

Acknowledgement

Alhamdulillah, praise to Almighty Allah for His blessing and guidance which enabled me to complete this research.

I wish to extend my greatest gratitude and gratefulness to my supervisor Dr .Ali Hussein Mohammed for his valuable guidance, advice and suggestions throughout this project. His effort and concern, that able me to complete my thesis.

A lot of thanks to all staff of civil Engineering Department ,Sudan University of Science and Technology and to all my friends who were provided me with a high level of information's.