

UNIVERSITI TEKNOLOGI MARA FACULTY OF CIVIL ENGINEERING INDUSTRIAL TRAINING REPORT

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ACKNOWLEDGEMENT

Alhamdulillah, thanks to Allah The Most Gracious and The Most Merciful for allowing me to completed this practical training at Bina Mekar Sdn Bhd for 8 weeks. Along this time I have gained so much experiences, memories and knowledge, although it not hundred percent related with my field. Industrial training is one way to expose the undergraduate student with exact environment which will help them to get through after graduation from university. This training gave me the opportunity to explore various things that can't get in lecture hall. Furthermore, I have learned so much about reality life outside of the university.

I would like to give a warm thank you to Bina Mekar Sdn for giving me the chance to experience the life of working in a well-known company even for only 2 months. Moreover, deeply thanks to Site Engineer Bina Mekar Sdn Bhd, En Azmi Bin Abdullah as my supervisor. I would like to give my appreciation and thanks to all engineers, and staffs for all wonderful experiences and cooperation during my practical.

Special thanks to my dearly loved parents for giving me hope and strength with every little thing I have done. Their support never ceases and always leads me to triumph. Special thanks to En. Shahrul, for his visit to Bina Mekar Sdn Bhd during my industrial training.

Finally, with memorable, for those who contribute directly or indirectly toward preparing and finishing on the practical training I wish for God blessed, thank you.

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CHAPTER 1

INTRODUCTION

The definition of road is a wide way leading from one place to another, especially one that vehicles can use. The first indications of constructed roads date from about 4000 BC and consist of stone paved streets at Ur in modern-day Iraq and timber roads preserved in a swamp in Glastonbury, England. The longest road in the world is Australia's Highway 1. This road is over 24,000kms which makes it the longest national highway in the world. The functions of road are safe, effective and efficient movement of motor vehicles is balanced against the needs of other transport and non-transport users.

The road builders of the late 1800s depended solely on stone, gravel and sand for construction. Water would be used as a binder to give some unity to the road surface. John Metcalfe, a Scot born in 1717, built about 180 miles of roads in Yorkshire, England (even though he was blind). His well drained roads were built with three layers large stones, excavated road material, and a layer of gravel.

Modern tarred roads were the result of the work of two Scottish engineers, Thomas Telford and John Loudon McAdam. Telford designed the system of raising the foundation of the road in the center to act as a drain for water. Thomas Telford (born 1757) improved the method of building roads with broken stones by analyzing stone thickness, road traffic, road alignment and gradient slopes. Eventually his design became the norm for all roads everywhere.

John Loudon McAdam (born 1756) designed roads using broken stones laid in symmetrical, tight patterns and covered with small stones to create a hard surface. McAdam's design, called "macadam roads," provided the greatest advancement in road construction. But nowadays, the whole worlds use asphalt as a main material in the road construction.

BACKGROUND OF ORGANIZATION

BINA MEKAR SDN.BHD was incorporated under Company Act 1965 on December 21, 1994. This company is established and runs by a group of professional workforce which comprises of 100% Bumiputra high-skilled in specific areas.

This company provides services in engineering field specifically in building in construction, bridge, road, marine and water reticulation.

This company started in construction activity with Class D licenses from Contractor Services Center ("PKK") legitimately effective on April 15, 1997 until November 3, 1998. Then this company started the move heading for Class C which started from December 4, 1998 until November 3, 1999 in order to achieve the objectives of this company.

With a new strategy and planning, BINA MEKAR SDN.BHD has been dignified to Class B dated November 12, 1999 until November 3, 2003. To update, BINA MEKAR SDN.BHD has been accredited as Class A license started on November 4, 2003.Apart from that, BINA MEKAR SDN. BHD also has been awarded ISO 9001: 2008 on January 19, 2009.

The management with skillful support and experienced professional are in high manpower confidence to attain corporate goals and compete with other construction companies.