 mm    | 10800.47 cm <sup>3</sup> | 85260 mm         | 13M  | 84.78 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 1780 mm    | 13997.79 cm <sup>3</sup> | 110500 mm        | 13M  | 109.88 kg  |







g. Tulangan Utama Balok CG47

| <Tulangan Utama Balok CG47> |            |                         |                  |      |            |
|-----------------------------|------------|-------------------------|------------------|------|------------|
| A                           | B          | C                       | D                | E    | F          |
| Bar Diameter                | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |

h. Tulangan Senggang Balok CG47

| <Tulangan Senggang Balok CG47> |            |                         |                  |      |            |
|--------------------------------|------------|-------------------------|------------------|------|------------|
| A                              | B          | C                       | D                | E    | F          |
| Bar Diameter                   | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 13 mm                          | 2030 mm    | 6943.16 cm <sup>3</sup> | 54810 mm         | 13M  | 54.50 kg   |
| 13 mm                          | 920 mm     | 3030.11 cm <sup>3</sup> | 23920 mm         | 13M  | 23.79 kg   |
| 13 mm                          | 320 mm     | 1053.95 cm <sup>3</sup> | 8320 mm          | 13M  | 8.27 kg    |

i. Tulangan Utama Balok CG46

| <Tulangan Utama Balok CG46> |            |                        |                  |      |            |
|-----------------------------|------------|------------------------|------------------|------|------------|
| A                           | B          | C                      | D                | E    | F          |
| Bar Diameter                | Bar Length | Reinforcement Volu     | Total Bar Length | Type | Berat Besi |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 13 mm                       | 2180 mm    | 276.16 cm <sup>3</sup> | 2180 mm          | 13M  | 2.17 kg    |
| 13 mm                       | 2180 mm    | 276.16 cm <sup>3</sup> | 2180 mm          | 13M  | 2.17 kg    |

j. Tulangan Sengkan Balok CG46

| <Tulangan Sengkan Balok CG46> |            |                         |                  |      |            |
|-------------------------------|------------|-------------------------|------------------|------|------------|
| A                             | B          | C                       | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 1840 mm    | 1565.08 cm <sup>3</sup> | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                         | 1840 mm    | 1565.08 cm <sup>3</sup> | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                         | 1840 mm    | 1565.08 cm <sup>3</sup> | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                         | 1840 mm    | 1565.08 cm <sup>3</sup> | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                         | 1840 mm    | 2347.62 cm <sup>3</sup> | 33120 mm         | 10M  | 18.43 kg   |



m. Tulangan Utama Balok B57

| <Tulangan Utama Balok B57> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 13 mm                      | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 13 mm                      | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 13 mm                      | 6000 mm    | 760.06 cm <sup>3</sup>  | 6000 mm          | 13M  | 5.97 kg    |
| 13 mm                      | 6000 mm    | 760.06 cm <sup>3</sup>  | 6000 mm          | 13M  | 5.97 kg    |

n. Tulangan Senggang Balok B57

| <Tulangan Senggang Balok B57> |            |                         |                  |      |            |
|-------------------------------|------------|-------------------------|------------------|------|------------|
| A                             | B          | C                       | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 2240 mm    | 9685.34 cm <sup>3</sup> | 136640 mm        | 10M  | 76.03 kg   |
| 10 mm                         | 870 mm     | 3823.39 cm <sup>3</sup> | 53940 mm         | 10M  | 30.01 kg   |
| 10 mm                         | 420 mm     | 1845.77 cm <sup>3</sup> | 26040 mm         | 10M  | 14.49 kg   |
| 10 mm                         | 2240 mm    | 7144.92 cm <sup>3</sup> | 100800 mm        | 10M  | 56.09 kg   |
| 10 mm                         | 870 mm     | 2836.71 cm <sup>3</sup> | 40020 mm         | 10M  | 22.27 kg   |
| 10 mm                         | 420 mm     | 1369.44 cm <sup>3</sup> | 19320 mm         | 10M  | 10.75 kg   |

o. Tulangan Utama Balok B45

| <Tulangan Utama Balok B45> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 13 mm                      | 3150 mm    | 399.03 cm <sup>3</sup>  | 3150 mm          | 13M  | 3.13 kg    |
| 13 mm                      | 3150 mm    | 399.03 cm <sup>3</sup>  | 3150 mm          | 13M  | 3.13 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 13 mm                      | 5750 mm    | 728.39 cm <sup>3</sup>  | 5750 mm          | 13M  | 5.72 kg    |
| 13 mm                      | 5750 mm    | 728.39 cm <sup>3</sup>  | 5750 mm          | 13M  | 5.72 kg    |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |

|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 13 mm | 5750 mm | 728.39 cm <sup>3</sup>  | 5750 mm | 13M | 5.72 kg  |
| 13 mm | 5750 mm | 728.39 cm <sup>3</sup>  | 5750 mm | 13M | 5.72 kg  |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 13 mm | 5870 mm | 743.59 cm <sup>3</sup>  | 5870 mm | 13M | 5.84 kg  |
| 13 mm | 5870 mm | 743.59 cm <sup>3</sup>  | 5870 mm | 13M | 5.84 kg  |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 13 mm | 4250 mm | 538.38 cm <sup>3</sup>  | 4250 mm | 13M | 4.23 kg  |
| 13 mm | 4250 mm | 538.38 cm <sup>3</sup>  | 4250 mm | 13M | 4.23 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |

p. Tulangan Sengkang Balok B45

| <Tulangan Sengkang Balok B45> |            |                         |                  |      |            |
|-------------------------------|------------|-------------------------|------------------|------|------------|
| A                             | B          | C                       | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 1640 mm    | 3371.16 cm <sup>3</sup> | 47560 mm         | 10M  | 26.46 kg   |
| 10 mm                         | 670 mm     | 1092.29 cm <sup>3</sup> | 15410 mm         | 10M  | 8.57 kg    |
| 10 mm                         | 1640 mm    | 6277.33 cm <sup>3</sup> | 88560 mm         | 10M  | 49.28 kg   |
| 10 mm                         | 670 mm     | 2089.61 cm <sup>3</sup> | 29480 mm         | 10M  | 16.40 kg   |
| 10 mm                         | 1640 mm    | 6277.33 cm <sup>3</sup> | 88560 mm         | 10M  | 49.28 kg   |
| 10 mm                         | 670 mm     | 2089.61 cm <sup>3</sup> | 29480 mm         | 10M  | 16.40 kg   |
| 10 mm                         | 1640 mm    | 6509.82 cm <sup>3</sup> | 91840 mm         | 10M  | 51.10 kg   |
| 10 mm                         | 670 mm     | 2089.61 cm <sup>3</sup> | 29480 mm         | 10M  | 16.40 kg   |
| 10 mm                         | 1640 mm    | 4533.62 cm <sup>3</sup> | 63960 mm         | 10M  | 35.59 kg   |
| 10 mm                         | 670 mm     | 1519.71 cm <sup>3</sup> | 21440 mm         | 10M  | 11.93 kg   |

q. Tulangan Utama Balok B36

| <Tulangan Utama Balok B36> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 13 mm                      | 7990 mm    | 1012.15 cm <sup>3</sup> | 7990 mm          | 13M  | 7.95 kg    |
| 13 mm                      | 7990 mm    | 1012.15 cm <sup>3</sup> | 7990 mm          | 13M  | 7.95 kg    |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |



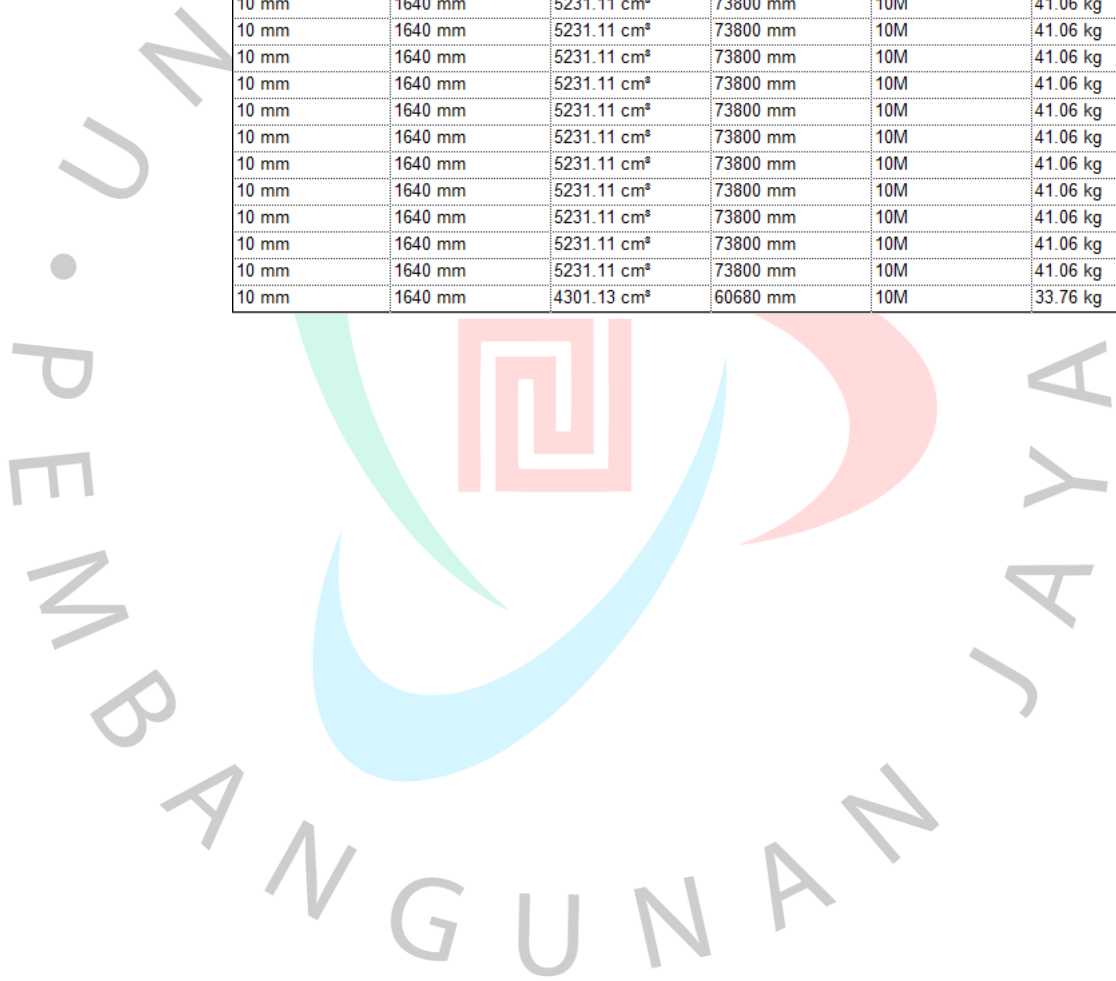




|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 19 mm | 8000 mm | 2292.17 cm <sup>2</sup> | 8000 mm | 19M | 17.99 kg |
| 19 mm | 8000 mm | 2292.17 cm <sup>2</sup> | 8000 mm | 19M | 17.99 kg |
| 19 mm | 8000 mm | 2292.17 cm <sup>2</sup> | 8000 mm | 19M | 17.99 kg |
| 13 mm | 8000 mm | 1013.41 cm <sup>2</sup> | 8000 mm | 13M | 7.96 kg  |
| 13 mm | 8000 mm | 1013.41 cm <sup>2</sup> | 8000 mm | 13M | 7.96 kg  |

r. Tulangan Senggang Balok B36

| <Tulangan Senggang Balok B36> |            |                         |                  |      |            |
|-------------------------------|------------|-------------------------|------------------|------|------------|
| A                             | B          | C                       | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 5231.11 cm <sup>2</sup> | 73800 mm         | 10M  | 41.06 kg   |
| 10 mm                         | 1640 mm    | 4301.13 cm <sup>2</sup> | 60680 mm         | 10M  | 33.76 kg   |



s. Tulangan Utama Balok B24

| <Tulangan Utama Balok B24> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 5700 mm    | 1633.17 cm <sup>3</sup> | 5700 mm          | 19M  | 12.82 kg   |



|       |          |                         |          |     |          |
|-------|----------|-------------------------|----------|-----|----------|
| 19 mm | 27700 mm | 7936.63 cm <sup>3</sup> | 27700 mm | 19M | 62.30 kg |
| 19 mm | 27700 mm | 7936.63 cm <sup>3</sup> | 27700 mm | 19M | 62.30 kg |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 15910 mm | 4558.55 cm <sup>3</sup> | 15910 mm | 19M | 35.78 kg |
| 19 mm | 15670 mm | 4489.79 cm <sup>3</sup> | 15670 mm | 19M | 35.24 kg |
| 19 mm | 15910 mm | 4558.55 cm <sup>3</sup> | 15910 mm | 19M | 35.78 kg |
| 19 mm | 15670 mm | 4489.79 cm <sup>3</sup> | 15670 mm | 19M | 35.24 kg |
| 19 mm | 15800 mm | 4527.03 cm <sup>3</sup> | 15800 mm | 19M | 35.54 kg |
| 19 mm | 15910 mm | 4558.55 cm <sup>3</sup> | 15910 mm | 19M | 35.78 kg |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |

t. Tulangan Sengkang Balok B24

| <Tulangan Sengkang Balok B24> |            |                          |                  |      |            |
|-------------------------------|------------|--------------------------|------------------|------|------------|
| A                             | B          | C                        | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu       | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2989.81 cm <sup>3</sup>  | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                         | 1140 mm    | 8646.21 cm <sup>3</sup>  | 121980 mm        | 10M  | 67.87 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1040 mm    | 737.17 cm <sup>3</sup>   | 10400 mm         | 10M  | 5.79 kg    |
| 10 mm                         | 1140 mm    | 14868.25 cm <sup>3</sup> | 209760 mm        | 10M  | 116.72 kg  |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 1131.28 cm <sup>3</sup>  | 15960 mm         | 10M  | 8.88 kg    |
| 10 mm                         | 1160 mm    | 8527.13 cm <sup>3</sup>  | 120300 mm        | 10M  | 66.94 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |

u. Tulangan Utama Balok CB24

| <Tulangan Utama Balok CB24> |            |                        |                  |      |            |
|-----------------------------|------------|------------------------|------------------|------|------------|
| A                           | B          | C                      | D                | E    | F          |
| Bar Diameter                | Bar Length | Reinforcement Volu     | Total Bar Length | Type | Berat Besi |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |



v. Tulangan Sengkang Balok CB24

| <Tulangan Sengkang Balok CB24> |            |                         |                  |      |            |
|--------------------------------|------------|-------------------------|------------------|------|------------|
| A                              | B          | C                       | D                | E    | F          |
| Bar Diameter                   | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1070 mm    | 758.44 cm <sup>3</sup>  | 10700 mm         | 10M  | 5.95 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 1292.89 cm <sup>3</sup> | 18240 mm         | 10M  | 10.15 kg   |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 900 mm     | 699.61 cm <sup>3</sup>  | 9870 mm          | 10M  | 5.49 kg    |
| 10 mm                          | 1160 mm    | 574.15 cm <sup>3</sup>  | 8100 mm          | 10M  | 4.51 kg    |

4.3. Lantai 3

a. Tulangan Utama Balok G58



| <Tulangan Utama Balok G58> |            |                  |      |                         |            |
|----------------------------|------------|------------------|------|-------------------------|------------|
| A                          | B          | C                | D    | E                       | F          |
| Bar Diameter               | Bar Length | Total Bar Length | Type | Reinforcement Volu      | Berat Besi |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 13 mm                      | 8030 mm    | 8030 mm          | 13M  | 1017.22 cm <sup>3</sup> | 7.99 kg    |
| 13 mm                      | 8030 mm    | 8030 mm          | 13M  | 1017.22 cm <sup>3</sup> | 7.99 kg    |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 13 mm                      | 8030 mm    | 8030 mm          | 13M  | 1017.22 cm <sup>3</sup> | 7.99 kg    |
| 13 mm                      | 8030 mm    | 8030 mm          | 13M  | 1017.22 cm <sup>3</sup> | 7.99 kg    |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |





b. Tulangan Senggang Balok G58

| <Tulangan Senggang Balok G58> |            |                  |      |                          |            |
|-------------------------------|------------|------------------|------|--------------------------|------------|
| A                             | B          | C                | D    | E                        | F          |
| Bar Diameter                  | Bar Length | Total Bar Length | Type | Reinforcement Volu       | Berat Besi |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 119070 mm        | 13M  | 15083.41 cm <sup>3</sup> | 118.40 kg  |
| 13 mm                         | 1020 mm    | 49980 mm         | 13M  | 6331.31 cm <sup>3</sup>  | 49.70 kg   |
| 13 mm                         | 2430 mm    | 119070 mm        | 13M  | 15083.41 cm <sup>3</sup> | 118.40 kg  |
| 13 mm                         | 1020 mm    | 49980 mm         | 13M  | 6331.31 cm <sup>3</sup>  | 49.70 kg   |
| 13 mm                         | 2430 mm    | 121500 mm        | 13M  | 15391.24 cm <sup>3</sup> | 120.82 kg  |
| 13 mm                         | 1020 mm    | 51000 mm         | 13M  | 6460.52 cm <sup>3</sup>  | 50.72 kg   |
| 13 mm                         | 2430 mm    | 121500 mm        | 13M  | 15391.24 cm <sup>3</sup> | 120.82 kg  |
| 13 mm                         | 1020 mm    | 51000 mm         | 13M  | 6460.52 cm <sup>3</sup>  | 50.72 kg   |
| 13 mm                         | 2430 mm    | 114210 mm        | 13M  | 14467.77 cm <sup>3</sup> | 113.57 kg  |
| 13 mm                         | 1020 mm    | 47940 mm         | 13M  | 6072.89 cm <sup>3</sup>  | 47.67 kg   |
| 13 mm                         | 2430 mm    | 109350 mm        | 13M  | 13852.12 cm <sup>3</sup> | 108.74 kg  |
| 13 mm                         | 1020 mm    | 47940 mm         | 13M  | 6072.89 cm <sup>3</sup>  | 47.67 kg   |
| 13 mm                         | 2430 mm    | 114210 mm        | 13M  | 14467.77 cm <sup>3</sup> | 113.57 kg  |
| 13 mm                         | 1020 mm    | 47940 mm         | 13M  | 6072.89 cm <sup>3</sup>  | 47.67 kg   |

c. Tulangan Utama Balok G47













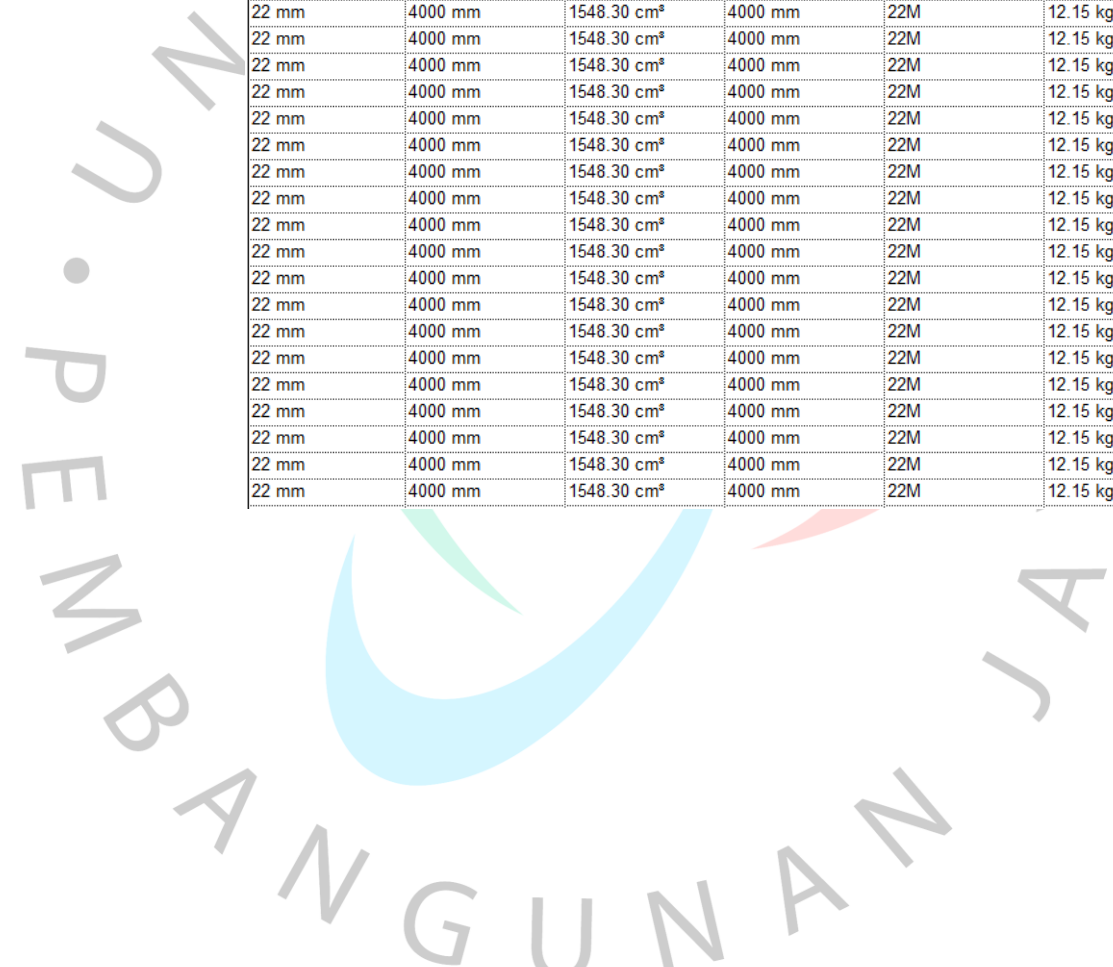
|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |

d. Tulangan Senggang Balok G47

| <Tulangan Senggang Balok G47> |            |                          |                  |      |            |
|-------------------------------|------------|--------------------------|------------------|------|------------|
| A                             | B          | C                        | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu       | Total Bar Length | Type | Berat Besi |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15172.09 cm <sup>3</sup> | 119770 mm        | 13M  | 119.10 kg  |
| 13 mm                         | 2030 mm    | 15172.09 cm <sup>3</sup> | 119770 mm        | 13M  | 119.10 kg  |
| 13 mm                         | 2030 mm    | 10800.47 cm <sup>3</sup> | 85260 mm         | 13M  | 84.78 kg   |
| 13 mm                         | 2030 mm    | 10800.47 cm <sup>3</sup> | 85260 mm         | 13M  | 84.78 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 1780 mm    | 13997.79 cm <sup>3</sup> | 110500 mm        | 13M  | 109.88 kg  |

e. Tulangan Utama Balok G34

| <Tulangan Utama Balok B34> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |



|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |

f. Tulangan Sengkang Balok G34

| <Tulangan Sengkang Balok G34> |            |                         |                  |      |            |
|-------------------------------|------------|-------------------------|------------------|------|------------|
| A                             | B          | C                       | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 13 mm                         | 1230 mm    | 4518.56 cm <sup>3</sup> | 35670 mm         | 13M  | 35.47 kg   |
| 13 mm                         | 1230 mm    | 4518.56 cm <sup>3</sup> | 35670 mm         | 13M  | 35.47 kg   |
| 13 mm                         | 1230 mm    | 4986.00 cm <sup>3</sup> | 39360 mm         | 13M  | 39.14 kg   |
| 13 mm                         | 1230 mm    | 5141.81 cm <sup>3</sup> | 40590 mm         | 13M  | 40.36 kg   |
| 13 mm                         | 1230 mm    | 4830.19 cm <sup>3</sup> | 38130 mm         | 13M  | 37.92 kg   |
| 13 mm                         | 1230 mm    | 4830.19 cm <sup>3</sup> | 38130 mm         | 13M  | 37.92 kg   |
| 13 mm                         | 1230 mm    | 4830.19 cm <sup>3</sup> | 38130 mm         | 13M  | 37.92 kg   |

g. Tulangan Utama Balok CG47

| <Tulangan Utama Balok CG47> |            |                         |                  |      |            |
|-----------------------------|------------|-------------------------|------------------|------|------------|
| A                           | B          | C                       | D                | E    | F          |
| Bar Diameter                | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |

h. Tulangan Senggang Balok CG47

| <Tulangan Senggang Balok CG47> |            |                         |                  |      |            |
|--------------------------------|------------|-------------------------|------------------|------|------------|
| A                              | B          | C                       | D                | E    | F          |
| Bar Diameter                   | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 13 mm                          | 2030 mm    | 6943.16 cm <sup>3</sup> | 54810 mm         | 13M  | 54.50 kg   |
| 13 mm                          | 920 mm     | 3030.11 cm <sup>3</sup> | 23920 mm         | 13M  | 23.79 kg   |
| 13 mm                          | 320 mm     | 1053.95 cm <sup>3</sup> | 8320 mm          | 13M  | 8.27 kg    |

i. Tulangan Utama Balok CG46

| <Tulangan Utama Balok CG46> |            |                        |                  |      |            |
|-----------------------------|------------|------------------------|------------------|------|------------|
| A                           | B          | C                      | D                | E    | F          |
| Bar Diameter                | Bar Length | Reinforcement Volu     | Total Bar Length | Type | Berat Besi |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 13 mm                       | 2180 mm    | 276.16 cm <sup>3</sup> | 2180 mm          | 13M  | 2.17 kg    |
| 13 mm                       | 2180 mm    | 276.16 cm <sup>3</sup> | 2180 mm          | 13M  | 2.17 kg    |

j. Tulangan Senggang Balok CG46

| <Tulangan Senggang Balok CG46> |            |                         |                  |      |            |
|--------------------------------|------------|-------------------------|------------------|------|------------|
| A                              | B          | C                       | D                | E    | F          |
| Bar Diameter                   | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                          | 1840 mm    | 1565.08 cm <sup>3</sup> | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 1565.08 cm <sup>3</sup> | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 1565.08 cm <sup>3</sup> | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 1565.08 cm <sup>3</sup> | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 2347.62 cm <sup>3</sup> | 33120 mm         | 10M  | 18.43 kg   |

k. Tulangan Utama Balok CG34

| <Tulangan Utama Balok CG34> |            |                    |                  |      |            |
|-----------------------------|------------|--------------------|------------------|------|------------|
| A                           | B          | C                  | D                | E    | F          |
| Bar Diameter                | Bar Length | Reinforcement Volu | Total Bar Length | Type | Berat Besi |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |

l. Tulangan Senggang Balok CG34

| <Tulangan Senggang Balok CG34> |            |                    |                  |      |            |
|--------------------------------|------------|--------------------|------------------|------|------------|
| A                              | B          | C                  | D                | E    | F          |
| Bar Diameter                   | Bar Length | Reinforcement Volu | Total Bar Length | Type | Berat Besi |
| 10 mm                          | 1240 mm    | 703.15 cm³         | 9920 mm          | 10M  | 5.52 kg    |
| 10 mm                          | 1240 mm    | 703.15 cm³         | 9920 mm          | 10M  | 5.52 kg    |
| 10 mm                          | 1240 mm    | 703.15 cm³         | 9920 mm          | 10M  | 5.52 kg    |
| 10 mm                          | 1240 mm    | 703.15 cm³         | 9920 mm          | 10M  | 5.52 kg    |
| 10 mm                          | 1240 mm    | 703.15 cm³         | 9920 mm          | 10M  | 5.52 kg    |
| 10 mm                          | 1240 mm    | 703.15 cm³         | 9920 mm          | 10M  | 5.52 kg    |

m. Tulangan Utama Balok B57

| <Tulangan Utama Balok B57> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 13 mm                      | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 13 mm                      | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 13 mm                      | 6000 mm    | 760.06 cm <sup>3</sup>  | 6000 mm          | 13M  | 5.97 kg    |
| 13 mm                      | 6000 mm    | 760.06 cm <sup>3</sup>  | 6000 mm          | 13M  | 5.97 kg    |

n. Tulangan Senggang Balok B57

| <Tulangan Senggang Balok B57> |            |                         |                  |      |            |
|-------------------------------|------------|-------------------------|------------------|------|------------|
| A                             | B          | C                       | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 2240 mm    | 9685.34 cm <sup>3</sup> | 136640 mm        | 10M  | 76.03 kg   |
| 10 mm                         | 870 mm     | 3823.39 cm <sup>3</sup> | 53940 mm         | 10M  | 30.01 kg   |
| 10 mm                         | 420 mm     | 1845.77 cm <sup>3</sup> | 26040 mm         | 10M  | 14.49 kg   |
| 10 mm                         | 2240 mm    | 7144.92 cm <sup>3</sup> | 100800 mm        | 10M  | 56.09 kg   |
| 10 mm                         | 870 mm     | 2836.71 cm <sup>3</sup> | 40020 mm         | 10M  | 22.27 kg   |
| 10 mm                         | 420 mm     | 1369.44 cm <sup>3</sup> | 19320 mm         | 10M  | 10.75 kg   |



o. Tulangan Utama Balok B45

| <Tulangan Utama Balok B45> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 13 mm                      | 3150 mm    | 399.03 cm <sup>3</sup>  | 3150 mm          | 13M  | 3.13 kg    |
| 13 mm                      | 3150 mm    | 399.03 cm <sup>3</sup>  | 3150 mm          | 13M  | 3.13 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 13 mm                      | 5750 mm    | 728.39 cm <sup>3</sup>  | 5750 mm          | 13M  | 5.72 kg    |
| 13 mm                      | 5750 mm    | 728.39 cm <sup>3</sup>  | 5750 mm          | 13M  | 5.72 kg    |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |

|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 13 mm | 5750 mm | 728.39 cm <sup>3</sup>  | 5750 mm | 13M | 5.72 kg  |
| 13 mm | 5750 mm | 728.39 cm <sup>3</sup>  | 5750 mm | 13M | 5.72 kg  |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 13 mm | 5870 mm | 743.59 cm <sup>3</sup>  | 5870 mm | 13M | 5.84 kg  |
| 13 mm | 5870 mm | 743.59 cm <sup>3</sup>  | 5870 mm | 13M | 5.84 kg  |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 13 mm | 4250 mm | 538.38 cm <sup>3</sup>  | 4250 mm | 13M | 4.23 kg  |
| 13 mm | 4250 mm | 538.38 cm <sup>3</sup>  | 4250 mm | 13M | 4.23 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |

p. Tulangan Sengkang Balok B45

| <Tulangan Sengkang Balok B45> |            |                         |                  |      |            |
|-------------------------------|------------|-------------------------|------------------|------|------------|
| A                             | B          | C                       | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 1640 mm    | 3371.16 cm <sup>3</sup> | 47560 mm         | 10M  | 26.46 kg   |
| 10 mm                         | 670 mm     | 1092.29 cm <sup>3</sup> | 15410 mm         | 10M  | 8.57 kg    |
| 10 mm                         | 1640 mm    | 6277.33 cm <sup>3</sup> | 88560 mm         | 10M  | 49.28 kg   |
| 10 mm                         | 670 mm     | 2089.61 cm <sup>3</sup> | 29480 mm         | 10M  | 16.40 kg   |
| 10 mm                         | 1640 mm    | 6277.33 cm <sup>3</sup> | 88560 mm         | 10M  | 49.28 kg   |
| 10 mm                         | 670 mm     | 2089.61 cm <sup>3</sup> | 29480 mm         | 10M  | 16.40 kg   |
| 10 mm                         | 1640 mm    | 6509.82 cm <sup>3</sup> | 91840 mm         | 10M  | 51.10 kg   |
| 10 mm                         | 670 mm     | 2089.61 cm <sup>3</sup> | 29480 mm         | 10M  | 16.40 kg   |
| 10 mm                         | 1640 mm    | 4533.62 cm <sup>3</sup> | 63960 mm         | 10M  | 35.59 kg   |
| 10 mm                         | 670 mm     | 1519.71 cm <sup>3</sup> | 21440 mm         | 10M  | 11.93 kg   |

q. Tulangan Utama Balok B36

| <Tulangan Utama Balok B36> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 13 mm                      | 7990 mm    | 1012.15 cm <sup>3</sup> | 7990 mm          | 13M  | 7.95 kg    |
| 13 mm                      | 7990 mm    | 1012.15 cm <sup>3</sup> | 7990 mm          | 13M  | 7.95 kg    |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |



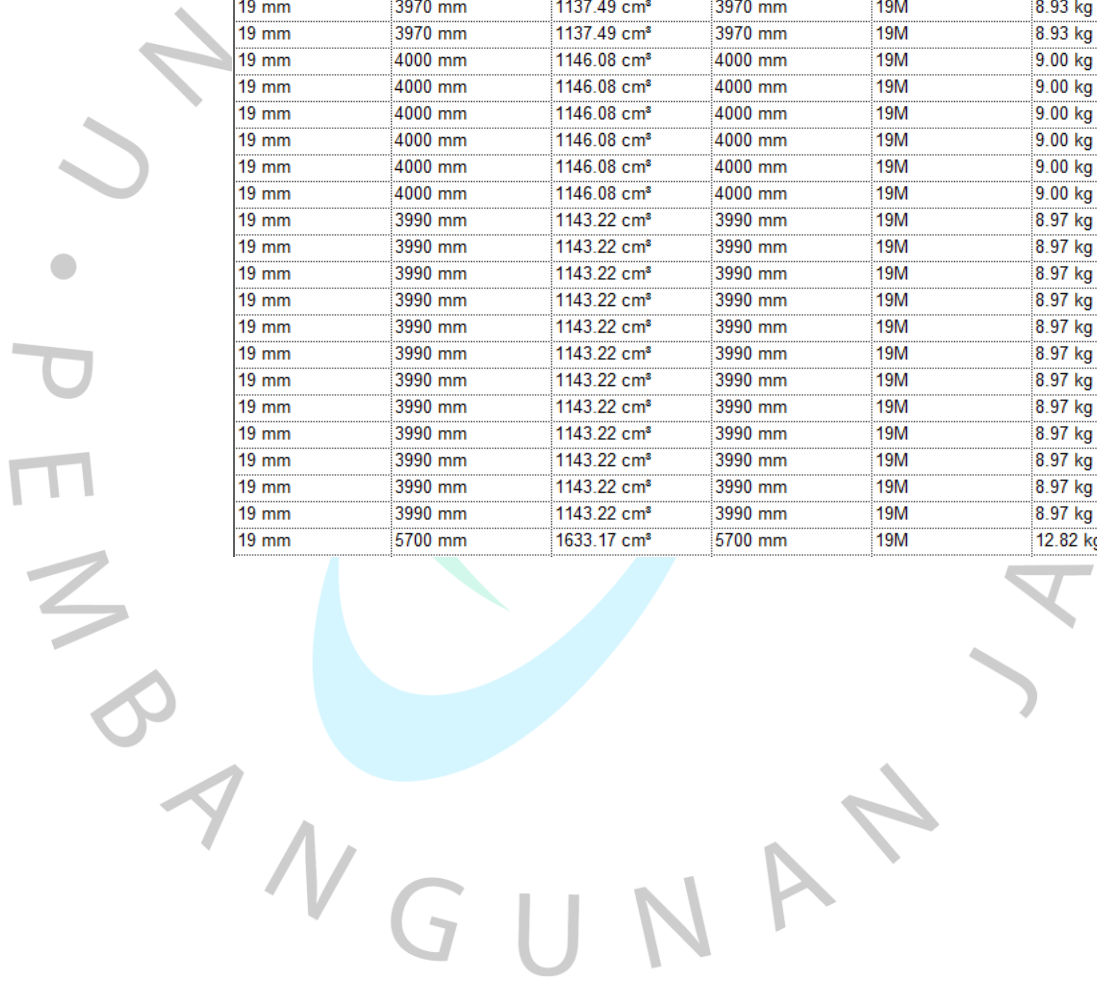




|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 13 mm | 5750 mm | 728.39 cm <sup>2</sup>  | 5750 mm | 13M | 5.72 kg  |
| 13 mm | 5750 mm | 728.39 cm <sup>2</sup>  | 5750 mm | 13M | 5.72 kg  |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 13 mm | 5870 mm | 743.59 cm <sup>2</sup>  | 5870 mm | 13M | 5.84 kg  |
| 13 mm | 5870 mm | 743.59 cm <sup>2</sup>  | 5870 mm | 13M | 5.84 kg  |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 13 mm | 4250 mm | 538.38 cm <sup>2</sup>  | 4250 mm | 13M | 4.23 kg  |
| 13 mm | 4250 mm | 538.38 cm <sup>2</sup>  | 4250 mm | 13M | 4.23 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |

s. Tulangan Utama Balok B24

| <Tulangan Utama Balok B24> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 5700 mm    | 1633.17 cm <sup>3</sup> | 5700 mm          | 19M  | 12.82 kg   |







|       |          |                         |          |     |          |
|-------|----------|-------------------------|----------|-----|----------|
| 19 mm | 27700 mm | 7936.63 cm <sup>3</sup> | 27700 mm | 19M | 62.30 kg |
| 19 mm | 27700 mm | 7936.63 cm <sup>3</sup> | 27700 mm | 19M | 62.30 kg |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 15910 mm | 4558.55 cm <sup>3</sup> | 15910 mm | 19M | 35.78 kg |
| 19 mm | 15670 mm | 4489.79 cm <sup>3</sup> | 15670 mm | 19M | 35.24 kg |
| 19 mm | 15910 mm | 4558.55 cm <sup>3</sup> | 15910 mm | 19M | 35.78 kg |
| 19 mm | 15670 mm | 4489.79 cm <sup>3</sup> | 15670 mm | 19M | 35.24 kg |
| 19 mm | 15800 mm | 4527.03 cm <sup>3</sup> | 15800 mm | 19M | 35.54 kg |
| 19 mm | 15910 mm | 4558.55 cm <sup>3</sup> | 15910 mm | 19M | 35.78 kg |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |

t. Tulangan Sengkang Balok B24

| <Tulangan Sengkang Balok B24> |            |                          |                  |      |            |
|-------------------------------|------------|--------------------------|------------------|------|------------|
| A                             | B          | C                        | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu       | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2989.81 cm <sup>3</sup>  | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                         | 1140 mm    | 8646.21 cm <sup>3</sup>  | 121980 mm        | 10M  | 67.87 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1040 mm    | 737.17 cm <sup>3</sup>   | 10400 mm         | 10M  | 5.79 kg    |
| 10 mm                         | 1140 mm    | 14868.25 cm <sup>3</sup> | 209760 mm        | 10M  | 116.72 kg  |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 1131.28 cm <sup>3</sup>  | 15960 mm         | 10M  | 8.88 kg    |
| 10 mm                         | 1160 mm    | 8527.13 cm <sup>3</sup>  | 120300 mm        | 10M  | 66.94 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |

u. Tulangan Utama Balok CB24

| <Tulangan Utama Balok CB24> |            |                        |                  |      |            |
|-----------------------------|------------|------------------------|------------------|------|------------|
| A                           | B          | C                      | D                | E    | F          |
| Bar Diameter                | Bar Length | Reinforcement Volu     | Total Bar Length | Type | Berat Besi |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |



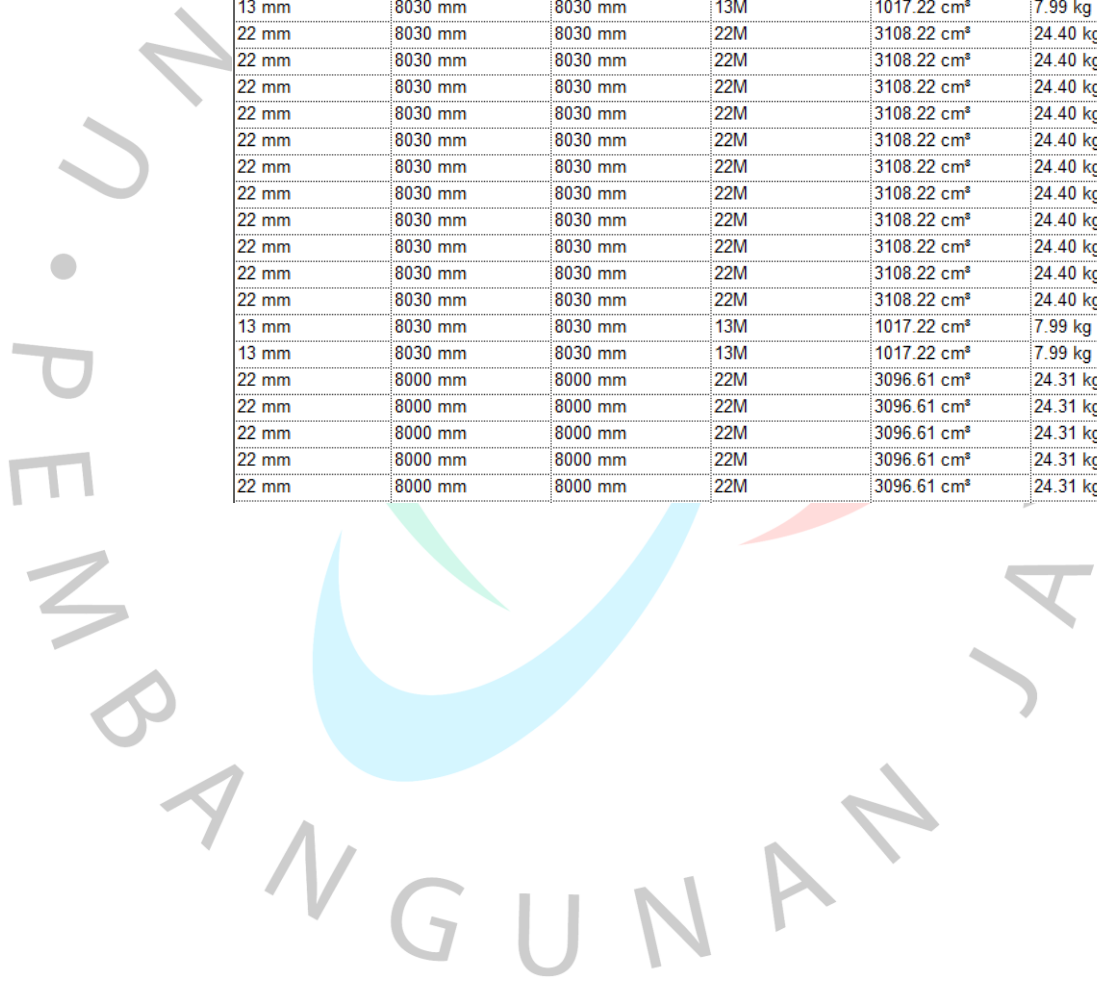
v. Tulangan Sengkang Balok CB24

| <Tulangan Sengkang Balok CB24> |            |                         |                  |      |            |
|--------------------------------|------------|-------------------------|------------------|------|------------|
| A                              | B          | C                       | D                | E    | F          |
| Bar Diameter                   | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1070 mm    | 758.44 cm <sup>3</sup>  | 10700 mm         | 10M  | 5.95 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 1292.89 cm <sup>3</sup> | 18240 mm         | 10M  | 10.15 kg   |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 900 mm     | 699.61 cm <sup>3</sup>  | 9870 mm          | 10M  | 5.49 kg    |
| 10 mm                          | 1160 mm    | 574.15 cm <sup>3</sup>  | 8100 mm          | 10M  | 4.51 kg    |

4.4. Lantai 4

a. Tulangan Utama Balok G58

| <Tulangan Utama Balok G58> |            |                  |      |                         |            |
|----------------------------|------------|------------------|------|-------------------------|------------|
| A                          | B          | C                | D    | E                       | F          |
| Bar Diameter               | Bar Length | Total Bar Length | Type | Reinforcement Volu      | Berat Besi |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 13 mm                      | 8030 mm    | 8030 mm          | 13M  | 1017.22 cm <sup>3</sup> | 7.99 kg    |
| 13 mm                      | 8030 mm    | 8030 mm          | 13M  | 1017.22 cm <sup>3</sup> | 7.99 kg    |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 13 mm                      | 8030 mm    | 8030 mm          | 13M  | 1017.22 cm <sup>3</sup> | 7.99 kg    |
| 13 mm                      | 8030 mm    | 8030 mm          | 13M  | 1017.22 cm <sup>3</sup> | 7.99 kg    |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |







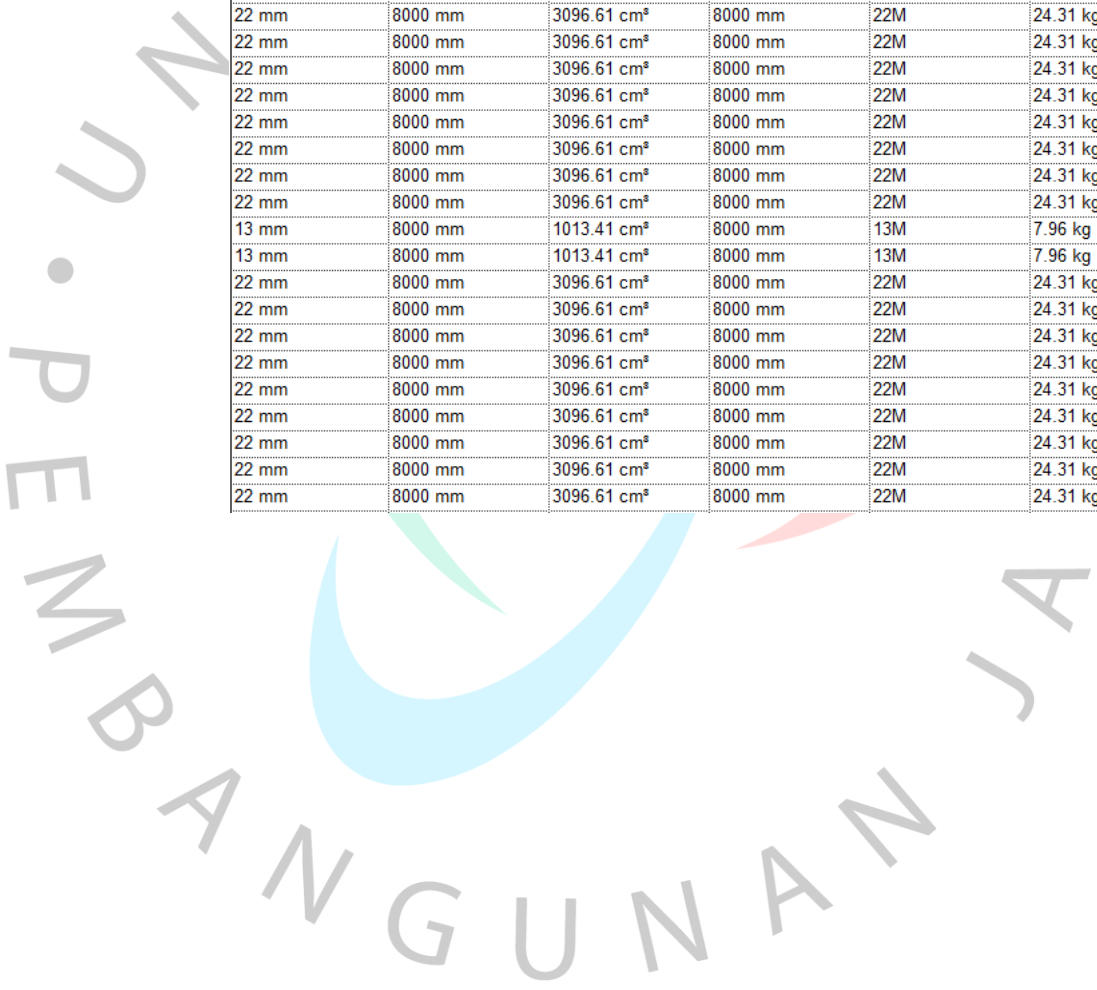


b. Tulangan Sengkang Balok G58

| <Tulangan Sengkang Balok G58> |            |                  |      |                          |            |
|-------------------------------|------------|------------------|------|--------------------------|------------|
| A                             | B          | C                | D    | E                        | F          |
| Bar Diameter                  | Bar Length | Total Bar Length | Type | Reinforcement Volu       | Berat Besi |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 119070 mm        | 13M  | 15083.41 cm <sup>3</sup> | 118.40 kg  |
| 13 mm                         | 1020 mm    | 49980 mm         | 13M  | 6331.31 cm <sup>3</sup>  | 49.70 kg   |
| 13 mm                         | 2430 mm    | 119070 mm        | 13M  | 15083.41 cm <sup>3</sup> | 118.40 kg  |
| 13 mm                         | 1020 mm    | 49980 mm         | 13M  | 6331.31 cm <sup>3</sup>  | 49.70 kg   |
| 13 mm                         | 2430 mm    | 121500 mm        | 13M  | 15391.24 cm <sup>3</sup> | 120.82 kg  |
| 13 mm                         | 1020 mm    | 51000 mm         | 13M  | 6460.52 cm <sup>3</sup>  | 50.72 kg   |
| 13 mm                         | 2430 mm    | 121500 mm        | 13M  | 15391.24 cm <sup>3</sup> | 120.82 kg  |
| 13 mm                         | 1020 mm    | 51000 mm         | 13M  | 6460.52 cm <sup>3</sup>  | 50.72 kg   |
| 13 mm                         | 2430 mm    | 114210 mm        | 13M  | 14467.77 cm <sup>3</sup> | 113.57 kg  |
| 13 mm                         | 1020 mm    | 47940 mm         | 13M  | 6072.89 cm <sup>3</sup>  | 47.67 kg   |
| 13 mm                         | 2430 mm    | 109350 mm        | 13M  | 13852.12 cm <sup>3</sup> | 108.74 kg  |
| 13 mm                         | 1020 mm    | 47940 mm         | 13M  | 6072.89 cm <sup>3</sup>  | 47.67 kg   |
| 13 mm                         | 2430 mm    | 114210 mm        | 13M  | 14467.77 cm <sup>3</sup> | 113.57 kg  |
| 13 mm                         | 1020 mm    | 47940 mm         | 13M  | 6072.89 cm <sup>3</sup>  | 47.67 kg   |

c. Tulangan Utama Balok G47

| <Tulangan Utama G47> |            |                         |                  |      |            |
|----------------------|------------|-------------------------|------------------|------|------------|
| A                    | B          | C                       | D                | E    | F          |
| Bar Diameter         | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 13 mm                | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 13 mm                | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 13 mm                | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 13 mm                | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |











|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |

d. Tulangan Senggang Balok G47

| <Tulangan Senggang Balok G47> |            |                          |                  |      |            |
|-------------------------------|------------|--------------------------|------------------|------|------------|
| A                             | B          | C                        | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu       | Total Bar Length | Type | Berat Besi |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15172.09 cm <sup>3</sup> | 119770 mm        | 13M  | 119.10 kg  |
| 13 mm                         | 2030 mm    | 15172.09 cm <sup>3</sup> | 119770 mm        | 13M  | 119.10 kg  |
| 13 mm                         | 2030 mm    | 10800.47 cm <sup>3</sup> | 85260 mm         | 13M  | 84.78 kg   |
| 13 mm                         | 2030 mm    | 10800.47 cm <sup>3</sup> | 85260 mm         | 13M  | 84.78 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 1780 mm    | 13997.79 cm <sup>3</sup> | 110500 mm        | 13M  | 109.88 kg  |

e. Tulangan Utama Balok G34

| <Tulangan Utama Balok B34> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |
| 22 mm                      | 4000 mm    | 1548.30 cm <sup>3</sup> | 4000 mm          | 22M  | 12.15 kg   |



|       |         |             |         |     |          |
|-------|---------|-------------|---------|-----|----------|
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm³ | 4000 mm | 22M | 12.15 kg |

f. Tulangan Senggang Balok G34

| <Tulangan Senggang Balok G34> |            |                    |                  |      |            |
|-------------------------------|------------|--------------------|------------------|------|------------|
| A                             | B          | C                  | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu | Total Bar Length | Type | Berat Besi |
| 13 mm                         | 1230 mm    | 4518.56 cm³        | 35670 mm         | 13M  | 35.47 kg   |
| 13 mm                         | 1230 mm    | 4518.56 cm³        | 35670 mm         | 13M  | 35.47 kg   |
| 13 mm                         | 1230 mm    | 4986.00 cm³        | 39360 mm         | 13M  | 39.14 kg   |
| 13 mm                         | 1230 mm    | 5141.81 cm³        | 40590 mm         | 13M  | 40.36 kg   |
| 13 mm                         | 1230 mm    | 4830.19 cm³        | 38130 mm         | 13M  | 37.92 kg   |
| 13 mm                         | 1230 mm    | 4830.19 cm³        | 38130 mm         | 13M  | 37.92 kg   |
| 13 mm                         | 1230 mm    | 4830.19 cm³        | 38130 mm         | 13M  | 37.92 kg   |

g. Tulangan Utama Balok CG47

| <Tulangan Utama Balok CG47> |            |                         |                  |      |            |
|-----------------------------|------------|-------------------------|------------------|------|------------|
| A                           | B          | C                       | D                | E    | F          |
| Bar Diameter                | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |

h. Tulangan Senggang Balok CG47

| <Tulangan Senggang Balok CG47> |            |                         |                  |      |            |
|--------------------------------|------------|-------------------------|------------------|------|------------|
| A                              | B          | C                       | D                | E    | F          |
| Bar Diameter                   | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 13 mm                          | 2030 mm    | 6943.16 cm <sup>3</sup> | 54810 mm         | 13M  | 54.50 kg   |
| 13 mm                          | 920 mm     | 3030.11 cm <sup>3</sup> | 23920 mm         | 13M  | 23.79 kg   |
| 13 mm                          | 320 mm     | 1053.95 cm <sup>3</sup> | 8320 mm          | 13M  | 8.27 kg    |

i. Tulangan Utama Balok CG46

| <Tulangan Utama Balok CG46> |            |                        |                  |      |            |
|-----------------------------|------------|------------------------|------------------|------|------------|
| A                           | B          | C                      | D                | E    | F          |
| Bar Diameter                | Bar Length | Reinforcement Volu     | Total Bar Length | Type | Berat Besi |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 13 mm                       | 2180 mm    | 276.16 cm <sup>3</sup> | 2180 mm          | 13M  | 2.17 kg    |
| 13 mm                       | 2180 mm    | 276.16 cm <sup>3</sup> | 2180 mm          | 13M  | 2.17 kg    |

j. Tulangan Senggang Balok CG46

| <Tulangan Senggang Balok CG46> |            |                         |                  |      |            |
|--------------------------------|------------|-------------------------|------------------|------|------------|
| A                              | B          | C                       | D                | E    | F          |
| Bar Diameter                   | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                          | 1840 mm    | 1565.08 cm <sup>3</sup> | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 1565.08 cm <sup>3</sup> | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 1565.08 cm <sup>3</sup> | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 1565.08 cm <sup>3</sup> | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 2347.62 cm <sup>3</sup> | 33120 mm         | 10M  | 18.43 kg   |

k. Tulangan Utama Balok CG34

| <Tulangan Utama Balok CG34> |            |                    |                  |      |            |
|-----------------------------|------------|--------------------|------------------|------|------------|
| A                           | B          | C                  | D                | E    | F          |
| Bar Diameter                | Bar Length | Reinforcement Volu | Total Bar Length | Type | Berat Besi |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |
| 19 mm                       | 1290 mm    | 369.61 cm³         | 1290 mm          | 19M  | 2.90 kg    |

l. Tulangan Senggang Balok CG34

| <Tulangan Senggang Balok CG34> |            |                    |                  |      |            |
|--------------------------------|------------|--------------------|------------------|------|------------|
| A                              | B          | C                  | D                | E    | F          |
| Bar Diameter                   | Bar Length | Reinforcement Volu | Total Bar Length | Type | Berat Besi |
| 10 mm                          | 1240 mm    | 703.15 cm³         | 9920 mm          | 10M  | 5.52 kg    |
| 10 mm                          | 1240 mm    | 703.15 cm³         | 9920 mm          | 10M  | 5.52 kg    |
| 10 mm                          | 1240 mm    | 703.15 cm³         | 9920 mm          | 10M  | 5.52 kg    |
| 10 mm                          | 1240 mm    | 703.15 cm³         | 9920 mm          | 10M  | 5.52 kg    |
| 10 mm                          | 1240 mm    | 703.15 cm³         | 9920 mm          | 10M  | 5.52 kg    |
| 10 mm                          | 1240 mm    | 703.15 cm³         | 9920 mm          | 10M  | 5.52 kg    |

m. Tulangan Utama Balok B57

| <Tulangan Utama Balok B57> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 13 mm                      | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 13 mm                      | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 13 mm                      | 6000 mm    | 760.06 cm <sup>3</sup>  | 6000 mm          | 13M  | 5.97 kg    |
| 13 mm                      | 6000 mm    | 760.06 cm <sup>3</sup>  | 6000 mm          | 13M  | 5.97 kg    |

n. Tulangan Senggang Balok B57

| <Tulangan Senggang Balok B57> |            |                         |                  |      |            |
|-------------------------------|------------|-------------------------|------------------|------|------------|
| A                             | B          | C                       | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 2240 mm    | 9685.34 cm <sup>3</sup> | 136640 mm        | 10M  | 76.03 kg   |
| 10 mm                         | 870 mm     | 3823.39 cm <sup>3</sup> | 53940 mm         | 10M  | 30.01 kg   |
| 10 mm                         | 420 mm     | 1845.77 cm <sup>3</sup> | 26040 mm         | 10M  | 14.49 kg   |
| 10 mm                         | 2240 mm    | 7144.92 cm <sup>3</sup> | 100800 mm        | 10M  | 56.09 kg   |
| 10 mm                         | 870 mm     | 2836.71 cm <sup>3</sup> | 40020 mm         | 10M  | 22.27 kg   |
| 10 mm                         | 420 mm     | 1369.44 cm <sup>3</sup> | 19320 mm         | 10M  | 10.75 kg   |

o. Tulangan Utama Balok B45

| <Tulangan Utama Balok B45> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 13 mm                      | 3150 mm    | 399.03 cm <sup>3</sup>  | 3150 mm          | 13M  | 3.13 kg    |
| 13 mm                      | 3150 mm    | 399.03 cm <sup>3</sup>  | 3150 mm          | 13M  | 3.13 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 13 mm                      | 5750 mm    | 728.39 cm <sup>3</sup>  | 5750 mm          | 13M  | 5.72 kg    |
| 13 mm                      | 5750 mm    | 728.39 cm <sup>3</sup>  | 5750 mm          | 13M  | 5.72 kg    |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |

|       |         |             |         |     |          |
|-------|---------|-------------|---------|-----|----------|
| 19 mm | 5750 mm | 1647.50 cm³ | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm³ | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm³ | 5750 mm | 19M | 12.93 kg |
| 13 mm | 5750 mm | 728.39 cm³  | 5750 mm | 13M | 5.72 kg  |
| 13 mm | 5750 mm | 728.39 cm³  | 5750 mm | 13M | 5.72 kg  |
| 19 mm | 5750 mm | 1647.50 cm³ | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm³ | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm³ | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm³ | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm³ | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm³ | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5870 mm | 1681.88 cm³ | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm³ | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm³ | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm³ | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm³ | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm³ | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm³ | 5870 mm | 19M | 13.20 kg |
| 13 mm | 5870 mm | 743.59 cm³  | 5870 mm | 13M | 5.84 kg  |
| 13 mm | 5870 mm | 743.59 cm³  | 5870 mm | 13M | 5.84 kg  |
| 19 mm | 5870 mm | 1681.88 cm³ | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm³ | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm³ | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm³ | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm³ | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm³ | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm³ | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm³ | 5870 mm | 19M | 13.20 kg |
| 19 mm | 4250 mm | 1217.71 cm³ | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm³ | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm³ | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm³ | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm³ | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm³ | 4250 mm | 19M | 9.56 kg  |
| 13 mm | 4250 mm | 538.38 cm³  | 4250 mm | 13M | 4.23 kg  |
| 13 mm | 4250 mm | 538.38 cm³  | 4250 mm | 13M | 4.23 kg  |
| 19 mm | 4250 mm | 1217.71 cm³ | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm³ | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm³ | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm³ | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm³ | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm³ | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm³ | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm³ | 4250 mm | 19M | 9.56 kg  |

p. Tulangan Sengkang Balok B45

| <Tulangan Sengkang Balok B45> |            |                    |                  |      |            |
|-------------------------------|------------|--------------------|------------------|------|------------|
| A                             | B          | C                  | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 1640 mm    | 3371.16 cm³        | 47560 mm         | 10M  | 26.46 kg   |
| 10 mm                         | 670 mm     | 1092.29 cm³        | 15410 mm         | 10M  | 8.57 kg    |
| 10 mm                         | 1640 mm    | 6277.33 cm³        | 88560 mm         | 10M  | 49.28 kg   |
| 10 mm                         | 670 mm     | 2089.61 cm³        | 29480 mm         | 10M  | 16.40 kg   |
| 10 mm                         | 1640 mm    | 6277.33 cm³        | 88560 mm         | 10M  | 49.28 kg   |
| 10 mm                         | 670 mm     | 2089.61 cm³        | 29480 mm         | 10M  | 16.40 kg   |
| 10 mm                         | 1640 mm    | 6509.82 cm³        | 91840 mm         | 10M  | 51.10 kg   |
| 10 mm                         | 670 mm     | 2089.61 cm³        | 29480 mm         | 10M  | 16.40 kg   |
| 10 mm                         | 1640 mm    | 4533.62 cm³        | 63960 mm         | 10M  | 35.59 kg   |
| 10 mm                         | 670 mm     | 1519.71 cm³        | 21440 mm         | 10M  | 11.93 kg   |

q. Tulangan Utama Balok B36

| <Tulangan Utama Balok B36> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 13 mm                      | 7990 mm    | 1012.15 cm <sup>3</sup> | 7990 mm          | 13M  | 7.95 kg    |
| 13 mm                      | 7990 mm    | 1012.15 cm <sup>3</sup> | 7990 mm          | 13M  | 7.95 kg    |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |









|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 13 mm | 5750 mm | 728.39 cm <sup>3</sup>  | 5750 mm | 13M | 5.72 kg  |
| 13 mm | 5750 mm | 728.39 cm <sup>3</sup>  | 5750 mm | 13M | 5.72 kg  |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 13 mm | 5870 mm | 743.59 cm <sup>3</sup>  | 5870 mm | 13M | 5.84 kg  |
| 13 mm | 5870 mm | 743.59 cm <sup>3</sup>  | 5870 mm | 13M | 5.84 kg  |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 13 mm | 4250 mm | 538.38 cm <sup>3</sup>  | 4250 mm | 13M | 4.23 kg  |
| 13 mm | 4250 mm | 538.38 cm <sup>3</sup>  | 4250 mm | 13M | 4.23 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |

s. Tulangan Utama Balok B24

| <Tulangan Utama Balok B24> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 5700 mm    | 1633.17 cm <sup>3</sup> | 5700 mm          | 19M  | 12.82 kg   |



|       |          |                         |          |     |          |
|-------|----------|-------------------------|----------|-----|----------|
| 19 mm | 27700 mm | 7936.63 cm <sup>3</sup> | 27700 mm | 19M | 62.30 kg |
| 19 mm | 27700 mm | 7936.63 cm <sup>3</sup> | 27700 mm | 19M | 62.30 kg |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 15910 mm | 4558.55 cm <sup>3</sup> | 15910 mm | 19M | 35.78 kg |
| 19 mm | 15670 mm | 4489.79 cm <sup>3</sup> | 15670 mm | 19M | 35.24 kg |
| 19 mm | 15910 mm | 4558.55 cm <sup>3</sup> | 15910 mm | 19M | 35.78 kg |
| 19 mm | 15670 mm | 4489.79 cm <sup>3</sup> | 15670 mm | 19M | 35.24 kg |
| 19 mm | 15800 mm | 4527.03 cm <sup>3</sup> | 15800 mm | 19M | 35.54 kg |
| 19 mm | 15910 mm | 4558.55 cm <sup>3</sup> | 15910 mm | 19M | 35.78 kg |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |

t. Tulangan Sengkang Balok B24

| <Tulangan Sengkang Balok B24> |            |                          |                  |      |            |
|-------------------------------|------------|--------------------------|------------------|------|------------|
| A                             | B          | C                        | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu       | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2989.81 cm <sup>3</sup>  | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                         | 1140 mm    | 8646.21 cm <sup>3</sup>  | 121980 mm        | 10M  | 67.87 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1040 mm    | 737.17 cm <sup>3</sup>   | 10400 mm         | 10M  | 5.79 kg    |
| 10 mm                         | 1140 mm    | 14868.25 cm <sup>3</sup> | 209760 mm        | 10M  | 116.72 kg  |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 1131.28 cm <sup>3</sup>  | 15960 mm         | 10M  | 8.88 kg    |
| 10 mm                         | 1160 mm    | 8527.13 cm <sup>3</sup>  | 120300 mm        | 10M  | 66.94 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |

u. Tulangan Utama Balok CB24

| <Tulangan Utama Balok CB24> |            |                        |                  |      |            |
|-----------------------------|------------|------------------------|------------------|------|------------|
| A                           | B          | C                      | D                | E    | F          |
| Bar Diameter                | Bar Length | Reinforcement Volu     | Total Bar Length | Type | Berat Besi |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |





v. Tulangan Sengkang Balok CB24

| <Tulangan Sengkang Balok CB24> |            |                         |                  |      |            |
|--------------------------------|------------|-------------------------|------------------|------|------------|
| A                              | B          | C                       | D                | E    | F          |
| Bar Diameter                   | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1070 mm    | 758.44 cm <sup>3</sup>  | 10700 mm         | 10M  | 5.95 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 1292.89 cm <sup>3</sup> | 18240 mm         | 10M  | 10.15 kg   |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 900 mm     | 699.61 cm <sup>3</sup>  | 9870 mm          | 10M  | 5.49 kg    |
| 10 mm                          | 1160 mm    | 574.15 cm <sup>3</sup>  | 8100 mm          | 10M  | 4.51 kg    |

4.5. Lantai 5

a. Tulangan Utama Balok G58

| <Tulangan Utama Balok G58> |            |                  |      |                         |            |
|----------------------------|------------|------------------|------|-------------------------|------------|
| A                          | B          | C                | D    | E                       | F          |
| Bar Diameter               | Bar Length | Total Bar Length | Type | Reinforcement Volu      | Berat Besi |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 13 mm                      | 8030 mm    | 8030 mm          | 13M  | 1017.22 cm <sup>3</sup> | 7.99 kg    |
| 13 mm                      | 8030 mm    | 8030 mm          | 13M  | 1017.22 cm <sup>3</sup> | 7.99 kg    |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 22 mm                      | 8030 mm    | 8030 mm          | 22M  | 3108.22 cm <sup>3</sup> | 24.40 kg   |
| 13 mm                      | 8030 mm    | 8030 mm          | 13M  | 1017.22 cm <sup>3</sup> | 7.99 kg    |
| 13 mm                      | 8030 mm    | 8030 mm          | 13M  | 1017.22 cm <sup>3</sup> | 7.99 kg    |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |
| 22 mm                      | 8000 mm    | 8000 mm          | 22M  | 3096.61 cm <sup>3</sup> | 24.31 kg   |





b. Tulangan Senggang Balok G58

| <Tulangan Senggang Balok G58> |            |                  |      |                          |            |
|-------------------------------|------------|------------------|------|--------------------------|------------|
| A                             | B          | C                | D    | E                        | F          |
| Bar Diameter                  | Bar Length | Total Bar Length | Type | Reinforcement Volu       | Berat Besi |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 119070 mm        | 13M  | 15083.41 cm <sup>3</sup> | 118.40 kg  |
| 13 mm                         | 1020 mm    | 49980 mm         | 13M  | 6331.31 cm <sup>3</sup>  | 49.70 kg   |
| 13 mm                         | 2430 mm    | 119070 mm        | 13M  | 15083.41 cm <sup>3</sup> | 118.40 kg  |
| 13 mm                         | 1020 mm    | 49980 mm         | 13M  | 6331.31 cm <sup>3</sup>  | 49.70 kg   |
| 13 mm                         | 2430 mm    | 121500 mm        | 13M  | 15391.24 cm <sup>3</sup> | 120.82 kg  |
| 13 mm                         | 1020 mm    | 51000 mm         | 13M  | 6460.52 cm <sup>3</sup>  | 50.72 kg   |
| 13 mm                         | 2430 mm    | 121500 mm        | 13M  | 15391.24 cm <sup>3</sup> | 120.82 kg  |
| 13 mm                         | 1020 mm    | 51000 mm         | 13M  | 6460.52 cm <sup>3</sup>  | 50.72 kg   |
| 13 mm                         | 2430 mm    | 114210 mm        | 13M  | 14467.77 cm <sup>3</sup> | 113.57 kg  |
| 13 mm                         | 1020 mm    | 47940 mm         | 13M  | 6072.89 cm <sup>3</sup>  | 47.67 kg   |
| 13 mm                         | 2430 mm    | 109350 mm        | 13M  | 13852.12 cm <sup>3</sup> | 108.74 kg  |
| 13 mm                         | 1020 mm    | 47940 mm         | 13M  | 6072.89 cm <sup>3</sup>  | 47.67 kg   |
| 13 mm                         | 2430 mm    | 114210 mm        | 13M  | 14467.77 cm <sup>3</sup> | 113.57 kg  |
| 13 mm                         | 1020 mm    | 47940 mm         | 13M  | 6072.89 cm <sup>3</sup>  | 47.67 kg   |

c. Tulangan Utama Balok G47













|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |

d. Tulangan Senggang Balok G47

| <Tulangan Senggang Balok G47> |            |                          |                  |      |            |
|-------------------------------|------------|--------------------------|------------------|------|------------|
| A                             | B          | C                        | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu       | Total Bar Length | Type | Berat Besi |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15172.09 cm <sup>3</sup> | 119770 mm        | 13M  | 119.10 kg  |
| 13 mm                         | 2030 mm    | 15172.09 cm <sup>3</sup> | 119770 mm        | 13M  | 119.10 kg  |
| 13 mm                         | 2030 mm    | 10800.47 cm <sup>3</sup> | 85260 mm         | 13M  | 84.78 kg   |
| 13 mm                         | 2030 mm    | 10800.47 cm <sup>3</sup> | 85260 mm         | 13M  | 84.78 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 1780 mm    | 13997.79 cm <sup>3</sup> | 110500 mm        | 13M  | 109.88 kg  |

e. Tulangan Utama Balok G34



|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |

f. Tulangan Sengkang Balok G34

| <Tulangan Sengkang Balok G34> |            |                         |                  |      |            |
|-------------------------------|------------|-------------------------|------------------|------|------------|
| A                             | B          | C                       | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 13 mm                         | 1230 mm    | 4518.56 cm <sup>3</sup> | 35670 mm         | 13M  | 35.47 kg   |
| 13 mm                         | 1230 mm    | 4518.56 cm <sup>3</sup> | 35670 mm         | 13M  | 35.47 kg   |
| 13 mm                         | 1230 mm    | 4986.00 cm <sup>3</sup> | 39360 mm         | 13M  | 39.14 kg   |
| 13 mm                         | 1230 mm    | 5141.81 cm <sup>3</sup> | 40590 mm         | 13M  | 40.36 kg   |
| 13 mm                         | 1230 mm    | 4830.19 cm <sup>3</sup> | 38130 mm         | 13M  | 37.92 kg   |
| 13 mm                         | 1230 mm    | 4830.19 cm <sup>3</sup> | 38130 mm         | 13M  | 37.92 kg   |
| 13 mm                         | 1230 mm    | 4830.19 cm <sup>3</sup> | 38130 mm         | 13M  | 37.92 kg   |

g. Tulangan Utama Balok CG47

| <Tulangan Utama Balok CG47> |            |                         |                  |      |            |
|-----------------------------|------------|-------------------------|------------------|------|------------|
| A                           | B          | C                       | D                | E    | F          |
| Bar Diameter                | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |

h. Tulangan Senggang Balok CG47

| <Tulangan Senggang Balok CG47> |            |                         |                  |      |            |
|--------------------------------|------------|-------------------------|------------------|------|------------|
| A                              | B          | C                       | D                | E    | F          |
| Bar Diameter                   | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 13 mm                          | 2030 mm    | 6943.16 cm <sup>3</sup> | 54810 mm         | 13M  | 54.50 kg   |
| 13 mm                          | 920 mm     | 3030.11 cm <sup>3</sup> | 23920 mm         | 13M  | 23.79 kg   |
| 13 mm                          | 320 mm     | 1053.95 cm <sup>3</sup> | 8320 mm          | 13M  | 8.27 kg    |

i. Tulangan Utama Balok CG46

| <Tulangan Utama Balok CG46> |            |                        |                  |      |            |
|-----------------------------|------------|------------------------|------------------|------|------------|
| A                           | B          | C                      | D                | E    | F          |
| Bar Diameter                | Bar Length | Reinforcement Volu     | Total Bar Length | Type | Berat Besi |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm <sup>3</sup> | 1660 mm          | 19M  | 3.73 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm <sup>3</sup> | 1660 mm          | 13M  | 1.65 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm <sup>3</sup> | 2180 mm          | 19M  | 4.90 kg    |
| 13 mm                       | 2180 mm    | 276.16 cm <sup>3</sup> | 2180 mm          | 13M  | 2.17 kg    |
| 13 mm                       | 2180 mm    | 276.16 cm <sup>3</sup> | 2180 mm          | 13M  | 2.17 kg    |

j. Tulangan Senggang Balok CG46

| <Tulangan Senggang Balok CG46> |            |                         |                  |      |            |
|--------------------------------|------------|-------------------------|------------------|------|------------|
| A                              | B          | C                       | D                | E    | F          |
| Bar Diameter                   | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                          | 1840 mm    | 1565.08 cm <sup>3</sup> | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 1565.08 cm <sup>3</sup> | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 1565.08 cm <sup>3</sup> | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 1565.08 cm <sup>3</sup> | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 2347.62 cm <sup>3</sup> | 33120 mm         | 10M  | 18.43 kg   |







o. Tulangan Utama Balok B45

| <Tulangan Utama Balok B45> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 13 mm                      | 3150 mm    | 399.03 cm <sup>3</sup>  | 3150 mm          | 13M  | 3.13 kg    |
| 13 mm                      | 3150 mm    | 399.03 cm <sup>3</sup>  | 3150 mm          | 13M  | 3.13 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>3</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 13 mm                      | 5750 mm    | 728.39 cm <sup>3</sup>  | 5750 mm          | 13M  | 5.72 kg    |
| 13 mm                      | 5750 mm    | 728.39 cm <sup>3</sup>  | 5750 mm          | 13M  | 5.72 kg    |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>3</sup> | 5750 mm          | 19M  | 12.93 kg   |

|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 13 mm | 5750 mm | 728.39 cm <sup>3</sup>  | 5750 mm | 13M | 5.72 kg  |
| 13 mm | 5750 mm | 728.39 cm <sup>3</sup>  | 5750 mm | 13M | 5.72 kg  |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 13 mm | 5870 mm | 743.59 cm <sup>3</sup>  | 5870 mm | 13M | 5.84 kg  |
| 13 mm | 5870 mm | 743.59 cm <sup>3</sup>  | 5870 mm | 13M | 5.84 kg  |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 13 mm | 4250 mm | 538.38 cm <sup>3</sup>  | 4250 mm | 13M | 4.23 kg  |
| 13 mm | 4250 mm | 538.38 cm <sup>3</sup>  | 4250 mm | 13M | 4.23 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |

p. Tulangan Sengkang Balok B45

| <Tulangan Sengkang Balok B45> |            |                         |                  |      |            |
|-------------------------------|------------|-------------------------|------------------|------|------------|
| A                             | B          | C                       | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 1640 mm    | 3371.16 cm <sup>3</sup> | 47560 mm         | 10M  | 26.46 kg   |
| 10 mm                         | 670 mm     | 1092.29 cm <sup>3</sup> | 15410 mm         | 10M  | 8.57 kg    |
| 10 mm                         | 1640 mm    | 6277.33 cm <sup>3</sup> | 88560 mm         | 10M  | 49.28 kg   |
| 10 mm                         | 670 mm     | 2089.61 cm <sup>3</sup> | 29480 mm         | 10M  | 16.40 kg   |
| 10 mm                         | 1640 mm    | 6277.33 cm <sup>3</sup> | 88560 mm         | 10M  | 49.28 kg   |
| 10 mm                         | 670 mm     | 2089.61 cm <sup>3</sup> | 29480 mm         | 10M  | 16.40 kg   |
| 10 mm                         | 1640 mm    | 6509.82 cm <sup>3</sup> | 91840 mm         | 10M  | 51.10 kg   |
| 10 mm                         | 670 mm     | 2089.61 cm <sup>3</sup> | 29480 mm         | 10M  | 16.40 kg   |
| 10 mm                         | 1640 mm    | 4533.62 cm <sup>3</sup> | 63960 mm         | 10M  | 35.59 kg   |
| 10 mm                         | 670 mm     | 1519.71 cm <sup>3</sup> | 21440 mm         | 10M  | 11.93 kg   |

q. Tulangan Utama Balok B36

| <Tulangan Utama Balok B36> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 13 mm                      | 7990 mm    | 1012.15 cm <sup>3</sup> | 7990 mm          | 13M  | 7.95 kg    |
| 13 mm                      | 7990 mm    | 1012.15 cm <sup>3</sup> | 7990 mm          | 13M  | 7.95 kg    |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |









|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 13 mm | 5750 mm | 728.39 cm <sup>2</sup>  | 5750 mm | 13M | 5.72 kg  |
| 13 mm | 5750 mm | 728.39 cm <sup>2</sup>  | 5750 mm | 13M | 5.72 kg  |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 13 mm | 5870 mm | 743.59 cm <sup>2</sup>  | 5870 mm | 13M | 5.84 kg  |
| 13 mm | 5870 mm | 743.59 cm <sup>2</sup>  | 5870 mm | 13M | 5.84 kg  |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 13 mm | 4250 mm | 538.38 cm <sup>2</sup>  | 4250 mm | 13M | 4.23 kg  |
| 13 mm | 4250 mm | 538.38 cm <sup>2</sup>  | 4250 mm | 13M | 4.23 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |





|       |          |                         |          |     |          |
|-------|----------|-------------------------|----------|-----|----------|
| 19 mm | 27700 mm | 7936.63 cm <sup>3</sup> | 27700 mm | 19M | 62.30 kg |
| 19 mm | 27700 mm | 7936.63 cm <sup>3</sup> | 27700 mm | 19M | 62.30 kg |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 15910 mm | 4558.55 cm <sup>3</sup> | 15910 mm | 19M | 35.78 kg |
| 19 mm | 15670 mm | 4489.79 cm <sup>3</sup> | 15670 mm | 19M | 35.24 kg |
| 19 mm | 15910 mm | 4558.55 cm <sup>3</sup> | 15910 mm | 19M | 35.78 kg |
| 19 mm | 15670 mm | 4489.79 cm <sup>3</sup> | 15670 mm | 19M | 35.24 kg |
| 19 mm | 15800 mm | 4527.03 cm <sup>3</sup> | 15800 mm | 19M | 35.54 kg |
| 19 mm | 15910 mm | 4558.55 cm <sup>3</sup> | 15910 mm | 19M | 35.78 kg |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |

t. Tulangan Sengkang Balok B24

| <Tulangan Sengkang Balok B24> |            |                          |                  |      |            |
|-------------------------------|------------|--------------------------|------------------|------|------------|
| A                             | B          | C                        | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu       | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2989.81 cm <sup>3</sup>  | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                         | 1140 mm    | 8646.21 cm <sup>3</sup>  | 121980 mm        | 10M  | 67.87 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1040 mm    | 737.17 cm <sup>3</sup>   | 10400 mm         | 10M  | 5.79 kg    |
| 10 mm                         | 1140 mm    | 14868.25 cm <sup>3</sup> | 209760 mm        | 10M  | 116.72 kg  |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 1131.28 cm <sup>3</sup>  | 15960 mm         | 10M  | 8.88 kg    |
| 10 mm                         | 1160 mm    | 8527.13 cm <sup>3</sup>  | 120300 mm        | 10M  | 66.94 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |

u. Tulangan Utama Balok CB24

| <Tulangan Utama Balok CB24> |            |                        |                  |      |            |
|-----------------------------|------------|------------------------|------------------|------|------------|
| A                           | B          | C                      | D                | E    | F          |
| Bar Diameter                | Bar Length | Reinforcement Volu     | Total Bar Length | Type | Berat Besi |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |



v. Tulangan Sengkang Balok CB24

| <Tulangan Sengkang Balok CB24> |            |                         |                  |      |            |
|--------------------------------|------------|-------------------------|------------------|------|------------|
| A                              | B          | C                       | D                | E    | F          |
| Bar Diameter                   | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1070 mm    | 758.44 cm <sup>3</sup>  | 10700 mm         | 10M  | 5.95 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 1292.89 cm <sup>3</sup> | 18240 mm         | 10M  | 10.15 kg   |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 900 mm     | 699.61 cm <sup>3</sup>  | 9870 mm          | 10M  | 5.49 kg    |
| 10 mm                          | 1160 mm    | 574.15 cm <sup>3</sup>  | 8100 mm          | 10M  | 4.51 kg    |

4.6. Lantai 6

a. Tulangan Utama Balok G58







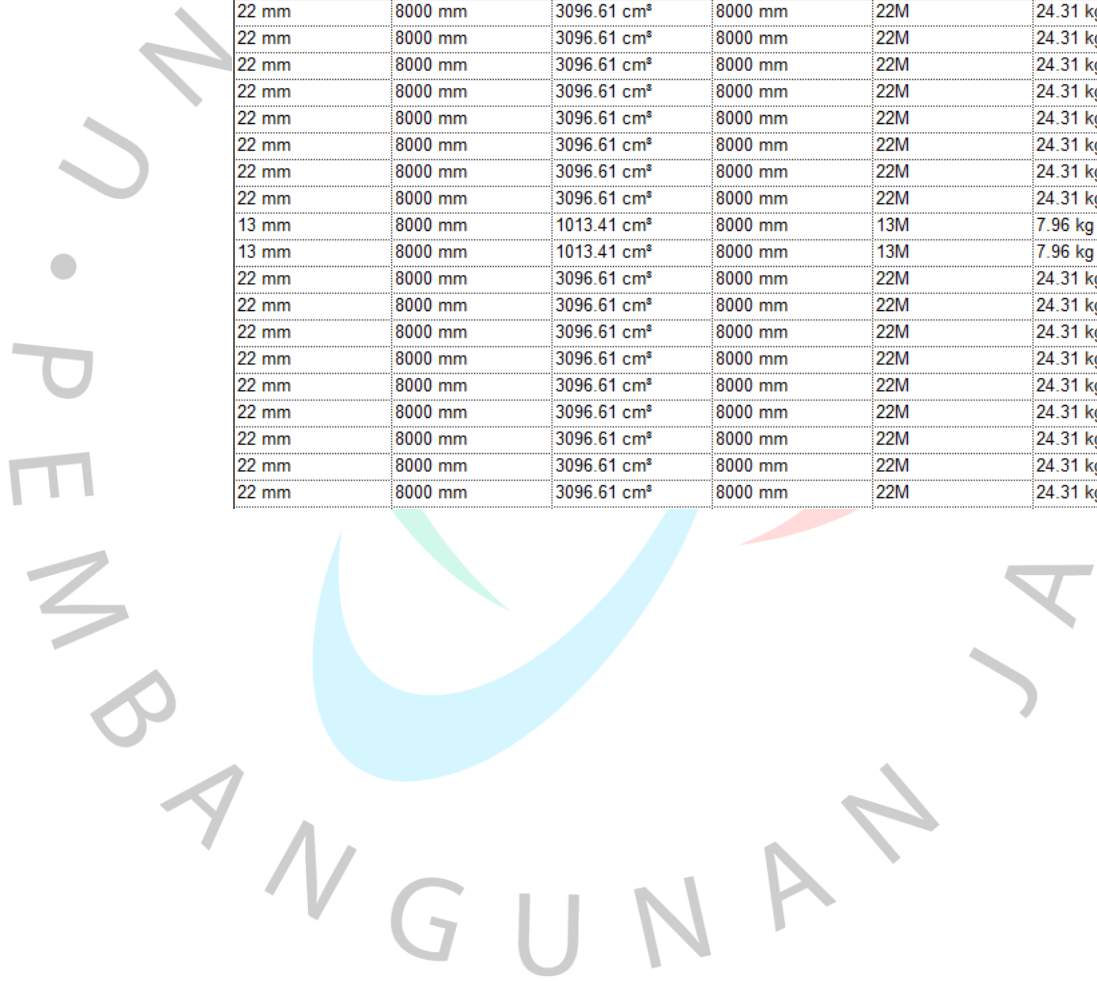


b. Tulangan Sengkang Balok G58

| <Tulangan Sengkang Balok G58> |            |                  |      |                          |            |
|-------------------------------|------------|------------------|------|--------------------------|------------|
| A                             | B          | C                | D    | E                        | F          |
| Bar Diameter                  | Bar Length | Total Bar Length | Type | Reinforcement Volu       | Berat Besi |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 116640 mm        | 13M  | 14775.59 cm <sup>3</sup> | 115.99 kg  |
| 13 mm                         | 1020 mm    | 48960 mm         | 13M  | 6202.10 cm <sup>3</sup>  | 48.69 kg   |
| 13 mm                         | 2430 mm    | 119070 mm        | 13M  | 15083.41 cm <sup>3</sup> | 118.40 kg  |
| 13 mm                         | 1020 mm    | 49980 mm         | 13M  | 6331.31 cm <sup>3</sup>  | 49.70 kg   |
| 13 mm                         | 2430 mm    | 119070 mm        | 13M  | 15083.41 cm <sup>3</sup> | 118.40 kg  |
| 13 mm                         | 1020 mm    | 49980 mm         | 13M  | 6331.31 cm <sup>3</sup>  | 49.70 kg   |
| 13 mm                         | 2430 mm    | 121500 mm        | 13M  | 15391.24 cm <sup>3</sup> | 120.82 kg  |
| 13 mm                         | 1020 mm    | 51000 mm         | 13M  | 6460.52 cm <sup>3</sup>  | 50.72 kg   |
| 13 mm                         | 2430 mm    | 121500 mm        | 13M  | 15391.24 cm <sup>3</sup> | 120.82 kg  |
| 13 mm                         | 1020 mm    | 51000 mm         | 13M  | 6460.52 cm <sup>3</sup>  | 50.72 kg   |
| 13 mm                         | 2430 mm    | 114210 mm        | 13M  | 14467.77 cm <sup>3</sup> | 113.57 kg  |
| 13 mm                         | 1020 mm    | 47940 mm         | 13M  | 6072.89 cm <sup>3</sup>  | 47.67 kg   |
| 13 mm                         | 2430 mm    | 109350 mm        | 13M  | 13852.12 cm <sup>3</sup> | 108.74 kg  |
| 13 mm                         | 1020 mm    | 47940 mm         | 13M  | 6072.89 cm <sup>3</sup>  | 47.67 kg   |
| 13 mm                         | 2430 mm    | 114210 mm        | 13M  | 14467.77 cm <sup>3</sup> | 113.57 kg  |
| 13 mm                         | 1020 mm    | 47940 mm         | 13M  | 6072.89 cm <sup>3</sup>  | 47.67 kg   |

c. Tulangan Utama Balok G47

| <Tulangan Utama G47> |            |                         |                  |      |            |
|----------------------|------------|-------------------------|------------------|------|------------|
| A                    | B          | C                       | D                | E    | F          |
| Bar Diameter         | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 13 mm                | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 13 mm                | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 13 mm                | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 13 mm                | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |
| 22 mm                | 8000 mm    | 3096.61 cm <sup>3</sup> | 8000 mm          | 22M  | 24.31 kg   |













|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |
| 22 mm | 8000 mm | 3096.61 cm <sup>3</sup> | 8000 mm | 22M | 24.31 kg |

d. Tulangan Senggang Balok G47

| <Tulangan Senggang Balok G47> |            |                          |                  |      |            |
|-------------------------------|------------|--------------------------|------------------|------|------------|
| A                             | B          | C                        | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu       | Total Bar Length | Type | Berat Besi |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15686.40 cm <sup>3</sup> | 123830 mm        | 13M  | 123.14 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15429.24 cm <sup>3</sup> | 121800 mm        | 13M  | 121.12 kg  |
| 13 mm                         | 2030 mm    | 15172.09 cm <sup>3</sup> | 119770 mm        | 13M  | 119.10 kg  |
| 13 mm                         | 2030 mm    | 15172.09 cm <sup>3</sup> | 119770 mm        | 13M  | 119.10 kg  |
| 13 mm                         | 2030 mm    | 10800.47 cm <sup>3</sup> | 85260 mm         | 13M  | 84.78 kg   |
| 13 mm                         | 2030 mm    | 10800.47 cm <sup>3</sup> | 85260 mm         | 13M  | 84.78 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 2030 mm    | 11571.93 cm <sup>3</sup> | 91350 mm         | 13M  | 90.84 kg   |
| 13 mm                         | 1780 mm    | 13997.79 cm <sup>3</sup> | 110500 mm        | 13M  | 109.88 kg  |

e. Tulangan Utama Balok G34



|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |
| 22 mm | 4000 mm | 1548.30 cm <sup>3</sup> | 4000 mm | 22M | 12.15 kg |

f. Tulangan Sengkang Balok G34

| <Tulangan Sengkang Balok G34> |            |                         |                  |      |            |
|-------------------------------|------------|-------------------------|------------------|------|------------|
| A                             | B          | C                       | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 13 mm                         | 1230 mm    | 4518.56 cm <sup>3</sup> | 35670 mm         | 13M  | 35.47 kg   |
| 13 mm                         | 1230 mm    | 4518.56 cm <sup>3</sup> | 35670 mm         | 13M  | 35.47 kg   |
| 13 mm                         | 1230 mm    | 4986.00 cm <sup>3</sup> | 39360 mm         | 13M  | 39.14 kg   |
| 13 mm                         | 1230 mm    | 5141.81 cm <sup>3</sup> | 40590 mm         | 13M  | 40.36 kg   |
| 13 mm                         | 1230 mm    | 4830.19 cm <sup>3</sup> | 38130 mm         | 13M  | 37.92 kg   |
| 13 mm                         | 1230 mm    | 4830.19 cm <sup>3</sup> | 38130 mm         | 13M  | 37.92 kg   |
| 13 mm                         | 1230 mm    | 4830.19 cm <sup>3</sup> | 38130 mm         | 13M  | 37.92 kg   |

g. Tulangan Utama Balok CG47

| <Tulangan Utama Balok CG47> |            |                         |                  |      |            |
|-----------------------------|------------|-------------------------|------------------|------|------------|
| A                           | B          | C                       | D                | E    | F          |
| Bar Diameter                | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 16 mm                       | 3000 mm    | 595.67 cm <sup>3</sup>  | 3000 mm          | 16M  | 4.68 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |
| 22 mm                       | 3000 mm    | 1161.23 cm <sup>3</sup> | 3000 mm          | 22M  | 9.12 kg    |

h. Tulangan Senggang Balok CG47

| <Tulangan Senggang Balok CG47> |            |                         |                  |      |            |
|--------------------------------|------------|-------------------------|------------------|------|------------|
| A                              | B          | C                       | D                | E    | F          |
| Bar Diameter                   | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 13 mm                          | 2030 mm    | 6943.16 cm <sup>3</sup> | 54810 mm         | 13M  | 54.50 kg   |
| 13 mm                          | 920 mm     | 3030.11 cm <sup>3</sup> | 23920 mm         | 13M  | 23.79 kg   |
| 13 mm                          | 320 mm     | 1053.95 cm <sup>3</sup> | 8320 mm          | 13M  | 8.27 kg    |

i. Tulangan Utama Balok CG46

| <Tulangan Utama Balok CG46> |            |                    |                  |      |            |
|-----------------------------|------------|--------------------|------------------|------|------------|
| A                           | B          | C                  | D                | E    | F          |
| Bar Diameter                | Bar Length | Reinforcement Volu | Total Bar Length | Type | Berat Besi |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm³         | 1660 mm          | 13M  | 1.65 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm³         | 1660 mm          | 13M  | 1.65 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm³         | 1660 mm          | 13M  | 1.65 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm³         | 1660 mm          | 13M  | 1.65 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm³         | 1660 mm          | 13M  | 1.65 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm³         | 1660 mm          | 13M  | 1.65 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 19 mm                       | 1660 mm    | 475.63 cm³         | 1660 mm          | 19M  | 3.73 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm³         | 1660 mm          | 13M  | 1.65 kg    |
| 13 mm                       | 1660 mm    | 210.28 cm³         | 1660 mm          | 13M  | 1.65 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm³         | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm³         | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm³         | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm³         | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm³         | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm³         | 2180 mm          | 19M  | 4.90 kg    |
| 19 mm                       | 2180 mm    | 624.62 cm³         | 2180 mm          | 19M  | 4.90 kg    |
| 13 mm                       | 2180 mm    | 276.16 cm³         | 2180 mm          | 13M  | 2.17 kg    |
| 13 mm                       | 2180 mm    | 276.16 cm³         | 2180 mm          | 13M  | 2.17 kg    |

j. Tulangan Senggang Balok CG46

| <Tulangan Senggang Balok CG46> |            |                    |                  |      |            |
|--------------------------------|------------|--------------------|------------------|------|------------|
| A                              | B          | C                  | D                | E    | F          |
| Bar Diameter                   | Bar Length | Reinforcement Volu | Total Bar Length | Type | Berat Besi |
| 10 mm                          | 1840 mm    | 1565.08 cm³        | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 1565.08 cm³        | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 1565.08 cm³        | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 1565.08 cm³        | 22080 mm         | 10M  | 12.29 kg   |
| 10 mm                          | 1840 mm    | 2347.62 cm³        | 33120 mm         | 10M  | 18.43 kg   |



m. Tulangan Utama Balok B57

| <Tulangan Utama Balok B57> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 19 mm                      | 8000 mm    | 2292.17 cm <sup>3</sup> | 8000 mm          | 19M  | 17.99 kg   |
| 13 mm                      | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 13 mm                      | 8000 mm    | 1013.41 cm <sup>3</sup> | 8000 mm          | 13M  | 7.96 kg    |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 19 mm                      | 6000 mm    | 1719.13 cm <sup>3</sup> | 6000 mm          | 19M  | 13.50 kg   |
| 13 mm                      | 6000 mm    | 760.06 cm <sup>3</sup>  | 6000 mm          | 13M  | 5.97 kg    |
| 13 mm                      | 6000 mm    | 760.06 cm <sup>3</sup>  | 6000 mm          | 13M  | 5.97 kg    |

n. Tulangan Sengkang Balok B57

| <Tulangan Sengkang Balok B57> |            |                         |                  |      |            |
|-------------------------------|------------|-------------------------|------------------|------|------------|
| A                             | B          | C                       | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 2240 mm    | 9685.34 cm <sup>3</sup> | 136640 mm        | 10M  | 76.03 kg   |
| 10 mm                         | 870 mm     | 3823.39 cm <sup>3</sup> | 53940 mm         | 10M  | 30.01 kg   |
| 10 mm                         | 420 mm     | 1845.77 cm <sup>3</sup> | 26040 mm         | 10M  | 14.49 kg   |
| 10 mm                         | 2240 mm    | 7144.92 cm <sup>3</sup> | 100800 mm        | 10M  | 56.09 kg   |
| 10 mm                         | 870 mm     | 2836.71 cm <sup>3</sup> | 40020 mm         | 10M  | 22.27 kg   |
| 10 mm                         | 420 mm     | 1369.44 cm <sup>3</sup> | 19320 mm         | 10M  | 10.75 kg   |

o. Tulangan Utama Balok B45

| <Tulangan Utama Balok B45> |            |                    |                  |      |            |
|----------------------------|------------|--------------------|------------------|------|------------|
| A                          | B          | C                  | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 3150 mm    | 902.54 cm³         | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm³         | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm³         | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm³         | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm³         | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm³         | 3150 mm          | 19M  | 7.08 kg    |
| 13 mm                      | 3150 mm    | 399.03 cm³         | 3150 mm          | 13M  | 3.13 kg    |
| 13 mm                      | 3150 mm    | 399.03 cm³         | 3150 mm          | 13M  | 3.13 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm³         | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm³         | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm³         | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm³         | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm³         | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm³         | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 5750 mm    | 1647.50 cm³        | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm³        | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm³        | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm³        | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm³        | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm³        | 5750 mm          | 19M  | 12.93 kg   |
| 13 mm                      | 5750 mm    | 728.39 cm³         | 5750 mm          | 13M  | 5.72 kg    |
| 13 mm                      | 5750 mm    | 728.39 cm³         | 5750 mm          | 13M  | 5.72 kg    |
| 19 mm                      | 5750 mm    | 1647.50 cm³        | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm³        | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm³        | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm³        | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm³        | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm³        | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm³        | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm³        | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm³        | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm³        | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm³        | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm³        | 5750 mm          | 19M  | 12.93 kg   |



|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 13 mm | 5750 mm | 728.39 cm <sup>3</sup>  | 5750 mm | 13M | 5.72 kg  |
| 13 mm | 5750 mm | 728.39 cm <sup>3</sup>  | 5750 mm | 13M | 5.72 kg  |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>3</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 13 mm | 5870 mm | 743.59 cm <sup>3</sup>  | 5870 mm | 13M | 5.84 kg  |
| 13 mm | 5870 mm | 743.59 cm <sup>3</sup>  | 5870 mm | 13M | 5.84 kg  |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>3</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 13 mm | 4250 mm | 538.38 cm <sup>3</sup>  | 4250 mm | 13M | 4.23 kg  |
| 13 mm | 4250 mm | 538.38 cm <sup>3</sup>  | 4250 mm | 13M | 4.23 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>3</sup> | 4250 mm | 19M | 9.56 kg  |

p. Tulangan Sengkang Balok B45

| <Tulangan Sengkang Balok B45> |            |                         |                  |      |            |
|-------------------------------|------------|-------------------------|------------------|------|------------|
| A                             | B          | C                       | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 1640 mm    | 3371.16 cm <sup>3</sup> | 47560 mm         | 10M  | 26.46 kg   |
| 10 mm                         | 670 mm     | 1092.29 cm <sup>3</sup> | 15410 mm         | 10M  | 8.57 kg    |
| 10 mm                         | 1640 mm    | 6277.33 cm <sup>3</sup> | 88560 mm         | 10M  | 49.28 kg   |
| 10 mm                         | 670 mm     | 2089.61 cm <sup>3</sup> | 29480 mm         | 10M  | 16.40 kg   |
| 10 mm                         | 1640 mm    | 6277.33 cm <sup>3</sup> | 88560 mm         | 10M  | 49.28 kg   |
| 10 mm                         | 670 mm     | 2089.61 cm <sup>3</sup> | 29480 mm         | 10M  | 16.40 kg   |
| 10 mm                         | 1640 mm    | 6509.82 cm <sup>3</sup> | 91840 mm         | 10M  | 51.10 kg   |
| 10 mm                         | 670 mm     | 2089.61 cm <sup>3</sup> | 29480 mm         | 10M  | 16.40 kg   |
| 10 mm                         | 1640 mm    | 4533.62 cm <sup>3</sup> | 63960 mm         | 10M  | 35.59 kg   |
| 10 mm                         | 670 mm     | 1519.71 cm <sup>3</sup> | 21440 mm         | 10M  | 11.93 kg   |

q. Tulangan Utama Balok B36

| <Tulangan Utama Balok B36> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 8030 mm    | 2300.76 cm <sup>3</sup> | 8030 mm          | 19M  | 18.06 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 19 mm                      | 7970 mm    | 2283.57 cm <sup>3</sup> | 7970 mm          | 19M  | 17.93 kg   |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 13 mm                      | 8030 mm    | 1017.22 cm <sup>3</sup> | 8030 mm          | 13M  | 7.99 kg    |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |
| 13 mm                      | 7990 mm    | 1012.15 cm <sup>3</sup> | 7990 mm          | 13M  | 7.95 kg    |
| 13 mm                      | 7990 mm    | 1012.15 cm <sup>3</sup> | 7990 mm          | 13M  | 7.95 kg    |
| 19 mm                      | 7990 mm    | 2289.30 cm <sup>3</sup> | 7990 mm          | 19M  | 17.97 kg   |





|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 19 mm | 8000 mm | 2292.17 cm <sup>2</sup> | 8000 mm | 19M | 17.99 kg |
| 19 mm | 8000 mm | 2292.17 cm <sup>2</sup> | 8000 mm | 19M | 17.99 kg |
| 19 mm | 8000 mm | 2292.17 cm <sup>2</sup> | 8000 mm | 19M | 17.99 kg |
| 13 mm | 8000 mm | 1013.41 cm <sup>2</sup> | 8000 mm | 13M | 7.96 kg  |
| 13 mm | 8000 mm | 1013.41 cm <sup>2</sup> | 8000 mm | 13M | 7.96 kg  |

r. Tulangan Senggang Balok B36

| <Tulangan Utama Balok B45> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>2</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>2</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>2</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>2</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>2</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>2</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 13 mm                      | 3150 mm    | 399.03 cm <sup>2</sup>  | 3150 mm          | 13M  | 3.13 kg    |
| 13 mm                      | 3150 mm    | 399.03 cm <sup>2</sup>  | 3150 mm          | 13M  | 3.13 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>2</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>2</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>2</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>2</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>2</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>2</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>2</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 3150 mm    | 902.54 cm <sup>2</sup>  | 3150 mm          | 19M  | 7.08 kg    |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>2</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>2</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>2</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>2</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>2</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>2</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 13 mm                      | 5750 mm    | 728.39 cm <sup>2</sup>  | 5750 mm          | 13M  | 5.72 kg    |
| 13 mm                      | 5750 mm    | 728.39 cm <sup>2</sup>  | 5750 mm          | 13M  | 5.72 kg    |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>2</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>2</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>2</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>2</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>2</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>2</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>2</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>2</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>2</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>2</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>2</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>2</sup> | 5750 mm          | 19M  | 12.93 kg   |
| 19 mm                      | 5750 mm    | 1647.50 cm <sup>2</sup> | 5750 mm          | 19M  | 12.93 kg   |

|       |         |                         |         |     |          |
|-------|---------|-------------------------|---------|-----|----------|
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 13 mm | 5750 mm | 728.39 cm <sup>2</sup>  | 5750 mm | 13M | 5.72 kg  |
| 13 mm | 5750 mm | 728.39 cm <sup>2</sup>  | 5750 mm | 13M | 5.72 kg  |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5750 mm | 1647.50 cm <sup>2</sup> | 5750 mm | 19M | 12.93 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 13 mm | 5870 mm | 743.59 cm <sup>2</sup>  | 5870 mm | 13M | 5.84 kg  |
| 13 mm | 5870 mm | 743.59 cm <sup>2</sup>  | 5870 mm | 13M | 5.84 kg  |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 5870 mm | 1681.88 cm <sup>2</sup> | 5870 mm | 19M | 13.20 kg |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 13 mm | 4250 mm | 538.38 cm <sup>2</sup>  | 4250 mm | 13M | 4.23 kg  |
| 13 mm | 4250 mm | 538.38 cm <sup>2</sup>  | 4250 mm | 13M | 4.23 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |
| 19 mm | 4250 mm | 1217.71 cm <sup>2</sup> | 4250 mm | 19M | 9.56 kg  |

s. Tulangan Utama Balok B24

| <Tulangan Utama Balok B24> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 3970 mm    | 1137.49 cm <sup>3</sup> | 3970 mm          | 19M  | 8.93 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 4000 mm    | 1146.08 cm <sup>3</sup> | 4000 mm          | 19M  | 9.00 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 3990 mm    | 1143.22 cm <sup>3</sup> | 3990 mm          | 19M  | 8.97 kg    |
| 19 mm                      | 5700 mm    | 1633.17 cm <sup>3</sup> | 5700 mm          | 19M  | 12.82 kg   |





|       |          |                         |          |     |          |
|-------|----------|-------------------------|----------|-----|----------|
| 19 mm | 27700 mm | 7936.63 cm <sup>3</sup> | 27700 mm | 19M | 62.30 kg |
| 19 mm | 27700 mm | 7936.63 cm <sup>3</sup> | 27700 mm | 19M | 62.30 kg |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 3970 mm  | 1137.49 cm <sup>3</sup> | 3970 mm  | 19M | 8.93 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 2430 mm  | 696.25 cm <sup>3</sup>  | 2430 mm  | 19M | 5.47 kg  |
| 19 mm | 15910 mm | 4558.55 cm <sup>3</sup> | 15910 mm | 19M | 35.78 kg |
| 19 mm | 15670 mm | 4489.79 cm <sup>3</sup> | 15670 mm | 19M | 35.24 kg |
| 19 mm | 15910 mm | 4558.55 cm <sup>3</sup> | 15910 mm | 19M | 35.78 kg |
| 19 mm | 15670 mm | 4489.79 cm <sup>3</sup> | 15670 mm | 19M | 35.24 kg |
| 19 mm | 15800 mm | 4527.03 cm <sup>3</sup> | 15800 mm | 19M | 35.54 kg |
| 19 mm | 15910 mm | 4558.55 cm <sup>3</sup> | 15910 mm | 19M | 35.78 kg |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |
| 19 mm | 3990 mm  | 1143.22 cm <sup>3</sup> | 3990 mm  | 19M | 8.97 kg  |

t. Tulangan Sengkang Balok B24

| <Tulangan Sengkang Balok B24> |            |                          |                  |      |            |
|-------------------------------|------------|--------------------------|------------------|------|------------|
| A                             | B          | C                        | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu       | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2989.81 cm <sup>3</sup>  | 42180 mm         | 10M  | 23.47 kg   |
| 10 mm                         | 1140 mm    | 8646.21 cm <sup>3</sup>  | 121980 mm        | 10M  | 67.87 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1040 mm    | 737.17 cm <sup>3</sup>   | 10400 mm         | 10M  | 5.79 kg    |
| 10 mm                         | 1140 mm    | 14868.25 cm <sup>3</sup> | 209760 mm        | 10M  | 116.72 kg  |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |
| 10 mm                         | 1140 mm    | 1131.28 cm <sup>3</sup>  | 15960 mm         | 10M  | 8.88 kg    |
| 10 mm                         | 1160 mm    | 8527.13 cm <sup>3</sup>  | 120300 mm        | 10M  | 66.94 kg   |
| 10 mm                         | 1140 mm    | 2020.14 cm <sup>3</sup>  | 28500 mm         | 10M  | 15.86 kg   |

u. Tulangan Utama Balok CB24

| <Tulangan Utama Balok CB24> |            |                        |                  |      |            |
|-----------------------------|------------|------------------------|------------------|------|------------|
| A                           | B          | C                      | D                | E    | F          |
| Bar Diameter                | Bar Length | Reinforcement Volu     | Total Bar Length | Type | Berat Besi |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1270 mm    | 363.88 cm <sup>3</sup> | 1270 mm          | 19M  | 2.86 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1650 mm    | 472.76 cm <sup>3</sup> | 1650 mm          | 19M  | 3.71 kg    |
| 19 mm                       | 1200 mm    | 343.83 cm <sup>3</sup> | 1200 mm          | 19M  | 2.70 kg    |



v. Tulangan Senggang Balok CB24

| <Tulangan Senggang Balok CB24> |            |                         |                  |      |            |
|--------------------------------|------------|-------------------------|------------------|------|------------|
| A                              | B          | C                       | D                | E    | F          |
| Bar Diameter                   | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1070 mm    | 758.44 cm <sup>3</sup>  | 10700 mm         | 10M  | 5.95 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 1292.89 cm <sup>3</sup> | 18240 mm         | 10M  | 10.15 kg   |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 1140 mm    | 808.06 cm <sup>3</sup>  | 11400 mm         | 10M  | 6.34 kg    |
| 10 mm                          | 900 mm     | 699.61 cm <sup>3</sup>  | 9870 mm          | 10M  | 5.49 kg    |
| 10 mm                          | 1160 mm    | 574.15 cm <sup>3</sup>  | 8100 mm          | 10M  | 4.51 kg    |

4.7. Rooftop

a. Tulangan Utama Balok B24

| <Tulangan Utama Balok B24> |            |                         |                  |      |            |
|----------------------------|------------|-------------------------|------------------|------|------------|
| A                          | B          | C                       | D                | E    | F          |
| Bar Diameter               | Bar Length | Reinforcement Volu      | Total Bar Length | Type | Berat Besi |
| 19 mm                      | 2630 mm    | 753.55 cm <sup>3</sup>  | 2630 mm          | 19M  | 5.92 kg    |
| 19 mm                      | 2790 mm    | 799.39 cm <sup>3</sup>  | 2790 mm          | 19M  | 6.28 kg    |
| 19 mm                      | 2630 mm    | 753.55 cm <sup>3</sup>  | 2630 mm          | 19M  | 5.92 kg    |
| 19 mm                      | 2790 mm    | 799.39 cm <sup>3</sup>  | 2790 mm          | 19M  | 6.28 kg    |
| 19 mm                      | 2790 mm    | 799.39 cm <sup>3</sup>  | 2790 mm          | 19M  | 6.28 kg    |
| 19 mm                      | 2790 mm    | 799.39 cm <sup>3</sup>  | 2790 mm          | 19M  | 6.28 kg    |
| 19 mm                      | 2790 mm    | 799.39 cm <sup>3</sup>  | 2790 mm          | 19M  | 6.28 kg    |
| 19 mm                      | 2950 mm    | 845.24 cm <sup>3</sup>  | 2950 mm          | 19M  | 6.64 kg    |
| 19 mm                      | 2790 mm    | 799.39 cm <sup>3</sup>  | 2790 mm          | 19M  | 6.28 kg    |
| 19 mm                      | 2950 mm    | 845.24 cm <sup>3</sup>  | 2950 mm          | 19M  | 6.64 kg    |
| 19 mm                      | 2790 mm    | 799.39 cm <sup>3</sup>  | 2790 mm          | 19M  | 6.28 kg    |
| 19 mm                      | 2790 mm    | 799.39 cm <sup>3</sup>  | 2790 mm          | 19M  | 6.28 kg    |
| 19 mm                      | 2790 mm    | 799.39 cm <sup>3</sup>  | 2790 mm          | 19M  | 6.28 kg    |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |
| 19 mm                      | 5500 mm    | 1575.87 cm <sup>3</sup> | 5500 mm          | 19M  | 12.37 kg   |

|       |         |             |         |     |          |
|-------|---------|-------------|---------|-----|----------|
| 19 mm | 5500 mm | 1575.87 cm³ | 5500 mm | 19M | 12.37 kg |
| 19 mm | 4000 mm | 1146.08 cm³ | 4000 mm | 19M | 9.00 kg  |
| 19 mm | 4000 mm | 1146.08 cm³ | 4000 mm | 19M | 9.00 kg  |
| 19 mm | 4000 mm | 1146.08 cm³ | 4000 mm | 19M | 9.00 kg  |
| 19 mm | 4000 mm | 1146.08 cm³ | 4000 mm | 19M | 9.00 kg  |
| 19 mm | 4000 mm | 1146.08 cm³ | 4000 mm | 19M | 9.00 kg  |
| 19 mm | 4000 mm | 1146.08 cm³ | 4000 mm | 19M | 9.00 kg  |
| 19 mm | 4000 mm | 1146.08 cm³ | 4000 mm | 19M | 9.00 kg  |
| 19 mm | 4000 mm | 1146.08 cm³ | 4000 mm | 19M | 9.00 kg  |
| 19 mm | 4000 mm | 1146.08 cm³ | 4000 mm | 19M | 9.00 kg  |
| 19 mm | 4000 mm | 1146.08 cm³ | 4000 mm | 19M | 9.00 kg  |
| 19 mm | 4000 mm | 1146.08 cm³ | 4000 mm | 19M | 9.00 kg  |
| 19 mm | 4000 mm | 1146.08 cm³ | 4000 mm | 19M | 9.00 kg  |
| 19 mm | 4000 mm | 1146.08 cm³ | 4000 mm | 19M | 9.00 kg  |
| 19 mm | 4000 mm | 1146.08 cm³ | 4000 mm | 19M | 9.00 kg  |

b. Tulangan Sengkang Balok B24

| <Tulangan Sengkang Balok B24> |            |                    |                  |      |            |
|-------------------------------|------------|--------------------|------------------|------|------------|
| A                             | B          | C                  | D                | E    | F          |
| Bar Diameter                  | Bar Length | Reinforcement Volu | Total Bar Length | Type | Berat Besi |
| 10 mm                         | 1140 mm    | 1454.50 cm³        | 20520 mm         | 10M  | 11.42 kg   |
| 10 mm                         | 1140 mm    | 1373.70 cm³        | 19380 mm         | 10M  | 10.78 kg   |
| 10 mm                         | 1140 mm    | 2828.20 cm³        | 39900 mm         | 10M  | 22.20 kg   |
| 10 mm                         | 1140 mm    | 2828.20 cm³        | 39900 mm         | 10M  | 22.20 kg   |
| 10 mm                         | 1140 mm    | 2828.20 cm³        | 39900 mm         | 10M  | 22.20 kg   |
| 10 mm                         | 1140 mm    | 2828.20 cm³        | 39900 mm         | 10M  | 22.20 kg   |
| 10 mm                         | 1140 mm    | 2828.20 cm³        | 39900 mm         | 10M  | 22.20 kg   |
| 10 mm                         | 1140 mm    | 2100.95 cm³        | 29640 mm         | 10M  | 16.49 kg   |
| 10 mm                         | 1140 mm    | 2100.95 cm³        | 29640 mm         | 10M  | 16.49 kg   |

5. Tulangan Pelat Lantai

| <Tulangan Pelat Lantai> |            |                    |                  |                              |            |               |
|-------------------------|------------|--------------------|------------------|------------------------------|------------|---------------|
| A                       | B          | C                  | D                | E                            | F          | G             |
| Bar Diameter            | Bar Length | Reinforcement Volu | Total Bar Length | Type                         | Berat Besi | Host Category |
| 12 mm                   | 9050 mm    | 19447.09 cm³       | 171950 mm        | Tulangan Plat Lantai D12-200 | 152.66 kg  | Floor         |
| 12 mm                   | 13170 mm   | 196612.93 cm³      | 1738440 mm       | Tulangan Plat Lantai D12-200 | 1543.41 kg | Floor         |
| 12 mm                   | 26310 mm   | 62487.41 cm³       | 552510 mm        | Tulangan Plat Lantai D12-200 | 490.53 kg  | Floor         |
| 12 mm                   | 29960 mm   | 155866.22 cm³      | 1378160 mm       | Tulangan Plat Lantai D12-200 | 1223.55 kg | Floor         |
| 12 mm                   | 21160 mm   | 131622.68 cm³      | 1163800 mm       | Tulangan Plat Lantai D12-200 | 1033.24 kg | Floor         |
| 12 mm                   | 16990 mm   | 26901.33 cm³       | 237860 mm        | Tulangan Plat Lantai D12-200 | 211.18 kg  | Floor         |
| 12 mm                   | 21160 mm   | 47862.79 cm³       | 423200 mm        | Tulangan Plat Lantai D12-200 | 375.72 kg  | Floor         |
| 12 mm                   | 10960 mm   | 26030.48 cm³       | 230160 mm        | Tulangan Plat Lantai D12-200 | 204.34 kg  | Floor         |
| 12 mm                   | 3860 mm    | 9167.67 cm³        | 81060 mm         | Tulangan Plat Lantai D12-200 | 71.97 kg   | Floor         |
| 12 mm                   | 17560 mm   | 170795.07 cm³      | 1510160 mm       | Tulangan Plat Lantai D12-200 | 1340.74 kg | Floor         |
| 12 mm                   | 20 mm      | 2.26 cm³           | 20 mm            | Tulangan Plat Lantai D12-200 | 0.02 kg    | Floor         |
| 12 mm                   | 620 mm     | 70.12 cm³          | 620 mm           | Tulangan Plat Lantai D12-200 | 0.55 kg    | Floor         |
| 12 mm                   | 1140 mm    | 128.93 cm³         | 1140 mm          | Tulangan Plat Lantai D12-200 | 1.01 kg    | Floor         |
| 12 mm                   | 1590 mm    | 179.82 cm³         | 1590 mm          | Tulangan Plat Lantai D12-200 | 1.41 kg    | Floor         |
| 12 mm                   | 2000 mm    | 226.19 cm³         | 2000 mm          | Tulangan Plat Lantai D12-200 | 1.78 kg    | Floor         |
| 12 mm                   | 2370 mm    | 268.04 cm³         | 2370 mm          | Tulangan Plat Lantai D12-200 | 2.10 kg    | Floor         |
| 12 mm                   | 2710 mm    | 306.49 cm³         | 2710 mm          | Tulangan Plat Lantai D12-200 | 2.41 kg    | Floor         |
| 12 mm                   | 3020 mm    | 341.55 cm³         | 3020 mm          | Tulangan Plat Lantai D12-200 | 2.68 kg    | Floor         |
| 12 mm                   | 3320 mm    | 375.48 cm³         | 3320 mm          | Tulangan Plat Lantai D12-200 | 2.95 kg    | Floor         |
| 12 mm                   | 3600 mm    | 407.15 cm³         | 3600 mm          | Tulangan Plat Lantai D12-200 | 3.20 kg    | Floor         |
| 12 mm                   | 3860 mm    | 436.56 cm³         | 3860 mm          | Tulangan Plat Lantai D12-200 | 3.43 kg    | Floor         |
| 12 mm                   | 4100 mm    | 463.70 cm³         | 4100 mm          | Tulangan Plat Lantai D12-200 | 3.64 kg    | Floor         |
| 12 mm                   | 4340 mm    | 490.84 cm³         | 4340 mm          | Tulangan Plat Lantai D12-200 | 3.85 kg    | Floor         |
| 12 mm                   | 4560 mm    | 515.72 cm³         | 4560 mm          | Tulangan Plat Lantai D12-200 | 4.05 kg    | Floor         |
| 12 mm                   | 4770 mm    | 539.47 cm³         | 4770 mm          | Tulangan Plat Lantai D12-200 | 4.23 kg    | Floor         |
| 12 mm                   | 4970 mm    | 562.09 cm³         | 4970 mm          | Tulangan Plat Lantai D12-200 | 4.41 kg    | Floor         |
| 12 mm                   | 5160 mm    | 583.58 cm³         | 5160 mm          | Tulangan Plat Lantai D12-200 | 4.58 kg    | Floor         |
| 12 mm                   | 5340 mm    | 603.94 cm³         | 5340 mm          | Tulangan Plat Lantai D12-200 | 4.74 kg    | Floor         |
| 12 mm                   | 5510 mm    | 623.17 cm³         | 5510 mm          | Tulangan Plat Lantai D12-200 | 4.89 kg    | Floor         |
| 12 mm                   | 5680 mm    | 642.39 cm³         | 5680 mm          | Tulangan Plat Lantai D12-200 | 5.04 kg    | Floor         |
| 12 mm                   | 5840 mm    | 660.49 cm³         | 5840 mm          | Tulangan Plat Lantai D12-200 | 5.18 kg    | Floor         |

|       |         |                          |           |                              |           |       |
|-------|---------|--------------------------|-----------|------------------------------|-----------|-------|
| 12 mm | 5990 mm | 677.45 cm <sup>3</sup>   | 5990 mm   | Tulangan Plat Lantai D12-200 | 5.32 kg   | Floor |
| 12 mm | 6140 mm | 694.42 cm <sup>3</sup>   | 6140 mm   | Tulangan Plat Lantai D12-200 | 5.45 kg   | Floor |
| 12 mm | 6280 mm | 710.25 cm <sup>3</sup>   | 6280 mm   | Tulangan Plat Lantai D12-200 | 5.58 kg   | Floor |
| 12 mm | 6410 mm | 724.95 cm <sup>3</sup>   | 6410 mm   | Tulangan Plat Lantai D12-200 | 5.69 kg   | Floor |
| 12 mm | 6540 mm | 739.66 cm <sup>3</sup>   | 6540 mm   | Tulangan Plat Lantai D12-200 | 5.81 kg   | Floor |
| 12 mm | 6660 mm | 753.23 cm <sup>3</sup>   | 6660 mm   | Tulangan Plat Lantai D12-200 | 5.91 kg   | Floor |
| 12 mm | 6770 mm | 765.67 cm <sup>3</sup>   | 6770 mm   | Tulangan Plat Lantai D12-200 | 6.01 kg   | Floor |
| 12 mm | 6880 mm | 778.11 cm <sup>3</sup>   | 6880 mm   | Tulangan Plat Lantai D12-200 | 6.11 kg   | Floor |
| 12 mm | 6990 mm | 790.55 cm <sup>3</sup>   | 6990 mm   | Tulangan Plat Lantai D12-200 | 6.21 kg   | Floor |
| 12 mm | 7090 mm | 801.86 cm <sup>3</sup>   | 7090 mm   | Tulangan Plat Lantai D12-200 | 6.29 kg   | Floor |
| 12 mm | 7190 mm | 813.17 cm <sup>3</sup>   | 7190 mm   | Tulangan Plat Lantai D12-200 | 6.38 kg   | Floor |
| 12 mm | 7280 mm | 823.35 cm <sup>3</sup>   | 7280 mm   | Tulangan Plat Lantai D12-200 | 6.46 kg   | Floor |
| 12 mm | 7370 mm | 833.53 cm <sup>3</sup>   | 7370 mm   | Tulangan Plat Lantai D12-200 | 6.54 kg   | Floor |
| 12 mm | 7450 mm | 842.58 cm <sup>3</sup>   | 7450 mm   | Tulangan Plat Lantai D12-200 | 6.61 kg   | Floor |
| 12 mm | 7530 mm | 851.62 cm <sup>3</sup>   | 7530 mm   | Tulangan Plat Lantai D12-200 | 6.69 kg   | Floor |
| 12 mm | 7600 mm | 859.54 cm <sup>3</sup>   | 7600 mm   | Tulangan Plat Lantai D12-200 | 6.75 kg   | Floor |
| 12 mm | 7670 mm | 867.46 cm <sup>3</sup>   | 7670 mm   | Tulangan Plat Lantai D12-200 | 6.81 kg   | Floor |
| 12 mm | 7740 mm | 875.37 cm <sup>3</sup>   | 7740 mm   | Tulangan Plat Lantai D12-200 | 6.87 kg   | Floor |
| 12 mm | 7800 mm | 882.16 cm <sup>3</sup>   | 7800 mm   | Tulangan Plat Lantai D12-200 | 6.92 kg   | Floor |
| 12 mm | 7860 mm | 888.95 cm <sup>3</sup>   | 7860 mm   | Tulangan Plat Lantai D12-200 | 6.98 kg   | Floor |
| 12 mm | 7910 mm | 894.60 cm <sup>3</sup>   | 7910 mm   | Tulangan Plat Lantai D12-200 | 7.02 kg   | Floor |
| 12 mm | 7970 mm | 901.39 cm <sup>3</sup>   | 7970 mm   | Tulangan Plat Lantai D12-200 | 7.08 kg   | Floor |
| 12 mm | 8010 mm | 905.91 cm <sup>3</sup>   | 8010 mm   | Tulangan Plat Lantai D12-200 | 7.11 kg   | Floor |
| 12 mm | 8060 mm | 911.56 cm <sup>3</sup>   | 8060 mm   | Tulangan Plat Lantai D12-200 | 7.16 kg   | Floor |
| 12 mm | 8100 mm | 916.09 cm <sup>3</sup>   | 8100 mm   | Tulangan Plat Lantai D12-200 | 7.19 kg   | Floor |
| 12 mm | 8130 mm | 919.48 cm <sup>3</sup>   | 8130 mm   | Tulangan Plat Lantai D12-200 | 7.22 kg   | Floor |
| 12 mm | 8170 mm | 924.01 cm <sup>3</sup>   | 8170 mm   | Tulangan Plat Lantai D12-200 | 7.25 kg   | Floor |
| 12 mm | 8190 mm | 926.27 cm <sup>3</sup>   | 8190 mm   | Tulangan Plat Lantai D12-200 | 7.27 kg   | Floor |
| 12 mm | 8220 mm | 929.66 cm <sup>3</sup>   | 8220 mm   | Tulangan Plat Lantai D12-200 | 7.30 kg   | Floor |
| 12 mm | 8240 mm | 931.92 cm <sup>3</sup>   | 8240 mm   | Tulangan Plat Lantai D12-200 | 7.32 kg   | Floor |
| 12 mm | 8260 mm | 934.18 cm <sup>3</sup>   | 8260 mm   | Tulangan Plat Lantai D12-200 | 7.33 kg   | Floor |
| 12 mm | 8280 mm | 936.45 cm <sup>3</sup>   | 8280 mm   | Tulangan Plat Lantai D12-200 | 7.35 kg   | Floor |
| 12 mm | 8290 mm | 937.58 cm <sup>3</sup>   | 8290 mm   | Tulangan Plat Lantai D12-200 | 7.36 kg   | Floor |
| 12 mm | 8300 mm | 938.71 cm <sup>3</sup>   | 8300 mm   | Tulangan Plat Lantai D12-200 | 7.37 kg   | Floor |
| 12 mm | 8300 mm | 938.71 cm <sup>3</sup>   | 8300 mm   | Tulangan Plat Lantai D12-200 | 7.37 kg   | Floor |
| 12 mm | 8300 mm | 938.71 cm <sup>3</sup>   | 8300 mm   | Tulangan Plat Lantai D12-200 | 7.37 kg   | Floor |
| 12 mm | 8300 mm | 938.71 cm <sup>3</sup>   | 8300 mm   | Tulangan Plat Lantai D12-200 | 7.37 kg   | Floor |
| 12 mm | 8300 mm | 938.71 cm <sup>3</sup>   | 8300 mm   | Tulangan Plat Lantai D12-200 | 7.37 kg   | Floor |
| 12 mm | 8300 mm | 938.71 cm <sup>3</sup>   | 8300 mm   | Tulangan Plat Lantai D12-200 | 7.37 kg   | Floor |
| 12 mm | 8300 mm | 938.71 cm <sup>3</sup>   | 8300 mm   | Tulangan Plat Lantai D12-200 | 7.37 kg   | Floor |
| 12 mm | 8290 mm | 937.58 cm <sup>3</sup>   | 8290 mm   | Tulangan Plat Lantai D12-200 | 7.36 kg   | Floor |
| 12 mm | 8280 mm | 936.45 cm <sup>3</sup>   | 8280 mm   | Tulangan Plat Lantai D12-200 | 7.35 kg   | Floor |
| 12 mm | 6000 mm | 31214.86 cm <sup>3</sup> | 276000 mm | Tulangan Plat Lantai D12-200 | 245.04 kg | Floor |
| 12 mm | 4990 mm | 564.36 cm <sup>3</sup>   | 4990 mm   | Tulangan Plat Lantai D12-200 | 4.43 kg   | Floor |
| 12 mm | 4890 mm | 553.05 cm <sup>3</sup>   | 4890 mm   | Tulangan Plat Lantai D12-200 | 4.34 kg   | Floor |
| 12 mm | 4780 mm | 540.61 cm <sup>3</sup>   | 4780 mm   | Tulangan Plat Lantai D12-200 | 4.24 kg   | Floor |
| 12 mm | 4660 mm | 527.03 cm <sup>3</sup>   | 4660 mm   | Tulangan Plat Lantai D12-200 | 4.14 kg   | Floor |
| 12 mm | 4540 mm | 513.46 cm <sup>3</sup>   | 4540 mm   | Tulangan Plat Lantai D12-200 | 4.03 kg   | Floor |
| 12 mm | 4400 mm | 497.63 cm <sup>3</sup>   | 4400 mm   | Tulangan Plat Lantai D12-200 | 3.91 kg   | Floor |
| 12 mm | 4260 mm | 481.79 cm <sup>3</sup>   | 4260 mm   | Tulangan Plat Lantai D12-200 | 3.78 kg   | Floor |
| 12 mm | 4100 mm | 463.70 cm <sup>3</sup>   | 4100 mm   | Tulangan Plat Lantai D12-200 | 3.64 kg   | Floor |
| 12 mm | 3940 mm | 445.60 cm <sup>3</sup>   | 3940 mm   | Tulangan Plat Lantai D12-200 | 3.50 kg   | Floor |
| 12 mm | 3760 mm | 425.25 cm <sup>3</sup>   | 3760 mm   | Tulangan Plat Lantai D12-200 | 3.34 kg   | Floor |
| 12 mm | 3570 mm | 403.76 cm <sup>3</sup>   | 3570 mm   | Tulangan Plat Lantai D12-200 | 3.17 kg   | Floor |
| 12 mm | 3360 mm | 380.01 cm <sup>3</sup>   | 3360 mm   | Tulangan Plat Lantai D12-200 | 2.98 kg   | Floor |
| 12 mm | 3140 mm | 355.13 cm <sup>3</sup>   | 3140 mm   | Tulangan Plat Lantai D12-200 | 2.79 kg   | Floor |
| 12 mm | 2900 mm | 327.98 cm <sup>3</sup>   | 2900 mm   | Tulangan Plat Lantai D12-200 | 2.57 kg   | Floor |
| 12 mm | 2630 mm | 297.45 cm <sup>3</sup>   | 2630 mm   | Tulangan Plat Lantai D12-200 | 2.33 kg   | Floor |
| 12 mm | 2340 mm | 264.65 cm <sup>3</sup>   | 2340 mm   | Tulangan Plat Lantai D12-200 | 2.08 kg   | Floor |
| 12 mm | 2020 mm | 228.46 cm <sup>3</sup>   | 2020 mm   | Tulangan Plat Lantai D12-200 | 1.79 kg   | Floor |
| 12 mm | 1650 mm | 186.61 cm <sup>3</sup>   | 1650 mm   | Tulangan Plat Lantai D12-200 | 1.46 kg   | Floor |
| 12 mm | 1220 mm | 137.98 cm <sup>3</sup>   | 1220 mm   | Tulangan Plat Lantai D12-200 | 1.08 kg   | Floor |
| 12 mm | 710 mm  | 80.30 cm <sup>3</sup>    | 710 mm    | Tulangan Plat Lantai D12-200 | 0.63 kg   | Floor |
| 12 mm | 30 mm   | 3.39 cm <sup>3</sup>     | 30 mm     | Tulangan Plat Lantai D12-200 | 0.03 kg   | Floor |

|       |          |                           |            |                              |            |       |
|-------|----------|---------------------------|------------|------------------------------|------------|-------|
| 12 mm | 21180 mm | 2395.40 cm <sup>2</sup>   | 21180 mm   | Tulangan Plat Lantai D12-200 | 18.80 kg   | Floor |
| 12 mm | 21120 mm | 2388.62 cm <sup>2</sup>   | 21120 mm   | Tulangan Plat Lantai D12-200 | 18.75 kg   | Floor |
| 12 mm | 21050 mm | 2380.70 cm <sup>2</sup>   | 21050 mm   | Tulangan Plat Lantai D12-200 | 18.69 kg   | Floor |
| 12 mm | 20980 mm | 2372.78 cm <sup>2</sup>   | 20980 mm   | Tulangan Plat Lantai D12-200 | 18.63 kg   | Floor |
| 12 mm | 20910 mm | 2364.87 cm <sup>2</sup>   | 20910 mm   | Tulangan Plat Lantai D12-200 | 18.56 kg   | Floor |
| 12 mm | 20850 mm | 2358.08 cm <sup>2</sup>   | 20850 mm   | Tulangan Plat Lantai D12-200 | 18.51 kg   | Floor |
| 12 mm | 21150 mm | 2392.01 cm <sup>2</sup>   | 21150 mm   | Tulangan Plat Lantai D12-200 | 18.78 kg   | Floor |
| 12 mm | 21400 mm | 2420.28 cm <sup>2</sup>   | 21400 mm   | Tulangan Plat Lantai D12-200 | 19.00 kg   | Floor |
| 12 mm | 21610 mm | 2444.03 cm <sup>2</sup>   | 21610 mm   | Tulangan Plat Lantai D12-200 | 19.19 kg   | Floor |
| 12 mm | 21790 mm | 2464.39 cm <sup>2</sup>   | 21790 mm   | Tulangan Plat Lantai D12-200 | 19.35 kg   | Floor |
| 12 mm | 21930 mm | 2480.22 cm <sup>2</sup>   | 21930 mm   | Tulangan Plat Lantai D12-200 | 19.47 kg   | Floor |
| 12 mm | 22060 mm | 2494.93 cm <sup>2</sup>   | 22060 mm   | Tulangan Plat Lantai D12-200 | 19.59 kg   | Floor |
| 12 mm | 22160 mm | 2506.24 cm <sup>2</sup>   | 22160 mm   | Tulangan Plat Lantai D12-200 | 19.67 kg   | Floor |
| 12 mm | 22240 mm | 2515.28 cm <sup>2</sup>   | 22240 mm   | Tulangan Plat Lantai D12-200 | 19.74 kg   | Floor |
| 12 mm | 22300 mm | 2522.07 cm <sup>2</sup>   | 22300 mm   | Tulangan Plat Lantai D12-200 | 19.80 kg   | Floor |
| 12 mm | 22350 mm | 2527.73 cm <sup>2</sup>   | 22350 mm   | Tulangan Plat Lantai D12-200 | 19.84 kg   | Floor |
| 12 mm | 22380 mm | 2531.12 cm <sup>2</sup>   | 22380 mm   | Tulangan Plat Lantai D12-200 | 19.87 kg   | Floor |
| 12 mm | 22390 mm | 2532.25 cm <sup>2</sup>   | 22390 mm   | Tulangan Plat Lantai D12-200 | 19.88 kg   | Floor |
| 12 mm | 22380 mm | 2531.12 cm <sup>2</sup>   | 22380 mm   | Tulangan Plat Lantai D12-200 | 19.87 kg   | Floor |
| 12 mm | 22360 mm | 2528.86 cm <sup>2</sup>   | 22360 mm   | Tulangan Plat Lantai D12-200 | 19.85 kg   | Floor |
| 12 mm | 22330 mm | 2525.46 cm <sup>2</sup>   | 22330 mm   | Tulangan Plat Lantai D12-200 | 19.82 kg   | Floor |
| 12 mm | 22280 mm | 2519.81 cm <sup>2</sup>   | 22280 mm   | Tulangan Plat Lantai D12-200 | 19.78 kg   | Floor |
| 12 mm | 22210 mm | 2511.89 cm <sup>2</sup>   | 22210 mm   | Tulangan Plat Lantai D12-200 | 19.72 kg   | Floor |
| 12 mm | 22130 mm | 2502.84 cm <sup>2</sup>   | 22130 mm   | Tulangan Plat Lantai D12-200 | 19.65 kg   | Floor |
| 12 mm | 22030 mm | 2491.53 cm <sup>2</sup>   | 22030 mm   | Tulangan Plat Lantai D12-200 | 19.56 kg   | Floor |
| 12 mm | 21920 mm | 2479.09 cm <sup>2</sup>   | 21920 mm   | Tulangan Plat Lantai D12-200 | 19.46 kg   | Floor |
| 12 mm | 21790 mm | 2464.39 cm <sup>2</sup>   | 21790 mm   | Tulangan Plat Lantai D12-200 | 19.35 kg   | Floor |
| 12 mm | 21650 mm | 2448.56 cm <sup>2</sup>   | 21650 mm   | Tulangan Plat Lantai D12-200 | 19.22 kg   | Floor |
| 12 mm | 21490 mm | 2430.46 cm <sup>2</sup>   | 21490 mm   | Tulangan Plat Lantai D12-200 | 19.08 kg   | Floor |
| 12 mm | 21310 mm | 2410.10 cm <sup>2</sup>   | 21310 mm   | Tulangan Plat Lantai D12-200 | 18.92 kg   | Floor |
| 12 mm | 21110 mm | 2387.48 cm <sup>2</sup>   | 21110 mm   | Tulangan Plat Lantai D12-200 | 18.74 kg   | Floor |
| 12 mm | 7600 mm  | 859.54 cm <sup>2</sup>    | 7600 mm    | Tulangan Plat Lantai D12-200 | 6.75 kg    | Floor |
| 12 mm | 7310 mm  | 826.74 cm <sup>2</sup>    | 7310 mm    | Tulangan Plat Lantai D12-200 | 6.49 kg    | Floor |
| 12 mm | 7010 mm  | 792.81 cm <sup>2</sup>    | 7010 mm    | Tulangan Plat Lantai D12-200 | 6.22 kg    | Floor |
| 12 mm | 6690 mm  | 756.62 cm <sup>2</sup>    | 6690 mm    | Tulangan Plat Lantai D12-200 | 5.94 kg    | Floor |
| 12 mm | 6330 mm  | 715.91 cm <sup>2</sup>    | 6330 mm    | Tulangan Plat Lantai D12-200 | 5.62 kg    | Floor |
| 12 mm | 5950 mm  | 672.93 cm <sup>2</sup>    | 5950 mm    | Tulangan Plat Lantai D12-200 | 5.28 kg    | Floor |
| 12 mm | 5530 mm  | 625.43 cm <sup>2</sup>    | 5530 mm    | Tulangan Plat Lantai D12-200 | 4.91 kg    | Floor |
| 12 mm | 5050 mm  | 571.14 cm <sup>2</sup>    | 5050 mm    | Tulangan Plat Lantai D12-200 | 4.48 kg    | Floor |
| 12 mm | 4510 mm  | 510.07 cm <sup>2</sup>    | 4510 mm    | Tulangan Plat Lantai D12-200 | 4.00 kg    | Floor |
| 12 mm | 3850 mm  | 435.42 cm <sup>2</sup>    | 3850 mm    | Tulangan Plat Lantai D12-200 | 3.42 kg    | Floor |
| 12 mm | 2990 mm  | 338.16 cm <sup>2</sup>    | 2990 mm    | Tulangan Plat Lantai D12-200 | 2.65 kg    | Floor |
| 12 mm | 750 mm   | 84.82 cm <sup>2</sup>     | 750 mm     | Tulangan Plat Lantai D12-200 | 0.67 kg    | Floor |
| 12 mm | 29960 mm | 155866.22 cm <sup>2</sup> | 1378160 mm | Tulangan Plat Lantai D12-200 | 1223.55 kg | Floor |
| 12 mm | 26310 mm | 62487.41 cm <sup>2</sup>  | 552510 mm  | Tulangan Plat Lantai D12-200 | 490.53 kg  | Floor |
| 12 mm | 9030 mm  | 19404.11 cm <sup>2</sup>  | 171570 mm  | Tulangan Plat Lantai D12-200 | 152.32 kg  | Floor |
| 12 mm | 13170 mm | 196612.93 cm <sup>2</sup> | 1738440 mm | Tulangan Plat Lantai D12-200 | 1543.41 kg | Floor |
| 12 mm | 21170 mm | 47885.41 cm <sup>2</sup>  | 423400 mm  | Tulangan Plat Lantai D12-200 | 375.90 kg  | Floor |
| 12 mm | 16990 mm | 24979.81 cm <sup>2</sup>  | 220870 mm  | Tulangan Plat Lantai D12-200 | 196.09 kg  | Floor |
| 12 mm | 21160 mm | 134015.82 cm <sup>2</sup> | 1184960 mm | Tulangan Plat Lantai D12-200 | 1052.02 kg | Floor |
| 12 mm | 17580 mm | 170989.60 cm <sup>2</sup> | 1511880 mm | Tulangan Plat Lantai D12-200 | 1342.27 kg | Floor |
| 12 mm | 3920 mm  | 9310.17 cm <sup>2</sup>   | 82320 mm   | Tulangan Plat Lantai D12-200 | 73.08 kg   | Floor |
| 12 mm | 10980 mm | 26077.98 cm <sup>2</sup>  | 230580 mm  | Tulangan Plat Lantai D12-200 | 204.71 kg  | Floor |
| 12 mm | 21180 mm | 2395.40 cm <sup>2</sup>   | 21180 mm   | Tulangan Plat Lantai D12-200 | 18.80 kg   | Floor |
| 12 mm | 21120 mm | 2388.62 cm <sup>2</sup>   | 21120 mm   | Tulangan Plat Lantai D12-200 | 18.75 kg   | Floor |
| 12 mm | 21060 mm | 2381.83 cm <sup>2</sup>   | 21060 mm   | Tulangan Plat Lantai D12-200 | 18.70 kg   | Floor |
| 12 mm | 20990 mm | 2373.91 cm <sup>2</sup>   | 20990 mm   | Tulangan Plat Lantai D12-200 | 18.64 kg   | Floor |
| 12 mm | 20920 mm | 2366.00 cm <sup>2</sup>   | 20920 mm   | Tulangan Plat Lantai D12-200 | 18.57 kg   | Floor |
| 12 mm | 20900 mm | 2363.73 cm <sup>2</sup>   | 20900 mm   | Tulangan Plat Lantai D12-200 | 18.56 kg   | Floor |
| 12 mm | 21200 mm | 2397.66 cm <sup>2</sup>   | 21200 mm   | Tulangan Plat Lantai D12-200 | 18.82 kg   | Floor |
| 12 mm | 21460 mm | 2427.07 cm <sup>2</sup>   | 21460 mm   | Tulangan Plat Lantai D12-200 | 19.05 kg   | Floor |
| 12 mm | 21670 mm | 2450.82 cm <sup>2</sup>   | 21670 mm   | Tulangan Plat Lantai D12-200 | 19.24 kg   | Floor |

6. Tulangan Anak dan Pelat Tangga

| <Tulangan Tangga> |            |                          |                  |      |            |               |
|-------------------|------------|--------------------------|------------------|------|------------|---------------|
| A                 | B          | C                        | D                | E    | F          | G             |
| Bar Diameter      | Bar Length | Reinforcement Volu       | Total Bar Length | Type | Berat Besi | Host Category |
| 16 mm             | 6420 mm    | 11472.60 cm <sup>3</sup> | 57780 mm         | 16M  | 90.06 kg   | Stairs        |
| 16 mm             | 5030 mm    | 8988.65 cm <sup>3</sup>  | 45270 mm         | 16M  | 70.56 kg   | Stairs        |
| 10 mm             | 720 mm     | 510.35 cm <sup>3</sup>   | 7200 mm          | 10M  | 4.01 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 1210 mm    | 1458.05 cm <sup>3</sup>  | 20570 mm         | 10M  | 11.45 kg   | Stairs        |
| 10 mm             | 1210 mm    | 1458.05 cm <sup>3</sup>  | 20570 mm         | 10M  | 11.45 kg   | Stairs        |
| 10 mm             | 720 mm     | 510.35 cm <sup>3</sup>   | 7200 mm          | 10M  | 4.01 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 720 mm     | 510.35 cm <sup>3</sup>   | 7200 mm          | 10M  | 4.01 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 720 mm     | 510.35 cm <sup>3</sup>   | 7200 mm          | 10M  | 4.01 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 720 mm     | 510.35 cm <sup>3</sup>   | 7200 mm          | 10M  | 4.01 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 720 mm     | 510.35 cm <sup>3</sup>   | 7200 mm          | 10M  | 4.01 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 720 mm     | 510.35 cm <sup>3</sup>   | 7200 mm          | 10M  | 4.01 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 720 mm     | 510.35 cm <sup>3</sup>   | 7200 mm          | 10M  | 4.01 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 720 mm     | 510.35 cm <sup>3</sup>   | 7200 mm          | 10M  | 4.01 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 16 mm             | 7270 mm    | 12991.55 cm <sup>3</sup> | 65430 mm         | 16M  | 101.98 kg  | Stairs        |
| 16 mm             | 5230 mm    | 9346.05 cm <sup>3</sup>  | 47070 mm         | 16M  | 73.37 kg   | Stairs        |
| 10 mm             | 730 mm     | 517.44 cm <sup>3</sup>   | 7300 mm          | 10M  | 4.06 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 730 mm     | 517.44 cm <sup>3</sup>   | 7300 mm          | 10M  | 4.06 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 730 mm     | 517.44 cm <sup>3</sup>   | 7300 mm          | 10M  | 4.06 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 730 mm     | 517.44 cm <sup>3</sup>   | 7300 mm          | 10M  | 4.06 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 730 mm     | 517.44 cm <sup>3</sup>   | 7300 mm          | 10M  | 4.06 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 730 mm     | 517.44 cm <sup>3</sup>   | 7300 mm          | 10M  | 4.06 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 730 mm     | 517.44 cm <sup>3</sup>   | 7300 mm          | 10M  | 4.06 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 730 mm     | 517.44 cm <sup>3</sup>   | 7300 mm          | 10M  | 4.06 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 730 mm     | 517.44 cm <sup>3</sup>   | 7300 mm          | 10M  | 4.06 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 730 mm     | 517.44 cm <sup>3</sup>   | 7300 mm          | 10M  | 4.06 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 730 mm     | 517.44 cm <sup>3</sup>   | 7300 mm          | 10M  | 4.06 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 730 mm     | 517.44 cm <sup>3</sup>   | 7300 mm          | 10M  | 4.06 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 730 mm     | 517.44 cm <sup>3</sup>   | 7300 mm          | 10M  | 4.06 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 730 mm     | 517.44 cm <sup>3</sup>   | 7300 mm          | 10M  | 4.06 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 730 mm     | 517.44 cm <sup>3</sup>   | 7300 mm          | 10M  | 4.06 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 730 mm     | 517.44 cm <sup>3</sup>   | 7300 mm          | 10M  | 4.06 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 730 mm     | 517.44 cm <sup>3</sup>   | 7300 mm          | 10M  | 4.06 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 16 mm             | 6100 mm    | 10900.75 cm <sup>3</sup> | 54900 mm         | 16M  | 85.57 kg   | Stairs        |
| 16 mm             | 4740 mm    | 8470.42 cm <sup>3</sup>  | 42660 mm         | 16M  | 66.49 kg   | Stairs        |
| 10 mm             | 730 mm     | 517.44 cm <sup>3</sup>   | 7300 mm          | 10M  | 4.06 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |
| 10 mm             | 730 mm     | 517.44 cm <sup>3</sup>   | 7300 mm          | 10M  | 4.06 kg    | Stairs        |
| 10 mm             | 1210 mm    | 85.77 cm <sup>3</sup>    | 1210 mm          | 10M  | 0.67 kg    | Stairs        |









### Quantity Take-Off Pengecoran

#### 1. Pengecoran Pondasi *Pile Cap*

| <Pengecoran Pondasi Pile Cap> |                      |                   |
|-------------------------------|----------------------|-------------------|
| A                             | B                    | C                 |
| Type                          | Volume               | Area              |
| Pc4                           | 33.86 m <sup>3</sup> | 7 m <sup>2</sup>  |
| Pc4                           | 33.86 m <sup>3</sup> | 7 m <sup>2</sup>  |
| Pc4                           | 33.86 m <sup>3</sup> | 7 m <sup>2</sup>  |
| Pc4                           | 33.86 m <sup>3</sup> | 7 m <sup>2</sup>  |
| Pc4                           | 33.86 m <sup>3</sup> | 7 m <sup>2</sup>  |
| Pc4                           | 33.86 m <sup>3</sup> | 7 m <sup>2</sup>  |
| Pc4                           | 33.86 m <sup>3</sup> | 7 m <sup>2</sup>  |
| Pc4                           | 33.86 m <sup>3</sup> | 7 m <sup>2</sup>  |
| Pc4                           | 33.86 m <sup>3</sup> | 7 m <sup>2</sup>  |
| Pc4                           | 33.86 m <sup>3</sup> | 7 m <sup>2</sup>  |
| Pc4                           | 33.86 m <sup>3</sup> | 7 m <sup>2</sup>  |
| Pc4                           | 33.86 m <sup>3</sup> | 7 m <sup>2</sup>  |
| Pc5                           | 46.83 m <sup>3</sup> | 11 m <sup>2</sup> |
| Pc5                           | 46.83 m <sup>3</sup> | 11 m <sup>2</sup> |
| Pc5                           | 46.83 m <sup>3</sup> | 11 m <sup>2</sup> |
| Pc5                           | 46.83 m <sup>3</sup> | 11 m <sup>2</sup> |
| Pc6                           | 53.69 m <sup>3</sup> | 12 m <sup>2</sup> |
| Pc6                           | 53.69 m <sup>3</sup> | 12 m <sup>2</sup> |
| Pc6                           | 53.69 m <sup>3</sup> | 12 m <sup>2</sup> |
| Pc6                           | 53.69 m <sup>3</sup> | 12 m <sup>2</sup> |
| Pc6                           | 53.69 m <sup>3</sup> | 12 m <sup>2</sup> |
| Pc6                           | 53.69 m <sup>3</sup> | 12 m <sup>2</sup> |
| Pc6                           | 53.69 m <sup>3</sup> | 12 m <sup>2</sup> |
| Pc6                           | 53.69 m <sup>3</sup> | 12 m <sup>2</sup> |
| Pc4A                          | 35.36 m <sup>3</sup> | 9 m <sup>2</sup>  |
| Pc1                           | 7.85 m <sup>3</sup>  | 2 m <sup>2</sup>  |
| Pc1                           | 7.85 m <sup>3</sup>  | 2 m <sup>2</sup>  |
| Pc3                           | 24.75 m <sup>3</sup> | 5 m <sup>2</sup>  |
| Pc3                           | 24.75 m <sup>3</sup> | 5 m <sup>2</sup>  |
| Pc3                           | 24.75 m <sup>3</sup> | 5 m <sup>2</sup>  |
| Pc3                           | 24.75 m <sup>3</sup> | 5 m <sup>2</sup>  |

2. Pengecoran *Tie Beam*

2.1. Pengecoran *Tie Beam* TG58

| <Pengecoran TG 58>          |        |                  |                     |
|-----------------------------|--------|------------------|---------------------|
| A                           | B      | C                | D                   |
| Family                      | Length | Type             | Volume              |
| M_Concrete-Rectangular Beam | 8032   | TG58 500 x 800 m | 2.09 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8032   | TG58 500 x 800 m | 2.21 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG58 500 x 800 m | 2.08 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG58 500 x 800 m | 2.08 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 7968   | TG58 500 x 800 m | 2.02 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 7968   | TG58 500 x 800 m | 1.86 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG58 500 x 800 m | 1.43 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG58 500 x 800 m | 1.87 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG58 500 x 800 m | 1.87 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG58 500 x 800 m | 1.87 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG58 500 x 800 m | 1.92 m <sup>3</sup> |

2.2. Pengecoran *Tie Beam* TG47

| <Pengecoran TG 47>          |        |                  |                     |
|-----------------------------|--------|------------------|---------------------|
| A                           | B      | C                | D                   |
| Family                      | Length | Type             | Volume              |
| M_Concrete-Rectangular Beam | 8000   | TG47 400 x 750 m | 1.65 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG47 400 x 750 m | 1.33 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG47 400 x 750 m | 1.33 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG47 400 x 750 m | 1.56 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG47 400 x 750 m | 1.65 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG47 400 x 750 m | 1.20 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG47 400 x 750 m | 1.73 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG47 400 x 750 m | 1.20 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 6000   | TG47 400 x 750 m | 0.69 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 6000   | TG47 400 x 750 m | 0.69 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 6000   | TG47 400 x 750 m | 1.13 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 6000   | TG47 400 x 750 m | 0.63 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 6000   | TG47 400 x 750 m | 0.50 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 6000   | TG47 400 x 750 m | 1.25 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG47 400 x 750 m | 1.59 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG47 400 x 750 m | 1.01 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG47 400 x 750 m | 1.52 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG47 400 x 750 m | 1.52 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG47 400 x 750 m | 1.01 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG47 400 x 750 m | 1.59 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG47 400 x 750 m | 1.59 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG47 400 x 750 m | 1.12 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TG47 400 x 750 m | 1.52 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8032   | TG47 400 x 750 m | 1.53 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 2966   | TG47 400 x 750 m | 0.61 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8165   | TG47 400 x 750 m | 1.76 m <sup>3</sup> |

2.3. Pengecoran *Tie Beam* TG46

| <Pengecoran TG 46>          |        |                  |                     |
|-----------------------------|--------|------------------|---------------------|
| A                           | B      | C                | D                   |
| Family                      | Length | Type             | Volume              |
| M_Concrete-Rectangular Beam | 4000   | TG46 400 x 600 m | 0.23 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 4000   | TG46 400 x 600 m | 0.26 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 4000   | TG46 400 x 600 m | 0.26 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 4000   | TG46 400 x 600 m | 0.26 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 4000   | TG46 400 x 600 m | 0.32 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 3968   | TG46 400 x 600 m | 0.20 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 3968   | TG46 400 x 600 m | 0.35 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 1132   | TG46 400 x 600 m | 0.00 m <sup>3</sup> |

2.4. Pengecoran *Tie Beam* TB36

| <Pengecoran TB 36>          |        |                   |                     |
|-----------------------------|--------|-------------------|---------------------|
| A                           | B      | C                 | D                   |
| Family                      | Length | Type              | Volume              |
| M_Concrete-Rectangular Beam | 8032   | TB36 300 x 600 mm | 1.37 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TB36 300 x 600 mm | 1.37 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8032   | TB36 300 x 600 mm | 1.37 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TB36 300 x 600 mm | 1.37 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8032   | TB36 300 x 600 mm | 1.37 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TB36 300 x 600 mm | 1.37 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8032   | TB36 300 x 600 mm | 1.37 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TB36 300 x 600 mm | 1.37 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TB36 300 x 600 mm | 0.94 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TB36 300 x 600 mm | 1.04 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TB36 300 x 600 mm | 1.09 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TB36 300 x 600 mm | 1.09 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TB36 300 x 600 mm | 1.09 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TB36 300 x 600 mm | 1.09 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TB36 300 x 600 mm | 1.09 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 8000   | TB36 300 x 600 mm | 1.09 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 7968   | TB36 300 x 600 mm | 1.09 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 2150   | TB36 300 x 600 mm | 0.25 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 2000   | TB36 300 x 600 mm | 0.24 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 3000   | TB36 300 x 600 mm | 0.49 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 6594   | TB36 300 x 600 mm | 0.78 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 6816   | TB36 300 x 600 mm | 0.92 m <sup>3</sup> |

2.5. Pengecoran *Tie Beam* TB24

| <Pengecoran TB 24>          |        |                   |                     |
|-----------------------------|--------|-------------------|---------------------|
| A                           | B      | C                 | D                   |
| Family                      | Length | Type              | Volume              |
| M_Concrete-Rectangular Beam | 3968   | TB24 250 x 400 mm | 0.36 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 3968   | TB24 250 x 400 mm | 0.36 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 3968   | TB24 250 x 400 mm | 0.36 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 3968   | TB24 250 x 400 mm | 0.36 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 4000   | TB24 250 x 400 mm | 0.25 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 4000   | TB24 250 x 400 mm | 0.18 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 4000   | TB24 250 x 400 mm | 0.25 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 4000   | TB24 250 x 400 mm | 0.25 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 4000   | TB24 250 x 400 mm | 0.25 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 4000   | TB24 250 x 400 mm | 0.25 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 4000   | TB24 250 x 400 mm | 0.25 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 4000   | TB24 250 x 400 mm | 0.25 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 4000   | TB24 250 x 400 mm | 0.25 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 3968   | TB24 250 x 400 mm | 0.19 m <sup>3</sup> |
| M_Concrete-Rectangular Beam | 2417   | TB24 250 x 400 mm | 0.14 m <sup>3</sup> |

3. Pengecoran Kolom

3.1. Lantai 1

a. Pengecoran Kolom K712

| <Pengecoran Kolom K712>       |                     |                   |        |
|-------------------------------|---------------------|-------------------|--------|
| A                             | B                   | C                 | D      |
| Family                        | Volume              | Type              | Length |
| M_Concrete-Rectangular-Column | 3.53 m <sup>3</sup> | K712 700 x 1200 m | 4320   |
| M_Concrete-Rectangular-Column | 3.53 m <sup>3</sup> | K712 700 x 1200 m | 4320   |
| M_Concrete-Rectangular-Column | 3.53 m <sup>3</sup> | K712 700 x 1200 m | 4320   |
| M_Concrete-Rectangular-Column | 3.53 m <sup>3</sup> | K712 700 x 1200 m | 4320   |
| M_Concrete-Rectangular-Column | 3.53 m <sup>3</sup> | K712 700 x 1200 m | 4320   |
| M_Concrete-Rectangular-Column | 3.58 m <sup>3</sup> | K712 700 x 1200 m | 4320   |
| M_Concrete-Rectangular-Column | 3.53 m <sup>3</sup> | K712 700 x 1200 m | 4320   |
| M_Concrete-Rectangular-Column | 3.58 m <sup>3</sup> | K712 700 x 1200 m | 4320   |
| M_Concrete-Rectangular-Column | 3.60 m <sup>3</sup> | K712 700 x 1200 m | 4320   |
| M_Concrete-Rectangular-Column | 3.58 m <sup>3</sup> | K712 700 x 1200 m | 4320   |



b. Pengecoran Kolom K79

| <Pengecoran Kolom K79>        |                     |                  |        |
|-------------------------------|---------------------|------------------|--------|
| A                             | B                   | C                | D      |
| Family                        | Volume              | Type             | Length |
| M_Concrete-Rectangular-Column | 2.65 m <sup>3</sup> | K79 700 x 900 mm | 4320   |
| M_Concrete-Rectangular-Column | 2.68 m <sup>3</sup> | K79 700 x 900 mm | 4320   |
| M_Concrete-Rectangular-Column | 2.65 m <sup>3</sup> | K79 700 x 900 mm | 4320   |
| M_Concrete-Rectangular-Column | 2.70 m <sup>3</sup> | K79 700 x 900 mm | 4320   |
| M_Concrete-Rectangular-Column | 2.65 m <sup>3</sup> | K79 700 x 900 mm | 4320   |
| M_Concrete-Rectangular-Column | 2.65 m <sup>3</sup> | K79 700 x 900 mm | 4320   |
| M_Concrete-Rectangular-Column | 2.65 m <sup>3</sup> | K79 700 x 900 mm | 4320   |
| M_Concrete-Rectangular-Column | 2.68 m <sup>3</sup> | K79 700 x 900 mm | 4320   |
| M_Concrete-Rectangular-Column | 2.68 m <sup>3</sup> | K79 700 x 900 mm | 4320   |
| M_Concrete-Rectangular-Column | 2.68 m <sup>3</sup> | K79 700 x 900 mm | 4320   |
| M_Concrete-Rectangular-Column | 2.65 m <sup>3</sup> | K79 700 x 900 mm | 4320   |
| M_Concrete-Rectangular-Column | 2.65 m <sup>3</sup> | K79 700 x 900 mm | 4320   |
| M_Concrete-Rectangular-Column | 2.65 m <sup>3</sup> | K79 700 x 900 mm | 4320   |
| M_Concrete-Rectangular-Column | 2.65 m <sup>3</sup> | K79 700 x 900 mm | 4320   |
| M_Concrete-Rectangular-Column | 2.65 m <sup>3</sup> | K79 700 x 900 mm | 4320   |
| M_Concrete-Rectangular-Column | 2.65 m <sup>3</sup> | K79 700 x 900 mm | 4320   |
| M_Concrete-Rectangular-Column | 2.68 m <sup>3</sup> | K79 700 x 900 mm | 4320   |

3.2. Lantai 2

a. Pengecoran Kolom K712

| <Pengecoran K712>             |                     |                   |        |
|-------------------------------|---------------------|-------------------|--------|
| A                             | B                   | C                 | D      |
| Family                        | Volume              | Type              | Length |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |

b. Pengecoran Kolom K79

| <Pengecoran K79>              |                     |                  |        |
|-------------------------------|---------------------|------------------|--------|
| A                             | B                   | C                | D      |
| Family                        | Volume              | Type             | Length |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |

3.3. Lantai 3

a. Pengecoran Kolom K712

| <Pengecoran K712>             |                     |                   |        |
|-------------------------------|---------------------|-------------------|--------|
| A                             | B                   | C                 | D      |
| Family                        | Volume              | Type              | Length |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |

b. Pengecoran Kolom K79

| <Pengecoran K79>              |                     |                  |        |
|-------------------------------|---------------------|------------------|--------|
| A                             | B                   | C                | D      |
| Family                        | Volume              | Type             | Length |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |

3.4. Lantai 4

a. Pengecoran Kolom K712

| <Pengecoran K712>             |                     |                   |        |
|-------------------------------|---------------------|-------------------|--------|
| A                             | B                   | C                 | D      |
| Family                        | Volume              | Type              | Length |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |

b. Pengecoran Kolom K79

| <Pengecoran K79>              |                     |                  |        |
|-------------------------------|---------------------|------------------|--------|
| A                             | B                   | C                | D      |
| Family                        | Volume              | Type             | Length |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |

3.5. Lantai 5

a. Pengecoran Kolom K712

| <Pengecoran K712>             |                     |                   |        |
|-------------------------------|---------------------|-------------------|--------|
| A                             | B                   | C                 | D      |
| Family                        | Volume              | Type              | Length |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m <sup>3</sup> | K712 700 x 1200 m | 3600   |

b. Pengecoran Kolom K79

| <Pengecoran K79>              |         |                  |        |
|-------------------------------|---------|------------------|--------|
| A                             | B       | C                | D      |
| Family                        | Volume  | Type             | Length |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m³ | K79 700 x 900 mm | 3600   |

3.6. Lantai 6

a. Pengecoran Kolom K712

| <Pengecoran K712>             |         |                   |        |
|-------------------------------|---------|-------------------|--------|
| A                             | B       | C                 | D      |
| Family                        | Volume  | Type              | Length |
| M_Concrete-Rectangular-Column | 3.02 m³ | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m³ | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m³ | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m³ | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m³ | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m³ | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m³ | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m³ | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m³ | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m³ | K712 700 x 1200 m | 3600   |
| M_Concrete-Rectangular-Column | 3.02 m³ | K712 700 x 1200 m | 3600   |

b. Pengecoran Kolom K79

| <Pengecoran K79>              |                     |                  |        |
|-------------------------------|---------------------|------------------|--------|
| A                             | B                   | C                | D      |
| Family                        | Volume              | Type             | Length |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |
| M_Concrete-Rectangular-Column | 2.27 m <sup>3</sup> | K79 700 x 900 mm | 3600   |

3.7. Rooftop

a. Pengecoran Kolom K33 Rooftop

| <Pengecoran Kolom K33>        |                     |                  |        |
|-------------------------------|---------------------|------------------|--------|
| A                             | B                   | C                | D      |
| Family                        | Volume              | Type             | Length |
| M_Concrete-Rectangular-Column | 0.27 m <sup>3</sup> | K33 300 x 300 mm | 3000   |
| M_Concrete-Rectangular-Column | 0.27 m <sup>3</sup> | K33 300 x 300 mm | 3000   |
| M_Concrete-Rectangular-Column | 0.27 m <sup>3</sup> | K33 300 x 300 mm | 3000   |
| M_Concrete-Rectangular-Column | 0.27 m <sup>3</sup> | K33 300 x 300 mm | 3000   |
| M_Concrete-Rectangular-Column | 0.27 m <sup>3</sup> | K33 300 x 300 mm | 3000   |
| M_Concrete-Rectangular-Column | 0.27 m <sup>3</sup> | K33 300 x 300 mm | 3000   |
| M_Concrete-Rectangular-Column | 0.27 m <sup>3</sup> | K33 300 x 300 mm | 3000   |
| M_Concrete-Rectangular-Column | 0.27 m <sup>3</sup> | K33 300 x 300 mm | 3000   |

4. Pengecoran Balok

4.1. Lantai 1

a. Pengecoran Balok G58

| <Pengecoran Balok G58>      |         |                  |        |
|-----------------------------|---------|------------------|--------|
| A                           | B       | C                | D      |
| Family                      | Volume  | Type             | Length |
| M_Concrete-Rectangular Beam | 3.36 m³ | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 3.36 m³ | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 3.22 m³ | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 3.36 m³ | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 3.36 m³ | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 3.36 m³ | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 3.20 m³ | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 3.36 m³ | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 3.36 m³ | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 3.36 m³ | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 3.36 m³ | G58 500 x 800 mm | 8000   |

b. Pengecoran Balok G47

| <Pengecoran Balok G47>      |         |                  |        |
|-----------------------------|---------|------------------|--------|
| A                           | B       | C                | D      |
| Family                      | Volume  | Type             | Length |
| M_Concrete-Rectangular Beam | 2.10 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.10 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.10 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.17 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.10 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.10 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.21 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.54 m³ | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.54 m³ | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.57 m³ | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.65 m³ | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.54 m³ | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.54 m³ | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 2.24 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.10 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.10 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.24 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.10 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.10 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.24 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.10 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.10 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.15 m³ | G47 400 x 700 mm | 8152   |
| M_Concrete-Rectangular Beam | 2.18 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.13 m³ | G47 400 x 700 mm | 8360   |

c. Pengecoran Balok G36

| <Pengecoran Balok G36>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 1.10 m <sup>3</sup> | G36 300 x 600 mm | 6618   |

d. Pengecoran Balok G34

| <Pengecoran Balok G34>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.43 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.43 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.43 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.43 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.43 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.43 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.43 m <sup>3</sup> | G34 300 x 400 mm | 4000   |

e. Pengecoran Balok CG46

| <Pengecoran Balok CG46>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.35 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.35 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.35 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.35 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.44 m <sup>3</sup> | CG46 400 x 600 m | 2133   |

f. Pengecoran Balok CG47

| <Pengecoran Balok CG47>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.98 m <sup>3</sup> | CG47 400 x 750 m | 2965   |



g. Pengecoran Balok CG34

| <Pengecoran Balok CG34>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.14 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.14 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.14 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.14 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CG34 300 x 400 m | 1200   |

h. Pengecoran Balok B45

| <Pengecoran Balok B45>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 1.08 m <sup>3</sup> | B45 400 x 500 mm | 5870   |

i. Pengecoran Balok B57

| <Pengecoran Balok B57>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 2.63 m <sup>3</sup> | B57 500 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.93 m <sup>3</sup> | B57 500 x 700 mm | 6000   |

j. Pengecoran Balok B36

| <Pengecoran Balok B36>      |         |                  |        |
|-----------------------------|---------|------------------|--------|
| A                           | B       | C                | D      |
| Family                      | Volume  | Type             | Length |
| M_Concrete-Rectangular Beam | 1.15 m³ | B36 300 x 600 mm | 6808   |
| M_Concrete-Rectangular Beam | 1.37 m³ | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m³ | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m³ | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m³ | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m³ | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m³ | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m³ | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m³ | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m³ | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m³ | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m³ | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m³ | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m³ | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m³ | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m³ | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m³ | B36 300 x 600 mm | 8000   |



k. Pengecoran Balok B24

| <Pengecoran Balok B24>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.53 m <sup>3</sup> | B24 250 x 400 mm | 5745   |
| M_Concrete-Rectangular Beam | 0.53 m <sup>3</sup> | B24 250 x 400 mm | 5745   |
| M_Concrete-Rectangular Beam | 0.53 m <sup>3</sup> | B24 250 x 400 mm | 5745   |
| M_Concrete-Rectangular Beam | 0.20 m <sup>3</sup> | B24 250 x 400 mm | 2398   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.13 m <sup>3</sup> | B24 250 x 400 mm | 1750   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.22 m <sup>3</sup> | B24 250 x 400 mm | 2500   |
| M_Concrete-Rectangular Beam | 0.28 m <sup>3</sup> | B24 250 x 400 mm | 3000   |
| M_Concrete-Rectangular Beam | 0.22 m <sup>3</sup> | B24 250 x 400 mm | 2500   |
| M_Concrete-Rectangular Beam | 0.22 m <sup>3</sup> | B24 250 x 400 mm | 2500   |
| M_Concrete-Rectangular Beam | 0.28 m <sup>3</sup> | B24 250 x 400 mm | 3000   |
| M_Concrete-Rectangular Beam | 0.22 m <sup>3</sup> | B24 250 x 400 mm | 2500   |
| M_Concrete-Rectangular Beam | 2.77 m <sup>3</sup> | B24 250 x 400 mm | 27714  |
| M_Concrete-Rectangular Beam | 1.55 m <sup>3</sup> | B24 250 x 400 mm | 15594  |

1. Pengecoran Balok CB24

| <Pengecoran Balok CB24>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.13 m <sup>3</sup> | CB24 250 x 400 m | 1574   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CB24 250 x 400 m | 1120   |
| M_Concrete-Rectangular Beam | 0.06 m <sup>3</sup> | CB24 250 x 400 m | 938    |

4.2. Lantai 2

a. Pengecoran Balok G58

| <Pengecoran Balok G58>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 2.79 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.78 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.79 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.78 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.83 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.87 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.92 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.72 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.72 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.72 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.92 m <sup>3</sup> | G58 500 x 800 mm | 8000   |

b. Pengecoran Balok G47

| <Pengecoran Balok G47>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.07 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.00 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.48 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.46 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.51 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 2.20 m <sup>3</sup> | G47 400 x 700 mm | 8074   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.02 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.02 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.51 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.43 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.43 m <sup>3</sup> | G47 400 x 700 mm | 6000   |

c. Pengecoran Balok G36

| <Pengecoran Balok G36>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 1.07 m <sup>3</sup> | G36 300 x 600 mm | 6637   |

d. Pengecoran Balok G34

| <Pengecoran Balok G34>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.37 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.35 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.35 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.35 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.38 m <sup>3</sup> | G34 300 x 400 mm | 4000   |

e. Pengecoran Balok CG46

| <Pengecoran Balok CG46>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.42 m <sup>3</sup> | CG46 400 x 600 m | 2162   |

f. Pengecoran Balok CG34

| <Pengecoran Balok CG34>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |

g. Pengecoran Balok B45

| <Pengecoran Balok B45>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 1.06 m <sup>3</sup> | B45 400 x 500 mm | 5745   |
| M_Concrete-Rectangular Beam | 1.06 m <sup>3</sup> | B45 400 x 500 mm | 5745   |
| M_Concrete-Rectangular Beam | 1.08 m <sup>3</sup> | B45 400 x 500 mm | 5870   |
| M_Concrete-Rectangular Beam | 0.76 m <sup>3</sup> | B45 400 x 500 mm | 4250   |
| M_Concrete-Rectangular Beam | 0.55 m <sup>3</sup> | B45 400 x 500 mm | 3150   |

h. Pengecoran Balok B57

| <Pengecoran Balok B57>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 2.63 m <sup>3</sup> | B57 500 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.93 m <sup>3</sup> | B57 500 x 700 mm | 6000   |

i. Pengecoran Balok B36

| <Pengecoran Balok B36>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.52 m <sup>3</sup> | B36 300 x 600 mm | 14845  |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |

j. Pengecoran Balok B24

| <Pengecoran Balok B24>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 1.57 m <sup>3</sup> | B24 250 x 400 mm | 16000  |
| M_Concrete-Rectangular Beam | 0.53 m <sup>3</sup> | B24 250 x 400 mm | 5745   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.20 m <sup>3</sup> | B24 250 x 400 mm | 2408   |
| M_Concrete-Rectangular Beam | 1.57 m <sup>3</sup> | B24 250 x 400 mm | 15772  |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 2.74 m <sup>3</sup> | B24 250 x 400 mm | 27667  |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.13 m <sup>3</sup> | B24 250 x 400 mm | 1750   |

l. Pengecoran Balok CB24

| <Pengecoran Balok CB24>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.13 m <sup>3</sup> | CB24 250 x 400 m | 1574   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.05 m <sup>3</sup> | CB24 250 x 400 m | 869    |
| M_Concrete-Rectangular Beam | 0.07 m <sup>3</sup> | CB24 250 x 400 m | 1042   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |



4.3. Lantai 3

a. Pengecoran Balok G58

| <Pengecoran Balok G58>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 2.79 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.78 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.79 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.78 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.83 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.87 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.92 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.72 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.72 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.72 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.92 m <sup>3</sup> | G58 500 x 800 mm | 8000   |

b. Pengecoran Balok G47

| <Pengecoran Balok G47>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.07 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.00 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.48 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.46 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.51 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 2.20 m <sup>3</sup> | G47 400 x 700 mm | 8074   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.02 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.02 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.51 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.43 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.43 m <sup>3</sup> | G47 400 x 700 mm | 6000   |

c. Pengecoran Balok G36

| <Pengecoran Balok G36>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 1.07 m <sup>3</sup> | G36 300 x 600 mm | 6637   |

d. Pengecoran Balok G34

| <Pengecoran Balok G34>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.37 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.35 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.35 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.35 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.38 m <sup>3</sup> | G34 300 x 400 mm | 4000   |

e. Pengecoran Balok CG46

| <Pengecoran Balok CG46>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.42 m <sup>3</sup> | CG46 400 x 600 m | 2162   |

f. Pengecoran Balok CG47

| <Pengecoran Balok CG47>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.78 m <sup>3</sup> | CG47 400 x 750 m | 3148   |

g. Pengecoran Balok CG34

| <Pengecoran Balok CG34>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |

h. Pengecoran Balok B45

| <Pengecoran Balok B45>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 1.06 m <sup>3</sup> | B45 400 x 500 mm | 5745   |
| M_Concrete-Rectangular Beam | 1.06 m <sup>3</sup> | B45 400 x 500 mm | 5745   |
| M_Concrete-Rectangular Beam | 1.08 m <sup>3</sup> | B45 400 x 500 mm | 5870   |
| M_Concrete-Rectangular Beam | 0.76 m <sup>3</sup> | B45 400 x 500 mm | 4250   |
| M_Concrete-Rectangular Beam | 0.55 m <sup>3</sup> | B45 400 x 500 mm | 3150   |

i. Pengecoran Balok B57

| <Pengecoran Balok B57>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 2.63 m <sup>3</sup> | B57 500 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.93 m <sup>3</sup> | B57 500 x 700 mm | 6000   |

j. Pengecoran Balok B36

| <Pengecoran Balok B36>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.52 m <sup>3</sup> | B36 300 x 600 mm | 14845  |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |

k. Pengecoran Balok B24

| <Pengecoran Balok B24>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 1.57 m <sup>3</sup> | B24 250 x 400 mm | 16000  |
| M_Concrete-Rectangular Beam | 0.53 m <sup>3</sup> | B24 250 x 400 mm | 5745   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.20 m <sup>3</sup> | B24 250 x 400 mm | 2408   |
| M_Concrete-Rectangular Beam | 1.57 m <sup>3</sup> | B24 250 x 400 mm | 15772  |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 2.74 m <sup>3</sup> | B24 250 x 400 mm | 27667  |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.13 m <sup>3</sup> | B24 250 x 400 mm | 1750   |

1. Pengecoran Balok CB24

| <Pengecoran Balok CB24>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.13 m <sup>3</sup> | CB24 250 x 400 m | 1574   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.05 m <sup>3</sup> | CB24 250 x 400 m | 869    |
| M_Concrete-Rectangular Beam | 0.07 m <sup>3</sup> | CB24 250 x 400 m | 1042   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |

4.4. Lantai 4

a. Pengecoran Balok G58

| <Pengecoran Balok G58>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 2.79 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.78 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.79 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.78 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.83 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.87 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.92 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.72 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.72 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.72 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.92 m <sup>3</sup> | G58 500 x 800 mm | 8000   |

b. Pengecoran Balok G47

| <Pengecoran Balok G47>      |         |                  |        |
|-----------------------------|---------|------------------|--------|
| A                           | B       | C                | D      |
| Family                      | Volume  | Type             | Length |
| M_Concrete-Rectangular Beam | 2.04 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.07 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.00 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.48 m³ | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.46 m³ | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.51 m³ | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 2.20 m³ | G47 400 x 700 mm | 8074   |
| M_Concrete-Rectangular Beam | 2.04 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.02 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.02 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m³ | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.51 m³ | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.43 m³ | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.43 m³ | G47 400 x 700 mm | 6000   |

c. Pengecoran Balok G36

| <Pengecoran Balok G36>      |         |                  |        |
|-----------------------------|---------|------------------|--------|
| A                           | B       | C                | D      |
| Family                      | Volume  | Type             | Length |
| M_Concrete-Rectangular Beam | 1.07 m³ | G36 300 x 600 mm | 6637   |

d. Pengecoran Balok G34

| <Pengecoran Balok G34>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.37 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.35 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.35 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.35 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.38 m <sup>3</sup> | G34 300 x 400 mm | 4000   |

e. Pengecoran Balok CG46

| <Pengecoran Balok CG46>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.42 m <sup>3</sup> | CG46 400 x 600 m | 2162   |

f. Pengecoran Balok CG47

| <Pengecoran Balok CG47>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.78 m <sup>3</sup> | CG47 400 x 750 m | 3148   |

g. Pengecoran Balok B34

| <Pengecoran Balok CG34>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |

h. Pengecoran Balok B45

| <Pengecoran Balok B45>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 1.06 m <sup>3</sup> | B45 400 x 500 mm | 5745   |
| M_Concrete-Rectangular Beam | 1.06 m <sup>3</sup> | B45 400 x 500 mm | 5745   |
| M_Concrete-Rectangular Beam | 1.08 m <sup>3</sup> | B45 400 x 500 mm | 5870   |
| M_Concrete-Rectangular Beam | 0.76 m <sup>3</sup> | B45 400 x 500 mm | 4250   |
| M_Concrete-Rectangular Beam | 0.55 m <sup>3</sup> | B45 400 x 500 mm | 3150   |

i. Pengecoran Balok B57

| <Pengecoran Balok B57>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 2.63 m <sup>3</sup> | B57 500 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.93 m <sup>3</sup> | B57 500 x 700 mm | 6000   |

j. Pengecoran Balok B36

| <Pengecoran Balok B36>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.52 m <sup>3</sup> | B36 300 x 600 mm | 14845  |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |



k. Pengecoran Balok B24

| <Pengecoran Balok B24>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 1.57 m <sup>3</sup> | B24 250 x 400 mm | 16000  |
| M_Concrete-Rectangular Beam | 0.53 m <sup>3</sup> | B24 250 x 400 mm | 5745   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.20 m <sup>3</sup> | B24 250 x 400 mm | 2408   |
| M_Concrete-Rectangular Beam | 1.57 m <sup>3</sup> | B24 250 x 400 mm | 15772  |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 2.74 m <sup>3</sup> | B24 250 x 400 mm | 27667  |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.13 m <sup>3</sup> | B24 250 x 400 mm | 1750   |

l. Pengecoran Balok CB24

| <Pengecoran Balok CB24>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.13 m <sup>3</sup> | CB24 250 x 400 m | 1574   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.05 m <sup>3</sup> | CB24 250 x 400 m | 869    |
| M_Concrete-Rectangular Beam | 0.07 m <sup>3</sup> | CB24 250 x 400 m | 1042   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |

4.5. Lantai 5

a. Pengecoran Balok G58

| <Pengecoran Balok G58>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 2.79 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.78 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.79 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.78 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.83 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.87 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.92 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.72 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.72 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.72 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.92 m <sup>3</sup> | G58 500 x 800 mm | 8000   |

b. Pengecoran Balok G47

| <Pengecoran Balok G47>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.07 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.00 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.48 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.46 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.51 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 2.20 m <sup>3</sup> | G47 400 x 700 mm | 8074   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.02 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.02 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.51 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.43 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.43 m <sup>3</sup> | G47 400 x 700 mm | 6000   |

c. Pengecoran Balok G36

| <Pengecoran Balok G36>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 1.07 m <sup>3</sup> | G36 300 x 600 mm | 6637   |

d. Pengecoran Balok G34

| <Pengecoran Balok G34>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.37 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.35 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.35 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.35 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.38 m <sup>3</sup> | G34 300 x 400 mm | 4000   |

e. Pengecoran Balok CG46

| <Pengecoran Balok CG46>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.42 m <sup>3</sup> | CG46 400 x 600 m | 2162   |

f. Pengecoran Balok CG47

| <Pengecoran Balok CG47>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.78 m <sup>3</sup> | CG47 400 x 750 m | 3148   |

g. Pengecoran Balok CG34

| <Pengecoran Balok CG34>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |

h. Pengecoran Balok B45

| <Pengecoran Balok B45>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 1.06 m <sup>3</sup> | B45 400 x 500 mm | 5745   |
| M_Concrete-Rectangular Beam | 1.06 m <sup>3</sup> | B45 400 x 500 mm | 5745   |
| M_Concrete-Rectangular Beam | 1.08 m <sup>3</sup> | B45 400 x 500 mm | 5870   |
| M_Concrete-Rectangular Beam | 0.76 m <sup>3</sup> | B45 400 x 500 mm | 4250   |
| M_Concrete-Rectangular Beam | 0.55 m <sup>3</sup> | B45 400 x 500 mm | 3150   |

i. Pengecoran Balok B57

| <Pengecoran Balok B57>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 2.63 m <sup>3</sup> | B57 500 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.93 m <sup>3</sup> | B57 500 x 700 mm | 6000   |

j. Pengecoran Balok B36

| <Pengecoran Balok B36>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.52 m <sup>3</sup> | B36 300 x 600 mm | 14845  |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |

k. Pengecoran Balok B24

| <Pengecoran Balok B24>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 1.57 m <sup>3</sup> | B24 250 x 400 mm | 16000  |
| M_Concrete-Rectangular Beam | 0.53 m <sup>3</sup> | B24 250 x 400 mm | 5745   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.20 m <sup>3</sup> | B24 250 x 400 mm | 2408   |
| M_Concrete-Rectangular Beam | 1.57 m <sup>3</sup> | B24 250 x 400 mm | 15772  |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 2.74 m <sup>3</sup> | B24 250 x 400 mm | 27667  |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.13 m <sup>3</sup> | B24 250 x 400 mm | 1750   |

1. Pengecoran Balok CB24

| <Pengecoran Balok CB24>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.13 m <sup>3</sup> | CB24 250 x 400 m | 1574   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.05 m <sup>3</sup> | CB24 250 x 400 m | 869    |
| M_Concrete-Rectangular Beam | 0.07 m <sup>3</sup> | CB24 250 x 400 m | 1042   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |

4.6. Lantai 6

a. Pengecoran Balok G58

| <Pengecoran Balok G58>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 2.79 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.78 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.79 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.78 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.83 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.87 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.92 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.72 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.72 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.72 m <sup>3</sup> | G58 500 x 800 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.92 m <sup>3</sup> | G58 500 x 800 mm | 8000   |

b. Pengecoran Balok G47

| <Pengecoran Balok G47>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.07 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.00 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.48 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.46 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.51 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 2.20 m <sup>3</sup> | G47 400 x 700 mm | 8074   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.02 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.02 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.04 m <sup>3</sup> | G47 400 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.51 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.43 m <sup>3</sup> | G47 400 x 700 mm | 6000   |
| M_Concrete-Rectangular Beam | 1.43 m <sup>3</sup> | G47 400 x 700 mm | 6000   |

c. Pengecoran Balok G36

| <Pengecoran Balok G36>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 1.07 m <sup>3</sup> | G36 300 x 600 mm | 6637   |

d. Pengecoran Balok G34

| <Pengecoran Balok G34>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.37 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.35 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.35 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.35 m <sup>3</sup> | G34 300 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.38 m <sup>3</sup> | G34 300 x 400 mm | 4000   |

e. Pengecoran Balok CG46

| <Pengecoran Balok CG46>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.33 m <sup>3</sup> | CG46 400 x 600 m | 1574   |
| M_Concrete-Rectangular Beam | 0.42 m <sup>3</sup> | CG46 400 x 600 m | 2162   |

f. Pengecoran Balok CG47

| <Pengecoran Balok CG47>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.78 m <sup>3</sup> | CG47 400 x 750 m | 3148   |

g. Pengecoran Balok CG34

| <Pengecoran Balok CG34>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.08 m <sup>3</sup> | CG34 300 x 400 m | 1200   |



h. Pengecoran Balok B45

| <Pengecoran Balok B45>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 1.06 m <sup>3</sup> | B45 400 x 500 mm | 5745   |
| M_Concrete-Rectangular Beam | 1.06 m <sup>3</sup> | B45 400 x 500 mm | 5745   |
| M_Concrete-Rectangular Beam | 1.08 m <sup>3</sup> | B45 400 x 500 mm | 5870   |
| M_Concrete-Rectangular Beam | 0.76 m <sup>3</sup> | B45 400 x 500 mm | 4250   |
| M_Concrete-Rectangular Beam | 0.55 m <sup>3</sup> | B45 400 x 500 mm | 3150   |

i. Pengecoran Balok B57

| <Pengecoran Balok B57>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 2.63 m <sup>3</sup> | B57 500 x 700 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.93 m <sup>3</sup> | B57 500 x 700 mm | 6000   |

j. Pengecoran Balok B36

| <Pengecoran Balok B36>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 2.52 m <sup>3</sup> | B36 300 x 600 mm | 14845  |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |
| M_Concrete-Rectangular Beam | 1.37 m <sup>3</sup> | B36 300 x 600 mm | 8000   |

k. Pengecoran Balok B24

| <Pengecoran Balok B24>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 1.57 m <sup>3</sup> | B24 250 x 400 mm | 16000  |
| M_Concrete-Rectangular Beam | 0.53 m <sup>3</sup> | B24 250 x 400 mm | 5745   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.20 m <sup>3</sup> | B24 250 x 400 mm | 2408   |
| M_Concrete-Rectangular Beam | 1.57 m <sup>3</sup> | B24 250 x 400 mm | 15772  |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 2.74 m <sup>3</sup> | B24 250 x 400 mm | 27667  |
| M_Concrete-Rectangular Beam | 0.36 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.13 m <sup>3</sup> | B24 250 x 400 mm | 1750   |

l. Pengecoran Balok CB24

| <Pengecoran Balok CB24>     |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.11 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.13 m <sup>3</sup> | CB24 250 x 400 m | 1574   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.05 m <sup>3</sup> | CB24 250 x 400 m | 869    |
| M_Concrete-Rectangular Beam | 0.07 m <sup>3</sup> | CB24 250 x 400 m | 1042   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |
| M_Concrete-Rectangular Beam | 0.09 m <sup>3</sup> | CB24 250 x 400 m | 1200   |

4.7. Rooftop

a. Pengecoran Balok B24

| <Pengecoran Balok B24>      |                     |                  |        |
|-----------------------------|---------------------|------------------|--------|
| A                           | B                   | C                | D      |
| Family                      | Volume              | Type             | Length |
| M_Concrete-Rectangular Beam | 0.52 m <sup>3</sup> | B24 250 x 400 mm | 5500   |
| M_Concrete-Rectangular Beam | 0.26 m <sup>3</sup> | B24 250 x 400 mm | 2900   |
| M_Concrete-Rectangular Beam | 0.52 m <sup>3</sup> | B24 250 x 400 mm | 5500   |
| M_Concrete-Rectangular Beam | 0.26 m <sup>3</sup> | B24 250 x 400 mm | 2900   |
| M_Concrete-Rectangular Beam | 0.37 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.52 m <sup>3</sup> | B24 250 x 400 mm | 5500   |
| M_Concrete-Rectangular Beam | 0.37 m <sup>3</sup> | B24 250 x 400 mm | 4000   |
| M_Concrete-Rectangular Beam | 0.52 m <sup>3</sup> | B24 250 x 400 mm | 5500   |

5. Pengecoran Pelat Lantai

| <Pengecoran Pelat Lantai> |                      |
|---------------------------|----------------------|
| A                         | B                    |
| Family                    | Volume               |
| Floor                     | 45.75 m <sup>3</sup> |
| Floor                     | 43.40 m <sup>3</sup> |
| Floor                     | 17.34 m <sup>3</sup> |
| Floor                     | 45.75 m <sup>3</sup> |
| Floor                     | 43.35 m <sup>3</sup> |
| Floor                     | 17.36 m <sup>3</sup> |
| Floor                     | 45.67 m <sup>3</sup> |
| Floor                     | 43.35 m <sup>3</sup> |
| Floor                     | 17.22 m <sup>3</sup> |
| Floor                     | 45.75 m <sup>3</sup> |
| Floor                     | 43.36 m <sup>3</sup> |
| Floor                     | 17.25 m <sup>3</sup> |
| Floor                     | 45.70 m <sup>3</sup> |
| Floor                     | 43.36 m <sup>3</sup> |
| Floor                     | 17.26 m <sup>3</sup> |
| Floor                     | 43.32 m <sup>3</sup> |
| Floor                     | 15.35 m <sup>3</sup> |
| Floor                     | 45.40 m <sup>3</sup> |
| Floor                     | 43.21 m <sup>3</sup> |
| Floor                     | 17.24 m <sup>3</sup> |
| Floor                     | 2.64 m <sup>3</sup>  |
| Floor                     | 1.91 m <sup>3</sup>  |
| Floor                     | 38.40 m <sup>3</sup> |

**Quantity Take-Off Dinding**

1. Dinding Lantai 1

| <Wall Schedule 2> |                 |                       |                   |
|-------------------|-----------------|-----------------------|-------------------|
| A                 | B               | C                     | D                 |
| Type              | Base Constraint | Top Constraint        | Area              |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 14 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 14 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 16 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 16 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 21 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 24 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 28 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 26 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 22 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 24 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 24 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 16 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 16 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 19 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 16 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 26 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 16 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 16 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 10 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 7 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 6 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 28 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 28 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 4 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 12 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 12 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 12 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 5 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 10 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 5 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 1        | Up to level: Lantai 2 | 5 m <sup>2</sup>  |

|                  |          |                       |                   |
|------------------|----------|-----------------------|-------------------|
| Generic - 150 mm | Lantai 1 | Up to level: Lantai 2 | 1 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 1 | Up to level: Lantai 2 | 2 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 1 | Up to level: Lantai 2 | 24 m <sup>2</sup> |
| Generic - 150 mm | Lantai 1 | Up to level: Lantai 2 | 28 m <sup>2</sup> |
| Generic - 150 mm | Lantai 1 | Up to level: Lantai 2 | 18 m <sup>2</sup> |
| Generic - 150 mm | Lantai 1 | Up to level: Lantai 2 | 13 m <sup>2</sup> |
| Generic - 150 mm | Lantai 1 | Up to level: Lantai 2 | 29 m <sup>2</sup> |
| Generic - 150 mm | Lantai 1 | Up to level: Lantai 2 | 10 m <sup>2</sup> |
| Generic - 150 mm | Lantai 1 | Up to level: Lantai 2 | 11 m <sup>2</sup> |
| Generic - 150 mm | Lantai 1 | Up to level: Lantai 2 | 11 m <sup>2</sup> |
| Generic - 150 mm | Lantai 1 | Up to level: Lantai 2 | 18 m <sup>2</sup> |
| Generic - 150 mm | Lantai 1 | Up to level: Lantai 2 | 3 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 1 | Up to level: Lantai 2 | 3 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 1 | Up to level: Lantai 2 | 1 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 1 | Up to level: Lantai 2 | 3 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 1 | Up to level: Lantai 2 | 1 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 1 | Up to level: Lantai 2 | 1 m <sup>2</sup>  |

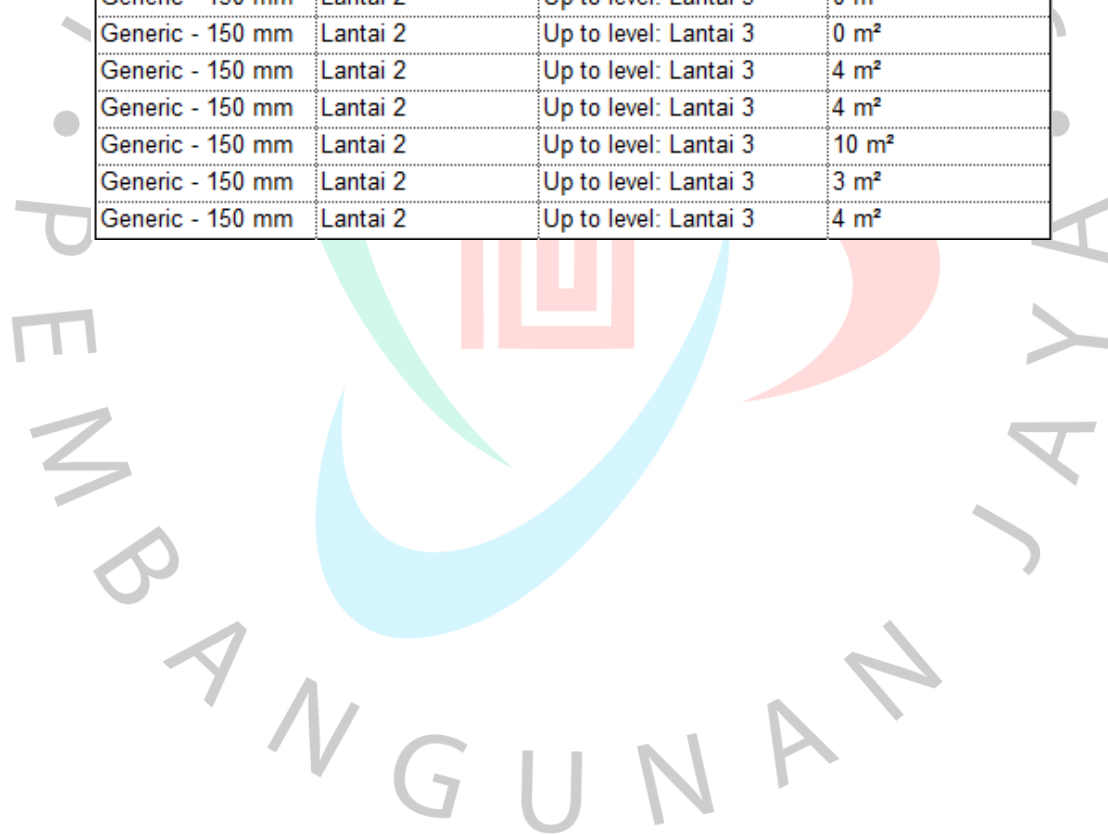


## 2. Dinding Lantai 2

<Wall Schedule 2>

| A                | B               | C                     | D                 |
|------------------|-----------------|-----------------------|-------------------|
| Type             | Base Constraint | Top Constraint        | Area              |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 9 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 11 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 11 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 19 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 15 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 11 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 13 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 9 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 19 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 22 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 5 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 2 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 8 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 7 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 8 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 20 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 2 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 19 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 3 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 32 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 8 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 17 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 22 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 22 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 18 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 11 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 13 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 13 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 11 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 9 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2        | Up to level: Lantai 3 | 9 m <sup>2</sup>  |

|                  |          |                       |                   |
|------------------|----------|-----------------------|-------------------|
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 20 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 22 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 3 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 6 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 21 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 8 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 9 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 3 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 7 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 7 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 7 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 4 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 4 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 1 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 1 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 19 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 0 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 0 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 4 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 4 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 10 m <sup>2</sup> |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 3 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 2 | Up to level: Lantai 3 | 4 m <sup>2</sup>  |

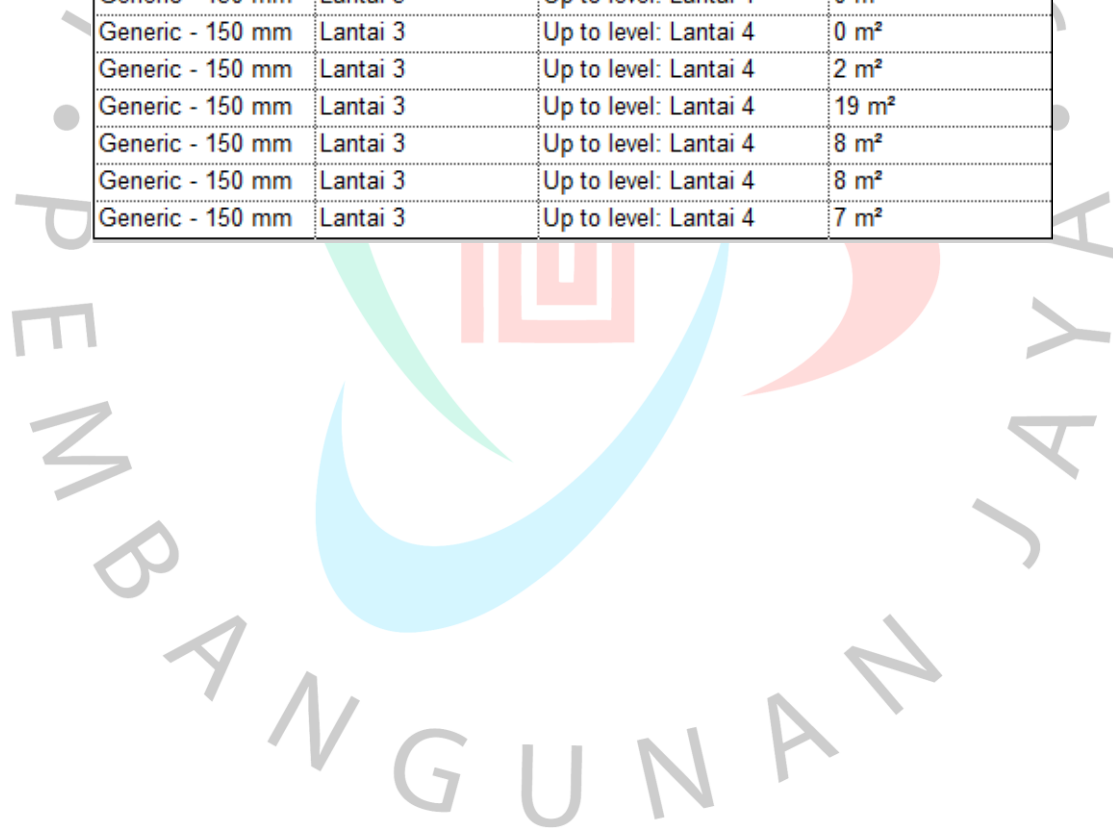




3. Dinding Lantai 3

| <Wall Schedule 2> |                 |                       |                   |
|-------------------|-----------------|-----------------------|-------------------|
| A                 | B               | C                     | D                 |
| Type              | Base Constraint | Top Constraint        | Area              |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 9 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 11 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 11 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 16 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 15 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 20 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 11 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 11 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 13 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 13 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 17 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 9 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 9 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 9 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 22 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 22 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 32 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 8 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 3 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 22 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 21 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 9 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 6 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 2 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 19 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 21 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 11 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 16 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 22 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 22 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 3        | Up to level: Lantai 4 | 6 m <sup>2</sup>  |

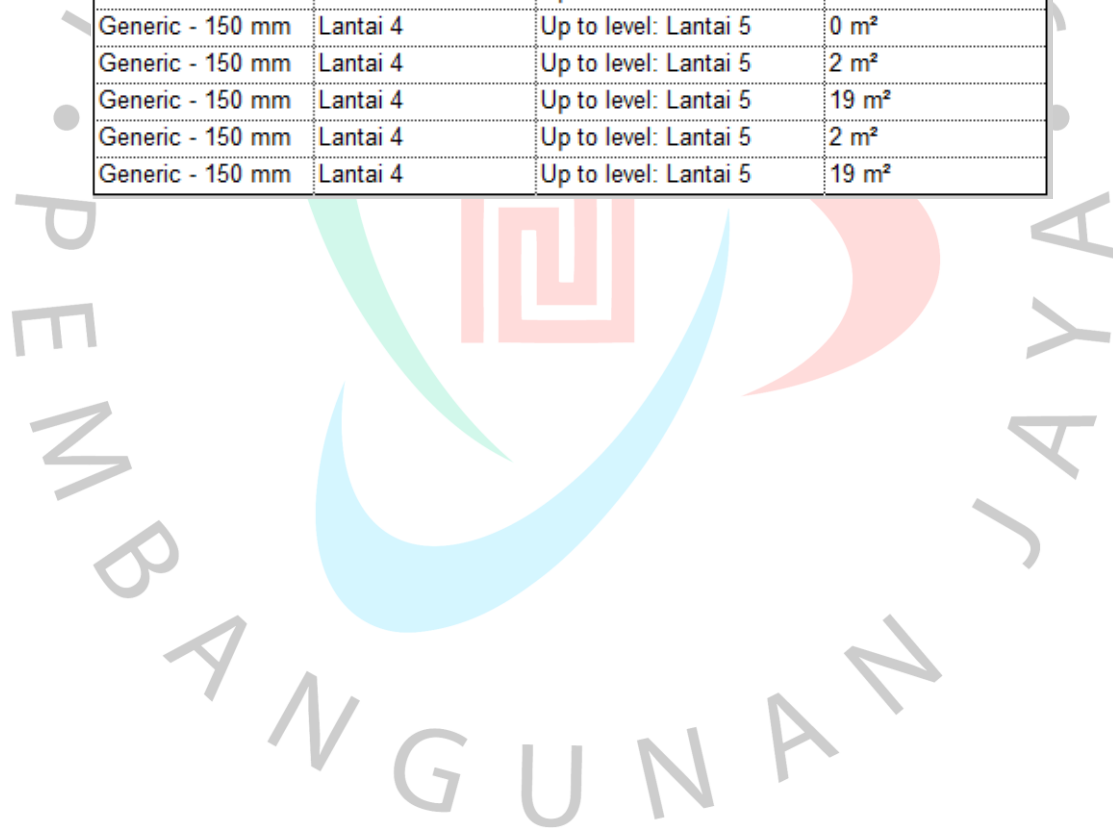
|                  |          |                       |                   |
|------------------|----------|-----------------------|-------------------|
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 10 m <sup>2</sup> |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 2 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 4 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 3 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 4 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 1 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 4 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 4 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 7 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 7 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 7 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 3 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 4 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 1 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 1 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 19 m <sup>2</sup> |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 0 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 0 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 2 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 19 m <sup>2</sup> |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 8 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 8 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 3 | Up to level: Lantai 4 | 7 m <sup>2</sup>  |



4. Dinding Lantai 4

| <Wall Schedule 2> |                 |                       |                   |
|-------------------|-----------------|-----------------------|-------------------|
| A                 | B               | C                     | D                 |
| Type              | Base Constraint | Top Constraint        | Area              |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 9 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 10 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 10 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 15 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 14 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 20 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 10 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 10 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 16 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 8 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 8 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 32 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 9 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 9 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 22 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 22 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 8 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 4 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 4 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 1 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 4 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 13 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 13 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 10 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 8 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 4 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 22 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 21 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 2 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 9 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 4        | Up to level: Lantai 5 | 6 m <sup>2</sup>  |

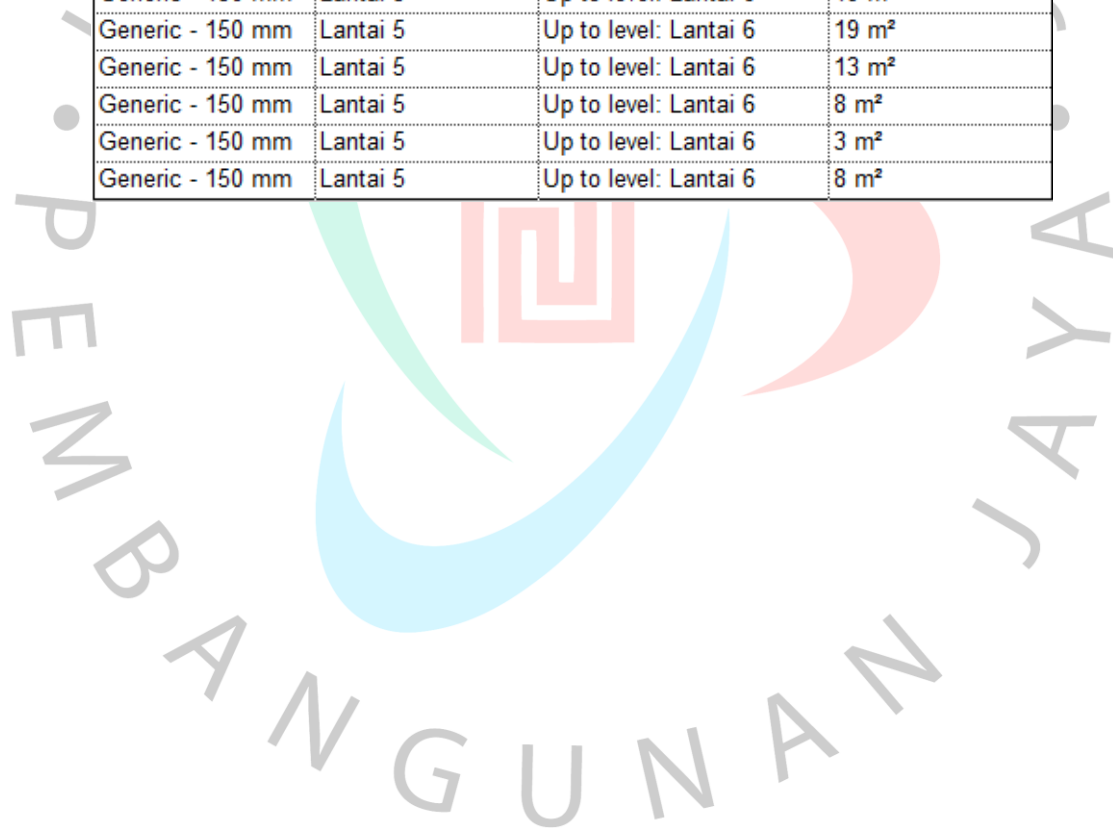
|                  |          |                       |                   |
|------------------|----------|-----------------------|-------------------|
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 3 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 19 m <sup>2</sup> |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 19 m <sup>2</sup> |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 8 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 8 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 8 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 6 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 4 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 7 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 7 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 7 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 3 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 4 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 1 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 1 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 19 m <sup>2</sup> |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 0 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 0 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 2 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 19 m <sup>2</sup> |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 2 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 4 | Up to level: Lantai 5 | 19 m <sup>2</sup> |



5. Dinding Lantai 5

| <Wall Schedule 2> |                 |                       |                   |
|-------------------|-----------------|-----------------------|-------------------|
| A                 | B               | C                     | D                 |
| Type              | Base Constraint | Top Constraint        | Area              |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 9 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 32 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 9 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 9 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 10 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 20 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 20 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 10 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 10 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 10 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 8 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 8 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 13 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 13 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 10 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 16 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 9 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 4 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 7 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 7 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 7 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 3 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 4 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 1 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 1 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 19 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 0 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 0 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 2 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 19 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 5        | Up to level: Lantai 6 | 2 m <sup>2</sup>  |

|                  |          |                       |                   |
|------------------|----------|-----------------------|-------------------|
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 19 m <sup>2</sup> |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 22 m <sup>2</sup> |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 22 m <sup>2</sup> |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 4 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 1 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 4 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 4 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 22 m <sup>2</sup> |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 3 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 21 m <sup>2</sup> |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 8 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 4 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 10 m <sup>2</sup> |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 6 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 9 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 2 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 19 m <sup>2</sup> |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 19 m <sup>2</sup> |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 13 m <sup>2</sup> |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 8 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 3 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 5 | Up to level: Lantai 6 | 8 m <sup>2</sup>  |



6. Dinding Lantai 6

| <Wall Schedule 2> |                 |                      |                   |
|-------------------|-----------------|----------------------|-------------------|
| A                 | B               | C                    | D                 |
| Type              | Base Constraint | Top Constraint       | Area              |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 9 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 32 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 9 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 9 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 10 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 10 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 16 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 14 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 20 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 10 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 10 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 13 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 13 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 16 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 8 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 8 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 8 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 4 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 7 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 7 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 7 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 3 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 4 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 1 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 1 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 19 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 0 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 0 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 2 m <sup>2</sup>  |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 19 m <sup>2</sup> |
| Generic - 150 mm  | Lantai 6        | Up to level: Rooftop | 19 m <sup>2</sup> |

|                  |          |                      |                   |
|------------------|----------|----------------------|-------------------|
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 19 m <sup>2</sup> |
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 8 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 8 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 8 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 6 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 22 m <sup>2</sup> |
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 22 m <sup>2</sup> |
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 4 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 4 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 22 m <sup>2</sup> |
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 21 m <sup>2</sup> |
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 9 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 3 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 6 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 1 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 4 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 7 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 3 m <sup>2</sup>  |
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 10 m <sup>2</sup> |
| Generic - 150 mm | Lantai 6 | Up to level: Rooftop | 3 m <sup>2</sup>  |

7. Dinding Rooftop

| <Wall Schedule 2> |                 |                   |                   |
|-------------------|-----------------|-------------------|-------------------|
| A                 | B               | C                 | D                 |
| Type              | Base Constraint | Top Constraint    | Area              |
| Generic - 150 mm  | Rooftop         | Up to level: Roof | 14 m <sup>2</sup> |
| Generic - 150 mm  | Rooftop         | Up to level: Roof | 5 m <sup>2</sup>  |
| Generic - 150 mm  | Rooftop         | Up to level: Roof | 7 m <sup>2</sup>  |
| Generic - 150 mm  | Rooftop         | Up to level: Roof | 14 m <sup>2</sup> |
| Generic - 150 mm  | Rooftop         | Up to level: Roof | 14 m <sup>2</sup> |
| Generic - 150 mm  | Rooftop         | Up to level: Roof | 14 m <sup>2</sup> |
| Generic - 150 mm  | Rooftop         | Up to level: Roof | 10 m <sup>2</sup> |
| Generic - 150 mm  | Rooftop         | Up to level: Roof | 7 m <sup>2</sup>  |
| Generic - 150 mm  | Rooftop         | Up to level: Roof | 13 m <sup>2</sup> |
| Generic - 150 mm  | Rooftop         | Up to level: Roof | 27 m <sup>2</sup> |
| Generic - 150 mm  | Rooftop         | Up to level: Roof | 5 m <sup>2</sup>  |
| Generic - 150 mm  | Rooftop         | Up to level: Roof | 10 m <sup>2</sup> |
| Generic - 150 mm  | Rooftop         | Up to level: Roof | 17 m <sup>2</sup> |
| Generic - 150 mm  | Rooftop         | Up to level: Roof | 21 m <sup>2</sup> |
| Generic - 150 mm  | Rooftop         | Up to level: Roof | 7 m <sup>2</sup>  |
| Generic - 150 mm  | Rooftop         | Up to level: Roof | 12 m <sup>2</sup> |
| Generic - 150 mm  | Rooftop         | Up to level: Roof | 30 m <sup>2</sup> |
| Generic - 150 mm  | Rooftop         | Up to level: Roof | 4 m <sup>2</sup>  |



**Quantity Take-Off Keramik Lantai**

1. Keramik Lantai 1

| <Floor Schedule> |           |                    |          |
|------------------|-----------|--------------------|----------|
| A                | B         | C                  | D        |
| Type             | Perimeter | Area               | Level    |
| F3 UNPOLISHED    | 177169    | 389 m <sup>2</sup> | Lantai 1 |
| F1 POLISHED      | 47950     | 92 m <sup>2</sup>  | Lantai 1 |
| F4 VINYL         | 36794     | 73 m <sup>2</sup>  | Lantai 1 |
| F4 VINYL         | 36794     | 73 m <sup>2</sup>  | Lantai 1 |
| F4 VINYL         | 31350     | 60 m <sup>2</sup>  | Lantai 1 |
| F1 POLISHED      | 24450     | 33 m <sup>2</sup>  | Lantai 1 |
| F1 POLISHED      | 15700     | 11 m <sup>2</sup>  | Lantai 1 |
| F2 UNPOLISHED    | 12400     | 7 m <sup>2</sup>   | Lantai 1 |
| F2 UNPOLISHED    | 12400     | 7 m <sup>2</sup>   | Lantai 1 |
| F1 POLISHED      | 9052      | 5 m <sup>2</sup>   | Lantai 1 |
| F1 POLISHED      | 8652      | 4 m <sup>2</sup>   | Lantai 1 |
| F2 UNPOLISHED    | 7700      | 4 m <sup>2</sup>   | Lantai 1 |
| F2 UNPOLISHED    | 7890      | 3 m <sup>2</sup>   | Lantai 1 |

2. Keramik Lantai 2

| <Floor Schedule> |           |                    |          |
|------------------|-----------|--------------------|----------|
| A                | B         | C                  | D        |
| Type             | Perimeter | Area               | Level    |
| F1 POLISHED      | 198820    | 344 m <sup>2</sup> | Lantai 2 |
| F1 POLISHED      | 49800     | 123 m <sup>2</sup> | Lantai 2 |
| F1 POLISHED      | 36130     | 72 m <sup>2</sup>  | Lantai 2 |
| F1 POLISHED      | 36194     | 71 m <sup>2</sup>  | Lantai 2 |
| F1 POLISHED      | 35472     | 66 m <sup>2</sup>  | Lantai 2 |
| F1 POLISHED      | 24400     | 29 m <sup>2</sup>  | Lantai 2 |
| F2 UNPOLISHED    | 21538     | 19 m <sup>2</sup>  | Lantai 2 |
| F2 UNPOLISHED    | 19000     | 18 m <sup>2</sup>  | Lantai 2 |
| F2 UNPOLISHED    | 11100     | 7 m <sup>2</sup>   | Lantai 2 |
| F1 POLISHED      | 9052      | 5 m <sup>2</sup>   | Lantai 2 |
| F1 POLISHED      | 8652      | 4 m <sup>2</sup>   | Lantai 2 |
| F2 UNPOLISHED    | 7632      | 3 m <sup>2</sup>   | Lantai 2 |
| F2 UNPOLISHED    | 7452      | 3 m <sup>2</sup>   | Lantai 2 |

3. Keramik Lantai 3

| <Floor Schedule> |           |                    |          |
|------------------|-----------|--------------------|----------|
| A                | B         | C                  | D        |
| Type             | Perimeter | Area               | Level    |
| F1 POLISHED      | 210279    | 413 m <sup>2</sup> | Lantai 3 |
| F1 POLISHED      | 42170     | 94 m <sup>2</sup>  | Lantai 3 |
| F2 UNPOLISHED    | 36194     | 71 m <sup>2</sup>  | Lantai 3 |
| F2 UNPOLISHED    | 35732     | 70 m <sup>2</sup>  | Lantai 3 |
| F1 POLISHED      | 33580     | 60 m <sup>2</sup>  | Lantai 3 |
| F2 UNPOLISHED    | 22270     | 21 m <sup>2</sup>  | Lantai 3 |
| F2 UNPOLISHED    | 18850     | 18 m <sup>2</sup>  | Lantai 3 |
| F2 UNPOLISHED    | 11250     | 7 m <sup>2</sup>   | Lantai 3 |
| F1 POLISHED      | 9504      | 5 m <sup>2</sup>   | Lantai 3 |
| F1 POLISHED      | 8954      | 4 m <sup>2</sup>   | Lantai 3 |
| F2 UNPOLISHED    | 7588      | 3 m <sup>2</sup>   | Lantai 3 |

4. Keramik Lantai 4

| <Floor Schedule> |           |                    |          |
|------------------|-----------|--------------------|----------|
| A                | B         | C                  | D        |
| Type             | Perimeter | Area               | Level    |
| F1 POLISHED      | 206881    | 447 m <sup>2</sup> | Lantai 4 |
| F1 POLISHED      | 36194     | 71 m <sup>2</sup>  | Lantai 4 |
| F1 POLISHED      | 35732     | 70 m <sup>2</sup>  | Lantai 4 |
| F1 POLISHED      | 31700     | 61 m <sup>2</sup>  | Lantai 4 |
| F1 POLISHED      | 31700     | 61 m <sup>2</sup>  | Lantai 4 |
| F2 UNPOLISHED    | 22270     | 21 m <sup>2</sup>  | Lantai 4 |
| F2 UNPOLISHED    | 18850     | 18 m <sup>2</sup>  | Lantai 4 |
| F2 UNPOLISHED    | 11250     | 7 m <sup>2</sup>   | Lantai 4 |
| F1 POLISHED      | 9052      | 5 m <sup>2</sup>   | Lantai 4 |
| F1 POLISHED      | 8952      | 4 m <sup>2</sup>   | Lantai 4 |
| F2 UNPOLISHED    | 7588      | 3 m <sup>2</sup>   | Lantai 4 |

5. Keramik Lantai 5

| <Floor Schedule> |           |                    |          |
|------------------|-----------|--------------------|----------|
| A                | B         | C                  | D        |
| Type             | Perimeter | Area               | Level    |
| F1 POLISHED      | 201558    | 395 m <sup>2</sup> | Lantai 5 |
| F1 POLISHED      | 36194     | 71 m <sup>2</sup>  | Lantai 5 |
| F1 POLISHED      | 35732     | 70 m <sup>2</sup>  | Lantai 5 |
| F1 POLISHED      | 31700     | 61 m <sup>2</sup>  | Lantai 5 |
| F1 POLISHED      | 31700     | 61 m <sup>2</sup>  | Lantai 5 |
| F1 POLISHED      | 31700     | 59 m <sup>2</sup>  | Lantai 5 |
| F2 UNPOLISHED    | 22270     | 21 m <sup>2</sup>  | Lantai 5 |
| F2 UNPOLISHED    | 18850     | 18 m <sup>2</sup>  | Lantai 5 |
| F2 UNPOLISHED    | 11250     | 7 m <sup>2</sup>   | Lantai 5 |
| F2 UNPOLISHED    | 7588      | 3 m <sup>2</sup>   | Lantai 5 |

6. Keramik Lantai 6

| <Floor Schedule> |           |                    |          |
|------------------|-----------|--------------------|----------|
| A                | B         | C                  | D        |
| Type             | Perimeter | Area               | Level    |
| F1 POLISHED      | 206888    | 447 m <sup>2</sup> | Lantai 6 |
| F1 POLISHED      | 36194     | 71 m <sup>2</sup>  | Lantai 6 |
| F1 POLISHED      | 35732     | 70 m <sup>2</sup>  | Lantai 6 |
| F1 POLISHED      | 31700     | 61 m <sup>2</sup>  | Lantai 6 |
| F1 POLISHED      | 31700     | 61 m <sup>2</sup>  | Lantai 6 |
| F2 UNPOLISHED    | 22270     | 21 m <sup>2</sup>  | Lantai 6 |
| F2 UNPOLISHED    | 18850     | 18 m <sup>2</sup>  | Lantai 6 |
| F2 UNPOLISHED    | 11250     | 7 m <sup>2</sup>   | Lantai 6 |
| F1 POLISHED      | 9360      | 5 m <sup>2</sup>   | Lantai 6 |
| F1 POLISHED      | 8960      | 4 m <sup>2</sup>   | Lantai 6 |
| F2 UNPOLISHED    | 7588      | 3 m <sup>2</sup>   | Lantai 6 |

**Quantity Take-Off Plafond**

1. Plafond Lantai 1

| <b>&lt;Ceiling Schedule&gt;</b> |                    |           |          |
|---------------------------------|--------------------|-----------|----------|
| <b>A</b>                        | <b>B</b>           | <b>C</b>  | <b>D</b> |
| Type                            | Area               | Perimeter | Level    |
| Plafond Expose                  | 73 m <sup>2</sup>  | 36194     | Lantai 1 |
| Plafond Expose                  | 72 m <sup>2</sup>  | 36194     | Lantai 1 |
| Plafond Expose                  | 11 m <sup>2</sup>  | 15400     | Lantai 1 |
| Plafond Expose                  | 4 m <sup>2</sup>   | 8752      | Lantai 1 |
| Plafond Expose                  | 4 m <sup>2</sup>   | 8352      | Lantai 1 |
| Plafond Gypsum                  | 61 m <sup>2</sup>  | 31400     | Lantai 1 |
| Plafond Expose                  | 92 m <sup>2</sup>  | 47950     | Lantai 1 |
| Plafond Gypsum                  | 33 m <sup>2</sup>  | 24400     | Lantai 1 |
| Plafond GRC                     | 3 m <sup>2</sup>   | 7400      | Lantai 1 |
| Plafond GRC                     | 3 m <sup>2</sup>   | 7590      | Lantai 1 |
| Plafond GRC                     | 6 m <sup>2</sup>   | 10800     | Lantai 1 |
| Plafond GRC                     | 6 m <sup>2</sup>   | 10800     | Lantai 1 |
| Plafond Expose                  | 362 m <sup>2</sup> | 181029    | Lantai 1 |

2. Plafond Lantai 2

| <b>&lt;Ceiling Schedule&gt;</b> |                    |           |          |
|---------------------------------|--------------------|-----------|----------|
| <b>A</b>                        | <b>B</b>           | <b>C</b>  | <b>D</b> |
| Type                            | Area               | Perimeter | Level    |
| EX - Plafond Expos              | 71 m <sup>2</sup>  | 35830     | Lantai 2 |
| C2 - Plafond GRC                | 71 m <sup>2</sup>  | 35894     | Lantai 2 |
| C2 - Plafond GRC                | 19 m <sup>2</sup>  | 21538     | Lantai 2 |
| C2 - Plafond GRC                | 3 m <sup>2</sup>   | 7332      | Lantai 2 |
| C1 - Plafond Gypsu              | 66 m <sup>2</sup>  | 35172     | Lantai 2 |
| C2 - Plafond GRC                | 18 m <sup>2</sup>  | 18700     | Lantai 2 |
| C2 - Plafond GRC                | 6 m <sup>2</sup>   | 10800     | Lantai 2 |
| EX - Plafond Expos              | 5 m <sup>2</sup>   | 9052      | Lantai 2 |
| EX - Plafond Expos              | 4 m <sup>2</sup>   | 8652      | Lantai 2 |
| C2 - Plafond GRC                | 3 m <sup>2</sup>   | 7152      | Lantai 2 |
| C1 - Plafond Gypsu              | 29 m <sup>2</sup>  | 24100     | Lantai 2 |
| C1 - Plafond Gypsu              | 123 m <sup>2</sup> | 49500     | Lantai 2 |
| EX - Plafond Expos              | 344 m <sup>2</sup> | 198830    | Lantai 2 |

3. Plafond Lantai 3

| <Ceiling Schedule> |                   |           |          |
|--------------------|-------------------|-----------|----------|
| A                  | B                 | C         | D        |
| Type               | Area              | Perimeter | Level    |
| EX - Plafond Expos | 70 m <sup>2</sup> | 35456     | Lantai 3 |
| EX - Plafond Expos | 71 m <sup>2</sup> | 35894     | Lantai 3 |
| C2 - Plafond GRC   | 21 m <sup>2</sup> | 21970     | Lantai 3 |
| C2 - Plafond GRC   | 2 m <sup>2</sup>  | 7288      | Lantai 3 |
| C2 - Plafond GRC   | 18 m <sup>2</sup> | 18550     | Lantai 3 |
| C2 - Plafond GRC   | 7 m <sup>2</sup>  | 10950     | Lantai 3 |
| EX - Plafond Expos | 5 m <sup>2</sup>  | 9204      | Lantai 3 |
| EX - Plafond Expos | 4 m <sup>2</sup>  | 8654      | Lantai 3 |
| EX - Plafond Expos | 60 m <sup>2</sup> | 33280     | Lantai 3 |
| EX - Plafond Expos | 93 m <sup>2</sup> | 41870     | Lantai 3 |

4. Plafond Lantai 4

| <Ceiling Schedule> |                    |           |          |
|--------------------|--------------------|-----------|----------|
| A                  | B                  | C         | D        |
| Type               | Area               | Perimeter | Level    |
| EX - Plafond Expos | 447 m <sup>2</sup> | 206844    | Lantai 4 |
| EX - Plafond Expos | 70 m <sup>2</sup>  | 35432     | Lantai 4 |
| EX - Plafond Expos | 71 m <sup>2</sup>  | 35904     | Lantai 4 |
| C2 - Plafond GRC   | 21 m <sup>2</sup>  | 21970     | Lantai 4 |
| C2 - Plafond GRC   | 2 m <sup>2</sup>   | 7288      | Lantai 4 |
| C2 - Plafond GRC   | 18 m <sup>2</sup>  | 18550     | Lantai 4 |
| C2 - Plafond GRC   | 7 m <sup>2</sup>   | 10950     | Lantai 4 |
| EX - Plafond Expos | 9 m <sup>2</sup>   | 17404     | Lantai 4 |
| EX - Plafond Expos | 61 m <sup>2</sup>  | 31400     | Lantai 4 |
| EX - Plafond Expos | 61 m <sup>2</sup>  | 31400     | Lantai 4 |

5. Plafond Lantai 5

| <Ceiling Schedule> |                    |           |          |
|--------------------|--------------------|-----------|----------|
| A                  | B                  | C         | D        |
| Type               | Area               | Perimeter | Level    |
| EX - Plafond Expos | 61 m <sup>2</sup>  | 31400     | Lantai 5 |
| EX - Plafond Expos | 61 m <sup>2</sup>  | 31400     | Lantai 5 |
| EX - Plafond Expos | 59 m <sup>2</sup>  | 31400     | Lantai 5 |
| C2 - Plafond GRC   | 18 m <sup>2</sup>  | 18550     | Lantai 5 |
| C2 - Plafond GRC   | 7 m <sup>2</sup>   | 10950     | Lantai 5 |
| C2 - Plafond GRC   | 21 m <sup>2</sup>  | 21970     | Lantai 5 |
| C2 - Plafond GRC   | 2 m <sup>2</sup>   | 7288      | Lantai 5 |
| EX - Plafond Expos | 70 m <sup>2</sup>  | 35432     | Lantai 5 |
| EX - Plafond Expos | 71 m <sup>2</sup>  | 35894     | Lantai 5 |
| EX - Plafond Expos | 395 m <sup>2</sup> | 201682    | Lantai 5 |

6. Plafond Lantai 6

| <Ceiling Schedule> |                    |           |          |
|--------------------|--------------------|-----------|----------|
| A                  | B                  | C         | D        |
| Type               | Area               | Perimeter | Level    |
| EX - Plafond Expos | 447 m <sup>2</sup> | 206888    | Lantai 6 |
| EX - Plafond Expos | 70 m <sup>2</sup>  | 35432     | Lantai 6 |
| EX - Plafond Expos | 71 m <sup>2</sup>  | 35894     | Lantai 6 |
| C2 - Plafond GRC   | 21 m <sup>2</sup>  | 21970     | Lantai 6 |
| C2 - Plafond GRC   | 2 m <sup>2</sup>   | 7288      | Lantai 6 |
| C2 - Plafond GRC   | 18 m <sup>2</sup>  | 18550     | Lantai 6 |
| C2 - Plafond GRC   | 7 m <sup>2</sup>   | 10950     | Lantai 6 |
| EX - Plafond Expos | 5 m <sup>2</sup>   | 9060      | Lantai 6 |
| EX - Plafond Expos | 4 m <sup>2</sup>   | 8660      | Lantai 6 |
| EX - Plafond Expos | 61 m <sup>2</sup>  | 31400     | Lantai 6 |
| EX - Plafond Expos | 61 m <sup>2</sup>  | 31400     | Lantai 6 |

Lampiran 5. Rancangan Anggaran Biaya (RAB) dengan Metode Konvensional

| Item pekerjaan  | Satuan Unit | KONTRAK |             |                    |
|---|-------------|---------|-------------|--------------------|
|   |             | Volume  | Harsat      | Jumlah             |
| <b>LOKASI 6</b>   |             |         |             |                    |
| <b>REHAB TOTAL GEDUNG SDN PEJATEN TIMUR 11</b>                                    |             |         |             |                    |
| <b>Penawaran tidak boleh melebihi HPS per lokasi Rp32.052.878.861,54</b>          |             |         |             |                    |
| <b>PEKERJAAN PERSIAPAN</b>  |             |         |             |                    |
| Pembuatan Papan Nama Proyek   | Bh          | 1.00    | 25,750,000  | 25,750,000         |
| Administrasi dan Dokumentasi  | Ls          | 1.00    | 9,258,925   | 9,258,925          |
| Pekerjaan Pembuatan Direksi Keet, Los Kerja dan Gudang                            | M2          | 30.00   | 4,100,000   | 123,000,000        |
| Pemasangan Bouwplank Untuk Bangunan Gedung  | M           | 161.30  | 56,750      | 9,153,775          |
| Pembuatan Pagar Keliling Sementara Tinggi 2 M                                     | M2          | 161.30  | 977,500     | 157,670,750        |
| Rencana Keselamatan dan Kesehatan Kerja Kontrak (RK3K)                            | Ls          | 1.00    | 168,150,000 | 168,150,000        |
| Air dan Listrik Kerja   | Bln         | 6.00    | 29,713,476  | 178,280,853        |
| Test Sondir   | Titik       | 5.00    | 1,100,000   | 5,500,000          |
| Test Boring (1 Titik, T= 30m, Inc. Mob, Lab, dll.)                                | Ls          | 1.00    | 9,850,000   | 9,850,000          |
| <b>TOTAL PEKERJAAN PERSIAPAN</b>  |             |         |             | <b>686,614,303</b> |
| <b>PEKERJAAN STRUKTUR</b>   |             |         |             |                    |
| <b>PEKERJAAN PONDASI</b>  |             |         |             |                    |
| Pekerjaan Pondasi Pancang   |             |         |             |                    |
| - Mobilisasi dan Demobilisasi Alat Pancang  | Ls          | 1.00    | 186,250,000 | 186,250,000        |
| - Pengadaan Material Tiang Pancang 300x300 Mutu Beton $f_c = 41,5$ Mpa (6M/Tiang) | Tiang       | 113.00  | 4,276,000   | 483,188,000        |
| - Penetrasi tiang pancang Beton 300x300   | M           | 1017.00 | 100,114     | 101,816,406        |
| - Pembobokan Kepala Tiang Pancang   | Bh          | 113.00  | 451,000     | 50,963,000         |
| - PDA Test  | titik       | 2.00    | 8,605,000   | 17,210,000         |
| <b>Total Pekerjaan Pondasi</b>  |             |         |             | <b>839,427,406</b> |
| <b>PEKERJAAN PILECAP</b>  |             |         |             |                    |
| Pilecap Tipe PC1  |             |         |             |                    |

|                          |    |         |           |             |
|--------------------------|----|---------|-----------|-------------|
| - Galian Tanah (mekanis) | M3 | 4.12    | 148,844   | 613,237     |
| - Pasir Urug T.10 cm     | M3 | 0.29    | 571,703   | 165,794     |
| -Lantai Kerja            | M3 | 0.29    | 228,265   | 66,197      |
| -Beton fc 25 Mpa         | M3 | 2.59    | 2,240,109 | 5,801,884   |
| - Penulangan             | Kg | 412.75  | 45,315    | 18,703,918  |
| - Bekisting              | M2 | 8.64    | 264,397   | 2,284,386   |
| - Urugan Tanah Kembali   | M3 | 1.52    | 50,008    | 76,012      |
| Pilecap Tipe PC3         |    |         |           |             |
| - Galian Tanah (mekanis) | M3 | 36.45   | 148,844   | 5,425,357   |
| - Pasir Urug T.10 cm     | M3 | 2.30    | 571,703   | 1,314,917   |
| -Lantai Kerja            | M3 | 2.30    | 228,265   | 525,009     |
| -Beton fc 25 Mpa         | M3 | 27.60   | 2,240,109 | 61,827,021  |
| - Penulangan             | Kg | 3586.33 | 45,315    | 162,515,862 |
| - Bekisting              | M2 | 46.08   | 264,397   | 12,183,393  |
| - Urugan Tanah Kembali   | M3 | 8.85    | 50,008    | 442,569     |
| Pilecap Tipe PC4         |    |         |           |             |
| - Galian Tanah (mekanis) | M3 | 101.70  | 148,844   | 15,137,417  |
| - Pasir Urug T.10 cm     | M3 | 5.63    | 571,703   | 3,218,688   |
| -Lantai Kerja            | M3 | 5.63    | 228,265   | 1,285,132   |
| -Beton fc 25 Mpa         | M3 | 78.75   | 2,240,109 | 176,408,620 |
| - Penulangan             | Kg | 8650.52 | 45,315    | 392,001,493 |
| - Bekisting              | M2 | 126.00  | 264,397   | 33,313,964  |
| - Urugan Tanah Kembali   | M3 | 22.95   | 50,008    | 1,147,679   |
| Pilecap Tipe PC4A        |    |         |           |             |
| - Galian Tanah (mekanis) | M3 | 13.04   | 148,844   | 1,940,923   |
| - Pasir Urug T.10 cm     | M3 | 1.00    | 571,703   | 571,703     |



|                                |    |         |           |                      |
|--------------------------------|----|---------|-----------|----------------------|
| -Lantai Kerja                  | M3 | 1.00    | 228,265   | 228,265              |
| -Beton fc 25 Mpa               | M3 | 10.00   | 2,240,109 | 22,401,095           |
| - Penulangan                   | Kg | 1289.67 | 45,315    | 58,441,870           |
| - Bekisting                    | M2 | 3.04    | 264,397   | 803,765              |
| - Urugan Tanah Kembali         | M3 | 3.04    | 50,008    | 152,024              |
| Pilecap Tipe PC5               |    |         |           |                      |
| - Galian Tanah (mekanis)       | M3 | 34.17   | 148,844   | 5,085,994            |
| - Pasir Urug T.10 cm           | M3 | 1.95    | 571,703   | 1,114,821            |
| -Lantai Kerja                  | M3 | 1.95    | 228,265   | 445,117              |
| -Beton fc 25 Mpa               | M3 | 27.26   | 2,240,109 | 61,065,384           |
| - Penulangan                   | Kg | 2698.40 | 45,315    | 122,278,988          |
| - Bekisting                    | M2 | 34.94   | 264,397   | 9,238,015            |
| - Urugan Tanah Kembali         | M3 | 6.91    | 50,008    | 345,554              |
| Pilecap Tipe PC6               |    |         |           |                      |
| - Galian Tanah (mekanis)       | M3 | 79.10   | 148,844   | 11,773,547           |
| - Pasir Urug T.10 cm           | M3 | 4.38    | 571,703   | 2,504,059            |
| -Lantai Kerja                  | M3 | 4.38    | 228,265   | 999,801              |
| -Beton fc 25 Mpa               | M3 | 61.25   | 2,240,109 | 137,206,704          |
| - Penulangan                   | Kg | 6728.18 | 45,315    | 304,889,949          |
| - Bekisting                    | M2 | 98.00   | 264,397   | 25,910,861           |
| - Urugan Tanah Kembali         | M3 | 17.85   | 50,008    | 892,639              |
| <b>Total Pekerjaan Pilecap</b> |    |         |           | <b>1,662,749,626</b> |

| <b>PEKERJAAN TIE BEAM</b>  |    |         |           |             |
|----------------------------|----|---------|-----------|-------------|
| <b>Tie Beam Tipe TB 36</b> |    |         |           |             |
| - Galian Tanah (mekanis)   | M3 | 49.28   | 148,844   | 7,335,024   |
| - Pasir Urug T.10 cm       | M3 | 5.28    | 571,703   | 3,018,592   |
| -Lantai Kerja              | M3 | 5.28    | 228,265   | 1,205,239   |
| -Beton fc 25 Mpa           | M3 | 25.65   | 2,240,109 | 57,458,808  |
| - Penulangan               | Kg | 4023.75 | 45,315    | 182,337,710 |
| - Bekisting                | M2 | 171.00  | 264,397   | 45,211,808  |
| - Urugan Tanah Kembali     | M3 | 23.63   | 50,008    | 1,181,684   |
| <b>Tie Beam Tipe TG 47</b> |    |         |           |             |
| - Galian Tanah (mekanis)   | M3 | 55.08   | 148,844   | 8,198,318   |
| - Pasir Urug T.10 cm       | M3 | 5.76    | 571,703   | 3,293,010   |
| -Lantai Kerja              | M3 | 5.76    | 228,265   | 1,314,806   |
| -Beton fc 25 Mpa           | M3 | 31.09   | 2,240,109 | 69,645,003  |
| - Penulangan               | Kg | 7236.90 | 45,315    | 327,942,783 |
| - Bekisting                | M2 | 155.43  | 264,397   | 41,095,154  |
| - Urugan Tanah Kembali     | M3 | 23.99   | 50,008    | 1,199,687   |
| <b>Tie Beam Tipe TG 46</b> |    |         |           |             |
| - Galian Tanah (mekanis)   | M3 | 15.86   | 148,844   | 2,360,663   |
| - Pasir Urug T.10 cm       | M3 | 1.88    | 571,703   | 1,074,802   |
| -Lantai Kerja              | M3 | 1.88    | 228,265   | 429,138     |
| -Beton fc 25 Mpa           | M3 | 8.08    | 2,240,109 | 18,100,084  |
| - Penulangan               | Kg | 1593.24 | 45,315    | 72,198,256  |
| - Bekisting                | M2 | 40.41   | 264,397   | 10,684,264  |
| - Urugan Tanah Kembali     | M3 | 7.78    | 50,008    | 389,061     |
| <b>Tie Beam Tipe TB 24</b> |    |         |           |             |
| - Galian Tanah (mekanis)   | M3 | 6.63    | 148,844   | 986,835     |
| - Pasir Urug T.10 cm       | M3 | 1.01    | 571,703   | 577,420     |

|                                 |    |          |           |                      |
|---------------------------------|----|----------|-----------|----------------------|
| -Lantai Kerja                   | M3 | 1.01     | 228,265   | 230,548              |
| -Beton fc 25 Mpa                | M3 | 2.40     | 2,240,109 | 5,376,263            |
| - Penulangan                    | Kg | 845.93   | 45,315    | 38,333,629           |
| - Bekisting                     | M2 | 19.20    | 264,397   | 5,076,414            |
| - Urugan Tanah Kembali          | M3 | 4.23     | 50,008    | 211,533              |
| Tie Beam Tipe TG 58             |    |          |           |                      |
| - Galian Tanah (mekanis)        | M3 | 54.10    | 148,844   | 8,052,451            |
| - Pasir Urug T.10 cm            | M3 | 5.66     | 571,703   | 3,235,839            |
| -Lantai Kerja                   | M3 | 5.66     | 228,265   | 1,291,980            |
| -Beton fc 25 Mpa                | M3 | 30.10    | 2,240,109 | 67,427,295           |
| - Penulangan                    | Kg | 6987.10  | 45,315    | 316,623,004          |
| - Bekisting                     | M2 | 130.56   | 264,397   | 34,519,612           |
| - Urugan Tanah Kembali          | M3 | 21.80    | 50,008    | 1,090,170            |
| <b>Total Pekerjaan Tie Beam</b> |    |          |           | <b>1,338,706,886</b> |
| <b>PEKERJAAN KOLOM</b>          |    |          |           |                      |
| Kolom Lantai 1                  |    |          |           |                      |
| Kolom Tipe K79                  |    |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 54.98    | 2,240,109 | 123,161,218          |
| - Penulangan                    | Kg | 13592.68 | 45,315    | 615,957,290          |
| - Bekisting                     | M2 | 257.04   | 264,397   | 67,960,487           |
| Kolom Tipe K712                 |    |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 26.46    | 2,240,109 | 59,273,296           |
| - Penulangan                    | Kg | 6342.82  | 45,315    | 287,427,219          |
| - Bekisting                     | M2 | 134.40   | 264,397   | 35,534,895           |
| <b>Jumlah Kolom Lantai 1</b>    |    |          |           | <b>1,189,314,405</b> |
| Kolom Lantai 2                  |    |          |           |                      |
| Kolom Tipe K79                  |    |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 45.55    | 2,240,109 | 102,036,986          |

|                       |    |          |           |                      |
|-----------------------|----|----------|-----------|----------------------|
| - Penulangan          | Kg | 11617.74 | 45,315    | 526,462,158          |
| - Bekisting           | M2 | 212.98   | 264,397   | 56,311,175           |
| Kolom Tipe K712       |    |          |           |                      |
| -Beton fc 25 Mpa      | M3 | 21.92    | 2,240,109 | 49,103,199           |
| - Penulangan          | Kg | 5442.68  | 45,315    | 246,637,044          |
| - Bekisting           | M2 | 111.36   | 264,397   | 29,443,199           |
| Jumlah Kolom Lantai 2 |    |          |           | <b>1,009,993,761</b> |
| Kolom Lantai 3        |    |          |           |                      |
| Kolom Tipe K79        |    |          |           |                      |
| -Beton fc 25 Mpa      | M3 | 45.55    | 2,240,109 | 102,036,986          |
| - Penulangan          | Kg | 11617.74 | 45,315    | 526,462,158          |
| - Bekisting           | M2 | 212.98   | 264,397   | 56,311,175           |
| Kolom Tipe K712       |    |          |           |                      |
| -Beton fc 25 Mpa      | M3 | 21.92    | 2,240,109 | 49,103,199           |
| - Penulangan          | Kg | 5442.68  | 45,315    | 246,637,044          |
| - Bekisting           | M2 | 111.36   | 264,397   | 29,443,199           |
| Jumlah Kolom Lantai 3 |    |          |           | <b>1,009,993,761</b> |
| Kolom Lantai 4        |    |          |           |                      |
| Kolom Tipe K79        |    |          |           |                      |
| -Beton fc 25 Mpa      | M3 | 45.55    | 2,240,109 | 102,036,986          |
| - Penulangan          | Kg | 11617.74 | 45,315    | 526,462,158          |
| - Bekisting           | M2 | 212.98   | 264,397   | 56,311,175           |
| Kolom Tipe K712       |    |          |           |                      |
| -Beton fc 25 Mpa      | M3 | 21.92    | 2,240,109 | 49,103,199           |
| - Penulangan          | Kg | 5442.68  | 45,315    | 246,637,044          |
| - Bekisting           | M2 | 111.36   | 264,397   | 29,443,199           |
| Jumlah Kolom Lantai 4 |    |          |           | <b>1,009,993,761</b> |
| Kolom Lantai 5        |    |          |           |                      |
| Kolom Tipe K79        |    |          |           |                      |

|                          |    |          |           |                      |
|--------------------------|----|----------|-----------|----------------------|
| -Beton fc 25 Mpa         | M3 | 45.55    | 2,240,109 | 102,036,986          |
| - Penulangan             | Kg | 11617.74 | 45,315    | 526,462,158          |
| - Bekisting              | M2 | 212.98   | 264,397   | 56,311,175           |
| Kolom Tipe K712          |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 21.92    | 2,240,109 | 49,103,199           |
| - Penulangan             | Kg | 5442.68  | 45,315    | 246,637,044          |
| - Bekisting              | M2 | 111.36   | 264,397   | 29,443,199           |
| Jumlah Kolom Lantai 5    |    |          |           | <b>1,009,993,761</b> |
| Kolom Lantai 6           |    |          |           |                      |
| Kolom Tipe K79           |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 45.55    | 2,240,109 | 102,036,986          |
| - Penulangan             | Kg | 11617.74 | 45,315    | 526,462,158          |
| - Bekisting              | M2 | 212.98   | 264,397   | 56,311,175           |
| Kolom Tipe K712          |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 21.92    | 2,240,109 | 49,103,199           |
| - Penulangan             | Kg | 5442.68  | 45,315    | 246,637,044          |
| - Bekisting              | M2 | 111.36   | 264,397   | 29,443,199           |
| Jumlah Kolom Lantai 6    |    |          |           | <b>1,009,993,761</b> |
| Kolom Lantai Atap        |    |          |           |                      |
| Kolom Tipe K33           |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 1.30     | 2,240,109 | 2,903,182            |
| - Penulangan             | Kg | 352.87   | 45,315    | 15,990,237           |
| - Bekisting              | M2 | 17.28    | 264,397   | 4,568,772            |
| Jumlah Kolom Lantai Atap |    |          |           | <b>23,462,191</b>    |
| Total Pekerjaan Kolom    |    |          |           | <b>6,262,745,402</b> |
| PEKERJAAN BALOK          |    |          |           |                      |
| Pekerjaan Balok Lantai 2 |    |          |           |                      |
| Balok Tipe G58           |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 12.25    | 2,240,109 | 27,441,341           |

|                  |    |          |           |             |
|------------------|----|----------|-----------|-------------|
| - Penulangan     | Kg | 1,866.36 | 45,315    | 84,574,789  |
| - Bekisting      | M2 | 48.98    | 264,397   | 12,950,143  |
| Balok Tipe G47   |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 33.67    | 2,240,109 | 75,424,486  |
| - Penulangan     | Kg | 6,314.62 | 45,315    | 286,149,326 |
| - Bekisting      | M2 | 168.37   | 264,397   | 44,516,445  |
| Balok Tipe CG46  |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 2.96     | 2,240,109 | 6,630,724   |
| - Penulangan     | Kg | 569.34   | 45,315    | 25,799,851  |
| - Bekisting      | M2 | 14.79    | 264,397   | 3,910,425   |
| Balok Tipe B36   |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 21.48    | 2,240,109 | 48,117,551  |
| - Penulangan     | Kg | 3,385.21 | 45,315    | 153,402,035 |
| - Bekisting      | M2 | 143.18   | 264,397   | 37,856,297  |
| Balok Tipe B57   |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 0.73     | 2,240,109 | 1,635,280   |
| - Penulangan     | Kg | 142.52   | 45,315    | 6,458,346   |
| - Bekisting      | M2 | 4.90     | 264,397   | 1,295,543   |
| Balok Tipe B24   |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 3.43     | 2,240,109 | 7,683,575   |
| - Penulangan     | Kg | 692.74   | 45,315    | 31,391,768  |
| - Bekisting      | M2 | 27.41    | 264,397   | 7,247,109   |
| Balok Tipe G34   |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 1.46     | 2,240,109 | 3,270,560   |
| - Penulangan     | Kg | 244.58   | 45,315    | 11,083,233  |
| - Bekisting      | M2 | 5.86     | 264,397   | 1,549,364   |
| Balok Tipe CG34  |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 0.63     | 2,240,109 | 1,411,269   |

|                          |    |          |  |           |                      |
|--------------------------|----|----------|--|-----------|----------------------|
| - Penulangan             | Kg | 243.46   |  | 45,315    | 11,032,261           |
| - Bekisting              | M2 | 4.46     |  | 264,397   | 1,179,870            |
| Balok Tipe CG47          |    |          |  |           |                      |
| -Beton fc 25 Mpa         | M3 | 2.13     |  | 2,240,109 | 4,771,433            |
| - Penulangan             | Kg | 848.61   |  | 45,315    | 38,455,190           |
| - Bekisting              | M2 | 4.10     |  | 264,397   | 1,083,656            |
| Balok Tipe CB24          |    |          |  |           |                      |
| -Beton fc 25 Mpa         | M3 | 3.52     |  | 2,240,109 | 7,878,465            |
| - Penulangan             | Kg | 1156.79  |  | 45,315    | 52,420,235           |
| - Bekisting              | M2 | 28.14    |  | 264,397   | 7,439,061            |
| Balok Tipe B45           |    |          |  |           |                      |
| -Beton fc 25 Mpa         | M3 | 1.03     |  | 2,240,109 | 2,316,273            |
| - Penulangan             | Kg | 251.64   |  | 45,315    | 11,403,348           |
| - Bekisting              | M2 | 5.95     |  | 264,397   | 1,571,970            |
| Jumlah Balok Lantai 2    |    |          |  |           | <b>1,019,351,221</b> |
| Pekerjaan Balok Lantai 3 |    |          |  |           |                      |
| Balok Tipe G58           |    |          |  |           |                      |
| -Beton fc 25 Mpa         | M3 | 12.25    |  | 2,240,109 | 27,441,341           |
| - Penulangan             | Kg | 1,866.36 |  | 45,315    | 84,574,789           |
| - Bekisting              | M2 | 48.98    |  | 264,397   | 12,950,143           |
| Balok Tipe G47           |    |          |  |           |                      |
| -Beton fc 25 Mpa         | M3 | 33.67    |  | 2,240,109 | 75,424,486           |
| - Penulangan             | Kg | 6,314.62 |  | 45,315    | 286,149,326          |
| - Bekisting              | M2 | 168.37   |  | 264,397   | 44,516,445           |
| Balok Tipe CG46          |    |          |  |           |                      |
| -Beton fc 25 Mpa         | M3 | 2.96     |  | 2,240,109 | 6,630,724            |
| - Penulangan             | Kg | 569.34   |  | 45,315    | 25,799,851           |
| - Bekisting              | M2 | 14.79    |  | 264,397   | 3,910,425            |
| Balok Tipe B36           |    |          |  |           |                      |

|                  |    |          |           |             |
|------------------|----|----------|-----------|-------------|
| -Beton fc 25 Mpa | M3 | 21.48    | 2,240,109 | 48,117,551  |
| - Penulangan     | Kg | 3,385.21 | 45,315    | 153,402,035 |
| - Bekisting      | M2 | 143.18   | 264,397   | 37,856,297  |
| Balok Tipe B57   |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 0.73     | 2,240,109 | 1,635,280   |
| - Penulangan     | Kg | 142.52   | 45,315    | 6,458,346   |
| - Bekisting      | M2 | 4.90     | 264,397   | 1,295,543   |
| Balok Tipe B24   |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 3.43     | 2,240,109 | 7,683,575   |
| - Penulangan     | Kg | 692.74   | 45,315    | 31,391,768  |
| - Bekisting      | M2 | 27.41    | 264,397   | 7,247,109   |
| Balok Tipe G34   |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 1.46     | 2,240,109 | 3,270,560   |
| - Penulangan     | Kg | 244.58   | 45,315    | 11,083,233  |
| - Bekisting      | M2 | 5.86     | 264,397   | 1,549,364   |
| Balok Tipe CG34  |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 0.63     | 2,240,109 | 1,411,269   |
| - Penulangan     | Kg | 243.46   | 45,315    | 11,032,261  |
| - Bekisting      | M2 | 4.46     | 264,397   | 1,179,870   |
| Balok Tipe CG47  |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 2.13     | 2,240,109 | 4,771,433   |
| - Penulangan     | Kg | 848.61   | 45,315    | 38,455,190  |
| - Bekisting      | M2 | 4.10     | 264,397   | 1,083,656   |
| Balok Tipe CB24  |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 3.52     | 2,240,109 | 7,878,465   |
| - Penulangan     | Kg | 1156.79  | 45,315    | 52,420,235  |
| - Bekisting      | M2 | 28.14    | 264,397   | 7,439,061   |
| Balok Tipe B45   |    |          |           |             |



|                              |    |          |           |                      |
|------------------------------|----|----------|-----------|----------------------|
| -Beton fc 25 Mpa             | M3 | 1.03     | 2,240,109 | 2,316,273            |
| - Penulangan                 | Kg | 251.64   | 45,315    | 11,403,348           |
| - Bekisting                  | M2 | 5.95     | 264,397   | 1,571,970            |
| <b>Jumlah Balok Lantai 3</b> |    |          |           | <b>1,019,351,221</b> |
| Pekerjaan Balok Lantai 4     |    |          |           |                      |
| Balok Tipe G58               |    |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 12.25    | 2,240,109 | 27,441,341           |
| - Penulangan                 | Kg | 1,866.36 | 45,315    | 84,574,789           |
| - Bekisting                  | M2 | 48.98    | 264,397   | 12,950,143           |
| Balok Tipe G47               |    |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 33.67    | 2,240,109 | 75,424,486           |
| - Penulangan                 | Kg | 6,314.62 | 45,315    | 286,149,326          |
| - Bekisting                  | M2 | 168.37   | 264,397   | 44,516,445           |
| Balok Tipe CG46              |    |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 2.96     | 2,240,109 | 6,630,724            |
| - Penulangan                 | Kg | 569.34   | 45,315    | 25,799,851           |
| - Bekisting                  | M2 | 14.79    | 264,397   | 3,910,425            |
| Balok Tipe B36               |    |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 21.48    | 2,240,109 | 48,117,551           |
| - Penulangan                 | Kg | 3,385.21 | 45,315    | 153,402,035          |
| - Bekisting                  | M2 | 143.18   | 264,397   | 37,856,297           |
| Balok Tipe B57               |    |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 0.73     | 2,240,109 | 1,635,280            |
| - Penulangan                 | Kg | 142.52   | 45,315    | 6,458,346            |
| - Bekisting                  | M2 | 4.90     | 264,397   | 1,295,543            |
| Balok Tipe B24               |    |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 3.43     | 2,240,109 | 7,683,575            |
| - Penulangan                 | Kg | 692.74   | 45,315    | 31,391,768           |

|                          |    |          |           |                      |
|--------------------------|----|----------|-----------|----------------------|
| - Bekisting              | M2 | 27.41    | 264,397   | 7,247,109            |
| Balok Tipe G34           |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 1.46     | 2,240,109 | 3,270,560            |
| - Penulangan             | Kg | 244.58   | 45,315    | 11,083,233           |
| - Bekisting              | M2 | 5.86     | 264,397   | 1,549,364            |
| Balok Tipe CG34          |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 0.63     | 2,240,109 | 1,411,269            |
| - Penulangan             | Kg | 243.46   | 45,315    | 11,032,261           |
| - Bekisting              | M2 | 4.46     | 264,397   | 1,179,870            |
| Balok Tipe CG47          |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 2.13     | 2,240,109 | 4,771,433            |
| - Penulangan             | Kg | 848.61   | 45,315    | 38,455,190           |
| - Bekisting              | M2 | 4.10     | 264,397   | 1,083,656            |
| Balok Tipe CB24          |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 3.52     | 2,240,109 | 7,878,465            |
| - Penulangan             | Kg | 1156.79  | 45,315    | 52,420,235           |
| - Bekisting              | M2 | 28.14    | 264,397   | 7,439,061            |
| Balok Tipe B45           |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 1.03     | 2,240,109 | 2,316,273            |
| - Penulangan             | Kg | 251.64   | 45,315    | 11,403,348           |
| - Bekisting              | M2 | 5.95     | 264,397   | 1,571,970            |
| Jumlah Balok Lantai 4    |    |          |           | <b>1,019,351,221</b> |
| Pekerjaan Balok Lantai 5 |    |          |           |                      |
| Balok Tipe G58           |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 12.25    | 2,240,109 | 27,441,341           |
| - Penulangan             | Kg | 1,866.36 | 45,315    | 84,574,789           |
| - Bekisting              | M2 | 48.98    | 264,397   | 12,950,143           |
| Balok Tipe G47           |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 33.67    | 2,240,109 | 75,424,486           |

|                  |    |          |           |             |
|------------------|----|----------|-----------|-------------|
| - Penulangan     | Kg | 6,314.62 | 45,315    | 286,149,326 |
| - Bekisting      | M2 | 168.37   | 264,397   | 44,516,445  |
| Balok Tipe CG46  |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 2.96     | 2,240,109 | 6,630,724   |
| - Penulangan     | Kg | 569.34   | 45,315    | 25,799,851  |
| - Bekisting      | M2 | 14.79    | 264,397   | 3,910,425   |
| Balok Tipe B36   |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 21.48    | 2,240,109 | 48,117,551  |
| - Penulangan     | Kg | 3,385.21 | 45,315    | 153,402,035 |
| - Bekisting      | M2 | 143.18   | 264,397   | 37,856,297  |
| Balok Tipe B57   |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 0.73     | 2,240,109 | 1,635,280   |
| - Penulangan     | Kg | 142.52   | 45,315    | 6,458,346   |
| - Bekisting      | M2 | 4.90     | 264,397   | 1,295,543   |
| Balok Tipe B24   |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 3.43     | 2,240,109 | 7,683,575   |
| - Penulangan     | Kg | 692.74   | 45,315    | 31,391,768  |
| - Bekisting      | M2 | 27.41    | 264,397   | 7,247,109   |
| Balok Tipe G34   |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 1.46     | 2,240,109 | 3,270,560   |
| - Penulangan     | Kg | 244.58   | 45,315    | 11,083,233  |
| - Bekisting      | M2 | 5.86     | 264,397   | 1,549,364   |
| Balok Tipe CG34  |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 1.95     | 2,240,109 | 4,365,525   |
| - Penulangan     | Kg | 1177.02  | 45,315    | 53,337,050  |
| - Bekisting      | M2 | 13.80    | 264,397   | 3,649,730   |
| Balok Tipe CG47  |    |          |           |             |
| -Beton fc 25 Mpa | M3 | 0.63     | 2,240,109 | 1,411,269   |

|                          |    |          |           |                      |
|--------------------------|----|----------|-----------|----------------------|
| - Penulangan             | Kg | 243.46   | 45,315    | 11,032,261           |
| - Bekisting              | M2 | 4.46     | 264,397   | 1,179,870            |
| Balok Tipe CB24          |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 0.00     | 2,240,109 | -                    |
| - Penulangan             | Kg | 0.00     | 45,315    | -                    |
| - Bekisting              | M2 | 0.00     | 264,397   | -                    |
| Balok Tipe B45           |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 3.52     | 2,240,109 | 7,878,465            |
| - Penulangan             | Kg | 1156.79  | 45,315    | 52,420,235           |
| - Bekisting              | M2 | 28.14    | 264,397   | 7,439,061            |
| Jumlah Balok Lantai 5    |    |          |           | <b>1,021,101,656</b> |
| Pekerjaan Balok Lantai 6 |    |          |           |                      |
| Balok Tipe G58           |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 12.25    | 2,240,109 | 27,441,341           |
| - Penulangan             | Kg | 1,866.36 | 45,315    | 84,574,789           |
| - Bekisting              | M2 | 48.98    | 264,397   | 12,950,143           |
| Balok Tipe G47           |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 33.67    | 2,240,109 | 75,424,486           |
| - Penulangan             | Kg | 6,314.62 | 45,315    | 286,149,326          |
| - Bekisting              | M2 | 168.37   | 264,397   | 44,516,445           |
| Balok Tipe CG46          |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 2.96     | 2,240,109 | 6,630,724            |
| - Penulangan             | Kg | 569.34   | 45,315    | 25,799,851           |
| - Bekisting              | M2 | 14.79    | 264,397   | 3,910,425            |
| Balok Tipe B36           |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 21.48    | 2,240,109 | 48,117,551           |
| - Penulangan             | Kg | 3,385.21 | 45,315    | 153,402,035          |
| - Bekisting              | M2 | 143.18   | 264,397   | 37,856,297           |
| Balok Tipe B57           |    |          |           |                      |

|                       |    |         |           |                      |
|-----------------------|----|---------|-----------|----------------------|
| -Beton fc 25 Mpa      | M3 | 0.73    | 2,240,109 | 1,635,280            |
| - Penulangan          | Kg | 142.52  | 45,315    | 6,458,346            |
| - Bekisting           | M2 | 4.90    | 264,397   | 1,295,543            |
| Balok Tipe B24        |    |         |           |                      |
| -Beton fc 25 Mpa      | M3 | 3.43    | 2,240,109 | 7,683,575            |
| - Penulangan          | Kg | 692.74  | 45,315    | 31,391,768           |
| - Bekisting           | M2 | 27.41   | 264,397   | 7,247,109            |
| Balok Tipe G34        |    |         |           |                      |
| -Beton fc 25 Mpa      | M3 | 1.46    | 2,240,109 | 3,270,560            |
| - Penulangan          | Kg | 244.58  | 45,315    | 11,083,233           |
| - Bekisting           | M2 | 5.86    | 264,397   | 1,549,364            |
| Balok Tipe CG34       |    |         |           |                      |
| -Beton fc 25 Mpa      | M3 | 0.63    | 2,240,109 | 1,411,269            |
| - Penulangan          | Kg | 243.46  | 45,315    | 11,032,261           |
| - Bekisting           | M2 | 4.46    | 264,397   | 1,179,870            |
| Balok Tipe CG47       |    |         |           |                      |
| -Beton fc 25 Mpa      | M3 | 2.13    | 2,240,109 | 4,771,433            |
| - Penulangan          | Kg | 848.61  | 45,315    | 38,455,190           |
| - Bekisting           | M2 | 4.10    | 264,397   | 1,083,656            |
| Balok Tipe CB24       |    |         |           |                      |
| -Beton fc 25 Mpa      | M3 | 3.52    | 2,240,109 | 7,878,465            |
| - Penulangan          | Kg | 1156.79 | 45,315    | 52,420,235           |
| - Bekisting           | M2 | 28.14   | 264,397   | 7,439,061            |
| Balok Tipe B45        |    |         |           |                      |
| -Beton fc 25 Mpa      | M3 | 1.03    | 2,240,109 | 2,316,273            |
| - Penulangan          | Kg | 251.64  | 45,315    | 11,403,348           |
| - Bekisting           | M2 | 5.95    | 264,397   | 1,571,970            |
| Jumlah Balok Lantai 6 |    |         |           | <b>1,019,351,221</b> |

|                                |    |          |           |             |
|--------------------------------|----|----------|-----------|-------------|
| Pekerjaan Balok Lantai Rooftop |    |          |           |             |
| Balok Tipe G58                 |    |          |           |             |
| -Beton fc 25 Mpa               | M3 | 12.25    |           |             |
|                                |    |          | 2,240,109 | 27,441,341  |
| - Penulangan                   | Kg | 1,866.36 |           |             |
|                                |    |          | 45,315    | 84,574,789  |
| - Bekisting                    | M2 | 48.98    |           |             |
|                                |    |          | 264,397   | 12,950,143  |
| Balok Tipe G47                 |    |          |           |             |
| -Beton fc 25 Mpa               | M3 | 33.67    |           |             |
|                                |    |          | 2,240,109 | 75,424,486  |
| - Penulangan                   | Kg | 6,314.62 |           |             |
|                                |    |          | 45,315    | 286,149,326 |
| - Bekisting                    | M2 | 168.37   |           |             |
|                                |    |          | 264,397   | 44,516,445  |
| Balok Tipe CG46                |    |          |           |             |
| -Beton fc 25 Mpa               | M3 | 2.96     |           |             |
|                                |    |          | 2,240,109 | 6,630,724   |
| - Penulangan                   | Kg | 569.34   |           |             |
|                                |    |          | 45,315    | 25,799,851  |
| - Bekisting                    | M2 | 14.79    |           |             |
|                                |    |          | 264,397   | 3,910,425   |
| Balok Tipe B36                 |    |          |           |             |
| -Beton fc 25 Mpa               | M3 | 21.48    |           |             |
|                                |    |          | 2,240,109 | 48,117,551  |
| - Penulangan                   | Kg | 3,385.21 |           |             |
|                                |    |          | 45,315    | 153,402,035 |
| - Bekisting                    | M2 | 143.18   |           |             |
|                                |    |          | 264,397   | 37,856,297  |
| Balok Tipe B57                 |    |          |           |             |
| -Beton fc 25 Mpa               | M3 | 0.73     |           |             |
|                                |    |          | 2,240,109 | 1,635,280   |
| - Penulangan                   | Kg | 142.52   |           |             |
|                                |    |          | 45,315    | 6,458,346   |
| - Bekisting                    | M2 | 4.90     |           |             |
|                                |    |          | 264,397   | 1,295,543   |
| Balok Tipe B24                 |    |          |           |             |
| -Beton fc 25 Mpa               | M3 | 3.43     |           |             |
|                                |    |          | 2,240,109 | 7,683,575   |
| - Penulangan                   | Kg | 692.74   |           |             |
|                                |    |          | 45,315    | 31,391,768  |
| - Bekisting                    | M2 | 27.41    |           |             |
|                                |    |          | 264,397   | 7,247,109   |
| Balok Tipe G34                 |    |          |           |             |
| -Beton fc 25 Mpa               | M3 | 1.46     |           |             |
|                                |    |          | 2,240,109 | 3,270,560   |
| - Penulangan                   | Kg | 244.58   |           |             |
|                                |    |          | 45,315    | 11,083,233  |
| - Bekisting                    | M2 | 5.86     |           |             |
|                                |    |          | 264,397   | 1,549,364   |

|                               |    |          |           |                      |
|-------------------------------|----|----------|-----------|----------------------|
| Balok Tipe CG34               |    |          |           |                      |
| -Beton fc 25 Mpa              | M3 | 0.63     | 2,240,109 | 1,411,269            |
| - Penulangan                  | Kg | 243.46   | 45,315    | 11,032,261           |
| - Bekisting                   | M2 | 4.46     | 264,397   | 1,179,870            |
| Balok Tipe CG47               |    |          |           |                      |
| -Beton fc 25 Mpa              | M3 | 2.13     | 2,240,109 | 4,771,433            |
| - Penulangan                  | Kg | 848.61   | 45,315    | 38,455,190           |
| - Bekisting                   | M2 | 4.10     | 264,397   | 1,083,656            |
| Balok Tipe CB24               |    |          |           |                      |
| -Beton fc 25 Mpa              | M3 | 3.52     | 2,240,109 | 7,878,465            |
| - Penulangan                  | Kg | 1156.79  | 45,315    | 52,420,235           |
| - Bekisting                   | M2 | 28.14    | 264,397   | 7,439,061            |
| Balok Tipe B45                |    |          |           |                      |
| -Beton fc 25 Mpa              | M3 | 1.03     | 2,240,109 | 2,316,273            |
| - Penulangan                  | Kg | 251.64   | 45,315    | 11,403,348           |
| - Bekisting                   | M2 | 5.95     | 264,397   | 1,571,970            |
| Jumlah Balok Lantai Rooftop   |    |          |           | <b>1,019,351,221</b> |
| Total Pekerjaan Balok         |    |          |           | <b>6,117,857,759</b> |
| <b>PEKERJAAN PELAT LANTAI</b> |    |          |           |                      |
| Pekerjaan Pelat Lantai 1      |    |          |           |                      |
| Rabat Beton T = 15 cm         |    |          |           |                      |
| - Pasir Urug T.10 cm          | M3 | 125.43   | 371,703   | 46,622,714           |
| -Lantai Kerja                 | M3 | 43.31    | 118,265   | 5,122,056            |
| -Beton fc 25 Mpa              | M3 | 125.43   | 1,240,109 | 155,546,930          |
| - Penulangan                  | Kg | 8,620.94 | 15,315    | 132,032,864          |
| - Bekisting                   | M2 | 20.45    | 283,385   | 5,794,132            |
| Jumlah Pelat Lantai Dasar     |    |          |           | <b>345,118,696</b>   |
| Pekerjaan Pelat Lantai 2      |    |          |           |                      |
| Pelat Lantai T = 12 cm        |    |          |           |                      |

|                                |    |           |           |                    |
|--------------------------------|----|-----------|-----------|--------------------|
| -Beton fc 25 Mpa               | M3 | 97.04     | 1,240,109 | 120,340,222        |
| - Penulangan                   | Kg | 10,421.78 | 15,315    | 159,613,391        |
| - Bekisting                    | M2 | 826.40    | 283,385   | 234,189,450        |
| Jumlah Pelat Lantai 1          |    |           |           | <b>514,143,063</b> |
| Pekerjaan Pelat Lantai 3       |    |           |           |                    |
| Pelat Lantai T = 12 cm         |    |           |           |                    |
| -Beton fc 25 Mpa               | M3 | 97.04     | 1,240,109 | 120,340,222        |
| - Penulangan                   | Kg | 10,421.78 | 15,315    | 159,613,391        |
| - Bekisting                    | M2 | 826.40    | 283,385   | 234,189,450        |
| Jumlah Pelat Lantai 2          |    |           |           | <b>514,143,063</b> |
| Pekerjaan Pelat Lantai 4       |    |           |           |                    |
| Pelat Lantai T = 12 cm         |    |           |           |                    |
| -Beton fc 25 Mpa               | M3 | 97.04     | 1,240,109 | 120,340,222        |
| - Penulangan                   | Kg | 10,421.78 | 15,315    | 159,613,391        |
| - Bekisting                    | M2 | 826.40    | 283,385   | 234,189,450        |
| Jumlah Pelat Lantai 3          |    |           |           | <b>514,143,063</b> |
| Pekerjaan Pelat Lantai 5       |    |           |           |                    |
| Pelat Lantai T = 12 cm         |    |           |           |                    |
| -Beton fc 25 Mpa               | M3 | 97.04     | 1,240,109 | 120,340,222        |
| - Penulangan                   | Kg | 10,421.78 | 15,315    | 159,613,391        |
| - Bekisting                    | M2 | 826.40    | 283,385   | 234,189,450        |
| Jumlah Pelat Lantai 5          |    |           |           | <b>514,143,063</b> |
| Pekerjaan Pelat Lantai 6       |    |           |           |                    |
| Pelat Lantai T = 12 cm         |    |           |           |                    |
| -Beton fc 25 Mpa               | M3 | 97.04     | 1,240,109 | 120,340,222        |
| - Penulangan                   | Kg | 10,421.78 | 15,315    | 159,613,391        |
| - Bekisting                    | M2 | 826.40    | 283,385   | 234,189,450        |
| Jumlah Pelat Lantai 6          |    |           |           | <b>514,143,063</b> |
| Pekerjaan Pelat Lantai Rooftop |    |           |           |                    |
| Pelat Lantai T = 12 cm         |    |           |           |                    |



|  |    |           |           |                      |
|--|----|-----------|-----------|----------------------|
| -Beton fc 25 Mpa                               | M3 | 97.04     |           |                      |
|  |    |           | 1,240,109 | 120,340,222          |
| - Penulangan                                   | Kg | 10,421.78 |           |                      |
|  |    |           | 15,315    | 159,613,391          |
| - Bekisting                                    | M2 | 826.40    |           |                      |
|  |    |           | 283,385   | 234,189,450          |
| <b>Jumlah Pelat Lantai Rooftop</b>             |    |           |           | <b>514,143,063</b>   |
| <b>Pekerjaan Pelat Lantai Dak tangga</b>       |    |           |           |                      |
| <b>Pelat Lantai T = 12 cm</b>                  |    |           |           |                      |
| -Beton fc 25 Mpa                               | M3 | 3.98      |           |                      |
|  |    |           | 1,240,109 | 4,935,636            |
| - Penulangan                                   | Kg | 427.85    |           |                      |
|  |    |           | 15,315    | 6,552,680            |
| - Bekisting                                    | M2 | 37.25     |           |                      |
|  |    |           | 283,385   | 10,556,095           |
| <b>Jumlah Pelat Lantai Dak Tangga</b>          |    |           |           | <b>22,044,411</b>    |
| <b>Total Pekerjaan Pelat Lantai</b>            |    |           |           | <b>3,452,021,483</b> |
| <b>PEKERJAAN TANGGA</b>                        |    |           |           |                      |
| <b>Pekerjaan Tangga Lantai 1 (Lt.1 - Lt.2)</b> |    |           |           |                      |
| <b>Tangga 1</b>                                |    |           |           |                      |
| -Beton fc 25 Mpa                               | M3 | 2.40      |           |                      |
|  |    |           | 1,240,109 | 2,976,263            |
| - Penulangan                                   | Kg | 257.81    |           |                      |
|  |    |           | 15,315    | 3,948,455            |
| - Bekisting                                    | M2 | 21.91     |           |                      |
|  |    |           | 283,385   | 6,208,968            |
| <b>Tangga 2</b>                                |    |           |           |                      |
| -Beton fc 25 Mpa                               | M3 | 3.30      |           |                      |
|  |    |           | 1,240,109 | 4,092,361            |
| - Penulangan                                   | Kg | 354.38    |           |                      |
|  |    |           | 15,315    | 5,427,460            |
| - Bekisting                                    | M2 | 29.65     |           |                      |
|  |    |           | 283,385   | 8,402,368            |
| <b>Jumlah Tangga Lantai 1 (Lt. 1 - Lt. 2)</b>  |    |           |           | <b>31,055,875</b>    |
| <b>Pekerjaan Tangga Lantai 2 (Lt.2 - Lt.3)</b> |    |           |           |                      |
| <b>Tangga 1</b>                                |    |           |           |                      |
| -Beton fc 25 Mpa                               | M3 | 2.40      |           |                      |
|  |    |           | 1,240,109 | 2,976,263            |
| - Penulangan                                   | Kg | 257.81    |           |                      |
|  |    |           | 15,315    | 3,948,455            |
| - Bekisting                                    | M2 | 21.91     |           |                      |
|  |    |           | 283,385   | 6,208,968            |
| <b>Tangga 2</b>                                |    |           |           |                      |

|   |    |        |           |                   |
|---|----|--------|-----------|-------------------|
| -Beton fc 25 Mpa                          | M3 | 3.30   | 1,240,109 | 4,092,361         |
| - Penulangan                              | Kg | 354.38 | 15,315    | 5,427,460         |
| - Bekisting                               | M2 | 29.65  | 283,385   | 8,402,368         |
| Jumlah Tangga Lantai 2 (Lt. 2 - Lt.3)     |    |        |           | <b>31,055,875</b> |
| Pekerjaan Tangga Lantai 3 (Lt. 3 - Lt. 4) |    |        |           |                   |
| Tangga 1                                  |    |        |           |                   |
| -Beton fc 25 Mpa                          | M3 | 2.40   | 1,240,109 | 2,976,263         |
| - Penulangan                              | Kg | 257.81 | 15,315    | 3,948,455         |
| - Bekisting                               | M2 | 21.91  | 283,385   | 6,208,968         |
| Tangga 2                                  |    |        |           |                   |
| -Beton fc 25 Mpa                          | M3 | 3.30   | 1,240,109 | 4,092,361         |
| - Penulangan                              | Kg | 354.38 | 15,315    | 5,427,460         |
| - Bekisting                               | M2 | 29.65  | 283,385   | 8,402,368         |
| Jumlah Tangga Lantai 3 (Lt. 3 - Lt. 4)    |    |        |           | <b>31,055,875</b> |
| Pekerjaan Tangga Lantai 4 (Lt.4 - Lt. 5)  |    |        |           |                   |
| Tangga 1                                  |    |        |           |                   |
| -Beton fc 25 Mpa                          | M3 | 2.40   | 1,240,109 | 2,976,263         |
| - Penulangan                              | Kg | 257.81 | 15,315    | 3,948,455         |
| - Bekisting                               | M2 | 21.91  | 283,385   | 6,208,968         |
| Tangga 2                                  |    |        |           |                   |
| -Beton fc 25 Mpa                          | M3 | 3.30   | 1,240,109 | 4,092,361         |
| - Penulangan                              | Kg | 354.38 | 15,315    | 5,427,460         |
| - Bekisting                               | M2 | 29.65  | 283,385   | 8,402,368         |
| Jumlah Tangga Lantai 4 (Lt. 4 - Lt. 5)    |    |        |           | <b>31,055,874</b> |
| Pekerjaan Tangga Lantai 5 (Lt. 5 - Lt. 6) |    |        |           |                   |
| Tangga 1                                  |    |        |           |                   |
| -Beton fc 25 Mpa                          | M3 | 2.40   | 1,240,109 | 2,976,263         |
| - Penulangan                              | Kg | 257.81 | 15,315    | 3,948,455         |

|   |    |         |           |                       |
|---|----|---------|-----------|-----------------------|
| - Bekisting   | M2 | 21.91   | 283,385   | 6,208,967             |
| Tangga 2  |    |         |           |                       |
| -Beton fc 25 Mpa  | M3 | 3.30    | 1,240,109 | 4,092,361             |
| - Penulangan  | Kg | 354.38  | 15,315    | 5,427,460             |
| - Bekisting   | M2 | 29.65   | 283,385   | 8,402,368             |
| Jumlah Tangga Lantai 5 (Lt. 5 - Lt. 6)                      |    |         |           | <b>31,055,874</b>     |
| Pekerjaan Tangga Lantai 6 (Lt. 6 - Lt. Rooftop)             |    |         |           |                       |
| Tangga 1  |    |         |           |                       |
| -Beton fc 25 Mpa  | M3 | 2.40    | 1,240,109 | 2,976,263             |
| - Penulangan  | Kg | 257.81  | 15,315    | 3,948,455             |
| - Bekisting   | M2 | 21.91   | 283,385   | 6,208,967             |
| Tangga 2  |    |         |           |                       |
| -Beton fc 25 Mpa  | M3 | 3.30    | 1,240,109 | 4,092,361             |
| - Penulangan  | Kg | 354.38  | 15,315    | 5,427,460             |
| - Bekisting   | M2 | 29.65   | 283,385   | 8,402,368             |
| Jumlah Tangga Lantai 6 (Lt. 6 - Lt. Rooftop)                |    |         |           | <b>31,055,874</b>     |
| Total Pekerjaan Tangga                                      |    |         |           | <b>186,335,247</b>    |
| TOTAL PEKERJAAN STRUKTUR                                    |    |         |           | <b>19,859,843,808</b> |
| PEKERJAAN ARSITEKTUR  |    |         |           |                       |
| PEKERJAAN DINDING   |    |         |           |                       |
| Pekerjaan Dinding Bangunan                                  |    |         |           |                       |
| Pekerjaan Dinding Lantai 1                                  |    |         |           |                       |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 830.34  | 135,594   | 112,589,055           |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 1444.65 | 55,187    | 79,725,994            |
| - Skimcoat  | M2 | 185.54  | 34,949    | 6,484,395             |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 1367.27 | 31,025    | 42,420,115            |
| - Waterproofing Tipe Coating                                | M2 | 2.66    | 62,550    | 166,383               |
| Jumlah Pekerjaan Dinding Lantai 1                           |    |         |           | <b>241,385,941</b>    |
| Pekerjaan Dinding Lantai 2                                  |    |         |           |                       |

|   |    |         |         |                    |
|---|----|---------|---------|--------------------|
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 767.31  | 135,594 | 104,042,570        |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 1060.92 | 55,187  | 58,549,061         |
| - Skimcoat  | M2 | 187.43  | 34,949  | 6,550,448          |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 913.32  | 31,025  | 28,336,129         |
| - Waterproofing Tipe Coating                                | M2 | 10.42   | 62,550  | 651,771            |
| <b>Jumlah Pekerjaan Dinding Lantai 2</b>                    |    |         |         | <b>198,129,979</b> |
| <b>Pekerjaan Dinding Lantai 3</b>                           |    |         |         |                    |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 694.63  | 135,594 | 94,187,604         |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 1089.93 | 55,187  | 60,150,038         |
| - Skimcoat  | M2 | 187.60  | 34,949  | 6,556,389          |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 955.98  | 31,025  | 29,659,673         |
| - Waterproofing Tipe Coating                                | M2 | 10.55   | 62,550  | 659,903            |
| <b>Jumlah Pekerjaan Dinding Lantai 3</b>                    |    |         |         | <b>191,213,607</b> |
| <b>Pekerjaan Dinding Lantai 4</b>                           |    |         |         |                    |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 680.53  | 135,594 | 92,275,730         |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 1079.73 | 55,187  | 59,587,130         |
| - Skimcoat  | M2 | 187.60  | 34,949  | 6,556,389          |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 945.78  | 31,025  | 29,343,214         |
| - Waterproofing Tipe Coating                                | M2 | 10.55   | 62,550  | 659,903            |
| <b>Jumlah Pekerjaan Dinding Lantai 4</b>                    |    |         |         | <b>188,422,365</b> |
| <b>Pekerjaan Dinding Lantai 5</b>                           |    |         |         |                    |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 680.71  | 135,594 | 92,300,137         |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 1055.79 | 55,187  | 58,265,952         |
| - Skimcoat  | M2 | 187.60  | 34,949  | 6,556,389          |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 921.84  | 31,025  | 28,600,465         |
| - Waterproofing Tipe Coating                                | M2 | 10.55   | 62,550  | 659,903            |

|   |    |         |         |                      |
|---|----|---------|---------|----------------------|
| Jumlah Pekerjaan Dinding Lantai 5                           |    |         |         | <b>186,382,845</b>   |
| Pekerjaan Dinding Lantai 6                                  |    |         |         |                      |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 680.89  | 135,594 | 92,324,544           |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 1077.03 | 55,187  | 59,438,125           |
| - Skimcoat  | M2 | 187.60  | 34,949  | 6,556,389            |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 943.08  | 31,025  | 29,259,445           |
| - Waterproofing Tipe Coating                                | M2 | 10.55   | 62,550  | 659,903              |
| Jumlah Pekerjaan Dinding Lantai 6                           |    |         |         | <b>188,238,405</b>   |
| Pekerjaan Dinding Lantai Atap                               |    |         |         |                      |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 292.86  | 135,594 | 39,710,035           |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 594.73  | 55,187  | 32,821,403           |
| - Skimcoat  | M2 | 54.72   | 34,949  | 1,912,397            |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 594.73  | 31,025  | 18,451,743           |
| Jumlah Pekerjaan Dinding Lantai Atap                        |    |         |         | <b>92,895,578</b>    |
| <b>Total Pekerjaan Dinding</b>                              |    |         |         | <b>1,286,668,720</b> |
| PEKERJAAN KERAMIK   |    |         |         |                      |
| Pekerjaan Keramik Lantai 1                                  |    |         |         |                      |
| - Pas. Lantai Homogeneous Tile (Polished) 60x60 cm          | M2 | 791.70  | 268,408 | 212,498,902          |
| - Pas. Lantai Homogeneous Tile (UnPolished) 60x60 cm        | M2 | 19.50   | 209,748 | 4,090,094            |
| - Pas. Plint Lantai Homogeneous Tile (Polished) 10x60 cm    | M  | 328.00  | 199,025 | 65,280,219           |
| - Lantai Vinyl  | M2 | 228.00  | 375,300 | 85,568,400           |
| - Pas. Lantai Homogenous Tile (Tangga) 30x60 cm             | M2 | 34.60   | 244,547 | 8,461,316            |
| - Waterproofing Coating                                     | M2 | 19.50   | 62,550  | 1,219,725            |
| Jumlah Pekerjaan Keramik Lantai 1                           |    |         |         | <b>377,118,656</b>   |
| Pekerjaan Keramik Lantai 2                                  |    |         |         |                      |
| - Pas. Lantai Homogeneous Tile (Polished) 60x60 cm          | M2 | 708.60  | 268,408 | 190,194,167          |
| - Pas. Lantai Homogeneous Tile (UnPolished) 60x60 cm        | M2 | 44.20   | 209,748 | 9,270,881            |

|  |    |        |         |                    |
|--|----|--------|---------|--------------------|
| - Pas. Plint Lantai Homogeneous Tile (Polished) 10x60 cm | M  | 360.80 | 199,025 | 71,808,241         |
| - Pas. Lantai Homogenous Tile (Tangga) 30x60 cm          | M2 | 34.60  | 244,547 | 8,461,316          |
| - Waterproofing Coating                                  | M2 | 44.20  | 62,550  | 2,764,710          |
| <b>Jumlah Pekerjaan Keramik Lantai 2</b>                 |    |        |         | <b>282,499,314</b> |
| <b>Pekerjaan Keramik Lantai 3</b>                        |    |        |         |                    |
| - Pas. Lantai Homogeneous Tile (Polished) 60x60 cm       | M2 | 712.00 | 268,408 | 191,106,756        |
| - Pas. Lantai Homogeneous Tile (UnPolished) 60x60 cm     | M2 | 44.20  | 209,748 | 9,270,881          |
| - Pas. Plint Lantai Homogeneous Tile (Polished) 10x60 cm | M  | 295.20 | 199,025 | 58,752,197         |
| - Pas. Lantai Homogenous Tile (Tangga) 30x60 cm          | M2 | 34.60  | 244,547 | 8,461,316          |
| - Waterproofing Coating                                  | M2 | 44.20  | 62,550  | 2,764,710          |
| <b>Jumlah Pekerjaan Keramik Lantai 3</b>                 |    |        |         | <b>270,355,859</b> |
| <b>Pekerjaan Keramik Lantai 4</b>                        |    |        |         |                    |
| - Pas. Lantai Homogeneous Tile (Polished) 60x60 cm       | M2 | 712.60 | 209,748 | 149,466,734        |
| - Pas. Lantai Homogeneous Tile (UnPolished) 60x60 cm     | M2 | 44.20  | 209,748 | 9,270,881          |
| - Pas. Plint Lantai Homogeneous Tile (Polished) 10x60 cm | M  | 295.20 | 199,025 | 58,752,197         |
| - Pas. Lantai Homogenous Tile (Tangga) 30x60 cm          | M2 | 34.60  | 244,547 | 8,461,316          |
| - Waterproofing Coating                                  | M2 | 44.20  | 62,550  | 2,764,710          |
| <b>Jumlah Pekerjaan Keramik Lantai 4</b>                 |    |        |         | <b>228,715,837</b> |
| <b>Pekerjaan Keramik Lantai 5</b>                        |    |        |         |                    |
| - Pas. Lantai Homogeneous Tile (Polished) 60x60 cm       | M2 | 711.70 | 268,408 | 191,026,233        |
| - Pas. Lantai Homogeneous Tile (UnPolished) 60x60 cm     | M2 | 44.20  | 209,748 | 9,270,881          |
| - Pas. Plint Lantai Homogeneous Tile (Polished) 10x60 cm | M  | 295.20 | 199,025 | 58,752,197         |
| - Pas. Lantai Homogenous Tile (Tangga) 30x60 cm          | M2 | 3.60   | 244,547 | 880,368            |
| - Waterproofing Coating                                  | M2 | 44.20  | 62,550  | 2,764,710          |
| <b>Jumlah Pekerjaan Keramik Lantai 5</b>                 |    |        |         | <b>262,694,389</b> |
| <b>Pekerjaan Keramik Lantai 6</b>                        |    |        |         |                    |
| - Pas. Lantai Homogeneous Tile (Polished) 60x60 cm       | M2 | 712.80 | 268,408 | 191,321,482        |

|  |    |         |         |                      |
|--|----|---------|---------|----------------------|
| - Pas. Lantai Homogeneous Tile (UnPolished) 60x60 cm     | M2 | 44.20   | 209,748 | 9,270,881            |
| - Pas. Plint Lantai Homogeneous Tile (Polished) 10x60 cm | M  | 295.20  | 199,025 | 58,752,197           |
| - Pas. Lantai Homogenous Tile (Tangga) 30x60 cm          | M2 | 34.60   | 244,547 | 8,461,316            |
| - Waterproofing Coating                                  | M2 | 44.20   | 62,550  | 2,764,710            |
| Jumlah Pekerjaan Keramik Lantai 6                        |    |         |         | <b>270,570,586</b>   |
| <b>Total Pekerjaan Keramik</b>                           |    |         |         | <b>1,691,954,641</b> |
| <b>PEKERJAAN PLAFOND</b>                                 |    |         |         |                      |
| Pekerjaan Plafond Lantai 1                               |    |         |         |                      |
| - Pekerjaan Rangka Plafond Gypsum                        | M2 | 120.80  | 55,600  | 6,716,480            |
| - Pekerjaan Plafond Gypsum                               | M2 | 120.80  | 159,850 | 19,309,880           |
| - Pekerjaan Rangka Plafond GRC                           | M2 | 670.30  | 55,600  | 37,268,680           |
| - Pekerjaan Plafond GRC                                  | M2 | 670.30  | 180,700 | 121,123,210          |
| - Pekerjaan Plafond Expose                               | M2 | 958.53  | 34,646  | 33,208,805           |
| Jumlah Pekerjaan Plafond Lantai 1                        |    |         |         | <b>217,627,055</b>   |
| Pekerjaan Plafond Lantai 2                               |    |         |         |                      |
| - Pekerjaan Rangka Plafond Gypsum                        | M2 | 149.10  | 55,600  | 8,289,960            |
| - Pekerjaan Plafond Gypsum                               | M2 | 149.10  | 159,850 | 23,833,635           |
| - Pekerjaan Rangka Plafond GRC                           | M2 | 44.20   | 55,600  | 2,457,520            |
| - Pekerjaan Plafond GRC                                  | M2 | 44.20   | 180,700 | 7,986,940            |
| - Pekerjaan Plafond Expose                               | M2 | 849.71  | 34,646  | 29,438,676           |
| Jumlah Pekerjaan Plafond Lantai 2                        |    |         |         | <b>72,006,731</b>    |
| Pekerjaan Plafond Lantai 3                               |    |         |         |                      |
| - Pekerjaan Rangka Plafond GRC                           | M2 | 44.20   | 55,600  | 2,457,520            |
| - Pekerjaan Plafond GRC                                  | M2 | 44.20   | 180,700 | 7,986,940            |
| - Pekerjaan Plafond Expose                               | M2 | 1070.07 | 34,646  | 37,073,171           |
| Jumlah Pekerjaan Plafond Lantai 3                        |    |         |         | <b>47,517,631</b>    |
| Pekerjaan Plafond Lantai 4                               |    |         |         |                      |
| - Pekerjaan Rangka Plafond GRC                           | M2 | 44.20   | 55,600  | 2,457,520            |

|   |      |         |            |                    |
|---|------|---------|------------|--------------------|
| - Pekerjaan Plafond GRC                           | M2   | 44.20   | 180,700    | 7,986,940          |
| - Pekerjaan Plafond Expose                        | M2   | 1070.64 | 34,646     | 37,092,919         |
| Jumlah Pekerjaan Plafond Lantai 4                 |      |         |            | <b>47,537,379</b>  |
| Pekerjaan Plafond Lantai 5                        |      |         |            |                    |
| - Pekerjaan Rangka Plafond GRC                    | M2   | 44.20   | 55,600     | 2,457,520          |
| - Pekerjaan Plafond GRC                           | M2   | 44.20   | 180,700    | 7,986,940          |
| - Pekerjaan Plafond Expose                        | M2   | 1070.78 | 34,646     | 37,097,769         |
| Jumlah Pekerjaan Plafond Lantai 5                 |      |         |            | <b>47,542,229</b>  |
| Pekerjaan Plafond Lantai 6                        |      |         |            |                    |
| - Pekerjaan Rangka Plafond GRC                    | M2   | 44.20   | 55,600     | 2,457,520          |
| - Pekerjaan Plafond GRC                           | M2   | 44.20   | 180,700    | 7,986,940          |
| - Pekerjaan Plafond Expose                        | M2   | 1071.21 | 34,646     | 37,112,667         |
| Jumlah Pekerjaan Plafond Lantai 6                 |      |         |            | <b>47,557,127</b>  |
| Total Pekerjaan Plafond                           |      |         |            | <b>479,788,152</b> |
| <b>PEKERJAAN KUSEN PINTU DAN JENDELA</b>          |      |         |            |                    |
| Pekerjaan Kusen Pintu dan Jendela Lantai 1        |      |         |            |                    |
| - Pasangan Kusen Tipe P1 (130x260)                | Unit | 6.00    | 5,839,863  | 35,039,176         |
| - Pasangan Kusen Tipe P3 (110x260)                | Unit | 4.00    | 4,941,422  | 19,765,689         |
| - Pasangan Kusen Tipe P4 (650x260)                | Unit | 2.00    | 29,199,313 | 58,398,626         |
| - Pasangan Kusen Tipe J1 (300x170)                | Unit | 15.00   | 4,210,866  | 63,162,990         |
| - Pasangan Kusen Tipe J2 (300x170)                | Unit | 4.00    | 4,210,866  | 16,843,464         |
| - Pasangan Kusen Tipe J3 (250x170)                | Unit | 1.00    | 3,509,055  | 3,509,055          |
| - Pasangan Bouven BV1 (300x450)                   | Unit | 2.00    | 632,450    | 1,264,900          |
| Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai 1 |      |         |            | <b>197,983,899</b> |
| Pekerjaan Kusen Pintu dan Jendela Lantai 2        |      |         |            |                    |
| - Pasangan Kusen Tipe P1 (130x260)                | Unit | 5.00    | 5,839,863  | 29,199,313         |



|  |      |       |            |                    |
|--|------|-------|------------|--------------------|
| - Pasangan Kusen Tipe P3 (110x260)                       | Unit | 4.00  | 4,941,422  | 19,765,689         |
| - Pasangan Kusen Tipe P4 (650x260)                       | Unit | 2.00  | 29,199,313 | 58,398,626         |
| - Pasangan Kusen Tipe J1 (300x170)                       | Unit | 14.00 | 4,210,866  | 58,952,124         |
| - Pasangan Kusen Tipe J2 (300x170)                       | Unit | 6.00  | 4,210,866  | 25,265,196         |
| - Pasangan Kusen Tipe J5 (200x170)                       | Unit | 1.00  | 2,807,244  | 2,807,244          |
| - Pasangan Kusen Tipe J6 (100x170)                       | Unit | 1.00  | 1,403,622  | 1,403,622          |
| - Pasangan Bouven BV1 (300x450)                          | Unit | 2.00  | 632,450    | 1,264,900          |
| <b>Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai 2</b> |      |       |            | <b>197,056,714</b> |
| <b>Pekerjaan Kusen Pintu dan Jendela Lantai 3</b>        |      |       |            |                    |
| - Pasangan Kusen Tipe P1 (130x260)                       | Unit | 4.00  | 5,839,863  | 23,359,450         |
| - Pasangan Kusen Tipe P3 (110x260)                       | Unit | 4.00  | 4,941,422  | 19,765,689         |
| - Pasangan Kusen Tipe P4 (650x260)                       | Unit | 2.00  | 29,199,313 | 58,398,626         |
| - Pasangan Kusen Tipe J1 (300x170)                       | Unit | 15.00 | 4,210,866  | 63,162,990         |
| - Pasangan Kusen Tipe J2 (300x170)                       | Unit | 5.00  | 4,210,866  | 21,054,330         |
| - Pasangan Kusen Tipe J5 (200x170)                       | Unit | 1.00  | 2,807,244  | 2,807,244          |
| - Pasangan Bouven BV1 (300x450)                          | Unit | 2.00  | 632,450    | 1,264,900          |
| <b>Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai 3</b> |      |       |            | <b>189,813,229</b> |
| <b>Pekerjaan Kusen Pintu dan Jendela Lantai 4</b>        |      |       |            |                    |
| - Pasangan Kusen Tipe P1 (130x260)                       | Unit | 4.00  | 5,839,863  | 23,359,450         |
| - Pasangan Kusen Tipe P3 (110x260)                       | Unit | 4.00  | 4,941,422  | 19,765,689         |
| - Pasangan Kusen Tipe P4 (650x260)                       | Unit | 2.00  | 29,199,313 | 58,398,626         |
| - Pasangan Kusen Tipe J1 (300x170)                       | Unit | 15.00 | 4,210,866  | 63,162,990         |
| - Pasangan Kusen Tipe J2 (300x170)                       | Unit | 6.00  | 4,210,866  | 25,265,196         |
| - Pasangan Kusen Tipe J5 (200x170)                       | Unit | 1.00  | 2,807,244  | 2,807,244          |
| - Pasangan Bouven BV1 (300x450)                          | Unit | 2.00  | 632,450    | 1,264,900          |
| <b>Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai 4</b> |      |       |            | <b>194,024,095</b> |

|  |      |         |            |                      |
|--|------|---------|------------|----------------------|
| Pekerjaan Kusen Pintu dan Jendela Lantai 5           |      |         |            |                      |
| - Pasangan Kusen Tipe P1 (130x260)                   | Unit | 5.00    | 5,839,863  | 29,199,313           |
| - Pasangan Kusen Tipe P3 (110x260)                   | Unit | 4.00    | 4,941,422  | 19,765,689           |
| - Pasangan Kusen Tipe J1 (300x170)                   | Unit | 16.00   | 4,941,422  | 79,062,755           |
| - Pasangan Kusen Tipe J2 (300x170)                   | Unit | 8.00    | 4,210,866  | 33,686,928           |
| - Pasangan Kusen Tipe J5 (200x170)                   | Unit | 1.00    | 2,807,244  | 2,807,244            |
| - Pasangan Bouven BV1 (300x450)                      | Unit | 2.00    | 632,450    | 1,264,900            |
| Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai 5    |      |         |            | <b>165,786,829</b>   |
| Pekerjaan Kusen Pintu dan Jendela Lantai 6           |      |         |            |                      |
| - Pasangan Kusen Tipe P1 (130x260)                   | Unit | 4.00    | 5,839,863  | 23,359,450           |
| - Pasangan Kusen Tipe P3 (110x260)                   | Unit | 4.00    | 4,941,422  | 19,765,689           |
| - Pasangan Kusen Tipe P4 (650x260)                   | Unit | 2.00    | 29,199,313 | 58,398,626           |
| - Pasangan Kusen Tipe J1 (300x170)                   | Unit | 15.00   | 4,210,866  | 63,162,990           |
| - Pasangan Kusen Tipe J2 (300x170)                   | Unit | 6.00    | 4,210,866  | 25,265,196           |
| - Pasangan Kusen Tipe J5 (200x170)                   | Unit | 1.00    | 2,807,244  | 2,807,244            |
| - Pasangan Bouven BV1 (300x450)                      | Unit | 2.00    | 632,450    | 1,264,900            |
| Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai 6    |      |         |            | <b>194,024,095</b>   |
| Pekerjaan Kusen Pintu dan Jendela Lantai Atap        |      |         |            |                      |
| - Pasangan Kusen Tipe P5 (850x260)                   | Unit | 2.00    | 38,183,717 | 76,367,434           |
| Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai Atap |      |         |            | <b>76,367,434</b>    |
| Total Pekerjaan Kusen Pintu dan Jendela              |      |         |            | <b>1,215,056,296</b> |
| PEKERJAAN PENGECATAN                                 |      |         |            |                      |
| Pekerjaan Pengecatan Lantai 1                        |      |         |            |                      |
| - Pengecatan Dinding Eksterior                       | M2   | 475.93  | 38,920     | 18,523,196           |
| - Pengecatan Dinding Interior                        | M2   | 1154.26 | 33,360     | 38,506,114           |
| - Pengecatan Dak Ekspose                             | M2   | 958.53  | 38,920     | 37,305,988           |

|   |    |         |        |                    |
|---|----|---------|--------|--------------------|
| - Pengecatan Plafond                        | M2 | 791.10  |        |                    |
|   |    |         | 33,360 | 26,391,096         |
| <b>Jumlah Pekerjaan Pengecatan Lantai 1</b> |    |         |        | <b>120,726,393</b> |
| <b>Pekerjaan Pengecatan Lantai 2</b>        |    |         |        |                    |
| - Pengecatan Dinding Eksterior              | M2 | 369.72  |        |                    |
|   |    |         | 38,920 | 14,389,502         |
| - Pengecatan Dinding Interior               | M2 | 878.63  |        |                    |
|   |    |         | 33,360 | 29,311,097         |
| - Pengecatan Dak Ekspose                    | M2 | 849.71  |        |                    |
|   |    |         | 38,920 | 33,070,713         |
| - Pengecatan Plafond                        | M2 | 193.30  |        |                    |
|   |    |         | 33,360 | 6,448,488          |
| <b>Jumlah Pekerjaan Pengecatan Lantai 2</b> |    |         |        | <b>83,219,800</b>  |
| <b>Pekerjaan Pengecatan Lantai 3</b>        |    |         |        |                    |
| - Pengecatan Dinding Eksterior              | M2 | 369.81  |        |                    |
|   |    |         | 38,920 | 14,393,005         |
| - Pengecatan Dinding Interior               | M2 | 907.72  |        |                    |
|   |    |         | 33,360 | 30,281,539         |
| - Pengecatan Dak Ekspose                    | M2 | 1070.07 |        |                    |
|   |    |         | 38,920 | 41,647,124         |
| - Pengecatan Plafond                        | M2 | 44.20   |        |                    |
|   |    |         | 33,360 | 1,474,512          |
| <b>Jumlah Pekerjaan Pengecatan Lantai 3</b> |    |         |        | <b>87,796,181</b>  |
| <b>Pekerjaan Pengecatan Lantai 4</b>        |    |         |        |                    |
| - Pengecatan Dinding Eksterior              | M2 | 369.81  |        |                    |
|   |    |         | 38,920 | 14,393,005         |
| - Pengecatan Dinding Interior               | M2 | 897.52  |        |                    |
|   |    |         | 33,360 | 29,941,267         |
| - Pengecatan Dak Ekspose                    | M2 | 1070.64 |        |                    |
|   |    |         | 38,920 | 41,669,309         |
| - Pengecatan Plafond                        | M2 | 44.20   |        |                    |
|   |    |         | 33,360 | 1,474,512          |
| <b>Jumlah Pekerjaan Pengecatan Lantai 4</b> |    |         |        | <b>87,478,093</b>  |
| <b>Pekerjaan Pengecatan Lantai 5</b>        |    |         |        |                    |
| - Pengecatan Dinding Eksterior              | M2 | 369.81  |        |                    |
|   |    |         | 38,920 | 14,393,005         |
| - Pengecatan Dinding Interior               | M2 | 873.58  |        |                    |
|   |    |         | 33,360 | 29,142,629         |
| - Pengecatan Dak Ekspose                    | M2 | 1070.78 |        |                    |
|   |    |         | 38,920 | 41,674,758         |
| - Pengecatan Plafond                        | M2 | 44.20   |        |                    |
|   |    |         | 33,360 | 1,474,512          |
| <b>Jumlah Pekerjaan Pengecatan Lantai 5</b> |    |         |        | <b>86,684,904</b>  |
| <b>Pekerjaan Pengecatan Lantai 6</b>        |    |         |        |                    |
| - Pengecatan Dinding Eksterior              | M2 | 369.81  |        |                    |
|   |    |         | 38,920 | 14,393,005         |

|   |      |         |           |                    |
|---|------|---------|-----------|--------------------|
| - Pengecatan Dinding Interior           | M2   | 894.82  | 33,360    | 29,851,195         |
| - Pengecatan Dak Ekspose                | M2   | 1071.21 | 38,920    | 41,691,493         |
| - Pengecatan Plafond                    | M2   | 44.20   | 33,360    | 1,474,512          |
| Jumlah Pekerjaan Pengecatan Lantai 6    |      |         |           | <b>87,410,206</b>  |
| Pekerjaan Pengecatan Lantai Atap        |      |         |           |                    |
| - Pengecatan Dinding Eksterior          | M2   | 594.73  | 38,920    | 23,146,892         |
| Jumlah Pekerjaan Pengecatan Lantai Atap |      |         |           | <b>23,146,892</b>  |
| Total Pekerjaan Pengecatan              |      |         |           | <b>576,462,468</b> |
| <b>PEKERJAAN SANITAIR</b>               |      |         |           |                    |
| Pekerjaan Sanitair Lantai 1             |      |         |           |                    |
| - Closet Duduk Toto atau setara         | Unit | 5.00    | 2,103,765 | 10,518,825         |
| - Jet Washer Toto atau setara           | Set  | 5.00    | 827,815   | 4,139,073          |
| - Washtafel Toto atau setara            | Unit | 3.00    | 1,579,735 | 4,739,205          |
| - Cermin 6 mm (L=0,725M)                | Set  | 3.00    | 410,050   | 1,230,150          |
| - Floor Drain Toto atau setara          | Set  | 6.00    | 582,966   | 3,497,796          |
| - Keran Air Toto atau setara            | Unit | 2.00    | 518,818   | 1,037,635          |
| - Paper Holder Toto atau setara         | Unit | 5.00    | 292,039   | 1,460,195          |
| - Partisi Cubical                       | M2   | 13.00   | 3,803,388 | 49,444,038         |
| Jumlah Pekerjaan Sanitair Lantai 1      |      |         |           | <b>76,066,916</b>  |
| Pekerjaan Sanitair Lantai 2             |      |         |           |                    |
| - Closet Duduk Toto atau setara         | Unit | 11.00   | 2,103,765 | 23,141,415         |
| - Jet Washer Toto atau setara           | Set  | 11.00   | 827,815   | 9,105,960          |
| - Washtafel Toto atau setara            | Unit | 6.00    | 1,579,735 | 9,478,410          |
| - Cermin 6 mm (L=0,725M)                | Set  | 6.00    | 410,050   | 2,460,300          |
| - Floor Drain Toto atau setara          | Set  | 12.00   | 582,966   | 6,995,592          |
| - Keran Air Toto atau setara            | Unit | 3.00    | 518,818   | 1,556,453          |
| - Paper Holder Toto atau setara         | Unit | 11.00   | 292,039   | 3,212,429          |

|                                    |      |       |           |                    |
|------------------------------------|------|-------|-----------|--------------------|
| - Urinoir                          | Unit | 2.00  | 3,440,945 | 6,881,890          |
| - Partisi Urinoir                  | Unit | 2.00  | 4,173,475 | 8,346,950          |
| - Partisi Cubical                  | M2   | 9.00  | 3,803,388 | 34,230,488         |
| - Grab Bar                         | Unit | 2.00  | 1,341,350 | 2,682,700          |
| Jumlah Pekerjaan Sanitair Lantai 2 |      |       |           | <b>108,092,586</b> |
| Pekerjaan Sanitair Lantai 3        |      |       |           |                    |
| - Closet Duduk Toto atau setara    | Unit | 10.00 | 2,103,765 | 21,037,650         |
| - Jet Washer Toto atau setara      | Set  | 10.00 | 827,815   | 8,278,145          |
| - Washtafel Toto atau setara       | Unit | 5.00  | 1,579,735 | 7,898,675          |
| - Cermin 6 mm (L=0,725M)           | Set  | 5.00  | 410,050   | 2,050,250          |
| - Floor Drain Toto atau setara     | Set  | 11.00 | 582,966   | 6,412,626          |
| - Keran Air Toto atau setara       | Unit | 2.00  | 518,818   | 1,037,635          |
| - Paper Holder Toto atau setara    | Unit | 10.00 | 292,039   | 2,920,390          |
| - Urinoir                          | Unit | 2.00  | 3,440,945 | 6,881,890          |
| - Partisi Urinoir                  | Unit | 2.00  | 4,173,475 | 8,346,950          |
| - Partisi Cubical                  | M2   | 9.00  | 3,803,388 | 34,230,488         |
| - Grab Bar                         | Unit | 2.00  | 1,341,350 | 2,682,700          |
| Jumlah Pekerjaan Sanitair Lantai 3 |      |       |           | <b>101,777,399</b> |
| Pekerjaan Sanitair Lantai 4        |      |       |           |                    |
| - Closet Duduk Toto atau setara    | Unit | 10.00 | 2,103,765 | 21,037,650         |
| - Jet Washer Toto atau setara      | Set  | 10.00 | 827,815   | 8,278,145          |
| - Washtafel Toto atau setara       | Unit | 5.00  | 1,579,735 | 7,898,675          |
| - Cermin 6 mm (L=0,725M)           | Set  | 5.00  | 410,050   | 2,050,250          |
| - Floor Drain Toto atau setara     | Set  | 11.00 | 582,966   | 6,412,626          |
| - Keran Air Toto atau setara       | Unit | 2.00  | 518,818   | 1,037,635          |
| - Paper Holder Toto atau setara    | Unit | 10.00 | 292,039   | 2,920,390          |
| - Urinoir                          | Unit | 2.00  | 3,440,945 | 6,881,890          |
| - Partisi Urinoir                  | Unit | 2.00  | 4,173,475 | 8,346,950          |
| - Partisi Cubical                  | M2   | 9.00  | 3,803,388 | 34,230,488         |
| - Grab Bar                         | Unit | 2.00  | 1,341,350 | 2,682,700          |
| Jumlah Pekerjaan Sanitair Lantai 4 |      |       |           | <b>101,777,399</b> |
| Pekerjaan Sanitair Lantai 5        |      |       |           |                    |
| - Closet Duduk Toto atau setara    | Unit | 10.00 | 2,103,765 | 21,037,650         |
| - Jet Washer Toto atau setara      | Set  | 10.00 | 827,815   | 8,278,145          |
| - Washtafel Toto atau setara       | Unit | 5.00  | 1,579,735 | 7,898,675          |
| - Cermin 6 mm (L=0,725M)           | Set  | 5.00  | 410,050   | 2,050,250          |
| - Floor Drain Toto atau setara     | Set  | 11.00 | 582,966   | 6,412,626          |
| - Keran Air Toto atau setara       | Unit | 2.00  | 518,818   | 1,037,635          |
| - Paper Holder Toto atau setara    | Unit | 10.00 | 292,039   | 2,920,390          |
| - Urinoir                          | Unit | 2.00  | 3,440,945 | 6,881,890          |
| - Partisi Urinoir                  | Unit | 2.00  | 4,173,475 | 8,346,950          |
| - Partisi Cubical                  | M2   | 9.00  | 3,803,388 | 34,230,488         |

|                                    |      |       |           |                       |
|------------------------------------|------|-------|-----------|-----------------------|
| - Grab Bar                         | Unit | 2.00  | 1,341,350 | 2,682,700             |
| Jumlah Pekerjaan Sanitair Lantai 5 |      |       |           | <b>101,777,399</b>    |
| Pekerjaan Sanitair Lantai 6        |      |       |           |                       |
| - Closet Duduk Toto atau setara    | Unit | 10.00 | 2,103,765 | 21,037,650            |
| - Jet Washer Toto atau setara      | Set  | 10.00 | 827,815   | 8,278,145             |
| - Washtafel Toto atau setara       | Unit | 5.00  | 1,579,735 | 7,898,675             |
| - Cermin 6 mm (L=0,725M)           | Set  | 5.00  | 410,050   | 2,050,250             |
| - Floor Drain Toto atau setara     | Set  | 11.00 | 582,966   | 6,412,626             |
| - Keran Air Toto atau setara       | Unit | 2.00  | 518,818   | 1,037,635             |
| - Paper Holder Toto atau setara    | Unit | 10.00 | 292,039   | 2,920,390             |
| - Urinoir                          | Unit | 2.00  |           | 6,881,890             |
|                                    |      |       | 3,440,945 |                       |
| - Partisi Urinoir                  | Unit | 2.00  |           | 8,346,950             |
|                                    |      |       | 4,173,475 |                       |
| - Partisi Cubical                  | M2   | 9.00  |           | 34,230,488            |
|                                    |      |       | 3,803,388 |                       |
| - Grab Bar                         | Unit | 2.00  | 1,341,350 | 2,682,700             |
| Jumlah Pekerjaan Sanitair Lantai 6 |      |       |           | <b>101,777,399</b>    |
| <b>Total Pekerjaan Sanitair</b>    |      |       |           | <b>591,269,096</b>    |
| <b>TOTAL PEKERJAAN ARSITEKTUR</b>  |      |       |           | <b>5,841,199,372</b>  |
|                                    |      |       |           | <b>26,387,657,484</b> |

Lampiran 6. Rancangan Anggaran Biaya (RAB) dengan Metode BIM

| Item pekerjaan   | Satuan Unit | KONTRAK |             |                    |
|--|-------------|---------|-------------|--------------------|
|  |             | Volume  | Harsat      | Jumlah             |
| <b>LOKASI 6</b>  |             |         |             |                    |
| <b>REHAB TOTAL GEDUNG SDN PEJATEN TIMUR 11</b>                                 |             |         |             |                    |
| <b>Penawaran tidak boleh melebihi HPS per lokasi</b>                           |             |         |             |                    |
| <b>PEKERJAAN PERSIAPAN</b>   |             |         |             |                    |
| Pembuatan Papan Nama Proyek  | Bh          | 1.00    | 25,750,000  | 25,750,000         |
| Administrasi dan Dokumentasi   | Ls          | 1.00    | 9,258,925   | 9,258,925          |
| Pekerjaan Pembuatan Direksi Keet, Los Kerja dan Gudang                         | M2          | 30.00   | 4,100,000   | 123,000,000        |
| Pemasangan Bouwplank Untuk Bangunan Gedung                                     | M           | 161.30  | 56,750      | 9,153,775          |
| Pembuatan Pagar Keliling Sementara Tinggi 2 M                                  | M2          | 161.30  | 977,500     | 157,670,750        |
| Rencana Keselamatan dan Kesehatan Kerja Kontrak (RK3K)                         | Ls          | 1.00    | 168,150,000 | 168,150,000        |
| Air dan Listrik Kerja  | Bln         | 6.00    | 29,713,476  | 178,280,853        |
| Test Sondir  | Titik       | 5.00    | 1,100,000   | 5,500,000          |
| Test Boring (1 Titik, T= 30m, Inc. Mob, Lab, dll.)                             | Ls          | 1.00    | 9,850,000   | 9,850,000          |
| <b>TOTAL PEKERJAAN PERSIAPAN</b>   |             |         |             | <b>686,614,303</b> |
| <b>PEKERJAAN STRUKTUR</b>  |             |         |             |                    |
| <b>PEKERJAAN PONDASI</b>   |             |         |             |                    |
| Pekerjaan Pondasi Pancang  |             |         |             |                    |
| - Mobilisasi dan Demobilisasi Alat Pancang                                     | Ls          | 1.00    | 186,250,000 | 186,250,000        |
| - Pengadaan Material Tiang Pancang 300x300 Mutu Beton fc = 41,5 Mpa (6M/Tiang) | Tiang       | 113.00  | 4,276,000   | 483,188,000        |
| - Penetrasi tiang pancang Beton 300x300  | M           | 1017.00 | 100,114     | 101,816,406        |
| - Pembobokan Kepala Tiang Pancang  | Bh          | 113.00  | 451,000     | 50,963,000         |
| - PDA Test   | titik       | 2.00    | 8,605,000   | 17,210,000         |
| <b>Total Pekerjaan Pondasi</b>   |             |         |             | <b>839,427,406</b> |
| <b>PEKERJAAN PILECAP</b>   |             |         |             |                    |
| Pilecap Tipe PC1   |             |         |             |                    |
| - Galian Tanah (mekanis)   | M3          | 4.12    | 148,844     | 613,237            |
| - Pasir Urug T.10 cm   | M3          | 0.29    | 571,703     | 165,794            |
| -Lantai Kerja  | M3          | 0.29    | 228,265     | 66,197             |
| -Beton fc 25 Mpa   | M3          | 2.59    | 2,240,109   | 5,801,884          |
| - Penulangan   | Kg          | 309.78  | 45,315      | 14,037,795         |
| - Bekisting  | M2          | 8.64    | 264,397     | 2,284,386          |

|                                |    |         |           |                      |
|--------------------------------|----|---------|-----------|----------------------|
| - Urugan Tanah Kembali         | M3 | 1.52    | 50,008    | 76,012               |
| Pilecap Tipe PC3               |    |         |           |                      |
| - Galian Tanah (mekanis)       | M3 | 36.45   | 148,844   | 5,425,357            |
| - Pasir Urug T.10 cm           | M3 | 2.30    | 571,703   | 1,314,917            |
| -Lantai Kerja                  | M3 | 2.30    | 228,265   | 525,009              |
| -Beton fc 25 Mpa               | M3 | 27.60   | 2,240,109 | 61,827,021           |
| - Penulangan                   | Kg | 2196.12 | 45,315    | 99,517,985           |
| - Bekisting                    | M2 | 46.08   | 264,397   | 12,183,393           |
| - Urugan Tanah Kembali         | M3 | 8.85    | 50,008    | 442,569              |
| Pilecap Tipe PC4               |    |         |           |                      |
| - Galian Tanah (mekanis)       | M3 | 101.70  | 148,844   | 15,137,417           |
| - Pasir Urug T.10 cm           | M3 | 5.63    | 571,703   | 3,218,688            |
| -Lantai Kerja                  | M3 | 5.63    | 228,265   | 1,285,132            |
| -Beton fc 25 Mpa               | M3 | 78.75   | 2,240,109 | 176,408,620          |
| - Penulangan                   | Kg | 8202.59 | 45,315    | 371,703,380          |
| - Bekisting                    | M2 | 126.00  | 264,397   | 33,313,964           |
| - Urugan Tanah Kembali         | M3 | 22.95   | 50,008    | 1,147,679            |
| Pilecap Tipe PC4A              |    |         |           |                      |
| - Galian Tanah (mekanis)       | M3 | 13.04   | 148,844   | 1,940,923            |
| - Pasir Urug T.10 cm           | M3 | 1.00    | 571,703   | 571,703              |
| -Lantai Kerja                  | M3 | 1.00    | 228,265   | 228,265              |
| -Beton fc 25 Mpa               | M3 | 10.00   | 2,240,109 | 22,401,095           |
| - Penulangan                   | Kg | 999.38  | 45,315    | 45,287,272           |
| - Bekisting                    | M2 | 3.04    | 264,397   | 803,765              |
| - Urugan Tanah Kembali         | M3 | 3.04    | 50,008    | 152,024              |
| Pilecap Tipe PC5               |    |         |           |                      |
| - Galian Tanah (mekanis)       | M3 | 34.17   | 148,844   | 5,085,994            |
| - Pasir Urug T.10 cm           | M3 | 1.95    | 571,703   | 1,114,821            |
| -Lantai Kerja                  | M3 | 1.95    | 228,265   | 445,117              |
| -Beton fc 25 Mpa               | M3 | 27.26   | 2,240,109 | 61,065,384           |
| - Penulangan                   | Kg | 2579.46 | 45,315    | 116,889,178          |
| - Bekisting                    | M2 | 34.94   | 264,397   | 9,238,015            |
| - Urugan Tanah Kembali         | M3 | 6.91    | 50,008    | 345,554              |
| Pilecap Tipe PC6               |    |         |           |                      |
| - Galian Tanah (mekanis)       | M3 | 79.10   | 148,844   | 11,773,547           |
| - Pasir Urug T.10 cm           | M3 | 4.38    | 571,703   | 2,504,059            |
| -Lantai Kerja                  | M3 | 4.38    | 228,265   | 999,801              |
| -Beton fc 25 Mpa               | M3 | 61.25   | 2,240,109 | 137,206,704          |
| - Penulangan                   | Kg | 5287.98 | 45,315    | 239,626,757          |
| - Bekisting                    | M2 | 98.00   | 264,397   | 25,910,861           |
| - Urugan Tanah Kembali         | M3 | 17.85   | 50,008    | 892,639              |
| <b>Total Pekerjaan Pilecap</b> |    |         |           | <b>1,490,979,912</b> |
| <b>PEKERJAAN TIE BEAM</b>      |    |         |           |                      |
| Tie Beam Tipe TB 36            |    |         |           |                      |
| - Galian Tanah (mekanis)       | M3 | 49.28   | 148,844   | 7,335,024            |



|                                 |    |          |           |                      |
|---------------------------------|----|----------|-----------|----------------------|
| - Pasir Urug T.10 cm            | M3 | 5.28     | 571,703   | 3,018,592            |
| -Lantai Kerja                   | M3 | 5.28     | 228,265   | 1,205,239            |
| -Beton fc 25 Mpa                | M3 | 24.30    | 2,240,109 | 54,434,660           |
| - Penulangan                    | Kg | 3889.60  | 45,315    | 176,258,653          |
| - Bekisting                     | M2 | 171.00   | 264,397   | 45,211,808           |
| - Urugan Tanah Kembali          | M3 | 23.63    | 50,008    | 1,181,684            |
| <b>Tie Beam Tipe TG 47</b>      |    |          |           |                      |
| - Galian Tanah (mekanis)        | M3 | 55.08    | 148,844   | 8,198,318            |
| - Pasir Urug T.10 cm            | M3 | 5.76     | 571,703   | 3,293,010            |
| -Lantai Kerja                   | M3 | 5.76     | 228,265   | 1,314,806            |
| -Beton fc 25 Mpa                | M3 | 31.09    | 2,240,109 | 69,645,003           |
| - Penulangan                    | Kg | 7236.90  | 45,315    | 327,942,783          |
| - Bekisting                     | M2 | 155.43   | 264,397   | 41,095,154           |
| - Urugan Tanah Kembali          | M3 | 23.99    | 50,008    | 1,199,687            |
| <b>Tie Beam Tipe TG 46</b>      |    |          |           |                      |
| - Galian Tanah (mekanis)        | M3 | 15.86    | 148,844   | 2,360,663            |
| - Pasir Urug T.10 cm            | M3 | 1.88     | 571,703   | 1,074,802            |
| -Lantai Kerja                   | M3 | 1.88     | 228,265   | 429,138              |
| -Beton fc 25 Mpa                | M3 | 8.08     | 2,240,109 | 18,100,084           |
| - Penulangan                    | Kg | 1367.80  | 45,315    | 61,982,360           |
| - Bekisting                     | M2 | 40.41    | 264,397   | 10,684,264           |
| - Urugan Tanah Kembali          | M3 | 7.78     | 50,008    | 389,061              |
| <b>Tie Beam Tipe TB 24</b>      |    |          |           |                      |
| - Galian Tanah (mekanis)        | M3 | 6.63     | 148,844   | 986,835              |
| - Pasir Urug T.10 cm            | M3 | 1.01     | 571,703   | 577,420              |
| -Lantai Kerja                   | M3 | 1.01     | 228,265   | 230,548              |
| -Beton fc 25 Mpa                | M3 | 2.40     | 2,240,109 | 5,376,263            |
| - Penulangan                    | Kg | 845.93   | 45,315    | 38,333,629           |
| - Bekisting                     | M2 | 19.20    | 264,397   | 5,076,414            |
| - Urugan Tanah Kembali          | M3 | 4.23     | 50,008    | 211,533              |
| <b>Tie Beam Tipe TG 58</b>      |    |          |           |                      |
| - Galian Tanah (mekanis)        | M3 | 54.10    | 148,844   | 8,052,451            |
| - Pasir Urug T.10 cm            | M3 | 5.66     | 571,703   | 3,235,839            |
| -Lantai Kerja                   | M3 | 5.66     | 228,265   | 1,291,980            |
| -Beton fc 25 Mpa                | M3 | 30.10    | 2,240,109 | 67,427,295           |
| - Penulangan                    | Kg | 6987.10  | 45,315    | 316,623,004          |
| - Bekisting                     | M2 | 130.56   | 264,397   | 34,519,612           |
| - Urugan Tanah Kembali          | M3 | 21.80    | 50,008    | 1,090,170            |
| <b>Total Pekerjaan Tie Beam</b> |    |          |           | <b>1,319,387,785</b> |
| <b>PEKERJAAN KOLOM</b>          |    |          |           |                      |
| <b>Kolom Lantai 1</b>           |    |          |           |                      |
| <b>Kolom Tipe K79</b>           |    |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 45.05    | 2,240,109 | 100,916,931          |
| - Penulangan                    | Kg | 13448.90 | 45,315    | 609,441,846          |
| - Bekisting                     | M2 | 257.04   | 264,397   | 67,960,487           |

|                       |    |          |           |                      |
|-----------------------|----|----------|-----------|----------------------|
| Kolom Tipe K712       |    |          |           |                      |
| -Beton fc 25 Mpa      | M3 | 24.71    | 2,240,109 | 55,353,105           |
| - Penulangan          | Kg | 6218.14  | 45,315    | 281,777,299          |
| - Bekisting           | M2 | 134.40   | 264,397   | 35,534,895           |
| Jumlah Kolom Lantai 1 |    |          |           | <b>1,150,984,563</b> |
| Kolom Lantai 2        |    |          |           |                      |
| Kolom Tipe K79        |    |          |           |                      |
| -Beton fc 25 Mpa      | M3 | 38.59    | 2,240,109 | 86,445,824           |
| - Penulangan          | Kg | 11249.20 | 45,315    | 509,761,632          |
| - Bekisting           | M2 | 212.98   | 264,397   | 56,311,175           |
| Kolom Tipe K712       |    |          |           |                      |
| -Beton fc 25 Mpa      | M3 | 21.14    | 2,240,109 | 47,355,914           |
| - Penulangan          | Kg | 5317.20  | 45,315    | 240,950,872          |
| - Bekisting           | M2 | 101.36   | 264,397   | 26,799,233           |
| Jumlah Kolom Lantai 2 |    |          |           | <b>967,624,651</b>   |
| Kolom Lantai 3        |    |          |           |                      |
| Kolom Tipe K79        |    |          |           |                      |
| -Beton fc 25 Mpa      | M3 | 38.59    | 2,240,109 | 86,445,824           |
| - Penulangan          | Kg | 11249.20 | 45,315    | 509,761,632          |
| - Bekisting           | M2 | 212.98   | 264,397   | 56,311,175           |
| Kolom Tipe K712       |    |          |           |                      |
| -Beton fc 25 Mpa      | M3 | 21.14    | 2,240,109 | 47,355,914           |
| - Penulangan          | Kg | 5317.20  | 45,315    | 240,950,872          |
| - Bekisting           | M2 | 101.36   | 264,397   | 26,799,233           |
| Jumlah Kolom Lantai 3 |    |          |           | <b>967,624,651</b>   |
| Kolom Lantai 4        |    |          |           |                      |
| Kolom Tipe K79        |    |          |           |                      |
| -Beton fc 25 Mpa      | M3 | 38.59    | 2,240,109 | 86,445,824           |
| - Penulangan          | Kg | 11249.20 | 45,315    | 509,761,632          |
| - Bekisting           | M2 | 212.98   | 264,397   | 56,311,175           |
| Kolom Tipe K712       |    |          |           |                      |
| -Beton fc 25 Mpa      | M3 | 21.14    | 2,240,109 | 47,355,914           |
| - Penulangan          | Kg | 5317.20  | 45,315    | 240,950,872          |
| - Bekisting           | M2 | 101.36   | 264,397   | 26,799,233           |
| Jumlah Kolom Lantai 4 |    |          |           | <b>967,624,651</b>   |
| Kolom Lantai 5        |    |          |           |                      |
| Kolom Tipe K79        |    |          |           |                      |
| -Beton fc 25 Mpa      | M3 | 38.59    | 2,240,109 | 86,445,824           |
| - Penulangan          | Kg | 11249.20 | 45,315    | 509,761,632          |
| - Bekisting           | M2 | 212.98   | 264,397   | 56,311,175           |
| Kolom Tipe K712       |    |          |           |                      |
| -Beton fc 25 Mpa      | M3 | 21.14    | 2,240,109 | 47,355,914           |
| - Penulangan          | Kg | 5317.20  | 45,315    | 240,950,872          |
| - Bekisting           | M2 | 101.36   | 264,397   | 26,799,233           |
| Jumlah Kolom Lantai 5 |    |          |           | <b>967,624,651</b>   |

|                                 |    |          |           |                      |
|---------------------------------|----|----------|-----------|----------------------|
| Kolom Lantai 6                  |    |          |           |                      |
| Kolom Tipe K79                  |    |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 38.59    | 2,240,109 | 86,445,824           |
| - Penulangan                    | Kg | 11249.20 | 45,315    | 509,761,632          |
| - Bekisting                     | M2 | 212.98   | 264,397   | 56,311,175           |
| Kolom Tipe K712                 |    |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 21.14    | 2,240,109 | 47,355,914           |
| - Penulangan                    | Kg | 5317.20  | 45,315    | 240,950,872          |
| - Bekisting                     | M2 | 101.36   | 264,397   | 26,799,233           |
| <b>Jumlah Kolom Lantai 6</b>    |    |          |           | <b>967,624,651</b>   |
| Kolom Lantai Atap               |    |          |           |                      |
| Kolom Tipe K33                  |    |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 0.81     | 2,240,109 | 1,814,489            |
| - Penulangan                    | Kg | 326.04   | 45,315    | 14,774,622           |
| - Bekisting                     | M2 | 16.22    | 264,397   | 4,288,512            |
| <b>Jumlah Kolom Lantai Atap</b> |    |          |           | <b>20,877,623</b>    |
| <b>Total Pekerjaan Kolom</b>    |    |          |           | <b>6,009,985,439</b> |
| <b>PEKERJAAN BALOK</b>          |    |          |           |                      |
| Pekerjaan Balok Lantai 2        |    |          |           |                      |
| Balok Tipe G58                  |    |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 12.25    | 2,240,109 | 27,441,341           |
| - Penulangan                    | Kg | 1,634.36 | 45,315    | 74,061,624           |
| - Bekisting                     | M2 | 48.98    | 264,397   | 12,950,143           |
| Balok Tipe G47                  |    |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 33.67    | 2,240,109 | 75,424,486           |
| - Penulangan                    | Kg | 4,314.62 | 45,315    | 195,518,591          |
| - Bekisting                     | M2 | 168.37   | 264,397   | 44,516,445           |
| Balok Tipe CG46                 |    |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 2.96     | 2,240,109 | 6,630,724            |
| - Penulangan                    | Kg | 569.34   | 45,315    | 25,799,851           |
| - Bekisting                     | M2 | 14.79    | 264,397   | 3,910,425            |
| Balok Tipe B36                  |    |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 21.48    | 2,240,109 | 48,117,551           |
| - Penulangan                    | Kg | 2,185.21 | 45,315    | 99,023,594           |
| - Bekisting                     | M2 | 143.18   | 264,397   | 37,856,297           |
| Balok Tipe B57                  |    |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 0.73     | 2,240,109 | 1,635,280            |
| - Penulangan                    | Kg | 142.52   | 45,315    | 6,458,346            |
| - Bekisting                     | M2 | 4.90     | 264,397   | 1,295,543            |
| Balok Tipe B24                  |    |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 3.43     | 2,240,109 | 7,683,575            |
| - Penulangan                    | Kg | 692.74   | 45,315    | 31,391,768           |
| - Bekisting                     | M2 | 27.41    | 264,397   | 7,247,109            |
| Balok Tipe G34                  |    |          |           |                      |

|                              |    |          |           |                    |
|------------------------------|----|----------|-----------|--------------------|
| -Beton fc 25 Mpa             | M3 | 1.46     | 2,240,109 | 3,270,560          |
| - Penulangan                 | Kg | 244.58   | 45,315    | 11,083,233         |
| - Bekisting                  | M2 | 5.86     | 264,397   | 1,549,364          |
| Balok Tipe CG34              |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 0.63     | 2,240,109 | 1,411,269          |
| - Penulangan                 | Kg | 243.46   | 45,315    | 11,032,261         |
| - Bekisting                  | M2 | 4.46     | 264,397   | 1,179,870          |
| Balok Tipe CG47              |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 2.13     | 2,240,109 | 4,771,433          |
| - Penulangan                 | Kg | 848.61   | 45,315    | 38,455,190         |
| - Bekisting                  | M2 | 4.10     | 264,397   | 1,083,656          |
| Balok Tipe CB24              |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 3.52     | 2,240,109 | 7,878,465          |
| - Penulangan                 | Kg | 1156.79  | 45,315    | 52,420,235         |
| - Bekisting                  | M2 | 28.14    | 264,397   | 7,439,061          |
| Balok Tipe B45               |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 1.03     | 2,240,109 | 2,316,273          |
| - Penulangan                 | Kg | 251.64   | 45,315    | 11,403,348         |
| - Bekisting                  | M2 | 5.95     | 264,397   | 1,571,970          |
| <b>Jumlah Balok Lantai 2</b> |    |          |           | <b>863,828,879</b> |
| Pekerjaan Balok Lantai 3     |    |          |           |                    |
| Balok Tipe G58               |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 12.25    | 2,240,109 | 27,441,341         |
| - Penulangan                 | Kg | 1,866.36 | 45,315    | 84,574,789         |
| - Bekisting                  | M2 | 48.98    | 264,397   | 12,950,143         |
| Balok Tipe G47               |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 33.67    | 2,240,109 | 75,424,486         |
| - Penulangan                 | Kg | 6,314.62 | 45,315    | 286,149,326        |
| - Bekisting                  | M2 | 168.37   | 264,397   | 44,516,445         |
| Balok Tipe CG46              |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 2.96     | 2,240,109 | 6,630,724          |
| - Penulangan                 | Kg | 569.34   | 45,315    | 25,799,851         |
| - Bekisting                  | M2 | 14.79    | 264,397   | 3,910,425          |
| Balok Tipe B36               |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 21.48    | 2,240,109 | 48,117,551         |
| - Penulangan                 | Kg | 2,385.21 | 45,315    | 108,086,668        |
| - Bekisting                  | M2 | 143.18   | 264,397   | 37,856,297         |
| Balok Tipe B57               |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 0.73     | 2,240,109 | 1,635,280          |
| - Penulangan                 | Kg | 142.52   | 45,315    | 6,458,346          |
| - Bekisting                  | M2 | 4.90     | 264,397   | 1,295,543          |
| Balok Tipe B24               |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 3.43     | 2,240,109 | 7,683,575          |
| - Penulangan                 | Kg | 692.74   | 45,315    | 31,391,768         |
| - Bekisting                  | M2 | 27.41    | 264,397   | 7,247,109          |

|                              |    |          |           |                    |
|------------------------------|----|----------|-----------|--------------------|
| Balok Tipe G34               |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 1.46     | 2,240,109 | 3,270,560          |
| - Penulangan                 | Kg | 244.58   | 45,315    | 11,083,233         |
| - Bekisting                  | M2 | 5.86     | 264,397   | 1,549,364          |
| Balok Tipe CG34              |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 0.63     | 2,240,109 | 1,411,269          |
| - Penulangan                 | Kg | 243.46   | 45,315    | 11,032,261         |
| - Bekisting                  | M2 | 4.46     | 264,397   | 1,179,870          |
| Balok Tipe CG47              |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 2.13     | 2,240,109 | 4,771,433          |
| - Penulangan                 | Kg | 848.61   | 45,315    | 38,455,190         |
| - Bekisting                  | M2 | 4.10     | 264,397   | 1,083,656          |
| Balok Tipe CB24              |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 3.52     | 2,240,109 | 7,878,465          |
| - Penulangan                 | Kg | 1156.79  | 45,315    | 52,420,235         |
| - Bekisting                  | M2 | 28.14    | 264,397   | 7,439,061          |
| Balok Tipe B45               |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 1.03     | 2,240,109 | 2,316,273          |
| - Penulangan                 | Kg | 251.64   | 45,315    | 11,403,348         |
| - Bekisting                  | M2 | 5.95     | 264,397   | 1,571,970          |
| <b>Jumlah Balok Lantai 3</b> |    |          |           | <b>974,035,853</b> |
| Pekerjaan Balok Lantai 4     |    |          |           |                    |
| Balok Tipe G58               |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 12.25    | 2,240,109 | 27,441,341         |
| - Penulangan                 | Kg | 1,866.36 | 45,315    | 84,574,789         |
| - Bekisting                  | M2 | 48.98    | 264,397   | 12,950,143         |
| Balok Tipe G47               |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 33.67    | 2,240,109 | 75,424,486         |
| - Penulangan                 | Kg | 6,314.62 | 45,315    | 286,149,326        |
| - Bekisting                  | M2 | 168.37   | 264,397   | 44,516,445         |
| Balok Tipe CG46              |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 2.96     | 2,240,109 | 6,630,724          |
| - Penulangan                 | Kg | 569.34   | 45,315    | 25,799,851         |
| - Bekisting                  | M2 | 14.79    | 264,397   | 3,910,425          |
| Balok Tipe B36               |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 21.48    | 2,240,109 | 48,117,551         |
| - Penulangan                 | Kg | 3,385.21 | 45,315    | 153,402,035        |
| - Bekisting                  | M2 | 143.18   | 264,397   | 37,856,297         |
| Balok Tipe B57               |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 0.73     | 2,240,109 | 1,635,280          |
| - Penulangan                 | Kg | 142.52   | 45,315    | 6,458,346          |
| - Bekisting                  | M2 | 4.90     | 264,397   | 1,295,543          |
| Balok Tipe B24               |    |          |           |                    |
| -Beton fc 25 Mpa             | M3 | 3.43     | 2,240,109 | 7,683,575          |

|                              |    |          |           |                      |
|------------------------------|----|----------|-----------|----------------------|
| - Penulangan                 | Kg | 692.74   | 45,315    | 31,391,768           |
| - Bekisting                  | M2 | 27.41    | 264,397   | 7,247,109            |
| Balok Tipe G34               |    |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 1.46     | 2,240,109 | 3,270,560            |
| - Penulangan                 | Kg | 244.58   | 45,315    | 11,083,233           |
| - Bekisting                  | M2 | 5.86     | 264,397   | 1,549,364            |
| Balok Tipe CG34              |    |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 0.63     | 2,240,109 | 1,411,269            |
| - Penulangan                 | Kg | 243.46   | 45,315    | 11,032,261           |
| - Bekisting                  | M2 | 4.46     | 264,397   | 1,179,870            |
| Balok Tipe CG47              |    |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 2.13     | 2,240,109 | 4,771,433            |
| - Penulangan                 | Kg | 848.61   | 45,315    | 38,455,190           |
| - Bekisting                  | M2 | 4.10     | 264,397   | 1,083,656            |
| Balok Tipe CB24              |    |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 3.52     | 2,240,109 | 7,878,465            |
| - Penulangan                 | Kg | 1156.79  | 45,315    | 52,420,235           |
| - Bekisting                  | M2 | 28.14    | 264,397   | 7,439,061            |
| Balok Tipe B45               |    |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 1.03     | 2,240,109 | 2,316,273            |
| - Penulangan                 | Kg | 251.64   | 45,315    | 11,403,348           |
| - Bekisting                  | M2 | 5.95     | 264,397   | 1,571,970            |
| <b>Jumlah Balok Lantai 4</b> |    |          |           | <b>1,019,351,221</b> |
| Pekerjaan Balok Lantai 5     |    |          |           |                      |
| Balok Tipe G58               |    |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 12.25    | 2,240,109 | 27,441,341           |
| - Penulangan                 | Kg | 1,866.36 | 45,315    | 84,574,789           |
| - Bekisting                  | M2 | 48.98    | 264,397   | 12,950,143           |
| Balok Tipe G47               |    |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 33.67    | 2,240,109 | 75,424,486           |
| - Penulangan                 | Kg | 6,314.62 | 45,315    | 286,149,326          |
| - Bekisting                  | M2 | 168.37   | 264,397   | 44,516,445           |
| Balok Tipe CG46              |    |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 2.96     | 2,240,109 | 6,630,724            |
| - Penulangan                 | Kg | 569.34   | 45,315    | 25,799,851           |
| - Bekisting                  | M2 | 14.79    | 264,397   | 3,910,425            |
| Balok Tipe B36               |    |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 21.48    | 2,240,109 | 48,117,551           |
| - Penulangan                 | Kg | 3,385.21 | 45,315    | 153,402,035          |
| - Bekisting                  | M2 | 143.18   | 264,397   | 37,856,297           |
| Balok Tipe B57               |    |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 0.73     | 2,240,109 | 1,635,280            |
| - Penulangan                 | Kg | 142.52   | 45,315    | 6,458,346            |
| - Bekisting                  | M2 | 4.90     | 264,397   | 1,295,543            |

|                          |    |          |           |                      |
|--------------------------|----|----------|-----------|----------------------|
| Balok Tipe B24           |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 3.43     | 2,240,109 | 7,683,575            |
| - Penulangan             | Kg | 692.74   | 45,315    | 31,391,768           |
| - Bekisting              | M2 | 27.41    | 264,397   | 7,247,109            |
| Balok Tipe G34           |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 1.46     | 2,240,109 | 3,270,560            |
| - Penulangan             | Kg | 244.58   | 45,315    | 11,083,233           |
| - Bekisting              | M2 | 5.86     | 264,397   | 1,549,364            |
| Balok Tipe CG34          |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 1.95     | 2,240,109 | 4,365,525            |
| - Penulangan             | Kg | 1177.02  | 45,315    | 53,337,050           |
| - Bekisting              | M2 | 13.80    | 264,397   | 3,649,730            |
| Balok Tipe CG47          |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 0.63     | 2,240,109 | 1,411,269            |
| - Penulangan             | Kg | 243.46   | 45,315    | 11,032,261           |
| - Bekisting              | M2 | 4.46     | 264,397   | 1,179,870            |
| Balok Tipe CB24          |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 0.00     | 2,240,109 | -                    |
| - Penulangan             | Kg | 0.00     | 45,315    | -                    |
| - Bekisting              | M2 | 0.00     | 264,397   | -                    |
| Balok Tipe B45           |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 3.52     | 2,240,109 | 7,878,465            |
| - Penulangan             | Kg | 1156.79  | 45,315    | 52,420,235           |
| - Bekisting              | M2 | 28.14    | 264,397   | 7,439,061            |
| Jumlah Balok Lantai 5    |    |          |           | <b>1,021,101,656</b> |
| Pekerjaan Balok Lantai 6 |    |          |           |                      |
| Balok Tipe G58           |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 12.25    | 2,240,109 | 27,441,341           |
| - Penulangan             | Kg | 1,866.36 | 45,315    | 84,574,789           |
| - Bekisting              | M2 | 48.98    | 264,397   | 12,950,143           |
| Balok Tipe G47           |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 33.67    | 2,240,109 | 75,424,486           |
| - Penulangan             | Kg | 6,314.62 | 45,315    | 286,149,326          |
| - Bekisting              | M2 | 168.37   | 264,397   | 44,516,445           |
| Balok Tipe CG46          |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 2.96     | 2,240,109 | 6,630,724            |
| - Penulangan             | Kg | 569.34   | 45,315    | 25,799,851           |
| - Bekisting              | M2 | 14.79    | 264,397   | 3,910,425            |
| Balok Tipe B36           |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 21.48    | 2,240,109 | 48,117,551           |
| - Penulangan             | Kg | 3,385.21 | 45,315    | 153,402,035          |
| - Bekisting              | M2 | 143.18   | 264,397   | 37,856,297           |
| Balok Tipe B57           |    |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 0.73     | 2,240,109 | 1,635,280            |
| - Penulangan             | Kg | 142.52   | 45,315    | 6,458,346            |

|                                |    |          |           |                      |
|--------------------------------|----|----------|-----------|----------------------|
| - Bekisting                    | M2 | 4.90     | 264,397   | 1,295,543            |
| Balok Tipe B24                 |    |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 3.43     | 2,240,109 | 7,683,575            |
| - Penulangan                   | Kg | 692.74   | 45,315    | 31,391,768           |
| - Bekisting                    | M2 | 27.41    | 264,397   | 7,247,109            |
| Balok Tipe G34                 |    |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 1.46     | 2,240,109 | 3,270,560            |
| - Penulangan                   | Kg | 244.58   | 45,315    | 11,083,233           |
| - Bekisting                    | M2 | 5.86     | 264,397   | 1,549,364            |
| Balok Tipe CG34                |    |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 0.63     | 2,240,109 | 1,411,269            |
| - Penulangan                   | Kg | 243.46   | 45,315    | 11,032,261           |
| - Bekisting                    | M2 | 4.46     | 264,397   | 1,179,870            |
| Balok Tipe CG47                |    |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 2.13     | 2,240,109 | 4,771,433            |
| - Penulangan                   | Kg | 848.61   | 45,315    | 38,455,190           |
| - Bekisting                    | M2 | 4.10     | 264,397   | 1,083,656            |
| Balok Tipe CB24                |    |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 3.52     | 2,240,109 | 7,878,465            |
| - Penulangan                   | Kg | 1156.79  | 45,315    | 52,420,235           |
| - Bekisting                    | M2 | 28.14    | 264,397   | 7,439,061            |
| Balok Tipe B45                 |    |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 1.03     | 2,240,109 | 2,316,273            |
| - Penulangan                   | Kg | 251.64   | 45,315    | 11,403,348           |
| - Bekisting                    | M2 | 5.95     | 264,397   | 1,571,970            |
| <b>Jumlah Balok Lantai 6</b>   |    |          |           | <b>1,019,351,221</b> |
| Pekerjaan Balok Lantai Rooftop |    |          |           |                      |
| Balok Tipe G58                 |    |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 12.25    | 2,240,109 | 27,441,341           |
| - Penulangan                   | Kg | 1,866.36 | 45,315    | 84,574,789           |
| - Bekisting                    | M2 | 48.98    | 264,397   | 12,950,143           |
| Balok Tipe G47                 |    |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 33.67    | 2,240,109 | 75,424,486           |
| - Penulangan                   | Kg | 6,314.62 | 45,315    | 286,149,326          |
| - Bekisting                    | M2 | 168.37   | 264,397   | 44,516,445           |
| Balok Tipe CG46                |    |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 2.96     | 2,240,109 | 6,630,724            |
| - Penulangan                   | Kg | 569.34   | 45,315    | 25,799,851           |
| - Bekisting                    | M2 | 14.79    | 264,397   | 3,910,425            |
| Balok Tipe B36                 |    |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 21.48    | 2,240,109 | 48,117,551           |
| - Penulangan                   | Kg | 3,385.21 | 45,315    | 153,402,035          |
| - Bekisting                    | M2 | 143.18   | 264,397   | 37,856,297           |
| Balok Tipe B57                 |    |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 0.73     | 2,240,109 | 1,635,280            |



|                             |    |           |           |                      |
|-----------------------------|----|-----------|-----------|----------------------|
| - Penulangan                | Kg | 142.52    | 45,315    | 6,458,346            |
| - Bekisting                 | M2 | 4.90      | 264,397   | 1,295,543            |
| Balok Tipe B24              |    |           |           |                      |
| -Beton fc 25 Mpa            | M3 | 3.43      | 2,240,109 | 7,683,575            |
| - Penulangan                | Kg | 692.74    | 45,315    | 31,391,768           |
| - Bekisting                 | M2 | 27.41     | 264,397   | 7,247,109            |
| Balok Tipe G34              |    |           |           |                      |
| -Beton fc 25 Mpa            | M3 | 1.46      | 2,240,109 | 3,270,560            |
| - Penulangan                | Kg | 244.58    | 45,315    | 11,083,233           |
| - Bekisting                 | M2 | 5.86      | 264,397   | 1,549,364            |
| Balok Tipe CG34             |    |           |           |                      |
| -Beton fc 25 Mpa            | M3 | 0.63      | 2,240,109 | 1,411,269            |
| - Penulangan                | Kg | 243.46    | 45,315    | 11,032,261           |
| - Bekisting                 | M2 | 4.46      | 264,397   | 1,179,870            |
| Balok Tipe CG47             |    |           |           |                      |
| -Beton fc 25 Mpa            | M3 | 2.13      | 2,240,109 | 4,771,433            |
| - Penulangan                | Kg | 848.61    | 45,315    | 38,455,190           |
| - Bekisting                 | M2 | 4.10      | 264,397   | 1,083,656            |
| Balok Tipe CB24             |    |           |           |                      |
| -Beton fc 25 Mpa            | M3 | 3.52      | 2,240,109 | 7,878,465            |
| - Penulangan                | Kg | 1156.79   | 45,315    | 52,420,235           |
| - Bekisting                 | M2 | 28.14     | 264,397   | 7,439,061            |
| Balok Tipe B45              |    |           |           |                      |
| -Beton fc 25 Mpa            | M3 | 1.03      | 2,240,109 | 2,316,273            |
| - Penulangan                | Kg | 251.64    | 45,315    | 11,403,348           |
| - Bekisting                 | M2 | 5.95      | 264,397   | 1,571,970            |
| Jumlah Balok Lantai Rooftop |    |           |           | <b>1,019,351,221</b> |
| Total Pekerjaan Balok       |    |           |           | <b>5,917,020,050</b> |
| PEKERJAAN PELAT LANTAI      |    |           |           |                      |
| Pekerjaan Pelat Lantai 1    |    |           |           |                      |
| Rabat Beton T = 15 cm       |    |           |           |                      |
| - Pasir Urug T.10 cm        | M3 | 125.43    | 371,703   | 46,622,714           |
| -Lantai Kerja               | M3 | 43.31     | 118,265   | 5,122,056            |
| -Beton fc 25 Mpa            | M3 | 125.43    | 1,240,109 | 155,546,930          |
| - Penulangan                | Kg | 8,620.94  | 15,315    | 132,032,864          |
| - Bekisting                 | M2 | 20.45     | 283,385   | 5,794,132            |
| Jumlah Pelat Lantai Dasar   |    |           |           | <b>345,118,696</b>   |
| Pekerjaan Pelat Lantai 2    |    |           |           |                      |
| Pelat Lantai T = 12 cm      |    |           |           |                      |
| -Beton fc 25 Mpa            | M3 | 97.04     | 1,240,109 | 120,340,222          |
| - Penulangan                | Kg | 10,421.78 | 15,315    | 159,613,391          |
| - Bekisting                 | M2 | 826.40    | 283,385   | 234,189,450          |
| Jumlah Pelat Lantai 1       |    |           |           | <b>514,143,063</b>   |
| Pekerjaan Pelat Lantai 3    |    |           |           |                      |

|   |    |           |           |                      |
|---|----|-----------|-----------|----------------------|
| Pelat Lantai T = 12 cm                  |    |           |           |                      |
| -Beton fc 25 Mpa                        | M3 | 97.04     | 1,240,109 | 120,340,222          |
| - Penulangan                            | Kg | 10,421.78 | 15,315    | 159,613,391          |
| - Bekisting                             | M2 | 826.40    | 283,385   | 234,189,450          |
| <b>Jumlah Pelat Lantai 2</b>            |    |           |           | <b>514,143,063</b>   |
| Pekerjaan Pelat Lantai 4                |    |           |           |                      |
| Pelat Lantai T = 12 cm                  |    |           |           |                      |
| -Beton fc 25 Mpa                        | M3 | 97.04     | 1,240,109 | 120,340,222          |
| - Penulangan                            | Kg | 10,421.78 | 15,315    | 159,613,391          |
| - Bekisting                             | M2 | 826.40    | 283,385   | 234,189,450          |
| <b>Jumlah Pelat Lantai 3</b>            |    |           |           | <b>514,143,063</b>   |
| Pekerjaan Pelat Lantai 5                |    |           |           |                      |
| Pelat Lantai T = 12 cm                  |    |           |           |                      |
| -Beton fc 25 Mpa                        | M3 | 97.04     | 1,240,109 | 120,340,222          |
| - Penulangan                            | Kg | 10,421.78 | 15,315    | 159,613,391          |
| - Bekisting                             | M2 | 826.40    | 283,385   | 234,189,450          |
| <b>Jumlah Pelat Lantai 5</b>            |    |           |           | <b>514,143,063</b>   |
| Pekerjaan Pelat Lantai 6                |    |           |           |                      |
| Pelat Lantai T = 12 cm                  |    |           |           |                      |
| -Beton fc 25 Mpa                        | M3 | 97.04     | 1,240,109 | 120,340,222          |
| - Penulangan                            | Kg | 10,421.78 | 15,315    | 159,613,391          |
| - Bekisting                             | M2 | 826.40    | 283,385   | 234,189,450          |
| <b>Jumlah Pelat Lantai 6</b>            |    |           |           | <b>514,143,063</b>   |
| Pekerjaan Pelat Lantai Rooftop          |    |           |           |                      |
| Pelat Lantai T = 12 cm                  |    |           |           |                      |
| -Beton fc 25 Mpa                        | M3 | 97.04     | 1,240,109 | 120,340,222          |
| - Penulangan                            | Kg | 10,421.78 | 15,315    | 159,613,391          |
| - Bekisting                             | M2 | 826.40    | 283,385   | 234,189,450          |
| <b>Jumlah Pelat Lantai Rooftop</b>      |    |           |           | <b>514,143,063</b>   |
| Pekerjaan Pelat Lantai Dak tangga       |    |           |           |                      |
| Pelat Lantai T = 12 cm                  |    |           |           |                      |
| -Beton fc 25 Mpa                        | M3 | 3.98      | 1,240,109 | 4,935,636            |
| - Penulangan                            | Kg | 427.85    | 15,315    | 6,552,680            |
| - Bekisting                             | M2 | 37.25     | 283,385   | 10,556,095           |
| <b>Jumlah Pelat Lantai Dak Tangga</b>   |    |           |           | <b>22,044,411</b>    |
| <b>Total Pekerjaan Pelat Lantai</b>     |    |           |           | <b>3,452,021,483</b> |
| PEKERJAAN TANGGA                        |    |           |           |                      |
| Pekerjaan Tangga Lantai 1 (Lt.1 - Lt.2) |    |           |           |                      |
| Tangga 1                                |    |           |           |                      |
| -Beton fc 25 Mpa                        | M3 | 2.40      | 1,240,109 | 2,976,263            |

|   |    |        |           |                   |
|---|----|--------|-----------|-------------------|
| - Penulangan                                  | Kg | 257.81 | 15,315    | 3,948,455         |
| - Bekisting                                   | M2 | 21.91  | 283,385   | 6,208,968         |
| Tangga 2                                      |    |        |           |                   |
| -Beton fc 25 Mpa                              | M3 | 3.30   | 1,240,109 | 4,092,361         |
| - Penulangan                                  | Kg | 354.38 | 15,315    | 5,427,460         |
| - Bekisting                                   | M2 | 29.65  | 283,385   | 8,402,368         |
| <b>Jumlah Tangga Lantai 1 (Lt. 1 - Lt. 2)</b> |    |        |           | <b>31,055,875</b> |
| Pekerjaan Tangga Lantai 2 (Lt.2 - Lt.3)       |    |        |           |                   |
| Tangga 1                                      |    |        |           |                   |
| -Beton fc 25 Mpa                              | M3 | 2.40   | 1,240,109 | 2,976,263         |
| - Penulangan                                  | Kg | 257.81 | 15,315    | 3,948,455         |
| - Bekisting                                   | M2 | 21.91  | 283,385   | 6,208,968         |
| Tangga 2                                      |    |        |           |                   |
| -Beton fc 25 Mpa                              | M3 | 3.30   | 1,240,109 | 4,092,361         |
| - Penulangan                                  | Kg | 354.38 | 15,315    | 5,427,460         |
| - Bekisting                                   | M2 | 29.65  | 283,385   | 8,402,368         |
| <b>Jumlah Tangga Lantai 2 (Lt. 2 - Lt.3)</b>  |    |        |           | <b>31,055,875</b> |
| Pekerjaan Tangga Lantai 3 (Lt. 3 - Lt. 4)     |    |        |           |                   |
| Tangga 1                                      |    |        |           |                   |
| -Beton fc 25 Mpa                              | M3 | 2.40   | 1,240,109 | 2,976,263         |
| - Penulangan                                  | Kg | 257.81 | 15,315    | 3,948,455         |
| - Bekisting                                   | M2 | 21.91  | 283,385   | 6,208,968         |
| Tangga 2                                      |    |        |           |                   |
| -Beton fc 25 Mpa                              | M3 | 3.30   | 1,240,109 | 4,092,361         |
| - Penulangan                                  | Kg | 354.38 | 15,315    | 5,427,460         |
| - Bekisting                                   | M2 | 29.65  | 283,385   | 8,402,368         |
| <b>Jumlah Tangga Lantai 3 (Lt. 3 - Lt. 4)</b> |    |        |           | <b>31,055,875</b> |
| Pekerjaan Tangga Lantai 4 (Lt.4 - Lt. 5)      |    |        |           |                   |
| Tangga 1                                      |    |        |           |                   |
| -Beton fc 25 Mpa                              | M3 | 2.40   | 1,240,109 | 2,976,263         |
| - Penulangan                                  | Kg | 257.81 | 15,315    | 3,948,455         |
| - Bekisting                                   | M2 | 21.91  | 283,385   | 6,208,968         |
| Tangga 2                                      |    |        |           |                   |
| -Beton fc 25 Mpa                              | M3 | 3.30   | 1,240,109 | 4,092,361         |
| - Penulangan                                  | Kg | 354.38 | 15,315    | 5,427,460         |
| - Bekisting                                   | M2 | 29.65  | 283,385   | 8,402,368         |
| <b>Jumlah Tangga Lantai 4 (Lt. 4 - Lt. 5)</b> |    |        |           | <b>31,055,874</b> |
| Pekerjaan Tangga Lantai 5 (Lt. 5 - Lt. 6)     |    |        |           |                   |
| Tangga 1                                      |    |        |           |                   |
| -Beton fc 25 Mpa                              | M3 | 2.40   | 1,240,109 | 2,976,263         |
| - Penulangan                                  | Kg | 257.81 | 15,315    | 3,948,455         |
| - Bekisting                                   | M2 | 21.91  | 283,385   | 6,208,967         |

|   |    |         |           |                       |
|---|----|---------|-----------|-----------------------|
| Tangga 2  |    |         |           |                       |
| -Beton fc 25 Mpa  | M3 | 3.30    | 1,240,109 | 4,092,361             |
| - Penulangan  | Kg | 354.38  | 15,315    | 5,427,460             |
| - Bekisting   | M2 | 29.65   | 283,385   | 8,402,368             |
| Jumlah Tangga Lantai 5 (Lt. 5 - Lt. 6)                      |    |         |           | <b>31,055,874</b>     |
| Pekerjaan Tangga Lantai 6 (Lt. 6 - Lt. Rooftop)             |    |         |           |                       |
| Tangga 1  |    |         |           |                       |
| -Beton fc 25 Mpa  | M3 | 2.40    | 1,240,109 | 2,976,263             |
| - Penulangan  | Kg | 257.81  | 15,315    | 3,948,455             |
| - Bekisting   | M2 | 21.91   | 283,385   | 6,208,967             |
| Tangga 2  |    |         |           |                       |
| -Beton fc 25 Mpa  | M3 | 3.30    | 1,240,109 | 4,092,361             |
| - Penulangan  | Kg | 354.38  | 15,315    | 5,427,460             |
| - Bekisting   | M2 | 29.65   | 283,385   | 8,402,368             |
| Jumlah Tangga Lantai 6 (Lt. 6 - Lt. Rooftop)                |    |         |           | <b>31,055,874</b>     |
| Total Pekerjaan Tangga                                      |    |         |           | <b>186,335,247</b>    |
| TOTAL PEKERJAAN STRUKTUR                                    |    |         |           | <b>19,215,157,323</b> |
| PEKERJAAN ARSITEKTUR  |    |         |           |                       |
| PEKERJAAN DINDING   |    |         |           |                       |
| Pekerjaan Dinding Bangunan                                  |    |         |           |                       |
| Pekerjaan Dinding Lantai 1                                  |    |         |           |                       |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 675.00  | 135,594   | 91,525,895            |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 1444.65 | 55,187    | 79,725,994            |
| - Skimcoat  | M2 | 185.54  | 34,949    | 6,484,395             |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 1367.27 | 31,025    | 42,420,115            |
| - Waterproofing Tipe Coating                                | M2 | 2.66    | 62,550    | 166,383               |
| Jumlah Pekerjaan Dinding Lantai 1                           |    |         |           | <b>220,322,781</b>    |
| Pekerjaan Dinding Lantai 2                                  |    |         |           |                       |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 565.00  | 135,594   | 76,610,564            |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 1060.92 | 55,187    | 58,549,061            |
| - Skimcoat  | M2 | 187.43  | 34,949    | 6,550,448             |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 913.32  | 31,025    | 28,336,129            |
| - Waterproofing Tipe Coating                                | M2 | 10.42   | 62,550    | 651,771               |
| Jumlah Pekerjaan Dinding Lantai 2                           |    |         |           | <b>170,697,973</b>    |
| Pekerjaan Dinding Lantai 3                                  |    |         |           |                       |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 563.00  | 135,594   | 76,339,376            |

|   |    |         |         |                    |
|---|----|---------|---------|--------------------|
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 1089.93 | 55,187  | 60,150,038         |
| - Skimcoat  | M2 | 187.60  | 34,949  | 6,556,389          |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 955.98  | 31,025  | 29,659,673         |
| - Waterproofing Tipe Coating                                | M2 | 10.55   | 62,550  | 659,903            |
| <b>Jumlah Pekerjaan Dinding Lantai 3</b>                    |    |         |         | <b>173,365,379</b> |
| <b>Pekerjaan Dinding Lantai 4</b>                           |    |         |         |                    |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 519.00  | 135,594 | 70,373,244         |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 1079.73 | 55,187  | 59,587,130         |
| - Skimcoat  | M2 | 187.60  | 34,949  | 6,556,389          |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 945.78  | 31,025  | 29,343,214         |
| - Waterproofing Tipe Coating                                | M2 | 10.55   | 62,550  | 659,903            |
| <b>Jumlah Pekerjaan Dinding Lantai 4</b>                    |    |         |         | <b>166,519,879</b> |
| <b>Pekerjaan Dinding Lantai 5</b>                           |    |         |         |                    |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 523.00  | 135,594 | 70,915,620         |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 1055.79 | 55,187  | 58,265,952         |
| - Skimcoat  | M2 | 187.60  | 34,949  | 6,556,389          |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 921.84  | 31,025  | 28,600,465         |
| - Waterproofing Tipe Coating                                | M2 | 10.55   | 62,550  | 659,903            |
| <b>Jumlah Pekerjaan Dinding Lantai 5</b>                    |    |         |         | <b>164,998,328</b> |
| <b>Pekerjaan Dinding Lantai 6</b>                           |    |         |         |                    |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 490.00  | 135,594 | 66,441,020         |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 1077.03 | 55,187  | 59,438,125         |
| - Skimcoat  | M2 | 187.60  | 34,949  | 6,556,389          |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 943.08  | 31,025  | 29,259,445         |
| - Waterproofing Tipe Coating                                | M2 | 10.55   | 62,550  | 659,903            |
| <b>Jumlah Pekerjaan Dinding Lantai 6</b>                    |    |         |         | <b>162,354,882</b> |
| <b>Pekerjaan Dinding Lantai Atap</b>                        |    |         |         |                    |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 231.00  | 135,594 | 31,322,195         |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 594.73  | 55,187  | 32,821,403         |
| - Skimcoat  | M2 | 54.72   | 34,949  | 1,912,397          |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 594.73  | 31,025  | 18,451,743         |
| <b>Jumlah Pekerjaan Dinding Lantai Atap</b>                 |    |         |         | <b>84,507,738</b>  |

|  |    |        |         |                      |
|--|----|--------|---------|----------------------|
| <b>Total Pekerjaan Dinding</b>                           |    |        |         | <b>1,142,766,962</b> |
| <b>PEKERJAAN KERAMIK</b>                                 |    |        |         |                      |
| <b>Pekerjaan Keramik Lantai 1</b>                        |    |        |         |                      |
| - Pas. Lantai Homogeneous Tile (Polished) 60x60 cm       | M2 | 534.00 | 268,408 | 143,330,067          |
| - Pas. Lantai Homogeneous Tile (UnPolished) 60x60 cm     | M2 | 20.00  | 209,748 | 4,194,969            |
| - Pas. Plint Lantai Homogeneous Tile (Polished) 10x60 cm | M  | 328.00 | 199,025 | 65,280,219           |
| - Lantai Vinyl   | M2 | 206.00 | 375,300 | 77,311,800           |
| - Pas. Lantai Homogenous Tile (Tangga) 30x60 cm          | M2 | 34.60  | 244,547 | 8,461,316            |
| - Waterproofing Coating                                  | M2 | 19.50  | 62,550  | 1,219,725            |
| <b>Jumlah Pekerjaan Keramik Lantai 1</b>                 |    |        |         | <b>299,798,095</b>   |
| <b>Pekerjaan Keramik Lantai 2</b>                        |    |        |         |                      |
| - Pas. Lantai Homogeneous Tile (Polished) 60x60 cm       | M2 | 782.10 | 268,408 | 209,922,182          |
| - Pas. Lantai Homogeneous Tile (UnPolished) 60x60 cm     | M2 | 41.00  | 209,748 | 8,599,686            |
| - Pas. Plint Lantai Homogeneous Tile (Polished) 10x60 cm | M  | 360.80 | 199,025 | 71,808,241           |
| - Pas. Lantai Homogenous Tile (Tangga) 30x60 cm          | M2 | 34.60  | 244,547 | 8,461,316            |
| - Waterproofing Coating                                  | M2 | 44.20  | 62,550  | 2,764,710            |
| <b>Jumlah Pekerjaan Keramik Lantai 2</b>                 |    |        |         | <b>301,556,134</b>   |
| <b>Pekerjaan Keramik Lantai 3</b>                        |    |        |         |                      |
| - Pas. Lantai Homogeneous Tile (Polished) 60x60 cm       | M2 | 782.10 | 268,408 | 209,922,182          |
| - Pas. Lantai Homogeneous Tile (UnPolished) 60x60 cm     | M2 | 41.00  | 209,748 | 8,599,686            |
| - Pas. Plint Lantai Homogeneous Tile (Polished) 10x60 cm | M  | 295.20 | 199,025 | 58,752,197           |
| - Pas. Lantai Homogenous Tile (Tangga) 30x60 cm          | M2 | 34.60  | 244,547 | 8,461,316            |
| - Waterproofing Coating                                  | M2 | 44.20  | 62,550  | 2,764,710            |
| <b>Jumlah Pekerjaan Keramik Lantai 3</b>                 |    |        |         | <b>288,500,090</b>   |
| <b>Pekerjaan Keramik Lantai 4</b>                        |    |        |         |                      |
| - Pas. Lantai Homogeneous Tile (Polished) 60x60 cm       | M2 | 782.10 | 209,748 | 164,044,250          |
| - Pas. Lantai Homogeneous Tile (UnPolished) 60x60 cm     | M2 | 41.00  | 209,748 | 8,599,686            |
| - Pas. Plint Lantai Homogeneous Tile (Polished) 10x60 cm | M  | 295.20 | 199,025 | 58,752,197           |
| - Pas. Lantai Homogenous Tile (Tangga) 30x60 cm          | M2 | 34.60  | 244,547 | 8,461,316            |
| - Waterproofing Coating                                  | M2 | 44.20  | 62,550  | 2,764,710            |

|  |    |        |         |                      |
|--|----|--------|---------|----------------------|
| Jumlah Pekerjaan Keramik Lantai 4                        |    |        |         | <b>242,622,159</b>   |
| Pekerjaan Keramik Lantai 5                               |    |        |         |                      |
| - Pas. Lantai Homogeneous Tile (Polished) 60x60 cm       | M2 | 782.10 | 268,408 | 209,922,182          |
| - Pas. Lantai Homogeneous Tile (UnPolished) 60x60 cm     | M2 | 41.00  | 209,748 | 8,599,686            |
| - Pas. Plint Lantai Homogeneous Tile (Polished) 10x60 cm | M  | 295.20 | 199,025 | 58,752,197           |
| - Pas. Lantai Homogenous Tile (Tangga) 30x60 cm          | M2 | 3.60   | 244,547 | 880,368              |
| - Waterproofing Coating                                  | M2 | 44.20  | 62,550  | 2,764,710            |
| Jumlah Pekerjaan Keramik Lantai 5                        |    |        |         | <b>280,919,143</b>   |
| Pekerjaan Keramik Lantai 6                               |    |        |         |                      |
| - Pas. Lantai Homogeneous Tile (Polished) 60x60 cm       | M2 | 782.10 | 268,408 | 209,922,182          |
| - Pas. Lantai Homogeneous Tile (UnPolished) 60x60 cm     | M2 | 41.00  | 209,748 | 8,599,686            |
| - Pas. Plint Lantai Homogeneous Tile (Polished) 10x60 cm | M  | 295.20 | 199,025 | 58,752,197           |
| - Pas. Lantai Homogenous Tile (Tangga) 30x60 cm          | M2 | 34.60  | 244,547 | 8,461,316            |
| - Waterproofing Coating                                  | M2 | 44.20  | 62,550  | 2,764,710            |
| <b>Total Pekerjaan Keramik</b>                           |    |        |         | <b>1,413,395,620</b> |
| PEKERJAAN PLAFOND  |    |        |         |                      |
| Pekerjaan Plafond Lantai 1                               |    |        |         |                      |
| - Pekerjaan Rangka Plafond Gypsum                        | M2 | 94.00  | 55,600  | 5,226,400            |
| - Pekerjaan Plafond Gypsum                               | M2 | 94.00  | 159,850 | 15,025,900           |
| - Pekerjaan Rangka Plafond GRC                           | M2 | 670.30 | 55,600  | 37,268,680           |
| - Pekerjaan Plafond GRC                                  | M2 | 670.30 | 180,700 | 121,123,210          |
| - Pekerjaan Plafond Expose                               | M2 | 618.00 | 34,646  | 21,410,954           |
| Jumlah Pekerjaan Plafond Lantai 1                        |    |        |         | <b>200,055,144</b>   |
| Pekerjaan Plafond Lantai 2                               |    |        |         |                      |
| - Pekerjaan Rangka Plafond Gypsum                        | M2 | 118.00 | 55,600  | 6,560,800            |
| - Pekerjaan Plafond Gypsum                               | M2 | 118.00 | 159,850 | 18,862,300           |
| - Pekerjaan Rangka Plafond GRC                           | M2 | 48.00  | 55,600  | 2,668,800            |
| - Pekerjaan Plafond GRC                                  | M2 | 48.00  | 180,700 | 8,673,600            |
| - Pekerjaan Plafond Expose                               | M2 | 419.00 | 34,646  | 14,516,488           |
| Jumlah Pekerjaan Plafond Lantai 2                        |    |        |         | <b>51,281,988</b>    |
| Pekerjaan Plafond Lantai 3                               |    |        |         |                      |
| - Pekerjaan Rangka Plafond GRC                           | M2 | 48.00  | 55,600  | 2,668,800            |
| - Pekerjaan Plafond GRC                                  | M2 | 48.00  | 180,700 | 8,673,600            |
| - Pekerjaan Plafond Expose                               | M2 | 717.00 | 34,646  | 24,840,864           |
| Jumlah Pekerjaan Plafond Lantai 3                        |    |        |         | <b>36,183,264</b>    |
| Pekerjaan Plafond Lantai 4                               |    |        |         |                      |
| - Pekerjaan Rangka Plafond GRC                           | M2 | 48.00  | 55,600  | 2,668,800            |
| - Pekerjaan Plafond GRC                                  | M2 | 48.00  | 180,700 | 8,673,600            |

|   |      |        |            |                    |
|---|------|--------|------------|--------------------|
| - Pekerjaan Plafond Expose                        | M2   | 717.00 | 34,646     | 24,840,864         |
| Jumlah Pekerjaan Plafond Lantai 4                 |      |        |            | <b>36,183,264</b>  |
| Pekerjaan Plafond Lantai 5                        |      |        |            |                    |
| - Pekerjaan Rangka Plafond GRC                    | M2   | 48.00  | 55,600     | 2,668,800          |
| - Pekerjaan Plafond GRC                           | M2   | 48.00  | 180,700    | 8,673,600          |
| - Pekerjaan Plafond Expose                        | M2   | 717.00 | 34,646     | 24,840,864         |
| Jumlah Pekerjaan Plafond Lantai 5                 |      |        |            | <b>36,183,264</b>  |
| Pekerjaan Plafond Lantai 6                        |      |        |            |                    |
| - Pekerjaan Rangka Plafond GRC                    | M2   | 48.00  | 55,600     | 2,668,800          |
| - Pekerjaan Plafond GRC                           | M2   | 48.00  | 180,700    | 8,673,600          |
| - Pekerjaan Plafond Expose                        | M2   | 719.00 | 34,646     | 24,910,155         |
| Jumlah Pekerjaan Plafond Lantai 6                 |      |        |            | <b>36,252,555</b>  |
| Total Pekerjaan Plafond                           |      |        |            | <b>396,139,480</b> |
| PEKERJAAN KUSEN PINTU DAN JENDELA                 |      |        |            |                    |
| Pekerjaan Kusen Pintu dan Jendela Lantai 1        |      |        |            |                    |
| - Pasangan Kusen Tipe P1 (130x260)                | Unit | 6.00   | 5,839,863  | 35,039,176         |
| - Pasangan Kusen Tipe P3 (110x260)                | Unit | 4.00   | 4,941,422  | 19,765,689         |
| - Pasangan Kusen Tipe P4 (650x260)                | Unit | 2.00   | 29,199,313 | 58,398,626         |
| - Pasangan Kusen Tipe J1 (300x170)                | Unit | 15.00  | 4,210,866  | 63,162,990         |
| - Pasangan Kusen Tipe J2 (300x170)                | Unit | 4.00   | 4,210,866  | 16,843,464         |
| - Pasangan Kusen Tipe J3 (250x170)                | Unit | 1.00   | 3,509,055  | 3,509,055          |
| - Pasangan Bouven BV1 (300x450)                   | Unit | 2.00   | 632,450    | 1,264,900          |
| Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai 1 |      |        |            | <b>197,983,899</b> |
| Pekerjaan Kusen Pintu dan Jendela Lantai 2        |      |        |            |                    |
| - Pasangan Kusen Tipe P1 (130x260)                | Unit | 5.00   | 5,839,863  | 29,199,313         |
| - Pasangan Kusen Tipe P3 (110x260)                | Unit | 4.00   | 4,941,422  | 19,765,689         |
| - Pasangan Kusen Tipe P4 (650x260)                | Unit | 2.00   | 29,199,313 | 58,398,626         |
| - Pasangan Kusen Tipe J1 (300x170)                | Unit | 14.00  | 4,210,866  | 58,952,124         |
| - Pasangan Kusen Tipe J2 (300x170)                | Unit | 6.00   | 4,210,866  | 25,265,196         |
| - Pasangan Kusen Tipe J5 (200x170)                | Unit | 1.00   | 2,807,244  | 2,807,244          |
| - Pasangan Kusen Tipe J6 (100x170)                | Unit | 1.00   | 1,403,622  | 1,403,622          |
| - Pasangan Bouven BV1 (300x450)                   | Unit | 2.00   | 632,450    | 1,264,900          |
| Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai 2 |      |        |            | <b>197,056,714</b> |
| Pekerjaan Kusen Pintu dan Jendela Lantai 3        |      |        |            |                    |
| - Pasangan Kusen Tipe P1 (130x260)                | Unit | 4.00   | 5,839,863  | 23,359,450         |
| - Pasangan Kusen Tipe P3 (110x260)                | Unit | 4.00   | 4,941,422  | 19,765,689         |
| - Pasangan Kusen Tipe P4 (650x260)                | Unit | 2.00   | 29,199,313 | 58,398,626         |
| - Pasangan Kusen Tipe J1 (300x170)                | Unit | 15.00  | 4,210,866  | 63,162,990         |
| - Pasangan Kusen Tipe J2 (300x170)                | Unit | 5.00   | 4,210,866  | 21,054,330         |



|  |      |         |            |                      |
|--|------|---------|------------|----------------------|
| - Pasangan Kusen Tipe J5 (200x170)                   | Unit | 1.00    | 2,807,244  | 2,807,244            |
| - Pasangan Bouven BV1 (300x450)                      | Unit | 2.00    | 632,450    | 1,264,900            |
| Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai 3    |      |         |            | <b>189,813,229</b>   |
| Pekerjaan Kusen Pintu dan Jendela Lantai 4           |      |         |            |                      |
| - Pasangan Kusen Tipe P1 (130x260)                   | Unit | 4.00    | 5,839,863  | 23,359,450           |
| - Pasangan Kusen Tipe P3 (110x260)                   | Unit | 4.00    | 4,941,422  | 19,765,689           |
| - Pasangan Kusen Tipe P4 (650x260)                   | Unit | 2.00    | 29,199,313 | 58,398,626           |
| - Pasangan Kusen Tipe J1 (300x170)                   | Unit | 15.00   | 4,210,866  | 63,162,990           |
| - Pasangan Kusen Tipe J2 (300x170)                   | Unit | 6.00    | 4,210,866  | 25,265,196           |
| - Pasangan Kusen Tipe J5 (200x170)                   | Unit | 1.00    | 2,807,244  | 2,807,244            |
| - Pasangan Bouven BV1 (300x450)                      | Unit | 2.00    | 632,450    | 1,264,900            |
| Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai 4    |      |         |            | <b>194,024,095</b>   |
| Pekerjaan Kusen Pintu dan Jendela Lantai 5           |      |         |            |                      |
| - Pasangan Kusen Tipe P1 (130x260)                   | Unit | 5.00    | 5,839,863  | 29,199,313           |
| - Pasangan Kusen Tipe P3 (110x260)                   | Unit | 4.00    | 4,941,422  | 19,765,689           |
| - Pasangan Kusen Tipe J1 (300x170)                   | Unit | 16.00   | 4,941,422  | 79,062,755           |
| - Pasangan Kusen Tipe J2 (300x170)                   | Unit | 8.00    | 4,210,866  | 33,686,928           |
| - Pasangan Kusen Tipe J5 (200x170)                   | Unit | 1.00    | 2,807,244  | 2,807,244            |
| - Pasangan Bouven BV1 (300x450)                      | Unit | 2.00    | 632,450    | 1,264,900            |
| Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai 5    |      |         |            | <b>165,786,829</b>   |
| Pekerjaan Kusen Pintu dan Jendela Lantai 6           |      |         |            |                      |
| - Pasangan Kusen Tipe P1 (130x260)                   | Unit | 4.00    | 5,839,863  | 23,359,450           |
| - Pasangan Kusen Tipe P3 (110x260)                   | Unit | 4.00    | 4,941,422  | 19,765,689           |
| - Pasangan Kusen Tipe P4 (650x260)                   | Unit | 2.00    | 29,199,313 | 58,398,626           |
| - Pasangan Kusen Tipe J1 (300x170)                   | Unit | 15.00   | 4,210,866  | 63,162,990           |
| - Pasangan Kusen Tipe J2 (300x170)                   | Unit | 6.00    | 4,210,866  | 25,265,196           |
| - Pasangan Kusen Tipe J5 (200x170)                   | Unit | 1.00    | 2,807,244  | 2,807,244            |
| - Pasangan Bouven BV1 (300x450)                      | Unit | 2.00    | 632,450    | 1,264,900            |
| Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai 6    |      |         |            | <b>194,024,095</b>   |
| Pekerjaan Kusen Pintu dan Jendela Lantai Atap        |      |         |            |                      |
| - Pasangan Kusen Tipe P5 (850x260)                   | Unit | 2.00    | 38,183,717 | 76,367,434           |
| Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai Atap |      |         |            | <b>76,367,434</b>    |
| Total Pekerjaan Kusen Pintu dan Jendela              |      |         |            | <b>1,215,056,296</b> |
| PEKERJAAN PENGECATAN                                 |      |         |            |                      |
| Pekerjaan Pengecatan Lantai 1                        |      |         |            |                      |
| - Pengecatan Dinding Eksterior                       | M2   | 475.93  | 38,920     | 18,523,196           |
| - Pengecatan Dinding Interior                        | M2   | 1154.26 | 33,360     | 38,506,114           |

|  |      |         |           |                    |
|--|------|---------|-----------|--------------------|
| - Pengecatan Dak Ekspose                       | M2   | 958.53  | 38,920    | 37,305,988         |
| - Pengecatan Plafond                           | M2   | 791.10  | 33,360    | 26,391,096         |
| <b>Jumlah Pekerjaan Pengecatan Lantai 1</b>    |      |         |           | <b>120,726,393</b> |
| <b>Pekerjaan Pengecatan Lantai 2</b>           |      |         |           |                    |
| - Pengecatan Dinding Eksterior                 | M2   | 369.72  | 38,920    | 14,389,502         |
| - Pengecatan Dinding Interior                  | M2   | 878.63  | 33,360    | 29,311,097         |
| - Pengecatan Dak Ekspose                       | M2   | 849.71  | 38,920    | 33,070,713         |
| - Pengecatan Plafond                           | M2   | 193.30  | 33,360    | 6,448,488          |
| <b>Jumlah Pekerjaan Pengecatan Lantai 2</b>    |      |         |           | <b>83,219,800</b>  |
| <b>Pekerjaan Pengecatan Lantai 3</b>           |      |         |           |                    |
| - Pengecatan Dinding Eksterior                 | M2   | 369.81  | 38,920    | 14,393,005         |
| - Pengecatan Dinding Interior                  | M2   | 907.72  | 33,360    | 30,281,539         |
| - Pengecatan Dak Ekspose                       | M2   | 1070.07 | 38,920    | 41,647,124         |
| - Pengecatan Plafond                           | M2   | 44.20   | 33,360    | 1,474,512          |
| <b>Jumlah Pekerjaan Pengecatan Lantai 3</b>    |      |         |           | <b>87,796,181</b>  |
| <b>Pekerjaan Pengecatan Lantai 4</b>           |      |         |           |                    |
| - Pengecatan Dinding Eksterior                 | M2   | 369.81  | 38,920    | 14,393,005         |
| - Pengecatan Dinding Interior                  | M2   | 897.52  | 33,360    | 29,941,267         |
| - Pengecatan Dak Ekspose                       | M2   | 1070.64 | 38,920    | 41,669,309         |
| - Pengecatan Plafond                           | M2   | 44.20   | 33,360    | 1,474,512          |
| <b>Jumlah Pekerjaan Pengecatan Lantai 4</b>    |      |         |           | <b>87,478,093</b>  |
| <b>Pekerjaan Pengecatan Lantai 5</b>           |      |         |           |                    |
| - Pengecatan Dinding Eksterior                 | M2   | 369.81  | 38,920    | 14,393,005         |
| - Pengecatan Dinding Interior                  | M2   | 873.58  | 33,360    | 29,142,629         |
| - Pengecatan Dak Ekspose                       | M2   | 1070.78 | 38,920    | 41,674,758         |
| - Pengecatan Plafond                           | M2   | 44.20   | 33,360    | 1,474,512          |
| <b>Jumlah Pekerjaan Pengecatan Lantai 5</b>    |      |         |           | <b>86,684,904</b>  |
| <b>Pekerjaan Pengecatan Lantai 6</b>           |      |         |           |                    |
| - Pengecatan Dinding Eksterior                 | M2   | 369.81  | 38,920    | 14,393,005         |
| - Pengecatan Dinding Interior                  | M2   | 894.82  | 33,360    | 29,851,195         |
| - Pengecatan Dak Ekspose                       | M2   | 1071.21 | 38,920    | 41,691,493         |
| - Pengecatan Plafond                           | M2   | 44.20   | 33,360    | 1,474,512          |
| <b>Jumlah Pekerjaan Pengecatan Lantai 6</b>    |      |         |           | <b>87,410,206</b>  |
| <b>Pekerjaan Pengecatan Lantai Atap</b>        |      |         |           |                    |
| - Pengecatan Dinding Eksterior                 | M2   | 594.73  | 38,920    | 23,146,892         |
| <b>Jumlah Pekerjaan Pengecatan Lantai Atap</b> |      |         |           | <b>23,146,892</b>  |
| <b>Total Pekerjaan Pengecatan</b>              |      |         |           | <b>576,462,468</b> |
| <b>PEKERJAAN SANITAIR</b>                      |      |         |           |                    |
| <b>Pekerjaan Sanitair Lantai 1</b>             |      |         |           |                    |
| - Closet Duduk Toto atau setara                | Unit | 5.00    | 2,103,765 | 10,518,825         |
| - Jet Washer Toto atau setara                  | Set  | 5.00    | 827,815   | 4,139,073          |
| - Washtafel Toto atau setara                   | Unit | 3.00    | 1,579,735 | 4,739,205          |
| - Cermin 6 mm (L=0,725M)                       | Set  | 3.00    | 410,050   | 1,230,150          |
| - Floor Drain Toto atau setara                 | Set  | 6.00    | 582,966   | 3,497,796          |

|                                    |      |       |           |                    |
|------------------------------------|------|-------|-----------|--------------------|
| - Keran Air Toto atau setara       | Unit | 2.00  | 518,818   | 1,037,635          |
| - Paper Holder Toto atau setara    | Unit | 5.00  | 292,039   | 1,460,195          |
| - Partisi Cubical                  | M2   | 13.00 | 3,803,388 | 49,444,038         |
| Jumlah Pekerjaan Sanitair Lantai 1 |      |       |           | <b>76,066,916</b>  |
| Pekerjaan Sanitair Lantai 2        |      |       |           |                    |
| - Closet Duduk Toto atau setara    | Unit | 11.00 | 2,103,765 | 23,141,415         |
| - Jet Washer Toto atau setara      | Set  | 11.00 | 827,815   | 9,105,960          |
| - Washtafel Toto atau setara       | Unit | 6.00  | 1,579,735 | 9,478,410          |
| - Cermin 6 mm (L=0,725M)           | Set  | 6.00  | 410,050   | 2,460,300          |
| - Floor Drain Toto atau setara     | Set  | 12.00 | 582,966   | 6,995,592          |
| - Keran Air Toto atau setara       | Unit | 3.00  | 518,818   | 1,556,453          |
| - Paper Holder Toto atau setara    | Unit | 11.00 | 292,039   | 3,212,429          |
| - Urinoir                          | Unit | 2.00  | 3,440,945 | 6,881,890          |
| - Partisi Urinoir                  | Unit | 2.00  | 4,173,475 | 8,346,950          |
| - Partisi Cubical                  | M2   | 9.00  | 3,803,388 | 34,230,488         |
| - Grab Bar                         | Unit | 2.00  | 1,341,350 | 2,682,700          |
| Jumlah Pekerjaan Sanitair Lantai 2 |      |       |           | <b>108,092,586</b> |
| Pekerjaan Sanitair Lantai 3        |      |       |           |                    |
| - Closet Duduk Toto atau setara    | Unit | 10.00 | 2,103,765 | 21,037,650         |
| - Jet Washer Toto atau setara      | Set  | 10.00 | 827,815   | 8,278,145          |
| - Washtafel Toto atau setara       | Unit | 5.00  | 1,579,735 | 7,898,675          |
| - Cermin 6 mm (L=0,725M)           | Set  | 5.00  | 410,050   | 2,050,250          |
| - Floor Drain Toto atau setara     | Set  | 11.00 | 582,966   | 6,412,626          |
| - Keran Air Toto atau setara       | Unit | 2.00  | 518,818   | 1,037,635          |
| - Paper Holder Toto atau setara    | Unit | 10.00 | 292,039   | 2,920,390          |
| - Urinoir                          | Unit | 2.00  | 3,440,945 | 6,881,890          |
| - Partisi Urinoir                  | Unit | 2.00  | 4,173,475 | 8,346,950          |
| - Partisi Cubical                  | M2   | 9.00  | 3,803,388 | 34,230,488         |
| - Grab Bar                         | Unit | 2.00  | 1,341,350 | 2,682,700          |
| Jumlah Pekerjaan Sanitair Lantai 3 |      |       |           | <b>101,777,399</b> |
| Pekerjaan Sanitair Lantai 4        |      |       |           |                    |
| - Closet Duduk Toto atau setara    | Unit | 10.00 | 2,103,765 | 21,037,650         |
| - Jet Washer Toto atau setara      | Set  | 10.00 | 827,815   | 8,278,145          |
| - Washtafel Toto atau setara       | Unit | 5.00  | 1,579,735 | 7,898,675          |
| - Cermin 6 mm (L=0,725M)           | Set  | 5.00  | 410,050   | 2,050,250          |
| - Floor Drain Toto atau setara     | Set  | 11.00 | 582,966   | 6,412,626          |
| - Keran Air Toto atau setara       | Unit | 2.00  | 518,818   | 1,037,635          |
| - Paper Holder Toto atau setara    | Unit | 10.00 | 292,039   | 2,920,390          |
| - Urinoir                          | Unit | 2.00  | 3,440,945 | 6,881,890          |
| - Partisi Urinoir                  | Unit | 2.00  | 4,173,475 | 8,346,950          |
| - Partisi Cubical                  | M2   | 9.00  | 3,803,388 | 34,230,488         |
| - Grab Bar                         | Unit | 2.00  | 1,341,350 | 2,682,700          |
| Jumlah Pekerjaan Sanitair Lantai 4 |      |       |           | <b>101,777,399</b> |
| Pekerjaan Sanitair Lantai 5        |      |       |           |                    |
| - Closet Duduk Toto atau setara    | Unit | 10.00 | 2,103,765 | 21,037,650         |

|                                    |      |       |           |                       |
|------------------------------------|------|-------|-----------|-----------------------|
| - Jet Washer Toto atau setara      | Set  | 10.00 | 827,815   | 8,278,145             |
| - Washtafel Toto atau setara       | Unit | 5.00  | 1,579,735 | 7,898,675             |
| - Cermin 6 mm (L=0,725M)           | Set  | 5.00  | 410,050   | 2,050,250             |
| - Floor Drain Toto atau setara     | Set  | 11.00 | 582,966   | 6,412,626             |
| - Keran Air Toto atau setara       | Unit | 2.00  | 518,818   | 1,037,635             |
| - Paper Holder Toto atau setara    | Unit | 10.00 | 292,039   | 2,920,390             |
| - Urinoir                          | Unit | 2.00  | 3,440,945 | 6,881,890             |
| - Partisi Urinoir                  | Unit | 2.00  | 4,173,475 | 8,346,950             |
| - Partisi Cubical                  | M2   | 9.00  | 3,803,388 | 34,230,488            |
| - Grab Bar                         | Unit | 2.00  | 1,341,350 | 2,682,700             |
| Jumlah Pekerjaan Sanitair Lantai 5 |      |       |           | <b>101,777,399</b>    |
| Pekerjaan Sanitair Lantai 6        |      |       |           |                       |
| - Closet Duduk Toto atau setara    | Unit | 10.00 | 2,103,765 | 21,037,650            |
| - Jet Washer Toto atau setara      | Set  | 10.00 | 827,815   | 8,278,145             |
| - Washtafel Toto atau setara       | Unit | 5.00  | 1,579,735 | 7,898,675             |
| - Cermin 6 mm (L=0,725M)           | Set  | 5.00  | 410,050   | 2,050,250             |
| - Floor Drain Toto atau setara     | Set  | 11.00 | 582,966   | 6,412,626             |
| - Keran Air Toto atau setara       | Unit | 2.00  | 518,818   | 1,037,635             |
| - Paper Holder Toto atau setara    | Unit | 10.00 | 292,039   | 2,920,390             |
| - Urinoir                          | Unit | 2.00  | 3,440,945 | 6,881,890             |
| - Partisi Urinoir                  | Unit | 2.00  | 4,173,475 | 8,346,950             |
| - Partisi Cubical                  | M2   | 9.00  | 3,803,388 | 34,230,488            |
| - Grab Bar                         | Unit | 2.00  | 1,341,350 | 2,682,700             |
| Jumlah Pekerjaan Sanitair Lantai 6 |      |       |           | <b>101,777,399</b>    |
| <b>Total Pekerjaan Sanitair</b>    |      |       |           | <b>591,269,096</b>    |
| <b>TOTAL PEKERJAAN ARSITEKTUR</b>  |      |       |           | <b>5,335,089,921</b>  |
|                                    |      |       |           | <b>25,236,861,548</b> |

Lampiran 7. Perbandingan Rancangan Anggaran Biaya (RAB) antara Metode Konvensional dan Metode BIM

| Item Pekerjaan   | Satuan Unit | Vol. Konvensional | Vol. BIM | Harsat      | Jumlah             |
|--|-------------|-------------------|----------|-------------|--------------------|
| <b>LOKASI 6</b>  |             |                   |          |             |                    |
| <b>REHAB TOTAL GEDUNG SDN PEJATEN TIMUR 11</b>                                 |             |                   |          |             |                    |
| <b>Penawaran tidak boleh melebihi HPS per lokasi</b>                           |             |                   |          |             |                    |
| <b>PEKERJAAN PERSIAPAN</b>   |             |                   |          |             |                    |
| Pembuatan Papan Nama Proyek  | Bh          | 1.00              | 1.00     | 25,750,000  | 25,750,000         |
| Administrasi dan Dokumentasi   | Ls          | 1.00              | 1.00     | 9,258,925   | 9,258,925          |
| Pekerjaan Pembuatan Direksi Keet, Los Kerja dan Gudang                         | M2          | 30.00             | 30.00    | 4,100,000   | 123,000,000        |
| Pemasangan Bouwplank Untuk Bangunan Gedung                                     | M           | 161.30            | 161.30   | 56,750      | 9,153,775          |
| Pembuatan Pagar Keliling Sementara Tinggi 2 M                                  | M2          | 161.30            | 161.30   | 977,500     | 157,670,750        |
| Rencana Keselamatan dan Kesehatan Kerja Kontrak (RK3K)                         | Ls          | 1.00              | 1.00     | 168,150,000 | 168,150,000        |
| Air dan Listrik Kerja  | Bln         | 6.00              | 6.00     | 29,713,476  | 178,280,853        |
| Test Sondir  | Titik       | 5.00              | 5.00     | 1,100,000   | 5,500,000          |
| Test Boring (1 Titik, T=30m, Inc. Mob, Lab, dll.)                              | Ls          | 1.00              | 1.00     | 9,850,000   | 9,850,000          |
| <b>TOTAL PEKERJAAN PERSIAPAN</b>   |             |                   |          |             | <b>686,614,303</b> |
| <b>PEKERJAAN STRUKTUR</b>  |             |                   |          |             |                    |
| <b>PEKERJAAN PONDASI</b>   |             |                   |          |             |                    |
| Pekerjaan Pondasi Pancang  |             |                   |          |             |                    |
| - Mobilisasi dan Demobilisasi Alat Pancang                                     | Ls          | 1.00              | 1.00     | 186,250,000 | 186,250,000        |
| - Pengadaan Material Tiang Pancang 300x300 Mutu Beton fc = 41,5 Mpa (6M/Tiang) | Tiang       | 113.00            | 113.00   | 4,276,000   | 483,188,000        |
| - Penetrasi tiang pancang Beton 300x300  | M           | 1017.00           | 1017.00  | 100,114     | 101,816,406        |
| - Pembobokan Kepala Tiang Pancang  | Bh          | 113.00            | 113.00   | 451,000     | 50,963,000         |
| - PDA Test   | titik       | 2.00              | 2.00     | 8,605,000   | 17,210,000         |

| <b>Total Pekerjaan Pondasi</b> |    |         |         |           | <b>839,427,406</b> |
|--------------------------------|----|---------|---------|-----------|--------------------|
| <b>PEKERJAAN PILECAP</b>       |    |         |         |           |                    |
| <b>Pilecap Tipe PC1</b>        |    |         |         |           |                    |
| - Galian Tanah (mekanis)       | M3 | 4.12    | 4.12    | 148,844   | 613,237            |
| - Pasir Urug T.10 cm           | M3 | 0.29    | 0.29    | 571,703   | 165,794            |
| -Lantai Kerja                  | M3 | 0.29    | 0.29    | 228,265   | 66,197             |
| -Beton fc 25 Mpa               | M3 | 2.59    | 2.59    | 2,240,109 | 5,801,884          |
| - Penulangan                   | Kg | 412.75  | 309.78  | 45,315    | 14,037,795         |
| - Bekisting                    | M2 | 8.64    | 8.64    | 264,397   | 2,284,386          |
| - Urugan Tanah Kembali         | M3 | 1.52    | 1.52    | 50,008    | 76,012             |
| <b>Pilecap Tipe PC3</b>        |    |         |         |           |                    |
| - Galian Tanah (mekanis)       | M3 | 36.45   | 36.45   | 148,844   | 5,425,357          |
| - Pasir Urug T.10 cm           | M3 | 2.30    | 2.30    | 571,703   | 1,314,917          |
| -Lantai Kerja                  | M3 | 2.30    | 2.30    | 228,265   | 525,009            |
| -Beton fc 25 Mpa               | M3 | 27.60   | 27.60   | 2,240,109 | 61,827,021         |
| - Penulangan                   | Kg | 3586.33 | 2196.12 | 45,315    | 99,517,985         |
| - Bekisting                    | M2 | 46.08   | 46.08   | 264,397   | 12,183,393         |
| - Urugan Tanah Kembali         | M3 | 8.85    | 8.85    | 50,008    | 442,569            |
| <b>Pilecap Tipe PC4</b>        |    |         |         |           |                    |
| - Galian Tanah (mekanis)       | M3 | 101.70  | 101.70  | 148,844   | 15,137,417         |
| - Pasir Urug T.10 cm           | M3 | 5.63    | 5.63    | 571,703   | 3,218,688          |
| -Lantai Kerja                  | M3 | 5.63    | 5.63    | 228,265   | 1,285,132          |
| -Beton fc 25 Mpa               | M3 | 78.75   | 78.75   | 2,240,109 | 176,408,620        |
| - Penulangan                   | Kg | 8650.52 | 8202.59 | 45,315    | 371,703,380        |
| - Bekisting                    | M2 | 126.00  | 126.00  | 264,397   | 33,313,964         |
| - Urugan Tanah Kembali         | M3 | 22.95   | 22.95   | 50,008    | 1,147,679          |
| <b>Pilecap Tipe PC4A</b>       |    |         |         |           |                    |
| - Galian Tanah (mekanis)       | M3 | 13.04   | 13.04   | 148,844   | 1,940,923          |
| - Pasir Urug T.10 cm           | M3 | 1.00    | 1.00    | 571,703   | 571,703            |
| -Lantai Kerja                  | M3 | 1.00    | 1.00    | 228,265   | 228,265            |
| -Beton fc 25 Mpa               | M3 | 10.00   | 10.00   | 2,240,109 | 22,401,095         |
| - Penulangan                   | Kg | 1289.67 | 999.38  | 45,315    | 45,287,272         |
| - Bekisting                    | M2 | 3.04    | 3.04    | 264,397   | 803,765            |
| - Urugan Tanah Kembali         | M3 | 3.04    | 3.04    | 50,008    | 152,024            |
| <b>Pilecap Tipe PC5</b>        |    |         |         |           |                    |
| - Galian Tanah (mekanis)       | M3 | 34.17   | 34.17   | 148,844   | 5,085,994          |
| - Pasir Urug T.10 cm           | M3 | 1.95    | 1.95    | 571,703   | 1,114,821          |
| -Lantai Kerja                  | M3 | 1.95    | 1.95    | 228,265   | 445,117            |

|                                |    |         |         |           |                      |
|--------------------------------|----|---------|---------|-----------|----------------------|
| -Beton fc 25 Mpa               | M3 | 27.26   | 27.26   | 2,240,109 | 61,065,384           |
| - Penulangan                   | Kg | 2698.40 | 2579.46 | 45,315    | 116,889,178          |
| - Bekisting                    | M2 | 34.94   | 34.94   | 264,397   | 9,238,015            |
| - Urugan Tanah Kembali         | M3 | 6.91    | 6.91    | 50,008    | 345,554              |
| <b>Pilecap Tipe PC6</b>        |    |         |         |           |                      |
| - Galian Tanah (mekanis)       | M3 | 79.10   | 79.10   | 148,844   | 11,773,547           |
| - Pasir Urug T.10 cm           | M3 | 4.38    | 4.38    | 571,703   | 2,504,059            |
| -Lantai Kerja                  | M3 | 4.38    | 4.38    | 228,265   | 999,801              |
| -Beton fc 25 Mpa               | M3 | 61.25   | 61.25   | 2,240,109 | 137,206,704          |
| - Penulangan                   | Kg | 6728.18 | 5287.98 | 45,315    | 239,626,757          |
| - Bekisting                    | M2 | 98.00   | 98.00   | 264,397   | 25,910,861           |
| - Urugan Tanah Kembali         | M3 | 17.85   | 17.85   | 50,008    | 892,639              |
| <b>Total Pekerjaan Pilecap</b> |    |         |         |           | <b>1,490,979,912</b> |
| <b>PEKERJAAN TIE BEAM</b>      |    |         |         |           |                      |
| <b>Tie Beam Tipe TB 36</b>     |    |         |         |           |                      |
| - Galian Tanah (mekanis)       | M3 | 49.28   | 49.28   | 148,844   | 7,335,024            |
| - Pasir Urug T.10 cm           | M3 | 5.28    | 5.28    | 571,703   | 3,018,592            |
| -Lantai Kerja                  | M3 | 5.28    | 5.28    | 228,265   | 1,205,239            |
| -Beton fc 25 Mpa               | M3 | 25.65   | 24.30   | 2,240,109 | 54,434,660           |
| - Penulangan                   | Kg | 4023.75 | 3889.60 | 45,315    | 176,258,653          |
| - Bekisting                    | M2 | 171.00  | 171.00  | 264,397   | 45,211,808           |
| - Urugan Tanah Kembali         | M3 | 23.63   | 23.63   | 50,008    | 1,181,684            |
| <b>Tie Beam Tipe TG 47</b>     |    |         |         |           |                      |
| - Galian Tanah (mekanis)       | M3 | 55.08   | 55.08   | 148,844   | 8,198,318            |
| - Pasir Urug T.10 cm           | M3 | 5.76    | 5.76    | 571,703   | 3,293,010            |
| -Lantai Kerja                  | M3 | 5.76    | 5.76    | 228,265   | 1,314,806            |
| -Beton fc 25 Mpa               | M3 | 31.09   | 31.09   | 2,240,109 | 69,645,003           |
| - Penulangan                   | Kg | 7236.90 | 7236.90 | 45,315    | 327,942,783          |
| - Bekisting                    | M2 | 155.43  | 155.43  | 264,397   | 41,095,154           |
| - Urugan Tanah Kembali         | M3 | 23.99   | 23.99   | 50,008    | 1,199,687            |
| <b>Tie Beam Tipe TG 46</b>     |    |         |         |           |                      |
| - Galian Tanah (mekanis)       | M3 | 15.86   | 15.86   | 148,844   | 2,360,663            |
| - Pasir Urug T.10 cm           | M3 | 1.88    | 1.88    | 571,703   | 1,074,802            |
| -Lantai Kerja                  | M3 | 1.88    | 1.88    | 228,265   | 429,138              |
| -Beton fc 25 Mpa               | M3 | 8.08    | 8.08    | 2,240,109 | 18,100,084           |
| - Penulangan                   | Kg | 1593.24 | 1367.80 | 45,315    | 61,982,360           |
| - Bekisting                    | M2 | 40.41   | 40.41   | 264,397   | 10,684,264           |
| - Urugan Tanah Kembali         | M3 | 7.78    | 7.78    | 50,008    | 389,061              |
| <b>Tie Beam Tipe TB 24</b>     |    |         |         |           |                      |
| - Galian Tanah (mekanis)       | M3 | 6.63    | 6.63    | 148,844   | 986,835              |
| - Pasir Urug T.10 cm           | M3 | 1.01    | 1.01    | 571,703   | 577,420              |
| -Lantai Kerja                  | M3 | 1.01    | 1.01    | 228,265   | 230,548              |
| -Beton fc 25 Mpa               | M3 | 2.40    | 2.40    | 2,240,109 | 5,376,263            |
| - Penulangan                   | Kg | 845.93  | 845.93  | 45,315    | 38,333,629           |
| - Bekisting                    | M2 | 19.20   | 19.20   | 264,397   | 5,076,414            |

|                                 |    |          |          |           |                      |
|---------------------------------|----|----------|----------|-----------|----------------------|
| - Urugan Tanah Kembali          | M3 | 4.23     | 4.23     | 50,008    | 211,533              |
| Tie Beam Tipe TG 58             |    |          |          |           |                      |
| - Galian Tanah (mekanis)        | M3 | 54.10    | 54.10    | 148,844   | 8,052,451            |
| - Pasir Urug T.10 cm            | M3 | 5.66     | 5.66     | 571,703   | 3,235,839            |
| -Lantai Kerja                   | M3 | 5.66     | 5.66     | 228,265   | 1,291,980            |
| -Beton fc 25 Mpa                | M3 | 30.10    | 30.10    | 2,240,109 | 67,427,295           |
| - Penulangan                    | Kg | 6987.10  | 6987.10  | 45,315    | 316,623,004          |
| - Bekisting                     | M2 | 130.56   | 130.56   | 264,397   | 34,519,612           |
| - Urugan Tanah Kembali          | M3 | 21.80    | 21.80    | 50,008    | 1,090,170            |
| <b>Total Pekerjaan Tie Beam</b> |    |          |          |           | <b>1,319,387,785</b> |
| <b>PEKERJAAN KOLOM</b>          |    |          |          |           |                      |
| Kolom Lantai 1                  |    |          |          |           |                      |
| Kolom Tipe K79                  |    |          |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 54.98    | 45.05    | 2,240,109 | 100,916,931          |
| - Penulangan                    | Kg | 13592.68 | 13448.90 | 45,315    | 609,441,846          |
| - Bekisting                     | M2 | 257.04   | 257.04   | 264,397   | 67,960,487           |
| Kolom Tipe K712                 |    |          |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 26.46    | 24.71    | 2,240,109 | 55,353,105           |
| - Penulangan                    | Kg | 6342.82  | 6218.14  | 45,315    | 281,777,299          |
| - Bekisting                     | M2 | 134.40   | 134.40   | 264,397   | 35,534,895           |
| <b>Jumlah Kolom Lantai 1</b>    |    |          |          |           | <b>1,150,984,563</b> |
| Kolom Lantai 2                  |    |          |          |           |                      |
| Kolom Tipe K79                  |    |          |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 45.55    | 38.59    | 2,240,109 | 86,445,824           |
| - Penulangan                    | Kg | 11617.74 | 11249.20 | 45,315    | 509,761,632          |
| - Bekisting                     | M2 | 212.98   | 212.98   | 264,397   | 56,311,175           |
| Kolom Tipe K712                 |    |          |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 21.92    | 21.14    | 2,240,109 | 47,355,914           |
| - Penulangan                    | Kg | 5442.68  | 5317.20  | 45,315    | 240,950,872          |
| - Bekisting                     | M2 | 111.36   | 101.36   | 264,397   | 26,799,233           |
| <b>Jumlah Kolom Lantai 2</b>    |    |          |          |           | <b>967,624,651</b>   |
| Kolom Lantai 3                  |    |          |          |           |                      |
| Kolom Tipe K79                  |    |          |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 45.55    | 38.59    | 2,240,109 | 86,445,824           |
| - Penulangan                    | Kg | 11617.74 | 11249.20 | 45,315    | 509,761,632          |
| - Bekisting                     | M2 | 212.98   | 212.98   | 264,397   | 56,311,175           |
| Kolom Tipe K712                 |    |          |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 21.92    | 21.14    | 2,240,109 | 47,355,914           |
| - Penulangan                    | Kg | 5442.68  | 5317.20  | 45,315    | 240,950,872          |
| - Bekisting                     | M2 | 111.36   | 101.36   | 264,397   | 26,799,233           |
| <b>Jumlah Kolom Lantai 3</b>    |    |          |          |           | <b>967,624,651</b>   |
| Kolom Lantai 4                  |    |          |          |           |                      |
| Kolom Tipe K79                  |    |          |          |           |                      |
| -Beton fc 25 Mpa                | M3 | 45.55    | 38.59    | 2,240,109 | 86,445,824           |
| - Penulangan                    | Kg | 11617.74 | 11249.20 | 45,315    | 509,761,632          |



|                          |    |          |          |           |                      |
|--------------------------|----|----------|----------|-----------|----------------------|
| - Bekisting              | M2 | 212.98   | 212.98   | 264,397   | 56,311,175           |
| Kolom Tipe K712          |    |          |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 21.92    | 21.14    | 2,240,109 | 47,355,914           |
| - Penulangan             | Kg | 5442.68  | 5317.20  | 45,315    | 240,950,872          |
| - Bekisting              | M2 | 111.36   | 101.36   | 264,397   | 26,799,233           |
| Jumlah Kolom Lantai 4    |    |          |          |           | <b>967,624,651</b>   |
| Kolom Lantai 5           |    |          |          |           |                      |
| Kolom Tipe K79           |    |          |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 45.55    | 38.59    | 2,240,109 | 86,445,824           |
| - Penulangan             | Kg | 11617.74 | 11249.20 | 45,315    | 509,761,632          |
| - Bekisting              | M2 | 212.98   | 212.98   | 264,397   | 56,311,175           |
| Kolom Tipe K712          |    |          |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 21.92    | 21.14    | 2,240,109 | 47,355,914           |
| - Penulangan             | Kg | 5442.68  | 5317.20  | 45,315    | 240,950,872          |
| - Bekisting              | M2 | 111.36   | 101.36   | 264,397   | 26,799,233           |
| Jumlah Kolom Lantai 5    |    |          |          |           | <b>967,624,651</b>   |
| Kolom Lantai 6           |    |          |          |           |                      |
| Kolom Tipe K79           |    |          |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 45.55    | 38.59    | 2,240,109 | 86,445,824           |
| - Penulangan             | Kg | 11617.74 | 11249.20 | 45,315    | 509,761,632          |
| - Bekisting              | M2 | 212.98   | 212.98   | 264,397   | 56,311,175           |
| Kolom Tipe K712          |    |          |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 21.92    | 21.14    | 2,240,109 | 47,355,914           |
| - Penulangan             | Kg | 5442.68  | 5317.20  | 45,315    | 240,950,872          |
| - Bekisting              | M2 | 111.36   | 101.36   | 264,397   | 26,799,233           |
| Jumlah Kolom Lantai 6    |    |          |          |           | <b>967,624,651</b>   |
| Kolom Lantai Atap        |    |          |          |           |                      |
| Kolom Tipe K33           |    |          |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 1.30     | 0.81     | 2,240,109 | 1,814,489            |
| - Penulangan             | Kg | 352.87   | 326.04   | 45,315    | 14,774,622           |
| - Bekisting              | M2 | 17.28    | 16.22    | 264,397   | 4,288,512            |
| Jumlah Kolom Lantai Atap |    |          |          |           | <b>20,877,623</b>    |
| Total Pekerjaan Kolom    |    |          |          |           | <b>6,009,985,439</b> |
| PEKERJAAN BALOK          |    |          |          |           |                      |
| Pekerjaan Balok Lantai 2 |    |          |          |           |                      |
| Balok Tipe G58           |    |          |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 12.25    | 12.25    | 2,240,109 | 27,441,341           |
| - Penulangan             | Kg | 1,866.36 | 1,634.36 | 45,315    | 74,061,624           |
| - Bekisting              | M2 | 48.98    | 48.98    | 264,397   | 12,950,143           |
| Balok Tipe G47           |    |          |          |           |                      |
| -Beton fc 25 Mpa         | M3 | 33.67    | 33.67    | 2,240,109 | 75,424,486           |
| - Penulangan             | Kg | 6,314.62 | 4,314.62 | 45,315    | 195,518,591          |
| - Bekisting              | M2 | 168.37   | 168.37   | 264,397   | 44,516,445           |
| Balok Tipe CG46          |    |          |          |           |                      |

|                          |    |          |          |           |                    |
|--------------------------|----|----------|----------|-----------|--------------------|
| -Beton fc 25 Mpa         | M3 | 2.96     | 2.96     | 2,240,109 | 6,630,724          |
| - Penulangan             | Kg | 569.34   | 569.34   | 45,315    | 25,799,851         |
| - Bekisting              | M2 | 14.79    | 14.79    | 264,397   | 3,910,425          |
| Balok Tipe B36           |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 21.48    | 21.48    | 2,240,109 | 48,117,551         |
| - Penulangan             | Kg | 3,385.21 | 2,185.21 | 45,315    | 99,023,594         |
| - Bekisting              | M2 | 143.18   | 143.18   | 264,397   | 37,856,297         |
| Balok Tipe B57           |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 0.73     | 0.73     | 2,240,109 | 1,635,280          |
| - Penulangan             | Kg | 142.52   | 142.52   | 45,315    | 6,458,346          |
| - Bekisting              | M2 | 4.90     | 4.90     | 264,397   | 1,295,543          |
| Balok Tipe B24           |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 3.43     | 3.43     | 2,240,109 | 7,683,575          |
| - Penulangan             | Kg | 692.74   | 692.74   | 45,315    | 31,391,768         |
| - Bekisting              | M2 | 27.41    | 27.41    | 264,397   | 7,247,109          |
| Balok Tipe G34           |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 1.46     | 1.46     | 2,240,109 | 3,270,560          |
| - Penulangan             | Kg | 244.58   | 244.58   | 45,315    | 11,083,233         |
| - Bekisting              | M2 | 5.86     | 5.86     | 264,397   | 1,549,364          |
| Balok Tipe CG34          |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 0.63     | 0.63     | 2,240,109 | 1,411,269          |
| - Penulangan             | Kg | 243.46   | 243.46   | 45,315    | 11,032,261         |
| - Bekisting              | M2 | 4.46     | 4.46     | 264,397   | 1,179,870          |
| Balok Tipe CG47          |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 2.13     | 2.13     | 2,240,109 | 4,771,433          |
| - Penulangan             | Kg | 848.61   | 848.61   | 45,315    | 38,455,190         |
| - Bekisting              | M2 | 4.10     | 4.10     | 264,397   | 1,083,656          |
| Balok Tipe CB24          |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 3.52     | 3.52     | 2,240,109 | 7,878,465          |
| - Penulangan             | Kg | 1156.79  | 1156.79  | 45,315    | 52,420,235         |
| - Bekisting              | M2 | 28.14    | 28.14    | 264,397   | 7,439,061          |
| Balok Tipe B45           |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 1.03     | 1.03     | 2,240,109 | 2,316,273          |
| - Penulangan             | Kg | 251.64   | 251.64   | 45,315    | 11,403,348         |
| - Bekisting              | M2 | 5.95     | 5.95     | 264,397   | 1,571,970          |
| Jumlah Balok Lantai 2    |    |          |          |           | <b>863,828,879</b> |
| Pekerjaan Balok Lantai 3 |    |          |          |           |                    |
| Balok Tipe G58           |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 12.25    | 12.25    | 2,240,109 | 27,441,341         |
| - Penulangan             | Kg | 1,866.36 | 1,866.36 | 45,315    | 84,574,789         |
| - Bekisting              | M2 | 48.98    | 48.98    | 264,397   | 12,950,143         |
| Balok Tipe G47           |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 33.67    | 33.67    | 2,240,109 | 75,424,486         |
| - Penulangan             | Kg |          |          | 45,315    | 286,149,326        |
|                          |    | 6,314.62 | 6,314.62 |           |                    |

|                          |    |          |          |           |                    |
|--------------------------|----|----------|----------|-----------|--------------------|
| - Bekisting              | M2 | 168.37   | 168.37   | 264,397   | 44,516,445         |
| Balok Tipe CG46          |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 2.96     | 2.96     | 2,240,109 | 6,630,724          |
| - Penulangan             | Kg | 569.34   | 569.34   | 45,315    | 25,799,851         |
| - Bekisting              | M2 | 14.79    | 14.79    | 264,397   | 3,910,425          |
| Balok Tipe B36           |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 21.48    | 21.48    | 2,240,109 | 48,117,551         |
| - Penulangan             | Kg | 3,385.21 | 2,385.21 | 45,315    | 108,086,668        |
| - Bekisting              | M2 | 143.18   | 143.18   | 264,397   | 37,856,297         |
| Balok Tipe B57           |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 0.73     | 0.73     | 2,240,109 | 1,635,280          |
| - Penulangan             | Kg | 142.52   | 142.52   | 45,315    | 6,458,346          |
| - Bekisting              | M2 | 4.90     | 4.90     | 264,397   | 1,295,543          |
| Balok Tipe B24           |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 3.43     | 3.43     | 2,240,109 | 7,683,575          |
| - Penulangan             | Kg | 692.74   | 692.74   | 45,315    | 31,391,768         |
| - Bekisting              | M2 | 27.41    | 27.41    | 264,397   | 7,247,109          |
| Balok Tipe G34           |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 1.46     | 1.46     | 2,240,109 | 3,270,560          |
| - Penulangan             | Kg | 244.58   | 244.58   | 45,315    | 11,083,233         |
| - Bekisting              | M2 | 5.86     | 5.86     | 264,397   | 1,549,364          |
| Balok Tipe CG34          |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 0.63     | 0.63     | 2,240,109 | 1,411,269          |
| - Penulangan             | Kg | 243.46   | 243.46   | 45,315    | 11,032,261         |
| - Bekisting              | M2 | 4.46     | 4.46     | 264,397   | 1,179,870          |
| Balok Tipe CG47          |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 2.13     | 2.13     | 2,240,109 | 4,771,433          |
| - Penulangan             | Kg | 848.61   | 848.61   | 45,315    | 38,455,190         |
| - Bekisting              | M2 | 4.10     | 4.10     | 264,397   | 1,083,656          |
| Balok Tipe CB24          |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 3.52     | 3.52     | 2,240,109 | 7,878,465          |
| - Penulangan             | Kg | 1156.79  | 1156.79  | 45,315    | 52,420,235         |
| - Bekisting              | M2 | 28.14    | 28.14    | 264,397   | 7,439,061          |
| Balok Tipe B45           |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 1.03     | 1.03     | 2,240,109 | 2,316,273          |
| - Penulangan             | Kg | 251.64   | 251.64   | 45,315    | 11,403,348         |
| - Bekisting              | M2 | 5.95     | 5.95     | 264,397   | 1,571,970          |
| Jumlah Balok Lantai 3    |    |          |          |           | <b>974,035,853</b> |
| Pekerjaan Balok Lantai 4 |    |          |          |           |                    |
| Balok Tipe G58           |    |          |          |           |                    |
| -Beton fc 25 Mpa         | M3 | 12.25    | 12.25    | 2,240,109 | 27,441,341         |
| - Penulangan             | Kg | 1,866.36 | 1,866.36 | 45,315    | 84,574,789         |
| - Bekisting              | M2 | 48.98    | 48.98    | 264,397   | 12,950,143         |
| Balok Tipe G47           |    |          |          |           |                    |

|                              |    |          |          |           |                      |
|------------------------------|----|----------|----------|-----------|----------------------|
| -Beton fc 25 Mpa             | M3 | 33.67    | 33.67    | 2,240,109 | 75,424,486           |
| - Penulangan                 | Kg | 6,314.62 | 6,314.62 | 45,315    | 286,149,326          |
| - Bekisting                  | M2 | 168.37   | 168.37   | 264,397   | 44,516,445           |
| Balok Tipe CG46              |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 2.96     | 2.96     | 2,240,109 | 6,630,724            |
| - Penulangan                 | Kg | 569.34   | 569.34   | 45,315    | 25,799,851           |
| - Bekisting                  | M2 | 14.79    | 14.79    | 264,397   | 3,910,425            |
| Balok Tipe B36               |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 21.48    | 21.48    | 2,240,109 | 48,117,551           |
| - Penulangan                 | Kg | 3,385.21 | 3,385.21 | 45,315    | 153,402,035          |
| - Bekisting                  | M2 | 143.18   | 143.18   | 264,397   | 37,856,297           |
| Balok Tipe B57               |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 0.73     | 0.73     | 2,240,109 | 1,635,280            |
| - Penulangan                 | Kg | 142.52   | 142.52   | 45,315    | 6,458,346            |
| - Bekisting                  | M2 | 4.90     | 4.90     | 264,397   | 1,295,543            |
| Balok Tipe B24               |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 3.43     | 3.43     | 2,240,109 | 7,683,575            |
| - Penulangan                 | Kg | 692.74   | 692.74   | 45,315    | 31,391,768           |
| - Bekisting                  | M2 | 27.41    | 27.41    | 264,397   | 7,247,109            |
| Balok Tipe G34               |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 1.46     | 1.46     | 2,240,109 | 3,270,560            |
| - Penulangan                 | Kg | 244.58   | 244.58   | 45,315    | 11,083,233           |
| - Bekisting                  | M2 | 5.86     | 5.86     | 264,397   | 1,549,364            |
| Balok Tipe CG34              |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 0.63     | 0.63     | 2,240,109 | 1,411,269            |
| - Penulangan                 | Kg | 243.46   | 243.46   | 45,315    | 11,032,261           |
| - Bekisting                  | M2 | 4.46     | 4.46     | 264,397   | 1,179,870            |
| Balok Tipe CG47              |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 2.13     | 2.13     | 2,240,109 | 4,771,433            |
| - Penulangan                 | Kg | 848.61   | 848.61   | 45,315    | 38,455,190           |
| - Bekisting                  | M2 | 4.10     | 4.10     | 264,397   | 1,083,656            |
| Balok Tipe CB24              |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 3.52     | 3.52     | 2,240,109 | 7,878,465            |
| - Penulangan                 | Kg | 1156.79  | 1156.79  | 45,315    | 52,420,235           |
| - Bekisting                  | M2 | 28.14    | 28.14    | 264,397   | 7,439,061            |
| Balok Tipe B45               |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 1.03     | 1.03     | 2,240,109 | 2,316,273            |
| - Penulangan                 | Kg | 251.64   | 251.64   | 45,315    | 11,403,348           |
| - Bekisting                  | M2 | 5.95     | 5.95     | 264,397   | 1,571,970            |
| <b>Jumlah Balok Lantai 4</b> |    |          |          |           | <b>1,019,351,221</b> |
| Pekerjaan Balok Lantai 5     |    |          |          |           |                      |
| Balok Tipe G58               |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 12.25    | 12.25    | 2,240,109 | 27,441,341           |
| - Penulangan                 | Kg | 1,866.36 | 1,866.36 | 45,315    | 84,574,789           |
| - Bekisting                  | M2 | 48.98    | 48.98    | 264,397   | 12,950,143           |

|                              |    |          |          |           |                      |
|------------------------------|----|----------|----------|-----------|----------------------|
| Balok Tipe G47               |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 33.67    | 33.67    | 2,240,109 | 75,424,486           |
| - Penulangan                 | Kg | 6,314.62 | 6,314.62 | 45,315    | 286,149,326          |
| - Bekisting                  | M2 | 168.37   | 168.37   | 264,397   | 44,516,445           |
| Balok Tipe CG46              |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 2.96     | 2.96     | 2,240,109 | 6,630,724            |
| - Penulangan                 | Kg | 569.34   | 569.34   | 45,315    | 25,799,851           |
| - Bekisting                  | M2 | 14.79    | 14.79    | 264,397   | 3,910,425            |
| Balok Tipe B36               |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 21.48    | 21.48    | 2,240,109 | 48,117,551           |
| - Penulangan                 | Kg | 3,385.21 | 3,385.21 | 45,315    | 153,402,035          |
| - Bekisting                  | M2 | 143.18   | 143.18   | 264,397   | 37,856,297           |
| Balok Tipe B57               |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 0.73     | 0.73     | 2,240,109 | 1,635,280            |
| - Penulangan                 | Kg | 142.52   | 142.52   | 45,315    | 6,458,346            |
| - Bekisting                  | M2 | 4.90     | 4.90     | 264,397   | 1,295,543            |
| Balok Tipe B24               |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 3.43     | 3.43     | 2,240,109 | 7,683,575            |
| - Penulangan                 | Kg | 692.74   | 692.74   | 45,315    | 31,391,768           |
| - Bekisting                  | M2 | 27.41    | 27.41    | 264,397   | 7,247,109            |
| Balok Tipe G34               |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 1.46     | 1.46     | 2,240,109 | 3,270,560            |
| - Penulangan                 | Kg | 244.58   | 244.58   | 45,315    | 11,083,233           |
| - Bekisting                  | M2 | 5.86     | 5.86     | 264,397   | 1,549,364            |
| Balok Tipe CG34              |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 1.95     | 1.95     | 2,240,109 | 4,365,525            |
| - Penulangan                 | Kg | 1177.02  | 1177.02  | 45,315    | 53,337,050           |
| - Bekisting                  | M2 | 13.80    | 13.80    | 264,397   | 3,649,730            |
| Balok Tipe CG47              |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 0.63     | 0.63     | 2,240,109 | 1,411,269            |
| - Penulangan                 | Kg | 243.46   | 243.46   | 45,315    | 11,032,261           |
| - Bekisting                  | M2 | 4.46     | 4.46     | 264,397   | 1,179,870            |
| Balok Tipe CB24              |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 0.00     | 0.00     | 2,240,109 | -                    |
| - Penulangan                 | Kg | 0.00     | 0.00     | 45,315    | -                    |
| - Bekisting                  | M2 | 0.00     | 0.00     | 264,397   | -                    |
| Balok Tipe B45               |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 3.52     | 3.52     | 2,240,109 | 7,878,465            |
| - Penulangan                 | Kg | 1156.79  | 1156.79  | 45,315    | 52,420,235           |
| - Bekisting                  | M2 | 28.14    | 28.14    | 264,397   | 7,439,061            |
| <b>Jumlah Balok Lantai 5</b> |    |          |          |           | <b>1,021,101,656</b> |
| Pekerjaan Balok Lantai 6     |    |          |          |           |                      |
| Balok Tipe G58               |    |          |          |           |                      |
| -Beton fc 25 Mpa             | M3 | 12.25    | 12.25    | 2,240,109 | 27,441,341           |
| - Penulangan                 | Kg | 1,866.36 | 1,866.36 | 45,315    | 84,574,789           |

|                                |    |          |          |           |                      |
|--------------------------------|----|----------|----------|-----------|----------------------|
| - Bekisting                    | M2 | 48.98    | 48.98    | 264,397   | 12,950,143           |
| Balok Tipe G47                 |    |          |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 33.67    | 33.67    | 2,240,109 | 75,424,486           |
| - Penulangan                   | Kg | 6,314.62 | 6,314.62 | 45,315    | 286,149,326          |
| - Bekisting                    | M2 | 168.37   | 168.37   | 264,397   | 44,516,445           |
| Balok Tipe CG46                |    |          |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 2.96     | 2.96     | 2,240,109 | 6,630,724            |
| - Penulangan                   | Kg | 569.34   | 569.34   | 45,315    | 25,799,851           |
| - Bekisting                    | M2 | 14.79    | 14.79    | 264,397   | 3,910,425            |
| Balok Tipe B36                 |    |          |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 21.48    | 21.48    | 2,240,109 | 48,117,551           |
| - Penulangan                   | Kg | 3,385.21 | 3,385.21 | 45,315    | 153,402,035          |
| - Bekisting                    | M2 | 143.18   | 143.18   | 264,397   | 37,856,297           |
| Balok Tipe B57                 |    |          |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 0.73     | 0.73     | 2,240,109 | 1,635,280            |
| - Penulangan                   | Kg | 142.52   | 142.52   | 45,315    | 6,458,346            |
| - Bekisting                    | M2 | 4.90     | 4.90     | 264,397   | 1,295,543            |
| Balok Tipe B24                 |    |          |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 3.43     | 3.43     | 2,240,109 | 7,683,575            |
| - Penulangan                   | Kg | 692.74   | 692.74   | 45,315    | 31,391,768           |
| - Bekisting                    | M2 | 27.41    | 27.41    | 264,397   | 7,247,109            |
| Balok Tipe G34                 |    |          |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 1.46     | 1.46     | 2,240,109 | 3,270,560            |
| - Penulangan                   | Kg | 244.58   | 244.58   | 45,315    | 11,083,233           |
| - Bekisting                    | M2 | 5.86     | 5.86     | 264,397   | 1,549,364            |
| Balok Tipe CG34                |    |          |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 0.63     | 0.63     | 2,240,109 | 1,411,269            |
| - Penulangan                   | Kg | 243.46   | 243.46   | 45,315    | 11,032,261           |
| - Bekisting                    | M2 | 4.46     | 4.46     | 264,397   | 1,179,870            |
| Balok Tipe CG47                |    |          |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 2.13     | 2.13     | 2,240,109 | 4,771,433            |
| - Penulangan                   | Kg | 848.61   | 848.61   | 45,315    | 38,455,190           |
| - Bekisting                    | M2 | 4.10     | 4.10     | 264,397   | 1,083,656            |
| Balok Tipe CB24                |    |          |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 3.52     | 3.52     | 2,240,109 | 7,878,465            |
| - Penulangan                   | Kg | 1156.79  | 1156.79  | 45,315    | 52,420,235           |
| - Bekisting                    | M2 | 28.14    | 28.14    | 264,397   | 7,439,061            |
| Balok Tipe B45                 |    |          |          |           |                      |
| -Beton fc 25 Mpa               | M3 | 1.03     | 1.03     | 2,240,109 | 2,316,273            |
| - Penulangan                   | Kg | 251.64   | 251.64   | 45,315    | 11,403,348           |
| - Bekisting                    | M2 | 5.95     | 5.95     | 264,397   | 1,571,970            |
| <b>Jumlah Balok Lantai 6</b>   |    |          |          |           | <b>1,019,351,221</b> |
| Pekerjaan Balok Lantai Rooftop |    |          |          |           |                      |
| Balok Tipe G58                 |    |          |          |           |                      |

|                             |    |          |          |           |                      |
|-----------------------------|----|----------|----------|-----------|----------------------|
| -Beton fc 25 Mpa            | M3 | 12.25    | 12.25    | 2,240,109 | 27,441,341           |
| - Penulangan                | Kg | 1,866.36 | 1,866.36 | 45,315    | 84,574,789           |
| - Bekisting                 | M2 | 48.98    | 48.98    | 264,397   | 12,950,143           |
| Balok Tipe G47              |    |          |          |           |                      |
| -Beton fc 25 Mpa            | M3 | 33.67    | 33.67    | 2,240,109 | 75,424,486           |
| - Penulangan                | Kg | 6,314.62 | 6,314.62 | 45,315    | 286,149,326          |
| - Bekisting                 | M2 | 168.37   | 168.37   | 264,397   | 44,516,445           |
| Balok Tipe CG46             |    |          |          |           |                      |
| -Beton fc 25 Mpa            | M3 | 2.96     | 2.96     | 2,240,109 | 6,630,724            |
| - Penulangan                | Kg | 569.34   | 569.34   | 45,315    | 25,799,851           |
| - Bekisting                 | M2 | 14.79    | 14.79    | 264,397   | 3,910,425            |
| Balok Tipe B36              |    |          |          |           |                      |
| -Beton fc 25 Mpa            | M3 | 21.48    | 21.48    | 2,240,109 | 48,117,551           |
| - Penulangan                | Kg | 3,385.21 | 3,385.21 | 45,315    | 153,402,035          |
| - Bekisting                 | M2 | 143.18   | 143.18   | 264,397   | 37,856,297           |
| Balok Tipe B57              |    |          |          |           |                      |
| -Beton fc 25 Mpa            | M3 | 0.73     | 0.73     | 2,240,109 | 1,635,280            |
| - Penulangan                | Kg | 142.52   | 142.52   | 45,315    | 6,458,346            |
| - Bekisting                 | M2 | 4.90     | 4.90     | 264,397   | 1,295,543            |
| Balok Tipe B24              |    |          |          |           |                      |
| -Beton fc 25 Mpa            | M3 | 3.43     | 3.43     | 2,240,109 | 7,683,575            |
| - Penulangan                | Kg | 692.74   | 692.74   | 45,315    | 31,391,768           |
| - Bekisting                 | M2 | 27.41    | 27.41    | 264,397   | 7,247,109            |
| Balok Tipe G34              |    |          |          |           |                      |
| -Beton fc 25 Mpa            | M3 | 1.46     | 1.46     | 2,240,109 | 3,270,560            |
| - Penulangan                | Kg | 244.58   | 244.58   | 45,315    | 11,083,233           |
| - Bekisting                 | M2 | 5.86     | 5.86     | 264,397   | 1,549,364            |
| Balok Tipe CG34             |    |          |          |           |                      |
| -Beton fc 25 Mpa            | M3 | 0.63     | 0.63     | 2,240,109 | 1,411,269            |
| - Penulangan                | Kg | 243.46   | 243.46   | 45,315    | 11,032,261           |
| - Bekisting                 | M2 | 4.46     | 4.46     | 264,397   | 1,179,870            |
| Balok Tipe CG47             |    |          |          |           |                      |
| -Beton fc 25 Mpa            | M3 | 2.13     | 2.13     | 2,240,109 | 4,771,433            |
| - Penulangan                | Kg | 848.61   | 848.61   | 45,315    | 38,455,190           |
| - Bekisting                 | M2 | 4.10     | 4.10     | 264,397   | 1,083,656            |
| Balok Tipe CB24             |    |          |          |           |                      |
| -Beton fc 25 Mpa            | M3 | 3.52     | 3.52     | 2,240,109 | 7,878,465            |
| - Penulangan                | Kg | 1156.79  | 1156.79  | 45,315    | 52,420,235           |
| - Bekisting                 | M2 | 28.14    | 28.14    | 264,397   | 7,439,061            |
| Balok Tipe B45              |    |          |          |           |                      |
| -Beton fc 25 Mpa            | M3 | 1.03     | 1.03     | 2,240,109 | 2,316,273            |
| - Penulangan                | Kg | 251.64   | 251.64   | 45,315    | 11,403,348           |
| - Bekisting                 | M2 | 5.95     | 5.95     | 264,397   | 1,571,970            |
| Jumlah Balok Lantai Rooftop |    |          |          |           | <b>1,019,351,221</b> |

|                           |    |           |           |           |                      |
|---------------------------|----|-----------|-----------|-----------|----------------------|
| Total Pekerjaan Balok     |    |           |           |           | <b>5,917,020,050</b> |
| PEKERJAAN PELAT LANTAI    |    |           |           |           |                      |
| Pekerjaan Pelat Lantai 1  |    |           |           |           |                      |
| Rabat Beton T = 15 cm     |    |           |           |           |                      |
| - Pasir Urug T.10 cm      | M3 | 125.43    | 125.43    | 371,703   | 46,622,714           |
| -Lantai Kerja             | M3 | 43.31     | 43.31     | 118,265   | 5,122,056            |
| -Beton fc 25 Mpa          | M3 | 125.43    | 125.43    | 1,240,109 | 155,546,930          |
| - Penulangan              | Kg |           |           | 15,315    | 132,032,864          |
|                           |    | 8,620.94  | 8,620.94  |           |                      |
| - Bekisting               | M2 | 20.45     | 20.45     | 283,385   | 5,794,132            |
| Jumlah Pelat Lantai Dasar |    |           |           |           | <b>345,118,696</b>   |
| Pekerjaan Pelat Lantai 2  |    |           |           |           |                      |
| Pelat Lantai T = 12 cm    |    |           |           |           |                      |
| -Beton fc 25 Mpa          | M3 | 97.04     | 97.04     | 1,240,109 | 120,340,222          |
| - Penulangan              | Kg |           |           | 15,315    | 159,613,391          |
|                           |    | 10,421.78 | 10,421.78 |           |                      |
| - Bekisting               | M2 | 826.40    | 826.40    | 283,385   | 234,189,450          |
| Jumlah Pelat Lantai 1     |    |           |           |           | <b>514,143,063</b>   |
| Pekerjaan Pelat Lantai 3  |    |           |           |           |                      |
| Pelat Lantai T = 12 cm    |    |           |           |           |                      |
| -Beton fc 25 Mpa          | M3 | 97.04     | 97.04     | 1,240,109 | 120,340,222          |
| - Penulangan              | Kg |           |           | 15,315    | 159,613,391          |
|                           |    | 10,421.78 | 10,421.78 |           |                      |
| - Bekisting               | M2 | 826.40    | 826.40    | 283,385   | 234,189,450          |
| Jumlah Pelat Lantai 2     |    |           |           |           | <b>514,143,063</b>   |
| Pekerjaan Pelat Lantai 4  |    |           |           |           |                      |
| Pelat Lantai T = 12 cm    |    |           |           |           |                      |
| -Beton fc 25 Mpa          | M3 | 97.04     | 97.04     | 1,240,109 | 120,340,222          |
| - Penulangan              | Kg |           |           | 15,315    | 159,613,391          |
|                           |    | 10,421.78 | 10,421.78 |           |                      |
| - Bekisting               | M2 | 826.40    | 826.40    | 283,385   | 234,189,450          |
| Jumlah Pelat Lantai 3     |    |           |           |           | <b>514,143,063</b>   |
| Pekerjaan Pelat Lantai 5  |    |           |           |           |                      |
| Pelat Lantai T = 12 cm    |    |           |           |           |                      |
| -Beton fc 25 Mpa          | M3 | 97.04     | 97.04     | 1,240,109 | 120,340,222          |
| - Penulangan              | Kg |           |           | 15,315    | 159,613,391          |
|                           |    | 10,421.78 | 10,421.78 |           |                      |
| - Bekisting               | M2 | 826.40    | 826.40    | 283,385   | 234,189,450          |
| Jumlah Pelat Lantai 5     |    |           |           |           | <b>514,143,063</b>   |
| Pekerjaan Pelat Lantai 6  |    |           |           |           |                      |
| Pelat Lantai T = 12 cm    |    |           |           |           |                      |
| -Beton fc 25 Mpa          | M3 | 97.04     | 97.04     | 1,240,109 | 120,340,222          |
| - Penulangan              | Kg |           |           | 15,315    | 159,613,391          |
|                           |    | 10,421.78 | 10,421.78 |           |                      |
| - Bekisting               | M2 | 826.40    | 826.40    | 283,385   | 234,189,450          |



|   |    |           |           |           |                      |
|---|----|-----------|-----------|-----------|----------------------|
| Jumlah Pelat Lantai 6                   |    |           |           |           | <b>514,143,063</b>   |
| Pekerjaan Pelat Lantai Rooftop          |    |           |           |           |                      |
| Pelat Lantai T = 12 cm                  |    |           |           |           |                      |
| -Beton fc 25 Mpa                        | M3 | 97.04     | 97.04     | 1,240,109 | 120,340,222          |
| - Penulangan                            | Kg | 10,421.78 | 10,421.78 | 15,315    | 159,613,391          |
| - Bekisting                             | M2 | 826.40    | 826.40    | 283,385   | 234,189,450          |
| Jumlah Pelat Lantai Rooftop             |    |           |           |           | <b>514,143,063</b>   |
| Pekerjaan Pelat Lantai Dak tangga       |    |           |           |           |                      |
| Pelat Lantai T = 12 cm                  |    |           |           |           |                      |
| -Beton fc 25 Mpa                        | M3 | 3.98      | 3.98      | 1,240,109 | 4,935,636            |
| - Penulangan                            | Kg | 427.85    | 427.85    | 15,315    | 6,552,680            |
| - Bekisting                             | M2 | 37.25     | 37.25     | 283,385   | 10,556,095           |
| Jumlah Pelat Lantai Dak Tangga          |    |           |           |           | <b>22,044,411</b>    |
| <b>Total Pekerjaan Pelat Lantai</b>     |    |           |           |           | <b>3,452,021,483</b> |
| PEKERJAAN TANGGA                        |    |           |           |           |                      |
| Pekerjaan Tangga Lantai 1 (Lt.1 - Lt.2) |    |           |           |           |                      |
| Tangga 1                                |    |           |           |           |                      |
| -Beton fc 25 Mpa                        | M3 | 2.40      | 2.40      | 1,240,109 | 2,976,263            |
| - Penulangan                            | Kg | 257.81    | 257.81    | 15,315    | 3,948,455            |
| - Bekisting                             | M2 | 21.91     | 21.91     | 283,385   | 6,208,968            |
| Tangga 2                                |    |           |           |           |                      |
| -Beton fc 25 Mpa                        | M3 | 3.30      | 3.30      | 1,240,109 | 4,092,361            |
| - Penulangan                            | Kg | 354.38    | 354.38    | 15,315    | 5,427,460            |
| - Bekisting                             | M2 | 29.65     | 29.65     | 283,385   | 8,402,368            |
| Jumlah Tangga Lantai 1 (Lt. 1 - Lt. 2)  |    |           |           |           | <b>31,055,875</b>    |
| Pekerjaan Tangga Lantai 2 (Lt.2 - Lt.3) |    |           |           |           |                      |
| Tangga 1                                |    |           |           |           |                      |
| -Beton fc 25 Mpa                        | M3 | 2.40      | 2.40      | 1,240,109 | 2,976,263            |
| - Penulangan                            | Kg | 257.81    | 257.81    | 15,315    | 3,948,455            |
| - Bekisting                             | M2 | 21.91     | 21.91     | 283,385   | 6,208,968            |
| Tangga 2                                |    |           |           |           |                      |
| -Beton fc 25 Mpa                        | M3 | 3.30      | 3.30      | 1,240,109 | 4,092,361            |
| - Penulangan                            | Kg | 354.38    | 354.38    | 15,315    | 5,427,460            |
| - Bekisting                             | M2 | 29.65     | 29.65     | 283,385   | 8,402,368            |
| Jumlah Tangga Lantai 2 (Lt. 2 - Lt.3)   |    |           |           |           | <b>31,055,875</b>    |

|  |    |        |        |           |                   |
|--|----|--------|--------|-----------|-------------------|
| Pekerjaan Tangga Lantai 3<br>(Lt. 3 - Lt. 4)       |    |        |        |           |                   |
| Tangga 1   |    |        |        |           |                   |
| -Beton fc 25 Mpa                                   | M3 | 2.40   | 2.40   | 1,240,109 | 2,976,263         |
| - Penulangan                                       | Kg | 257.81 | 257.81 | 15,315    | 3,948,455         |
| - Bekisting  | M2 | 21.91  | 21.91  | 283,385   | 6,208,968         |
| Tangga 2   |    |        |        |           |                   |
| -Beton fc 25 Mpa                                   | M3 | 3.30   | 3.30   | 1,240,109 | 4,092,361         |
| - Penulangan                                       | Kg | 354.38 | 354.38 | 15,315    | 5,427,460         |
| - Bekisting  | M2 | 29.65  | 29.65  | 283,385   | 8,402,368         |
| Jumlah Tangga Lantai 3 (Lt.<br>3 - Lt. 4)          |    |        |        |           | <b>31,055,875</b> |
| Pekerjaan Tangga Lantai 4<br>(Lt.4 - Lt. 5)        |    |        |        |           |                   |
| Tangga 1   |    |        |        |           |                   |
| -Beton fc 25 Mpa                                   | M3 | 2.40   | 2.40   | 1,240,109 | 2,976,263         |
| - Penulangan                                       | Kg | 257.81 | 257.81 | 15,315    | 3,948,455         |
| - Bekisting  | M2 | 21.91  | 21.91  | 283,385   | 6,208,968         |
| Tangga 2   |    |        |        |           |                   |
| -Beton fc 25 Mpa                                   | M3 | 3.30   | 3.30   | 1,240,109 | 4,092,361         |
| - Penulangan                                       | Kg | 354.38 | 354.38 | 15,315    | 5,427,460         |
| - Bekisting  | M2 | 29.65  | 29.65  | 283,385   | 8,402,368         |
| Jumlah Tangga Lantai 4 (Lt.<br>4 - Lt. 5)          |    |        |        |           | <b>31,055,874</b> |
| Pekerjaan Tangga Lantai 5<br>(Lt. 5 - Lt. 6)       |    |        |        |           |                   |
| Tangga 1   |    |        |        |           |                   |
| -Beton fc 25 Mpa                                   | M3 | 2.40   | 2.40   | 1,240,109 | 2,976,263         |
| - Penulangan                                       | Kg | 257.81 | 257.81 | 15,315    | 3,948,455         |
| - Bekisting  | M2 | 21.91  | 21.91  | 283,385   | 6,208,967         |
| Tangga 2   |    |        |        |           |                   |
| -Beton fc 25 Mpa                                   | M3 | 3.30   | 3.30   | 1,240,109 | 4,092,361         |
| - Penulangan                                       | Kg | 354.38 | 354.38 | 15,315    | 5,427,460         |
| - Bekisting  | M2 | 29.65  | 29.65  | 283,385   | 8,402,368         |
| Jumlah Tangga Lantai 5 (Lt.<br>5 - Lt. 6)          |    |        |        |           | <b>31,055,874</b> |
| Pekerjaan Tangga Lantai 6<br>(Lt. 6 - Lt. Rooftop) |    |        |        |           |                   |
| Tangga 1   |    |        |        |           |                   |
| -Beton fc 25 Mpa                                   | M3 | 2.40   | 2.40   | 1,240,109 | 2,976,263         |
| - Penulangan                                       | Kg | 257.81 | 257.81 | 15,315    | 3,948,455         |
| - Bekisting  | M2 | 21.91  | 21.91  | 283,385   | 6,208,967         |
| Tangga 2   |    |        |        |           |                   |
| -Beton fc 25 Mpa                                   | M3 | 3.30   | 3.30   | 1,240,109 | 4,092,361         |
| - Penulangan                                       | Kg | 354.38 | 354.38 | 15,315    | 5,427,460         |

|   |    |         |         |         |                       |
|---|----|---------|---------|---------|-----------------------|
| - Bekisting   | M2 | 29.65   | 29.65   | 283,385 | 8,402,368             |
| Jumlah Tangga Lantai 6 (Lt. 6 - Lt. Rooftop)                |    |         |         |         | <b>31,055,874</b>     |
| Total Pekerjaan Tangga                                      |    |         |         |         | <b>186,335,247</b>    |
| TOTAL PEKERJAAN STRUKTUR                                    |    |         |         |         | <b>19,215,157,323</b> |
| PEKERJAAN ARSITEKTUR  |    |         |         |         |                       |
| PEKERJAAN DINDING   |    |         |         |         |                       |
| Pekerjaan Dinding Bangunan                                  |    |         |         |         |                       |
| Pekerjaan Dinding Lantai 1                                  |    |         |         |         |                       |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 830.34  | 675.00  | 135,594 | 91,525,895            |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 1444.65 | 1444.65 | 55,187  | 79,725,994            |
| - Skimcoat  | M2 | 185.54  | 185.54  | 34,949  | 6,484,395             |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 1367.27 | 1367.27 | 31,025  | 42,420,115            |
| - Waterproofing Tipe Coating                                | M2 | 2.66    | 2.66    | 62,550  | 166,383               |
| Jumlah Pekerjaan Dinding Lantai 1                           |    |         |         |         | <b>220,322,781</b>    |
| Pekerjaan Dinding Lantai 2                                  |    |         |         |         |                       |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 767.31  | 565.00  | 135,594 | 76,610,564            |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 1060.92 | 1060.92 | 55,187  | 58,549,061            |
| - Skimcoat  | M2 | 187.43  | 187.43  | 34,949  | 6,550,448             |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 913.32  | 913.32  | 31,025  | 28,336,129            |
| - Waterproofing Tipe Coating                                | M2 | 10.42   | 10.42   | 62,550  | 651,771               |
| Jumlah Pekerjaan Dinding Lantai 2                           |    |         |         |         | <b>170,697,973</b>    |
| Pekerjaan Dinding Lantai 3                                  |    |         |         |         |                       |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 694.63  | 563.00  | 135,594 | 76,339,376            |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 1089.93 | 1089.93 | 55,187  | 60,150,038            |
| - Skimcoat  | M2 | 187.60  | 187.60  | 34,949  | 6,556,389             |

|   |    |         |         |         |                    |
|---|----|---------|---------|---------|--------------------|
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 955.98  | 955.98  | 31,025  | 29,659,673         |
| - Waterproofing Tipe Coating                                | M2 | 10.55   | 10.55   | 62,550  | 659,903            |
| Jumlah Pekerjaan Dinding Lantai 3                           |    |         |         |         | <b>173,365,379</b> |
| Pekerjaan Dinding Lantai 4                                  |    |         |         |         |                    |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 680.53  | 519.00  | 135,594 | 70,373,244         |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 1079.73 | 1079.73 | 55,187  | 59,587,130         |
| - Skimcoat  | M2 | 187.60  | 187.60  | 34,949  | 6,556,389          |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 945.78  | 945.78  | 31,025  | 29,343,214         |
| - Waterproofing Tipe Coating                                | M2 | 10.55   | 10.55   | 62,550  | 659,903            |
| Jumlah Pekerjaan Dinding Lantai 4                           |    |         |         |         | <b>166,519,879</b> |
| Pekerjaan Dinding Lantai 5                                  |    |         |         |         |                    |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 680.71  | 523.00  | 135,594 | 70,915,620         |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 1055.79 | 1055.79 | 55,187  | 58,265,952         |
| - Skimcoat  | M2 | 187.60  | 187.60  | 34,949  | 6,556,389          |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 921.84  | 921.84  | 31,025  | 28,600,465         |
| - Waterproofing Tipe Coating                                | M2 | 10.55   | 10.55   | 62,550  | 659,903            |
| Jumlah Pekerjaan Dinding Lantai 5                           |    |         |         |         | <b>164,998,328</b> |
| Pekerjaan Dinding Lantai 6                                  |    |         |         |         |                    |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 680.89  | 490.00  | 135,594 | 66,441,020         |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 1077.03 | 1077.03 | 55,187  | 59,438,125         |
| - Skimcoat  | M2 | 187.60  | 187.60  | 34,949  | 6,556,389          |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 943.08  | 943.08  | 31,025  | 29,259,445         |
| - Waterproofing Tipe Coating                                | M2 | 10.55   | 10.55   | 62,550  | 659,903            |
| Jumlah Pekerjaan Dinding Lantai 6                           |    |         |         |         | <b>162,354,882</b> |

|   |    |        |        |         |                      |
|---|----|--------|--------|---------|----------------------|
| Pekerjaan Dinding Lantai Atap                               |    |        |        |         |                      |
| - Pas. Dinding Bata Ringan Menggunakan Mortar Siap Pakai    | M2 | 292.86 | 231.00 | 135,594 | 31,322,195           |
| - Plesteran Dinding T = 15 mm Menggunakan Mortar Siap Pakai | M2 | 594.73 | 594.73 | 55,187  | 32,821,403           |
| - Skimcoat  | M2 | 54.72  | 54.72  | 34,949  | 1,912,397            |
| - Acian Menggunakan Mortar Siap Pakai                       | M2 | 594.73 | 594.73 | 31,025  | 18,451,743           |
| Jumlah Pekerjaan Dinding Lantai Atap                        |    |        |        |         | <b>84,507,738</b>    |
| <b>Total Pekerjaan Dinding</b>                              |    |        |        |         | <b>1,142,766,962</b> |
| <b>PEKERJAAN KERAMIK</b>                                    |    |        |        |         |                      |
| Pekerjaan Keramik Lantai 1                                  |    |        |        |         |                      |
| - Pas. Lantai Homogeneous Tile (Polished) 60x60 cm          | M2 | 791.70 | 534.00 | 268,408 | 143,330,067          |
| - Pas. Lantai Homogeneous Tile (UnPolished) 60x60 cm        | M2 | 19.50  | 20.00  | 209,748 | 4,194,969            |
| - Pas. Plint Lantai Homogeneous Tile (Polished) 10x60 cm    | M  | 328.00 | 328.00 | 199,025 | 65,280,219           |
| - Lantai Vinyl  | M2 | 228.00 | 206.00 | 375,300 | 77,311,800           |
| - Pas. Lantai Homogenous Tile (Tangga) 30x60 cm             | M2 | 34.60  | 34.60  | 244,547 | 8,461,316            |
| - Waterproofing Coating                                     | M2 | 19.50  | 19.50  | 62,550  | 1,219,725            |
| Jumlah Pekerjaan Keramik Lantai 1                           |    |        |        |         | <b>299,798,095</b>   |
| Pekerjaan Keramik Lantai 2                                  |    |        |        |         |                      |
| - Pas. Lantai Homogeneous Tile (Polished) 60x60 cm          | M2 | 708.60 | 782.10 | 268,408 | 209,922,182          |
| - Pas. Lantai Homogeneous Tile (UnPolished) 60x60 cm        | M2 | 44.20  | 41.00  | 209,748 | 8,599,686            |
| - Pas. Plint Lantai Homogeneous Tile (Polished) 10x60 cm    | M  | 360.80 | 360.80 | 199,025 | 71,808,241           |
| - Pas. Lantai Homogenous Tile (Tangga) 30x60 cm             | M2 | 34.60  | 34.60  | 244,547 | 8,461,316            |
| - Waterproofing Coating                                     | M2 | 44.20  | 44.20  | 62,550  | 2,764,710            |
| Jumlah Pekerjaan Keramik Lantai 2                           |    |        |        |         | <b>301,556,134</b>   |
| Pekerjaan Keramik Lantai 3                                  |    |        |        |         |                      |
| - Pas. Lantai Homogeneous Tile (Polished) 60x60 cm          | M2 | 712.00 | 782.10 | 268,408 | 209,922,182          |
| - Pas. Lantai Homogeneous Tile (UnPolished) 60x60 cm        | M2 | 44.20  | 41.00  | 209,748 | 8,599,686            |

|  |    |        |        |         |                    |
|--|----|--------|--------|---------|--------------------|
| - Pas. Plint Lantai Homogeneous Tile (Polished) 10x60 cm | M  | 295.20 | 295.20 | 199,025 | 58,752,197         |
| - Pas. Lantai Homogenous Tile (Tangga) 30x60 cm          | M2 | 34.60  | 34.60  | 244,547 | 8,461,316          |
| - Waterproofing Coating                                  | M2 | 44.20  | 44.20  | 62,550  | 2,764,710          |
| Jumlah Pekerjaan Keramik Lantai 3                        |    |        |        |         | <b>288,500,090</b> |
| Pekerjaan Keramik Lantai 4                               |    |        |        |         |                    |
| - Pas. Lantai Homogeneous Tile (Polished) 60x60 cm       | M2 | 712.60 | 782.10 | 209,748 | 164,044,250        |
| - Pas. Lantai Homogeneous Tile (UnPolished) 60x60 cm     | M2 | 44.20  | 41.00  | 209,748 | 8,599,686          |
| - Pas. Plint Lantai Homogeneous Tile (Polished) 10x60 cm | M  | 295.20 | 295.20 | 199,025 | 58,752,197         |
| - Pas. Lantai Homogenous Tile (Tangga) 30x60 cm          | M2 | 34.60  | 34.60  | 244,547 | 8,461,316          |
| - Waterproofing Coating                                  | M2 | 44.20  | 44.20  | 62,550  | 2,764,710          |
| Jumlah Pekerjaan Keramik Lantai 4                        |    |        |        |         | <b>242,622,159</b> |
| Pekerjaan Keramik Lantai 5                               |    |        |        |         |                    |
| - Pas. Lantai Homogeneous Tile (Polished) 60x60 cm       | M2 | 711.70 | 782.10 | 268,408 | 209,922,182        |
| - Pas. Lantai Homogeneous Tile (UnPolished) 60x60 cm     | M2 | 44.20  | 41.00  | 209,748 | 8,599,686          |
| - Pas. Plint Lantai Homogeneous Tile (Polished) 10x60 cm | M  | 295.20 | 295.20 | 199,025 | 58,752,197         |
| - Pas. Lantai Homogenous Tile (Tangga) 30x60 cm          | M2 | 3.60   | 3.60   | 244,547 | 880,368            |
| - Waterproofing Coating                                  | M2 | 44.20  | 44.20  | 62,550  | 2,764,710          |
| Jumlah Pekerjaan Keramik Lantai 5                        |    |        |        |         | <b>280,919,143</b> |
| Pekerjaan Keramik Lantai 6                               |    |        |        |         |                    |
| - Pas. Lantai Homogeneous Tile (Polished) 60x60 cm       | M2 | 712.80 | 782.10 | 268,408 | 209,922,182        |
| - Pas. Lantai Homogeneous Tile (UnPolished) 60x60 cm     | M2 | 44.20  | 41.00  | 209,748 | 8,599,686          |
| - Pas. Plint Lantai Homogeneous Tile (Polished) 10x60 cm | M  | 295.20 | 295.20 | 199,025 | 58,752,197         |
| - Pas. Lantai Homogenous Tile (Tangga) 30x60 cm          | M2 | 34.60  | 34.60  | 244,547 | 8,461,316          |
| - Waterproofing Coating                                  | M2 | 44.20  | 44.20  | 62,550  | 2,764,710          |
| Jumlah Pekerjaan Keramik Lantai 6                        |    |        |        |         | <b>288,500,090</b> |

|                                   |    |         |        |         |                      |
|-----------------------------------|----|---------|--------|---------|----------------------|
| <b>Total Pekerjaan Keramik</b>    |    |         |        |         | <b>1,701,895,711</b> |
| PEKERJAAN PLAFOND                 |    |         |        |         |                      |
| Pekerjaan Plafond Lantai 1        |    |         |        |         |                      |
| - Pekerjaan Rangka Plafond Gypsum | M2 | 120.80  | 94.00  | 55,600  | 5,226,400            |
| - Pekerjaan Plafond Gypsum        | M2 | 120.80  | 94.00  | 159,850 | 15,025,900           |
| - Pekerjaan Rangka Plafond GRC    | M2 | 670.30  | 670.30 | 55,600  | 37,268,680           |
| - Pekerjaan Plafond GRC           | M2 | 670.30  | 670.30 | 180,700 | 121,123,210          |
| - Pekerjaan Plafond Expose        | M2 | 958.53  | 618.00 | 34,646  | 21,410,954           |
| Jumlah Pekerjaan Plafond Lantai 1 |    |         |        |         | <b>200,055,144</b>   |
| Pekerjaan Plafond Lantai 2        |    |         |        |         |                      |
| - Pekerjaan Rangka Plafond Gypsum | M2 | 149.10  | 118.00 | 55,600  | 6,560,800            |
| - Pekerjaan Plafond Gypsum        | M2 | 149.10  | 118.00 | 159,850 | 18,862,300           |
| - Pekerjaan Rangka Plafond GRC    | M2 | 44.20   | 48.00  | 55,600  | 2,668,800            |
| - Pekerjaan Plafond GRC           | M2 | 44.20   | 48.00  | 180,700 | 8,673,600            |
| - Pekerjaan Plafond Expose        | M2 | 849.71  | 419.00 | 34,646  | 14,516,488           |
| Jumlah Pekerjaan Plafond Lantai 2 |    |         |        |         | <b>51,281,988</b>    |
| Pekerjaan Plafond Lantai 3        |    |         |        |         |                      |
| - Pekerjaan Rangka Plafond GRC    | M2 | 44.20   | 48.00  | 55,600  | 2,668,800            |
| - Pekerjaan Plafond GRC           | M2 | 44.20   | 48.00  | 180,700 | 8,673,600            |
| - Pekerjaan Plafond Expose        | M2 | 1070.07 | 717.00 | 34,646  | 24,840,864           |
| Jumlah Pekerjaan Plafond Lantai 3 |    |         |        |         | <b>36,183,264</b>    |
| Pekerjaan Plafond Lantai 4        |    |         |        |         |                      |
| - Pekerjaan Rangka Plafond GRC    | M2 | 44.20   | 48.00  | 55,600  | 2,668,800            |
| - Pekerjaan Plafond GRC           | M2 | 44.20   | 48.00  | 180,700 | 8,673,600            |
| - Pekerjaan Plafond Expose        | M2 | 1070.64 | 717.00 | 34,646  | 24,840,864           |
| Jumlah Pekerjaan Plafond Lantai 4 |    |         |        |         | <b>36,183,264</b>    |
| Pekerjaan Plafond Lantai 5        |    |         |        |         |                      |
| - Pekerjaan Rangka Plafond GRC    | M2 | 44.20   | 48.00  | 55,600  | 2,668,800            |
| - Pekerjaan Plafond GRC           | M2 | 44.20   | 48.00  | 180,700 | 8,673,600            |
| - Pekerjaan Plafond Expose        | M2 | 1070.78 | 717.00 | 34,646  | 24,840,864           |
| Jumlah Pekerjaan Plafond Lantai 5 |    |         |        |         | <b>36,183,264</b>    |
| Pekerjaan Plafond Lantai 6        |    |         |        |         |                      |

|   |      |         |        |            |                    |
|---|------|---------|--------|------------|--------------------|
| - Pekerjaan Rangka Plafond GRC                    | M2   | 44.20   | 48.00  | 55,600     | 2,668,800          |
| - Pekerjaan Plafond GRC                           | M2   | 44.20   | 48.00  | 180,700    | 8,673,600          |
| - Pekerjaan Plafond Expose                        | M2   | 1071.21 | 719.00 | 34,646     | 24,910,155         |
| Jumlah Pekerjaan Plafond Lantai 6                 |      |         |        |            | <b>36,252,555</b>  |
| Total Pekerjaan Plafond                           |      |         |        |            | <b>396,139,480</b> |
| <b>PEKERJAAN KUSEN PINTU DAN JENDELA</b>          |      |         |        |            |                    |
| Pekerjaan Kusen Pintu dan Jendela Lantai 1        |      |         |        |            |                    |
| - Pasangan Kusen Tipe P1 (130x260)                | Unit | 6.00    | 6.00   | 5,839,863  | 35,039,176         |
| - Pasangan Kusen Tipe P3 (110x260)                | Unit | 4.00    | 4.00   | 4,941,422  | 19,765,689         |
| - Pasangan Kusen Tipe P4 (650x260)                | Unit | 2.00    | 2.00   | 29,199,313 | 58,398,626         |
| - Pasangan Kusen Tipe J1 (300x170)                | Unit | 15.00   | 15.00  | 4,210,866  | 63,162,990         |
| - Pasangan Kusen Tipe J2 (300x170)                | Unit | 4.00    | 4.00   | 4,210,866  | 16,843,464         |
| - Pasangan Kusen Tipe J3 (250x170)                | Unit | 1.00    | 1.00   | 3,509,055  | 3,509,055          |
| - Pasangan Bouven BV1 (300x450)                   | Unit | 2.00    | 2.00   | 632,450    | 1,264,900          |
| Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai 1 |      |         |        |            | <b>197,983,899</b> |
| Pekerjaan Kusen Pintu dan Jendela Lantai 2        |      |         |        |            |                    |
| - Pasangan Kusen Tipe P1 (130x260)                | Unit | 5.00    | 5.00   | 5,839,863  | 29,199,313         |
| - Pasangan Kusen Tipe P3 (110x260)                | Unit | 4.00    | 4.00   | 4,941,422  | 19,765,689         |
| - Pasangan Kusen Tipe P4 (650x260)                | Unit | 2.00    | 2.00   | 29,199,313 | 58,398,626         |
| - Pasangan Kusen Tipe J1 (300x170)                | Unit | 14.00   | 14.00  | 4,210,866  | 58,952,124         |
| - Pasangan Kusen Tipe J2 (300x170)                | Unit | 6.00    | 6.00   | 4,210,866  | 25,265,196         |
| - Pasangan Kusen Tipe J5 (200x170)                | Unit | 1.00    | 1.00   | 2,807,244  | 2,807,244          |
| - Pasangan Kusen Tipe J6 (100x170)                | Unit | 1.00    | 1.00   | 1,403,622  | 1,403,622          |
| - Pasangan Bouven BV1 (300x450)                   | Unit | 2.00    | 2.00   | 632,450    | 1,264,900          |
| Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai 2 |      |         |        |            | <b>197,056,714</b> |



|  |      |       |       |            |                    |
|--|------|-------|-------|------------|--------------------|
| Pekerjaan Kusen Pintu dan Jendela Lantai 3               |      |       |       |            |                    |
| - Pasangan Kusen Tipe P1 (130x260)                       | Unit | 4.00  | 4.00  | 5,839,863  | 23,359,450         |
| - Pasangan Kusen Tipe P3 (110x260)                       | Unit | 4.00  | 4.00  | 4,941,422  | 19,765,689         |
| - Pasangan Kusen Tipe P4 (650x260)                       | Unit | 2.00  | 2.00  | 29,199,313 | 58,398,626         |
| - Pasangan Kusen Tipe J1 (300x170)                       | Unit | 15.00 | 15.00 | 4,210,866  | 63,162,990         |
| - Pasangan Kusen Tipe J2 (300x170)                       | Unit | 5.00  | 5.00  | 4,210,866  | 21,054,330         |
| - Pasangan Kusen Tipe J5 (200x170)                       | Unit | 1.00  | 1.00  | 2,807,244  | 2,807,244          |
| - Pasangan Bouven BV1 (300x450)                          | Unit | 2.00  | 2.00  | 632,450    | 1,264,900          |
| <b>Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai 3</b> |      |       |       |            | <b>189,813,229</b> |
| Pekerjaan Kusen Pintu dan Jendela Lantai 4               |      |       |       |            |                    |
| - Pasangan Kusen Tipe P1 (130x260)                       | Unit | 4.00  | 4.00  | 5,839,863  | 23,359,450         |
| - Pasangan Kusen Tipe P3 (110x260)                       | Unit | 4.00  | 4.00  | 4,941,422  | 19,765,689         |
| - Pasangan Kusen Tipe P4 (650x260)                       | Unit | 2.00  | 2.00  | 29,199,313 | 58,398,626         |
| - Pasangan Kusen Tipe J1 (300x170)                       | Unit | 15.00 | 15.00 | 4,210,866  | 63,162,990         |
| - Pasangan Kusen Tipe J2 (300x170)                       | Unit | 6.00  | 6.00  | 4,210,866  | 25,265,196         |
| - Pasangan Kusen Tipe J5 (200x170)                       | Unit | 1.00  | 1.00  | 2,807,244  | 2,807,244          |
| - Pasangan Bouven BV1 (300x450)                          | Unit | 2.00  | 2.00  | 632,450    | 1,264,900          |
| <b>Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai 4</b> |      |       |       |            | <b>194,024,095</b> |
| Pekerjaan Kusen Pintu dan Jendela Lantai 5               |      |       |       |            |                    |
| - Pasangan Kusen Tipe P1 (130x260)                       | Unit | 5.00  | 5.00  | 5,839,863  | 29,199,313         |
| - Pasangan Kusen Tipe P3 (110x260)                       | Unit | 4.00  | 4.00  | 4,941,422  | 19,765,689         |
| - Pasangan Kusen Tipe J1 (300x170)                       | Unit | 16.00 | 16.00 | 4,941,422  | 79,062,755         |
| - Pasangan Kusen Tipe J2 (300x170)                       | Unit | 8.00  | 8.00  | 4,210,866  | 33,686,928         |

|  |      |         |         |            |                      |
|--|------|---------|---------|------------|----------------------|
| - Pasangan Kusen Tipe J5 (200x170)                   | Unit | 1.00    | 1.00    | 2,807,244  | 2,807,244            |
| - Pasangan Bouven BV1 (300x450)                      | Unit | 2.00    | 2.00    | 632,450    | 1,264,900            |
| Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai 5    |      |         |         |            | <b>165,786,829</b>   |
| Pekerjaan Kusen Pintu dan Jendela Lantai 6           |      |         |         |            |                      |
| - Pasangan Kusen Tipe P1 (130x260)                   | Unit | 4.00    | 4.00    | 5,839,863  | 23,359,450           |
| - Pasangan Kusen Tipe P3 (110x260)                   | Unit | 4.00    | 4.00    | 4,941,422  | 19,765,689           |
| - Pasangan Kusen Tipe P4 (650x260)                   | Unit | 2.00    | 2.00    | 29,199,313 | 58,398,626           |
| - Pasangan Kusen Tipe J1 (300x170)                   | Unit | 15.00   | 15.00   | 4,210,866  | 63,162,990           |
| - Pasangan Kusen Tipe J2 (300x170)                   | Unit | 6.00    | 6.00    | 4,210,866  | 25,265,196           |
| - Pasangan Kusen Tipe J5 (200x170)                   | Unit | 1.00    | 1.00    | 2,807,244  | 2,807,244            |
| - Pasangan Bouven BV1 (300x450)                      | Unit | 2.00    | 2.00    | 632,450    | 1,264,900            |
| Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai 6    |      |         |         |            | <b>194,024,095</b>   |
| Pekerjaan Kusen Pintu dan Jendela Lantai Atap        |      |         |         |            |                      |
| - Pasangan Kusen Tipe P5 (850x260)                   | Unit | 2.00    | 2.00    | 38,183,717 | 76,367,434           |
| Jumlah Pekerjaan Kusen Pintu dan Jendela Lantai Atap |      |         |         |            | <b>76,367,434</b>    |
| Total Pekerjaan Kusen Pintu dan Jendela              |      |         |         |            | <b>1,215,056,296</b> |
| PEKERJAAN PENGECATAN                                 |      |         |         |            |                      |
| Pekerjaan Pengecatan Lantai 1                        |      |         |         |            |                      |
| - Pengecatan Dinding Eksterior                       | M2   | 475.93  | 475.93  | 38,920     | 18,523,196           |
| - Pengecatan Dinding Interior                        | M2   | 1154.26 | 1154.26 | 33,360     | 38,506,114           |
| - Pengecatan Dak Ekspose                             | M2   | 958.53  | 958.53  | 38,920     | 37,305,988           |
| - Pengecatan Plafond                                 | M2   | 791.10  | 791.10  | 33,360     | 26,391,096           |
| Jumlah Pekerjaan Pengecatan Lantai 1                 |      |         |         |            | <b>120,726,393</b>   |
| Pekerjaan Pengecatan Lantai 2                        |      |         |         |            |                      |

|                                      |    |         |         |        |                   |
|--------------------------------------|----|---------|---------|--------|-------------------|
| - Pengecatan Dinding Eksterior       | M2 | 369.72  | 369.72  | 38,920 | 14,389,502        |
| - Pengecatan Dinding Interior        | M2 | 878.63  | 878.63  | 33,360 | 29,311,097        |
| - Pengecatan Dak Ekspose             | M2 | 849.71  | 849.71  | 38,920 | 33,070,713        |
| - Pengecatan Plafond                 | M2 | 193.30  | 193.30  | 33,360 | 6,448,488         |
| Jumlah Pekerjaan Pengecatan Lantai 2 |    |         |         |        | <b>83,219,800</b> |
| Pekerjaan Pengecatan Lantai 3        |    |         |         |        |                   |
| - Pengecatan Dinding Eksterior       | M2 | 369.81  | 369.81  | 38,920 | 14,393,005        |
| - Pengecatan Dinding Interior        | M2 | 907.72  | 907.72  | 33,360 | 30,281,539        |
| - Pengecatan Dak Ekspose             | M2 | 1070.07 | 1070.07 | 38,920 | 41,647,124        |
| - Pengecatan Plafond                 | M2 | 44.20   | 44.20   | 33,360 | 1,474,512         |
| Jumlah Pekerjaan Pengecatan Lantai 3 |    |         |         |        | <b>87,796,181</b> |
| Pekerjaan Pengecatan Lantai 4        |    |         |         |        |                   |
| - Pengecatan Dinding Eksterior       | M2 | 369.81  | 369.81  | 38,920 | 14,393,005        |
| - Pengecatan Dinding Interior        | M2 | 897.52  | 897.52  | 33,360 | 29,941,267        |
| - Pengecatan Dak Ekspose             | M2 | 1070.64 | 1070.64 | 38,920 | 41,669,309        |
| - Pengecatan Plafond                 | M2 | 44.20   | 44.20   | 33,360 | 1,474,512         |
| Jumlah Pekerjaan Pengecatan Lantai 4 |    |         |         |        | <b>87,478,093</b> |
| Pekerjaan Pengecatan Lantai 5        |    |         |         |        |                   |
| - Pengecatan Dinding Eksterior       | M2 | 369.81  | 369.81  | 38,920 | 14,393,005        |
| - Pengecatan Dinding Interior        | M2 | 873.58  | 873.58  | 33,360 | 29,142,629        |
| - Pengecatan Dak Ekspose             | M2 | 1070.78 | 1070.78 | 38,920 | 41,674,758        |
| - Pengecatan Plafond                 | M2 | 44.20   | 44.20   | 33,360 | 1,474,512         |
| Jumlah Pekerjaan Pengecatan Lantai 5 |    |         |         |        | <b>86,684,904</b> |
| Pekerjaan Pengecatan Lantai 6        |    |         |         |        |                   |
| - Pengecatan Dinding Eksterior       | M2 | 369.81  | 369.81  | 38,920 | 14,393,005        |
| - Pengecatan Dinding Interior        | M2 | 894.82  | 894.82  | 33,360 | 29,851,195        |
| - Pengecatan Dak Ekspose             | M2 | 1071.21 | 1071.21 | 38,920 | 41,691,493        |
| - Pengecatan Plafond                 | M2 | 44.20   | 44.20   | 33,360 | 1,474,512         |
| Jumlah Pekerjaan Pengecatan Lantai 6 |    |         |         |        | <b>87,410,206</b> |

|  |      |        |        |           |                    |
|--|------|--------|--------|-----------|--------------------|
| Pekerjaan Pengecatan Lantai Atap               |      |        |        |           |                    |
| - Pengecatan Dinding Eksterior                 | M2   | 594.73 | 594.73 | 38,920    | 23,146,892         |
| <b>Jumlah Pekerjaan Pengecatan Lantai Atap</b> |      |        |        |           | <b>23,146,892</b>  |
| <b>Total Pekerjaan Pengecatan</b>              |      |        |        |           | <b>576,462,468</b> |
| <b>PEKERJAAN SANITAIR</b>                      |      |        |        |           |                    |
| <b>Pekerjaan Sanitair Lantai 1</b>             |      |        |        |           |                    |
| - Closet Duduk Toto atau setara                | Unit | 5.00   | 5.00   | 2,103,765 | 10,518,825         |
| - Jet Washer Toto atau setara                  | Set  | 5.00   | 5.00   | 827,815   | 4,139,073          |
| - Washtafel Toto atau setara                   | Unit | 3.00   | 3.00   | 1,579,735 | 4,739,205          |
| - Cermin 6 mm (L=0,725M)                       | Set  | 3.00   | 3.00   | 410,050   | 1,230,150          |
| - Floor Drain Toto atau setara                 | Set  | 6.00   | 6.00   | 582,966   | 3,497,796          |
| - Keran Air Toto atau setara                   | Unit | 2.00   | 2.00   | 518,818   | 1,037,635          |
| - Paper Holder Toto atau setara                | Unit | 5.00   | 5.00   | 292,039   | 1,460,195          |
| - Partisi Cubical                              | M2   | 13.00  | 13.00  | 3,803,388 | 49,444,038         |
| <b>Jumlah Pekerjaan Sanitair Lantai 1</b>      |      |        |        |           | <b>76,066,916</b>  |
| <b>Pekerjaan Sanitair Lantai 2</b>             |      |        |        |           |                    |
| - Closet Duduk Toto atau setara                | Unit | 11.00  | 11.00  | 2,103,765 | 23,141,415         |
| - Jet Washer Toto atau setara                  | Set  | 11.00  | 11.00  | 827,815   | 9,105,960          |
| - Washtafel Toto atau setara                   | Unit | 6.00   | 6.00   | 1,579,735 | 9,478,410          |
| - Cermin 6 mm (L=0,725M)                       | Set  | 6.00   | 6.00   | 410,050   | 2,460,300          |
| - Floor Drain Toto atau setara                 | Set  | 12.00  | 12.00  | 582,966   | 6,995,592          |
| - Keran Air Toto atau setara                   | Unit | 3.00   | 3.00   | 518,818   | 1,556,453          |
| - Paper Holder Toto atau setara                | Unit | 11.00  | 11.00  | 292,039   | 3,212,429          |
| - Urinoir                                      | Unit | 2.00   | 2.00   | 3,440,945 | 6,881,890          |
| - Partisi Urinoir                              | Unit | 2.00   | 2.00   | 4,173,475 | 8,346,950          |
| - Partisi Cubical                              | M2   | 9.00   | 9.00   | 3,803,388 | 34,230,488         |
| - Grab Bar                                     | Unit | 2.00   | 2.00   | 1,341,350 | 2,682,700          |
| <b>Jumlah Pekerjaan Sanitair Lantai 2</b>      |      |        |        |           | <b>108,092,586</b> |
| <b>Pekerjaan Sanitair Lantai 3</b>             |      |        |        |           |                    |
| - Closet Duduk Toto atau setara                | Unit | 10.00  | 10.00  | 2,103,765 | 21,037,650         |
| - Jet Washer Toto atau setara                  | Set  | 10.00  | 10.00  | 827,815   | 8,278,145          |
| - Washtafel Toto atau setara                   | Unit | 5.00   | 5.00   | 1,579,735 | 7,898,675          |

|                                    |      |       |       |           |                    |
|------------------------------------|------|-------|-------|-----------|--------------------|
| - Cermin 6 mm (L=0,725M)           | Set  | 5.00  | 5.00  | 410,050   | 2,050,250          |
| - Floor Drain Toto atau setara     | Set  | 11.00 | 11.00 | 582,966   | 6,412,626          |
| - Keran Air Toto atau setara       | Unit | 2.00  | 2.00  | 518,818   | 1,037,635          |
| - Paper Holder Toto atau setara    | Unit | 10.00 | 10.00 | 292,039   | 2,920,390          |
| - Urinoir                          | Unit | 2.00  | 2.00  | 3,440,945 | 6,881,890          |
| - Partisi Urinoir                  | Unit | 2.00  | 2.00  | 4,173,475 | 8,346,950          |
| - Partisi Cubical                  | M2   | 9.00  | 9.00  | 3,803,388 | 34,230,488         |
| - Grab Bar                         | Unit | 2.00  | 2.00  | 1,341,350 | 2,682,700          |
| Jumlah Pekerjaan Sanitair Lantai 3 |      |       |       |           | <b>101,777,399</b> |
| Pekerjaan Sanitair Lantai 4        |      |       |       |           |                    |
| - Closet Duduk Toto atau setara    | Unit | 10.00 | 10.00 | 2,103,765 | 21,037,650         |
| - Jet Washer Toto atau setara      | Set  | 10.00 | 10.00 | 827,815   | 8,278,145          |
| - Washtafel Toto atau setara       | Unit | 5.00  | 5.00  | 1,579,735 | 7,898,675          |
| - Cermin 6 mm (L=0,725M)           | Set  | 5.00  | 5.00  | 410,050   | 2,050,250          |
| - Floor Drain Toto atau setara     | Set  | 11.00 | 11.00 | 582,966   | 6,412,626          |
| - Keran Air Toto atau setara       | Unit | 2.00  | 2.00  | 518,818   | 1,037,635          |
| - Paper Holder Toto atau setara    | Unit | 10.00 | 10.00 | 292,039   | 2,920,390          |
| - Urinoir                          | Unit | 2.00  | 2.00  | 3,440,945 | 6,881,890          |
| - Partisi Urinoir                  | Unit | 2.00  | 2.00  | 4,173,475 | 8,346,950          |
| - Partisi Cubical                  | M2   | 9.00  | 9.00  | 3,803,388 | 34,230,488         |
| - Grab Bar                         | Unit | 2.00  | 2.00  | 1,341,350 | 2,682,700          |
| Jumlah Pekerjaan Sanitair Lantai 4 |      |       |       |           | <b>101,777,399</b> |
| Pekerjaan Sanitair Lantai 5        |      |       |       |           |                    |
| - Closet Duduk Toto atau setara    | Unit | 10.00 | 10.00 | 2,103,765 | 21,037,650         |
| - Jet Washer Toto atau setara      | Set  | 10.00 | 10.00 | 827,815   | 8,278,145          |
| - Washtafel Toto atau setara       | Unit | 5.00  | 5.00  | 1,579,735 | 7,898,675          |
| - Cermin 6 mm (L=0,725M)           | Set  | 5.00  | 5.00  | 410,050   | 2,050,250          |
| - Floor Drain Toto atau setara     | Set  | 11.00 | 11.00 | 582,966   | 6,412,626          |
| - Keran Air Toto atau setara       | Unit | 2.00  | 2.00  | 518,818   | 1,037,635          |
| - Paper Holder Toto atau setara    | Unit | 10.00 | 10.00 | 292,039   | 2,920,390          |
| - Urinoir                          | Unit | 2.00  | 2.00  | 3,440,945 | 6,881,890          |
| - Partisi Urinoir                  | Unit | 2.00  | 2.00  | 4,173,475 | 8,346,950          |
| - Partisi Cubical                  | M2   | 9.00  | 9.00  | 3,803,388 | 34,230,488         |
| - Grab Bar                         | Unit | 2.00  | 2.00  | 1,341,350 | 2,682,700          |

|                                    |      |       |       |           |                       |
|------------------------------------|------|-------|-------|-----------|-----------------------|
| Jumlah Pekerjaan Sanitair Lantai 5 |      |       |       |           | <b>101,777,399</b>    |
| Pekerjaan Sanitair Lantai 6        |      |       |       |           |                       |
| - Closet Duduk Toto atau setara    | Unit | 10.00 | 10.00 | 2,103,765 | 21,037,650            |
| - Jet Washer Toto atau setara      | Set  | 10.00 | 10.00 | 827,815   | 8,278,145             |
| - Washtafel Toto atau setara       | Unit | 5.00  | 5.00  | 1,579,735 | 7,898,675             |
| - Cermin 6 mm (L=0,725M)           | Set  | 5.00  | 5.00  | 410,050   | 2,050,250             |
| - Floor Drain Toto atau setara     | Set  | 11.00 | 11.00 | 582,966   | 6,412,626             |
| - Keran Air Toto atau setara       | Unit | 2.00  | 2.00  | 518,818   | 1,037,635             |
| - Paper Holder Toto atau setara    | Unit | 10.00 | 10.00 | 292,039   | 2,920,390             |
| - Urinoir                          | Unit | 2.00  | 2.00  | 3,440,945 | 6,881,890             |
| - Partisi Urinoir                  | Unit | 2.00  | 2.00  | 4,173,475 | 8,346,950             |
| - Partisi Cubical                  | M2   | 9.00  | 9.00  | 3,803,388 | 34,230,488            |
| - Grab Bar                         | Unit | 2.00  | 2.00  | 1,341,350 | 2,682,700             |
| Jumlah Pekerjaan Sanitair Lantai 6 |      |       |       |           | <b>101,777,399</b>    |
| <b>Total Pekerjaan Sanitair</b>    |      |       |       |           | <b>591,269,096</b>    |
| <b>TOTAL PEKERJAAN ARSITEKTUR</b>  |      |       |       |           | <b>5,623,590,012</b>  |
|                                    |      |       |       |           | <b>25,525,361,638</b> |