

ABSTRAK

Apartemen *Warhol Residences* merupakan salah satu calon gedung pencakar langit yang akan segera dibangun di kawasan strategis Simpang Lima Semarang. Apartemen ini berlokasi di jalan Ahmad Yani no 137 Semarang. Dengan mengusung desain yang minimalis dan modern, Apartemen ini diharapkan mampu memenuhi kebutuhan warga Semarang maupun yang berasal dari luar Semarang akan hunian yang nyaman.

Dalam tugas akhir ini, struktur apartemen *Warhol Residences* ini didesain berdasarkan metode SRPMK atau Struktur Rangka Pemikul Momen Khusus. Pedoman utama dalam perencanaan ini diambil dari SNI Beton 03-2847-2002 dan RSNI Gempa 03-1726-2010. Adapun pemodelan yang dibuat, dilakukan dengan menggunakan bantuan software *Extended Three-Dimensional Analysis of Building System (ETABS) versi 9.2.7*. Selain itu, juga digunakan beberapa macam *software* pendukung lain seperti Structure Analysis Program 2000 (SAP 2000), PCACOL, dan Auto Cad.

Beberapa item pekerjaan yang diperhitungkan meliputi secara keseluruhan pekerjaan struktur baik elemen Primer maupun Sekunder. Elemen struktur primer meliputi : Balok, Balok Tinggi, Kolom, *Shearwall/Corewall*, HBK dan Pondasi *Bore Pile*. Sedangkan elemen sekundernya antara lain : Pelat lantai, Dinding dan Pelat Basement, Tangga, *Ramp*, serta *Lift*. Hasil analisis menunjukkan bahwa struktur apartemen *Warhol Residences* aman dan mampu dipertanggungjawabkan secara analitis.

ABSTRACT

Warhol Residences Apartment is one of the candidates for the skyscrapers that will soon be built in strategic areas Simpang Lima Semarang. These Apartments are located at No. 137 Ahmad Yani Street Semarang. By carrying out the minimalist and modern design, these apartments are expected to meet the needs of the residents of Semarang and foreigner the comfortable dwelling.

In this thesis, *Warhol Residences* apartment's structure is designed based on the method SRPMK or Special Moment Frame Structure bearers. The main guidelines in this plan are taken from Concrete SNI 03-2847-2002 and RSNI 03-1726-2010 Earthquake. The modeling is made, performed using software *Extended Three-Dimensinal Analysis of Building Systems (ETABS) version 9.2.7*. Beside that, it also use some other kind of supporting *software* such as *Structure Analysis Program 2000 (SAP 2000)*, PCACOL, and *Auto Cad*.

Some work items are taken into account include the overall structure of the work of both Primary and Secondary element. Primary structural elements include: Beams, High Beams, Columns, *Shearwall / Corewall, joint* and *Bore Pile* Foundation. While the secondary elements are: the plates, and the plate Basement Walls, Stairs, *Ramp*, and *Lift*. The analysis showed that the structure of the apartment safe and capable *Warhol Residences* accounted for analytically.