

5.13.13 *Working Document No. 13*

*Traffic Flow Information* - This document contains information on the traffic countings carried out by the PICR with the objective of studying road deterioration.

5.13.14 *Working Document No. 14*

*Material Characteristics of Pavement Study Sections* - This document presents the results of the tests made to characterize pavement layers for the sections included in the pavement deterioration study.

5.13.15 *Working Document No. 15*

*Paved and Unpaved Road Performance Parameters* - This document characterizes the parameters which indicate the deterioration of paved and unpaved roads.

5.13.16 *Working Document No. 16*

*Data Collection Procedures for the Fuel and Speed Experiments* - This paper includes the methods and techniques of the experiments which involve both vehicle operation simulations and fuel consumption measurements.

5.13.17 *Working Document No. 17*

*Test Section for the Fuel and Speed Experiment* - This paper documents the characteristics of the several sections selected to make it possible to simulate vehicle operation and measure fuel consumption.

5.13.18 *Working Document No. 18*

*Time and Fuel Algorithm* - This is the first version of the Model of Time and Fuel Consumption (MTC), which was then called the Time and Fuel Algorithm (TAFA). This topic is presented in Volume 9 of the Final Report in a more finished form.

5.13.19 *Working Document No. 19*

*User Survey Methodology and Documents* - This document presents the methods and techniques (standardized forms, etc.) used by the User Costs Group in data collection.

5.13.20 *Working Document No. 20-I*

*Documentation of the Pavement Studies Data Files* - This volume presents the documentation of the Pavement Deterioration Study Group.

5.13.21 *Working Document No. 20-II*

*Documentation of the Traffic Experiments Data Files* - This volume presents the documentation of the Traffic Study Group's files.

5.13.22 *Working Document No. 20-III*

*Documentation of the User Cost Surveys Data Files* - This volume presents the documentation pertaining to the User Cost Surveys files.

5.13.23 *Working Document No. 21*

*Resultados de Deflexões Medidas com Viga Benkelman* - This document consolidates the results of pavement-deflection measurements obtained with the use of the Benkelman Beam on PICR test sections.

5.13.24 *Working Document No. 22*

*A Procedure for Obtaining a Stable Roughness Scale from Rod Level Profiles* - This is part of the Ph.D. Thesis submitted to the University of Texas at Austin, by César Augusto Vieira de Queiroz. It discusses an attempt to establish the roughness level of a road surface through conventional topographic measurements.

5.13.25 *Working Document No. 23*

*An Evaluation of Unpaved Road Performance and Maintenance* - This is a Ph.D. Thesis submitted to the University of Texas at Austin, by Alex T. Visser. The data from which the models and equations were developed were obtained by the PICR.

5.13.26 *Working Document No. 24*

*User Cost Analysis Memos - 1980* - This volume contains the technical memos which document the analysis of the users costs files carried out during 1980.

5.13.27 *Working Document No. 25*

*Performance Prediction Models for Pavement Management in Brazil* - This is the Ph.D. Thesis of César Augusto V. de Queiroz, submitted to the University of Texas at Austin. The data used for developing the models contained therein are from the PICR.

5.13.28 *Working Document No. 26*

*Boletins Técnicos Nº 1 to 11* - This is a collection of Technical Bulletins written and distributed by technicians directly involved in the collection of data for the Study of Pavement, Maintenance and Deterioration.

5.13.29 *Working Document No. 27*

*Resultados dos Levantamentos da Condição dos Pavimentos* - This volume contains the results of the survey of the condition of pavements carried out on the test sections included in the Study of Pavement, Maintenance and Deterioration.

5.13.30 *Working Document No. 28*

*User Cost Analysis Memos - 1981* - This volume contains the

technical memos which documented the statistical analysis of the User Cost Files carried out during 1981.

5.13.31 *Working Document No. 29*

*Resultados de Deflexões Medidas com Dynaflect* - This volume contains the results of deflection measurements obtained with the Dynaflect. This instrument induces an elastic deformation in the pavement by applying a small load at 8 cycles per second.

5.13.32 *Working Document No. 30*

*Estudo Sobre a Validade dos Dados de Irregularidade da PICR* - This volume presents an evaluation of the roughness measurements regarding factors that can distort the results.

5.13.33 *Working Document No. 31*

*Road User Cost Surveys (Report III)*

*Working Document No. 32*

*Road User Cost on Traffic Experiments (Report IV)*

*Working Document No. 33*

*Pavement and Maintenance Studies (Report V)*

*Working Document No. 34*

*Instrumentation Report (Report VI)* - This is the final report submitted by the Texas Research and Development Foundation (TRDF) to the World Bank at the termination of the TRDF's contract. It shows the ICR Research in December 1979. This report was submitted to the World Bank in June 1980 and its circulation was restricted to the institutions involved in the project.

5.13.34 *Working Document No. 35*

*Manual de Recuperação de Informações e Procedimentos de Anã-*

*lise Estatística* - This manual permits the retrieval of any information associated with the statistical procedures adopted by the PICR through December 1979. Data entry for information retrieval is made through key-words or subject matter.

5.13.35 *Working Document No. 36*

*Quarterly Progress Report No. 1*

*Working Document No. 37*

*Quarterly Progress Report No. 2*

*Working Document No. 38*

*Quarterly Progress Report No. 3*

*Working Document No. 39*

*Quarterly Progress Report No. 4*

*Working Document No. 40*

*Quarterly Progress Report No. 5*

*Working Document No. 41*

*Quarterly Progress Report No. 6*

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*Quarterly Progress Report No. 7*

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*Quarterly Progress Report No. 9*

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*Quarterly Progress Report No. 10*

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*Quarterly Progress Report No. 11*

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*Quarterly Progress Report No. 12*

*Working Document No. 48*

*Quarterly Progress Report No. 13*

*Working Document No. 49*

*Quarterly Progress Report No. 14* - This selection of working documents is a series of quarterly reports written by TRDF for the World Bank as a contract requirement. They explain the progress made, the variations in staff, the difficulties encountered, and the solutions adopted. These reports also contain copies of technical memos written during the period from July 1976 to October 1979.

5.13.36 *Working Document No. 50*

*Report I - Inception Report* - This is the English version of the *Relatório Preliminar*, which basically describes the organization of the PICR, and the methods and techniques which would be utilized.

5.13.37 *Working Document No. 51*

*Report I - Midterm Report* - This is the English version of the *Relatório Intermediário*, where a number of preliminary results obtained by PICR are presented.

5.13.38 *Working Document No. 52*

*Relatório Preliminar* - This is the Portuguese version of the *Inception Report* (Working Document No. 50).

5.13.39 *Working Document No. 53*

*Relatório Intermediário* - This is the Portuguese version of the *Midterm Report* (Working Document No. 51).







1981

VOLUME 1 – Summary of the ICR Research

ICR RESEARCH

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