VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Belgaum-590014

A PROJECT REPORT

on

"PERFORMANCE EVALUATION OF RBI GRADE-81 MATERIAL FOR BITUMINOUS CONCRETE MIXES"

Submitted in Partial fulfillment of the Requirements for the Degree of

BACHELOR OF ENGINEERING

in

CIVIL ENGINEERING

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SYNOPSIS

A good pavement is needed for the safe, comfortable and economical movement of vehicular traffic. Sub grade is the major component of a pavement and properties of sub grade have significant effects on the pavement performance and thereby its life. Soil stabilization is the collective term for any physical, chemical, biological method or any combination of such methods employed to improve the strength of natural soil so as to make it serve the intended purpose. Using the technique of soil stabilization, many case studies are undergone using different soil stabilizing material and concluded that even sub-base and base layers can also be replaced with aggregate-soil mixed material which gives the desired strength results same as that of conventional materials could give.

RBI Grade 81 is a unique and innovative product that was developed for the stabilization of wide spectrum of soils in an efficient, least- cost manner. RBI Grade 81 is an environmental friendly inorganic, hydration activated powder-based stabilizer that reacts with soil particles to layers that are interconnected through a complex inter-particle framework.

Aim of the project is to conduct laboratory experiments to study the index and engineering properties of various kinds of soil samples available at NH-4.

The soil sample is collected from the proposed site. The properties of soil like Atterberg limits, Optimum Moisture Content (OMC) and Maximum Dry Density (MDD) and their variation with varying percentage of RBI Grade 81 are studied. The capability of RBI Grade 81 in improving the soil strength in terms of California Bearing Ratio (CBR) value will be found by laboratory studies and based upon the results obtained conclusion is drawn.