PERANCANGAN FASILITAS PEJALAN KAKI DI JALAN UTAMA KAMPUS POLITEKNIK NEGERI BENGKALIS

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ABSTRAK

Penambahan fasilitas pejalan kaki yang memadai sangat penting dalam menunjang mobilitas dan keselamatan civitas akademika di lingkungan kampus. Saat ini, jalan utama Kampus Politeknik Negeri Bengkalis tidak memiliki fasilitas pejalan kaki, sehingga menimbulkan ketidaknyamanan dan potensi risiko kecelakaan. Penelitian ini bertujuan merancang fasilitas pejalan kaki yang optimal guna meningkatkan kenyamanan, keamanan, dan kelancaran mobilitas di jalan utama kampus. Metode yang digunakan meliputi evaluasi kondisi eksisting, pengukuran volume pejalan kaki, dan analisis kebutuhan berdasarkan standar teknis Surat Edaran Menteri PUPR No 02 Tahun 2018. Hasil survei menunjukkan fasilitas pejalan kaki saat ini kurang memadai terutama pada jam puncak. Perancangan dilakukan dengan lebar trotoar adalah 3,5 meter disetiap segmen, mengakomodasi zona tepi jalan dan fasilitas pendukung seperti zebra *cross* untuk aspek keselamatan. Visualisasi desain dibuat dalam bentuk 3D menggunakan *SketchUp* untuk menggambarkan aspek fungsional dan estetika secara realistis. Estimasi total anggaran pembangunan fasilitas pejalan kaki mencapai Rp 2.226.415.237,00. Implementasi rencana ini diharapkan dapat meningkatkan kualitas, keamanan, dan kenyamanan jalur pejalan kaki di lingkungan kampus secara berkelanjutan.

Kata kunci : Desain 3D, Estimasi Anggaran, Fasilitas Pejalan Kaki, Perancangan Trotoar, Volume Pejalan Kaki.

Design of Pedestrian Facilities on the Main Road of Politeknik Negeri Bengkalis Campus

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ABSTRACT

The addition of adequate pedestrian facilities is crucial to support the mobility and safety of the academic community within the campus environment. Currently, the main road of the Bengkalis State Polytechnic Campus lacks pedestrian facilities, causing inconvenience and potential accident risks. This study aims to design optimal pedestrian facilities to improve comfort, safety, and smooth mobility on the main road of the campus. The methods used include evaluating existing conditions, measuring pedestrian volumes, and analyzing needs based on the technical standards of the Minister of Public Works and Public Housing Circular Letter No. 02 of 2018. The survey results indicate that current pedestrian facilities are inadequate, especially during peak hours. The design is carried out with a sidewalk width of 3.5 meters in each segment, accommodating roadside zones and supporting facilities such as zebra crossings for safety aspects. The design visualization is made in 3D using SketchUp to depict functional and aesthetic aspects realistically. The estimated total budget for the construction of pedestrian facilities reaches Rp 2,226,415,237.00. The implementation of this plan is expected to improve the quality, safety, and comfort of pedestrian paths within the campus environment in a sustainable manner.

Keywords: *3D Design, Budget Estimate, Pedestrian Facilities, Sidewalk Design or Sidewalk Planning, Pedestrian Volume.*