

**IMPLEMENTASI *MAPPING OF REINFORCEMENT BAR*
SEBAGAI DASAR PERMODELAN TULANGAN BIM 3D PADA
PROJECT APARTEMEN SAMESTA MAHATA SERPONG
SESUAI SNI 2847-2019**

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ABSTRAK

Penelitian ini berfokus pada elemen struktur lantai 5 Proyek Apartemen Samesta Mahata Serpong Tower Cattleya (B2), yang mencakup kolom, balok, dan *shearwall*. Permasalahan utama yang dihadapi adalah ketiadaan model BIM pada proyek, sehingga diperlukan metode yang sistematis untuk merepresentasikan detail tulangan secara digital. Tujuan penelitian adalah menyusun metode *mapping of reinforcement bar* yang mampu mengidentifikasi jenis, posisi, dimensi, dan jumlah tulangan berdasarkan gambar *as-built*, kemudian memodelkannya dalam format BIM 3D menggunakan Autodesk Revit sesuai ketentuan SNI 2847-2019. Jenis penelitian menggunakan pendekatan kualitatif deskriptif dan penelitian ini menggunakan pendekatan studi kasus eksploratif–deskriptif dengan memanfaatkan data sekunder berupa gambar *as-built* yang dianalisis, dipetakan, dan dimodelkan ulang. Hasilnya berupa model BIM 3D yang terintegrasi dengan *Bar Bending Schedule* (BBS). Analisis menunjukkan bahwa model yang dihasilkan memiliki tingkat akurasi tinggi terhadap kondisi *as-built*, memenuhi persyaratan teknis SNI, serta menyediakan visualisasi yang jelas, dokumentasi digital terintegrasi, dan kemudahan revisi maupun analisis. Kesimpulan penelitian menegaskan bahwa integrasi metode pemetaan tulangan dengan BIM meningkatkan akurasi dokumentasi teknis, memperlancar koordinasi antara tahap perencanaan dan pelaksanaan, serta memberikan nilai tambah untuk proses inspeksi dan pemeliharaan struktur di masa mendatang.

Kata kunci: BIM 3D, *Mapping of Reinforcement Bar*, Revit, SNI 2847-2019.

**IMPLEMENTATION OF REINFORCEMENT BAR MAPPING AS
THE BASIS FOR 3D REBAR BIM MODELING IN THE
SAMESTA MAHATA SERPONG APARTMENT PROJECT
ACCORDING TO SNI 2847-2019**

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ABSTRACT

This study focuses on the structural elements of the 5th floor of the Samesta Mahata Serpong Apartment Project, Cattleya Tower (B2), which include columns, beams, and shear walls. The main problem addressed is the absence of a Building Information Modeling (BIM) representation for the project, necessitating a systematic method to digitally ` reinforcement details. The objective of the research is to develop a mapping method for reinforcement bars that can identify the type, position, dimensions, and quantity of reinforcement based on as-built drawings, and then model them in 3D BIM format using Autodesk Revit in accordance with SNI 2847-2019. The type of research uses a descriptive qualitative approach and this research uses an exploratory-descriptive case study approach by utilizing secondary data in the form of as-built drawings which are analyzed, mapped, and re-modeled. The result is a 3D BIM model integrated with a Bar Bending Schedule (BBS). Analysis shows that the resulting model achieves high accuracy compared to the as-built conditions, complies with SNI technical requirements, and provides clear visualization, integrated digital documentation, and ease of revision and analysis. The conclusion emphasizes that integrating reinforcement mapping with BIM improves the accuracy of technical documentation, streamlines coordination between planning and execution stages, and offers added value for future inspection and maintenance of the structure.

Keywords: 3D BIM, Mapping of Reinforcement Bar, Revit, SNI 2847-2019.