

**ABSTRAK**

Judul : Optimasi Kinerja Waktu dan Biaya Proyek dengan Metode *Duration Cost Trade Off* dan *Linear Programming* (Studi Kasus : Pekerjaan *Finishing* pada Proyek Mandaya Royal *Hospital* Puri, Tangerang), Nama : Cika Juliyanti, NIM : 41119110052, Dosen Pembimbing : Retna Kritiana, ST., MT, 2021.

Pada pelaksanaan proyek konstruksi, keterlambatan (*delay*) merupakan suatu permasalahan yang terjadi hampir diseluruh proyek konstruksi dengan penyebab yang beragam serta dapat menyebabkan kerugian pada berbagai pihak, baik itu owner maupun pihak pelaksana. Proyek Mandaya Royal *Hospital* Puri mengalami keterlambatan waktu dalam pembangunannya sebesar minus 6,857%. Terjadinya perubahan *design*, perubahan pemilihan material, keputusan owner, adanya penunjukan subkon/vendor secara langsung oleh *owner* menjadi penyebab keterlambatan pada proyek tersebut. Penelitian ini bertujuan untuk percepatan pekerjaan ditinjau dari optimasi kinerja waktu dan biaya serta mengetahui pencapaian profit optimum yang paling efektif dan efisien dengan melakukan perbandingan penambahan jam kerja (kerja lembur) menggunakan metode *Duration Cost Trade Off* dan *Linear Programming*. Dari segi waktu, percepatan pekerjaan dengan metode *Duration Cost Trade Off* dengan penambahan jam lembur lebih lama dari metode *Linear Programming*, dimana waktu dengan metode *Duration Cost Trade Off* yaitu 113 hari dan waktu dengan metode *Linear Programming* yaitu 98 hari, sedangkan dari segi biaya, percepatan pekerjaan dengan metode *Duration Cost Trade Off* dengan penambahan jam lembur lebih besar dari metode *Linear Programming*, dimana biaya dengan metode *Duration Cost Trade Off* yaitu Rp. 3.599.371.434 dan biaya dengan metode *Linaer Programming* yaitu Rp. 3.562.255.720.

**Kata kunci** : Biaya, waktu, pekerjaan *finishing*, *duration cost trade off*, *linear programming*.

---

**ABSTRACT**

*Title: Optimization of Project Time and Cost Performance with the Method of Duration Cost Trade Off and Linear Programming (Case Study: Finishing Work on the Mandaya Royal Hospital Puri, Tangerang Project), Name: Cika Juliyanti, NIM: 41119110052, Supervisor: Retna Kritiana, ST. , MT, 2021.*

*In construction project implementation, delay is a problem that occurs in almost all construction projects with various causes and can cause losses to various parties, both the owner and the executor. Therefore, it is important to know the cause of the project delay and to find a solution, so as to minimize the delay and can be used as a reference for future projects. The Mandaya Royal Hospital Puri project experienced a delay in construction by minus 6.857%. Changes in design, changes in material selection, owner decisions, direct appointment of subcontractors / vendors by the owner are the causes of delays in the project. This study aims to accelerate work in terms of time and cost performance optimization and to determine the most effective and efficient optimum profit achievement by comparing the additional working hours (overtime work) using the Duration Cost Trade Off and Linear Programming methods. In terms of time, the acceleration of work using the Duration Cost Trade Off method with the addition of overtime hours is longer than the Linear Programming method, where the time using the Duration Cost Trade Off method is 113 days and the time using the Linear Programming method is 98 days, while in terms of costs, the acceleration work with the Duration Cost Trade Off method with the addition of overtime hours is greater than the Linear Programming method, where the cost with the Duration Cost Trade Off method is Rp. 3,599,371,434 and the cost with the Linaer Programming method is Rp. 3,562,255,720.*

**Keywords :** *Cost, time, finishing work, duration cost trade off, linear programming.*