

## ABSTRAK

**IBNU SURANTA NUGROHO, Teknik Pelaksanaan Overpass Sta 19+500 Dan Pengendalian Mutu Pekerjaan Overpass Pada Proyek Pembangunan Jalan Tol Tebing Tinggi - Parpat Studi Kasus: Jalan Tol Tebing Tinggi-Parapat, Tugas Akhir, Medan: Program Studi D3 Teknik Sipil, Fakultas Teknik Jurusan Pendidikan Teknik Bangunan, Universitas Negeri Medan, 2021.**

Overpass merupakan jalan yang dibangun tidak sebidang untuk penghubung jalan yang berada di atas jalan tol. Overpass diperlukan agar akses jalan eksisting yang sudah ada sebelum adanya jalan tol tidak terputus. Pekerjaan overpass mencakup pekerjaan struktur bawah (substructure) yang meliputi fondasi, pile cap, abutment dan struktur atas (superstructure) yang meliputi balok girder tipe I (PC-I girder), diafragma, pelat lantai serta struktur pengaman. Pekerjaan PC-I girder sendiri meliputi pekerjaan stressing girder dan pengangkatan (erection) girder. Tujuan penelitian ini untuk mengetahui teknik pelaksanaan overpass dan juga untuk mengetahui pengendalian mutu pekerjaan berdasarkan time schedule.

Teknik pelaksanaan dan pengendalian mutu overpass di lapangan sesuai dengan kontrak. Proses pelaksanaan overpass dilakukan berdasarkan time schedule berdurasi 157 hari, di mulai dari tanggal 1 februari 2020 sampai dengan selesai di tanggal 20 juli 2020. Berdasarkan shop drawing lebar overpass 13,64 m dapat ditumpu oleh pilar dengan panjang 40,80 m dan dengan tinggi 7 m. Berdasarkan uraian tersebut, maka proyek akhir ini akan mengkaji lebih mendalam tentang teknik pelaksanaan pekerjaan overpas STA 19+500 dan pengendalian mutu pekerjaan overpass pada proyek pembangunan jalan tol Tebing Tinggi – Parapat.

**Kata Kunci:** Overpass, substructure, superstructure, time schedule.

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**IBNU SURANTA NUGROHO, Implementation Techniques for the Sta 19+500 Overpass and Quality Control of Overpass Works on the Tebing Tinggi - Parpat Toll Road Construction Project Case Study: Tebing Tinggi-Parapat Toll Road, Final Project, Medan: Civil Engineering D3 Study Program, Faculty of Engineering Education Department Building Engineering, Medan State University, 2021.**

Overpass is a road that is built not on a plot to connect roads that are above the toll road. Overpass is needed so that access to existing roads that existed before the existence of the toll road is not cut off. Overpass work includes substructure work which includes foundations, pile caps, abutments and superstructure which includes type I girder beams (PC-I girder), diaphragms, floor plates and safety structures. PC-I girder work itself includes stressing girder and erection girder work. The purpose of this study is to determine the overpass implementation technique and also to determine the quality control of work based on the time schedule.

Overpass implementation and quality control techniques in the field in accordance with the contract. The overpass implementation process is carried out based on a time schedule of 157 days, starting from February 1, 2020 until completion on July 20, 2020. Based on the shop drawings, the overpass width of 13.64 m can be supported by pillars with a length of 40.80 m and a height of 40.80 m. 7 meters. Based on this description, this final project will examine in more depth the technical implementation of the STA 19+500 overpass work and quality control of the overpass work on the Tebing Tinggi – Parapat toll road construction project.

**Keywords:** Overpass, substructure, superstructure, time schedule

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