ABSTRACT

Roads are land transportation infrastructure that includes all parts of the road, including complementary buildings and equipment intended for traffic. H.T. Rizal Nurdin Road, located in Serdang Bedagai Regency, North Sumatra Province, is one of the roads to access the mirror beach tourist attractions and PTPN IV oil palm plantations. However, over time, the physical condition of H.T. Rizal Nurdin Road has deteriorated in the road structure due to increased overloading of the pavement infrastructure. Therefore, a good re-planning is needed to avoid damage to the pavement structure caused by excessive loads. The purpose of this study is to determine the planning of flexible pavement structures based on road traffic loads calculated using the 2017 Bina Marga method and the 1993 AASHTO method on the H.T. Rizal Nurdin road section STA 0+000 - STA 1+000. While this research method is an analytical method using the 2017 Bina Marga method and the 1993 AASHTO method. The results of this study indicate that the 2017 Bina Marga Method obtained the thickness of the AC-WC (Asphalt Concrete-Wearing Course) wear surface layer 4 cm, the AC-BC (Asphalt Concrete-Binder Course) intermediate surface layer 6 cm, the AC-Base (Asphalt ConcreteBase) foundation layer 0 cm, and the Class A Aggregate Foundation Layer (LPA) 40 cm while the 1993 AASHTO method obtained the thickness of the MS 744 Laston surface layer 11 cm, the Class A Crushed Stone top foundation layer 28 cm, and the Class A Sirtu bottom foundation layer 57 cm.

Keywords: Road, Flexible Pavement, Structure Planning, Bina Marga 2017, AASHTO 1993.