

## **ABSTRACT**

*Effective project management requires control over time and cost to ensure the project runs according to plan. One method that can be used to evaluate project performance is the Earned Value method, which integrates schedule, cost, and work results. This study aims to analyze the time and cost performance of a construction project using the Earned Value Management (EVM) method. The data used includes budget value, actual costs and physical progress of the project in a certain period. The main parameters analyzed include Earned Value (EV), Actual Cost (AC), Schedule Performance Index (SPI), and Cost Performance Index (CPI). Aspects in construction planning are very competitive at this time, demanding accuracy, effectiveness, efficiency, and economy in analyzing projects such as cost control and project time control. This study was conducted with the aim of (1) To determine and determine the time performance of the Medan - Binjai Km. 2+300 to Km. 2+850 (P24 - P38) (JLKAMB 3) (MYC2022-2024) Railway Line Construction Project using the Earned Value Method; (2) To determine the cost performance of the Medan - Binjai Km. 2+300 to Km. 2+850 (P24 - P38) (JLKAMB 3) (MYC2022-2024) Railway Line Construction Project using the Earned Value Method. This study uses secondary data taken from the implementing contractor in the form of project documents such as implementation drawings and structural data used in the project. The results of this study indicate that (1) the schedule variance has a value smaller than 0 ( $SV < 0$ ); (2) the Schedule Performance Index (SPI) shows a value smaller than 1 ( $SPI < 1$ ); (3) the cost variance for the 1st - 5th week period, the budgeted costs are greater than those that have been set, for the 6th - 20th week period, the budgeted costs are in accordance with those that have been set; (4) The results of the analysis that have been carried out are in accordance with the results of the interviews that have been conducted.*

**Keywords:** *Cost control, Earned Value, cost management, project performance.*