

**CLASH DETECTION ANALYSIS BETWEEN STRUCTURAL AND
ARCHITECTURAL WORKS WITH MECHANICAL ELECTRICAL
WORKS IN PROJECT X WITH BIM**

Final Project



by:

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DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING
UNIVERSITAS ATMA JAYA YOGYAKARTA**

2021

APPROVAL

Final Project

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Have been approved by the Supervisor

Yogyakarta,2021

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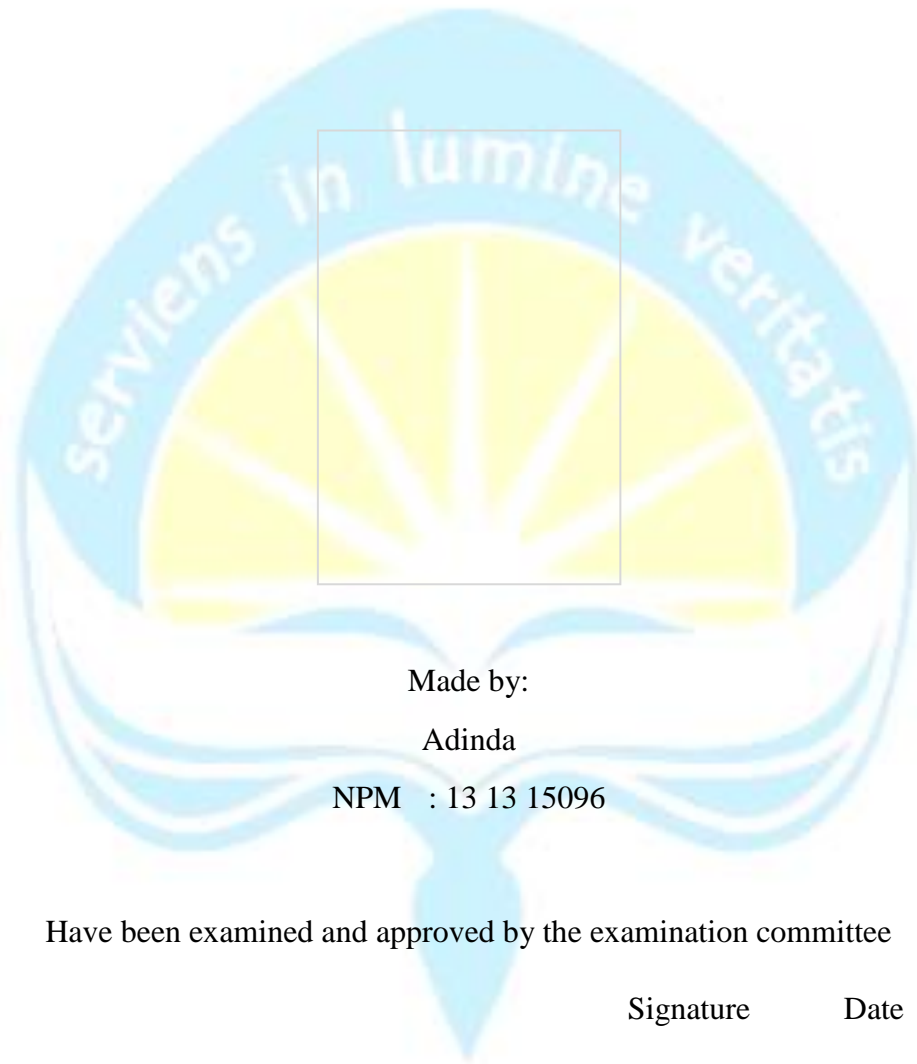


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APPROVAL SHEET

Final Project

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I signed below, stating that the final project with the title:

CLASH DETECTION ANALYSIS BETWEEN STRUCTURAL AND ARCHITECTURAL WORKS WITH MECHANICAL ELECTRICAL WORKS IN PROJECT X WITH BIM

It is the result of my own work and not a result of plagiarism of others people's work. Ideas, research data, and quotes directly or indirectly derived from the writings or ideas of others expressly provided in this Final Project. If it is proved later that the Final Project is the results of plagiarism, which I get the certificate would be canceled and I will return to the Rector of the University of Atma Jaya Yogyakarta.

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Who made the statement

(Adinda)

ACKNOWLEDGEMENT

Praise and gratitude we pray for the presence of Jesus Christ, for the grace and His gift ever bestowed upon us all. For the grace of God, the author finally able to complete the final project entitled **“CLASH DETECTION ANALYSIS BETWEEN STRUCTURE AND ARCHITECTURAL WORKS WITH MECHANICAL ELECTRIKAL WORKS IN PROJECT X WITH BIM”**.

This final defends is a requirement for achieving a Bachelor Degree of International Civil Engineering Program Department of Civil Engineering t at the Faculty of Engineering, Universitas Atma Jaya Yogyakarta. Thanks to the confidence and support from some people morally and materially, that made the author finally faced and overcome the difficulties and obstacles well, so this final defends could be completed. On this occasion, the author would like to express gratitude to a few parties where the assistance, guidance, and encouragement so that I can finish this final defends, namely to:

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Hopefully this paper can be useful and provide guidance to the students who will carry out the thesis as well as to the various parties that need.

Yogyakarta..... 2021

(Adinda)

ABSTRACT

“CLASH DETECTION ANALYSIS BETWEEN STRUCTURE AND ARCHITECTURAL WORKS WITH MECHANICAL ELEKTRIKAL WORKS IN PROJECT X WITH BIM”, Adinda, Student ID Number 13 13 15096 year of 2020, Construction Management, International Civil Engineering Program, Department of Civil Engineering, Universitas Atma Jaya Yogyakarta.

Building Information Modeling (BIM) defined as a sharable collection of building data, including a three-dimensional (3D) computer model of the entire project or collaborative platform to process produce, communicate and analyze the construction project using a digital information model throughout the project construction. The benefits of BIM in development that can improve project management and coordination with each side, reducing cost and time and increasing broader efficiencies, change the design and construction process, accurate geometric representation of part of the building, improved production quality, better procurement decisions.

The analysis data had been use Revit 2020 and Naviswork from autodesk. Field research was carried out by interview, Bill of Quantity and Shopdrawing. Construction projects located in Balikpapan, North Borneo.

From the result analysis of clash detection and its completion, the total cost of rework Structural and MEP Rp. 9.716.690.00 and the total cost of rework Architecutre and MEP Rp. 65.580.000.

Keywords: BIM, modeling, clash detection analysis, clash category, unit price, cost analysis

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