**DAFTAR ISI**

**Halaman Judul. Lembar Pengesahan.**

**Surat Keputusan Direktur. Lembar Asisteni.**

**Lembar Asistensi KPPTA.**

**Bukti Selesai Konsultasi Perbaikan Tugas Akhir.**

**KATA PENGANTAR .............................................................................................i ABSTRAK ............................................................................................................... ii DAFTAR ISI ........................................................................................................... iii DAFTAR TABEL ................................................................................................... v DAFTAR GAMBAR ...............................................................................................vi BAB I PENDAHULUAN ........................................................................................1**

1.1 Latar Belakang .............................................................................................. 1

1.2 Maksud dan Tujuan .......................................................................................2

1.3 Pembatasan Masalah ..................................................................................... 2

1.4 Metodologi Penulisan ................................................................................... 2

1.5 Sistematika Penulisan ................................................................................... 3

**BAB II DASAR TEORI ......................................................................................... 4**

2.1 Dasar Perencanaan Struktur Beton Bertulang ...............................................4

2.2 Elemen Struktur Beton Bertulang ................................................................. 4

2.2.1 Struktur Kolom ........ ....................................................................... 4

2.2.2 Balok ................................................................................................. 7

2.2.3 Pelat Lantai ....................................................................................... 11

2.2.4 Penulangan Pelat Satu Arah ..............................................................16

2.2.5 Penulangan Pelat Dua Arah .............................................................. 17

2.2.6 Pelat Dengan Satu Tumpuan .............................................................17

2.2.7 Pelat Dengan Dua Tumpuan Sejajar ................................................. 18

2.2.8 Pelat Dengan Empat Tumpuan Saling Sejajar .................................. 19

2.3 Pembebanan Pada Struktur ........................................................................... 19

2.3.1 Kombinasi Beban Pada Struktur Beton ............................................ 27

2.3.2 Beban dan Bangunan Gedung ......... ............................................... 28

2.3.3 Struktur Gedung Bertaturan dan Tidak Beraturan ............................ 30

2.3.4 Gaya-gaya Dalam ..............................................................................30

2.3.5 Pemodelan Struktur ...........................................................................32

2.4 Metode Pelaksanaan Struktur ........... ........................................................... 32

2.4.1 Persyaratan Teknis Metode Pelaksanaan .......................................... 32

**BAB III PEMBAHASAN ....................................................................................... 38**

3.1 Data Proyek ...................................................................................................38

3.2 Konsep Desain .............................................................................................. 39

3.3 Data-data Perencanaan .................................................................................. 39

3.3.1 Perencanaan Struktur Atas .... ........................................................... 39

3.3.2 Beban Struktur .................................................................................. 40

3.4 Denah Struktur .............................................................................................. 40

3.4.1 Denah Struktur Kolom ...................................................................... 40

3.4.2 Denah Struktur Balok ....................................................................... 42

3.5 Perhitungan Pembebanan Struktur Kolom, Balok dan Pelat ...................... 44

3.5.1 Perhitungan Pembebanan Secara Manual ......................................... 44

3.5.2 Perhitungan Pembebanan Menggunakan Etabs ................................ 46

3.5.3 Kontrol Kinerja Batas Layan ............................................................ 50

3.6 Kontrol Beban ............................................................................................... 52

3.6.1 Perhitungan Manual .......................................................................... 52

3.7 Perhitungan Tulangan Kolom dan Balok ......................................................58

3.7.1 Data Penulangan Program Etabs .......................................................58

3.7.2 Dimensi Penulangan Kolom dan Balok Secara Manual ................... 62

3.7.3 Dimensi dan Penulangan Pelat ..........................................................75

3.8 Metode Pelaksanaan Pekerjaan .....................................................................80

3.8.1 Pekerjaan Kolom ...............................................................................80

3.8.2 Pekerjaan Balok dan Pelat Lantai ..................................................... 86

**BAB IV PENUTUP ................................................................................................. 92**

4.1 Kesimpulan ................................................................................................... 92

4.2 Saran ............................................................................................................. 93

**DAFTAR PUSTAKA**