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Indian and Northern Affairs -
Engineering and Architecture

Technical Manuals Master Plan -
Northern Affairs Program

July 1979

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OTTAWA, Ontario KIA OH4
September 11, 1979.

Your file Votre référence

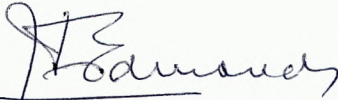
Our file Notre référence

Technical Manuals Master Plan -
Northern Affairs Program -
EA-HQ-78-23N

This is in reply to your August 24th memorandum to me requesting a list of manuals being prepared by E & A Branch so that you could take these into account in your own Program, and thus avoid unnecessary duplication.

-- Attached is one copy of EA-HQ-78-23N "Technical Manuals Master Plan - Northern Affairs Program" which will, I believe, meet your needs.

Encl.
EDMONDS/tc


J.K. Edmonds,
Program E & A Advisor,
Northern Program.

12-9-79



Indian and
Northern Affairs

Affaires indiennes
et du Nord

Engineering and
Architecture

Génie et
architecture



REPORT
For Discussion Only

RAPPORT
Pour discussion seulement

TECHNICAL MANUALS MASTER PLAN -
NORTHERN AFFAIRS PROGRAM

July, 1979

Co-ordination Services
Division

FOREWORD

This document contains all the manual titles and their associated tables of content currently in the E & A Branch Technical Manuals Work Plan for the Northern Affairs Program.

It contains two lists:

1. a numerical listing of all manuals; and,
2. a numerical listing of all manuals with the following additional information:
 - a. a synopsis of the proposed contents of each manual;
 - b. a complete table of contents for each manual; and
 - c. a status code (see note 1) for each manual or for its individual components (a manual may be written as an integral document or, in many cases, as a number of separate publications).

Note 1: The status of documents is indicated by the following codes:

- A - Published
- B - Available in final draft
- C - Final draft available by March 31, 1980
- D - Final draft not available in the current fiscal year

Note 2: To help users find additional information on a particular subject some publications are referred by number and title in the table of contents of related manuals. These referenced publications are marked with asterisks.

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3.	BRANCH GRAPHICS
4.	TECHNICAL DOCUMENTS MANAGEMENT SYSTEM
5.	INFOTHEQUE, DATA STORAGE AND RETRIEVAL
8.	BRANCH PUBLICATIONS
	<u>TECHNICAL RESSOURCES</u>
9.	E & A HUMAN RESOURCES
	<u>SPECIAL PROGRAMS</u>
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- CONTRACT ADMINISTRATION
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36. CONTRACTING (NON-CONSTRUCTION)
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42. MISCELLANEOUS PUBLICATIONS (CONTRACTS AND CAPITAL PROGRAM)
- FIRE PREVENTION AND SAFETY
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46. FIRE PREVENTION AND PROTECTION - NORTHERN AFFAIRS
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52. CONTROL SURVEYS SERVICES
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54. AIR PHOTO INTERPRETATION SERVICES
- ENVIRONMENT
59. ENVIRONMENTAL IMPACT ASSESSMENT
60. SELECTION, INVESTIGATION AND SITE
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68. WASTEWATER COLLECTION AND DISPOSAL

69. POWER GENERATION AND DISTRIBUTION

70. SOLID WASTE COLLECTION AND DISPOSAL

71. WATER SUPPLY AND DISTRIBUTION

BUILDINGS

76. ADMINISTRATION OF THE BUILDING DESIGN PROCESS

77. ESTIMATING, COST DATA, BILLS OF QUANTITIES FOR BUILDING PROJECTS

79. BUILDING DESIGN - GENERAL

82. BUILDING DESIGN - NORTHERN AFFAIRS

84. STRUCTURAL DESIGN FOR CONTEMPORARY BUILDINGS

85. BUILDING MATERIALS AND ARCHITECTURAL TECHNOLOGY

86. PLUMBING SERVICES IN BUILDINGS

87. SPACE CONDITIONING IN BUILDINGS

88. ELECTRICAL SYSTEMS IN BUILDINGS

89. SPECIAL BUILDING SYSTEMS

90. MAINTENANCE AND OPERATION OF BUILDING FACILITIES

94. MISCELLANEOUS PUBLICATIONS (BUILDINGS AND SERVICES)

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96.	TRANSPORTATION PLANNING
97.	ROAD DEVELOPMENT/DESIGN
98.	ROAD CONSTRUCTION
99.	ROAD MAINTENANCE
	<u>EQUIPMENT</u>
109.	MOBILE CONSTRUCTION AND MAINTENANCE EQUIPMENT AND PASSENGER VEHICLES

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Northern

DRM 10-7

DRM 10-7/1 - INTRODUCTION

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/1.1.	Engineering and Architecture Manual	D

DRM 10-7/2 - E&A BRANCH ROLES & RESPONSIBILITIES

This manual relates to the objectives, areas of responsibility, functions and organization of the E&A Branch.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/2.1.	Engineering, Architectural and Technical Services, Objectives, Areas of Responsibility, Functions and Organizations 1. Introduction 2. Engineering and Architecture Branch 3. Regional Engineering and Architectural Units, Northern Affairs Program	B
2.2.	Procedures for Review and Processing of Treasury Board Submissions	B
2.3.	Division of Responsibilities for Capital Programs - E&A Branch and Northern Program H/Q.'s and Regions	D

DRM 10-7/3 - BRANCH GRAPHICS

This manual describes procedures, methods of production, specifications and technical details for sketches, drawings, illustrations, photographs and typography to be used in Branch publications and presentations.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/3.1.	Management Summary	D
3.2.	Development of Graphics	D
3.3.	Graphics for Printing (Illustrations)	B
3.4.	Reproduction of Photographs	D
3.5.	Typography	D
3.6.	Specifications	D
3.7.	Artwork for Audio-Visual Presentation	D
3.8.	Procedures	D

DRM 10-7/4 - TECHNICAL DOCUMENTS MANAGEMENT SYSTEM

This manual details the procedures and guidelines for the management of Branch drawings and related technical documents from document identification through document reproduction. The system includes: coding, microfilming requirements, standards, storage and retrieval and reproduction methods.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/4.1.	Management Summary and Policy	C
4.2.	Drawings and Related Technical Documents Coding System	B
4.3.	Standards for Drawings	B
	1. Drawing Format	
	2. Half-size	
4.4.	Microfilming	B
4.5.	Storage and Retrieval	
	1. Archival Storage	B
4.6.	Reproduction	B

DRM 10-7/5 - INFOTHEQUE, DATA STORAGE AND RETRIEVAL

This manual is designated to instruct interested staff of the E & A Branch in the operation of computerized information storage and retrieval system called Infotheque.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/5.1.	Infothèque	C
5.2.	Technical Reference Library	D

DRM 10-7/8 - BRANCH PUBLICATIONS

This manual sets out the detailed responsibilities and procedures for the development of Branch publications from initiation of preliminary drafts through to promulgation. It establishes the Branch identity and physical characteristics of publications (i.e., size, colour, formats and numbering systems).

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/8.1.	Management Summary	C
8.2.	Identification System for Branch Publications	B
8.3.	Procedures for Maintaining the Technical Manuals Master Plan	B
8.4.	Developing Publications - Part I - Policies Standards and Guidelines	B D
8.5.	Developing Publications - Part II - Reports	B
8.6.	Translation	B
8.7.	Printing	B
8.8.	Distribution	B
8.9.	Up-dating Publications	B
8.10.	Use of SI (Metric) in all E&A Branch Publications and Correspondence	B
8.11.	Author's Credit Lines in E&A Branch Publications.	D

DRM 10-7/9 - E & A HUMAN RESOURCES

The manual covers a variety of subjects related to the management, development and utilization of technical human resources within the Department.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/9.1.	Management Summary	C
9.2.	Technical Training Program	B
	1. Outline of the Technical Training Program	B
	2. Guidelines for Conference Co-ordinators	B
	3. Guidelines for Course Co-ordinators	B
9.3.	(Spare)	
9.4.	(Spare)	
9.5.	Resource Utilization Reporting System	B
9.6.	(Spare)	
9.7.	Technical Resources Inventory	B
9.8.	Professional and Technical Advisory Services	B

DRM 10-7/10 - REGIONAL E&A RESOURCE GUIDELINES FOR
ESTIMATING MANPOWER REQUIREMENTS

This manual is a planning tool to assist managers to identify, quantify and justify the human resources required to carry out a given capital and maintenance program.

It will contain charts and graphs showing salary dollars and man-years needed to deliver the various stages and types of capital and non-capital work.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/10.1.	Management Summary	C

DRM 10-7/14 - EMERGENCY PLANNING

This manual defines and establishes the role that DIAND will pay in support of crisis handling within the federal government. It will contain guidelines for the development of contingency plans by the Programs (H.Q. and Regions) and guidance on levels and percentages of shared Federal/Provincial emergency financial assistance.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/14.1.	Management Summary	C
14.2.	Policy	B
14.3.	Emergency Planning Guidelines	B
14.4	Guideline on Cost Sharing for Disaster Assistance	B

DRM 10-7/15 - ENERGY CONSERVATION

This manual establishes the Department's position with respect to energy conservation within the Federal Government. It contains the accumulation of energy conservation policy statements as issued by Parliament, Treasury Board, EMR and DIAND. The manual sets out the identity, objectives, responsibilities and functions of short- and long-term energy consumption reporting systems. A number of technical publications relating to energy conservation are also cross-referenced in the Table of Contents.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/15.1.	Management Summary	C
15.2.	Departmental Policy - In-house Energy Conservation Program	B
15.3.	Energy Conservation - Buildings	
	1. Energy Conservation in Existing Buildings	B
	2. Energy Conservation in New Building Design	B
	* Life Cycle Costing for Buildings (see 77.5)	
	* Wall and Roof Construction for New Energy Conserva- tion Standards (see 85.4.1)	
	* Solar Heating - State of the Art (see 87.6.1)	
	* Energy Conservation - Electrical Systems in Buildings (see 88.2.1)	
15.4.	Energy Conservation - Equipment	D

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
15.5.	(Spare)	
15.6.	Energy Consumption Reporting System - Phase I	B
15.7.	Energy Consumption Reporting System - Phase II	C
15.8.	(Spare)	
15.9.	Energy Consumption Budgeting and Control (Energy Consumption Management)	D
	1. Theoretical Energy Requirements for Buildings	D
	2. Performance Measurement	D
15.10.	Energy Conservation Catalogue (State of the Art)	D

DRM 10-7/16 - METRIC CONVERSION

This manual establishes the Department's policy regarding metric conversion and sets out a Departmental plan for the conversion of its activities. A number of technical publications relating to metric conversion are also cross-referenced in the Table of Contents.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/16.1.	(Spare)	
16.2.	Metric Conversion (Departmental Plan)	B
*	Metric Consideration in Site Development (see 60.13.2)	
*	Conversion to the International System of Units for the Recording of Historic Sites and Structures (see 123.8)	
*	Use of SI (Metric) in All E & A Branch Publications and Correspondence (see 8.10)	

DRM 10-7/21 - TECHNICAL DEVELOPMENT FUNCTION

The role of the technical development function is to provide specialized assistance to technical specialists within the department who are seeking solutions to unique problems. The manual will provide the potential user with descriptions of the services provided and how to use them.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
1.0	Scope	B
2.0	Technical Information Service	B
3.0	Bulletins	B
4.0	Technical Assistance Services	B

DRM 10-7/22 - GUIDELINE FOR E & A SYSTEM DEVELOPMENT

The most commonly found weakness in system development assignments, particularly lengthy assignments involving many people, is a lack of understanding of the essential phases of the system development process and the work content of each. The objective of this document is to define the process, the terminology and the responsibilities of all parties involved in it.

In recognition of this problem, but quite independent of this Branch, Management Systems branch retained a system consultant for this very reason. The output of this contract was a document entitled the System Life Cycle which, with some modification will meet E & A needs.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
1.0	Introduction	B
2.0	System Life Cycle Concept	B
3.0	Request Initiation	B

DRM 10-7/24 - DEPARTMENTAL ASSETS INVENTORY SYSTEM

The inventory system manual will document all procedures associated with the operation and maintenance of the system itself. With documentation of this nature, users in the Regions will be able to make use of the system as required, and to maintain their own inventory records independently of E&A Headquarters and the other user Regions.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
1.0	Management Summary	B
2.0	Definitions	B
3.0	Authority and Responsibility	B
4.0	System Description	B
5.0	Inputs	B
6.0	Processing	B
7.0	Reporting	B
8.0	Special Retrievals	B
9.0	System Operating Instructions	B
10.0	Trouble Shooting	B
	Appendices - Description of Each Asset Classification	B

DRM 10-7/25 - MAINTENANCE MANAGEMENT

This manual is intended for use as a reference document for those concerned with the operation and maintenance of Departmental capital assets. The manual contains a comprehensive description of the system to be used for planning, scheduling, controlling and reporting on preventive and emergency maintenance of assets. The maintenance management system and its component sub-systems are discussed in detail as are levels of service, average production standards, work programming, budgeting and forms applicable.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/25.1.	Management Summary	B
25.2.	Definitions	B
25.3.	Identification of Significant Maintenance Activities	B
25.4.	Maintenance Management System	C
25.5.	Maintenance Standards	C
25.8.	Northern Affairs program	C

DRM 10-7/26 - CONSTRUCTION COST MANUAL

The objectives of the Engineering Cost Manual are to provide:

1. Senior management with the necessary cost data for verifying estimates, establishing priority, and more generally for assisting in the investment decision process;
2. Project managers and financial planners with a readily-useable cost data base from which planning estimates and cost benefit analyses of future projects can be made;
3. Provide the Treasury Board with cost-estimating information.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/26.1.	Departmental Summary	C
26.4.	Northern Affairs Program	C

DRM 10-7/27 - NETWORK PLANNING AND ANALYSIS

The purpose of this manual is to provide departmental managers with an introduction and guide to network planning. It outlines the concepts, objectives, and mechanics of the network planning system, and also includes brief discussions of the project types that can most benefit from its use, the various networking techniques in common use and the steps involved in the networking process. The primary intent of the manual is to provide a useful tool for planning, monitoring, reporting and evaluating the physical and financial status of those projects the nature of which demands the application of more than the simpler planning and scheduling techniques.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
1.0	Management Summary	B
2.0	Identification of Neet for Network Analysis	B
3.0	Types of Network Techniques	B
4.0	The Network Planning and Analysis Process	B
5.0	Recommended Reading	B

DRM 10-7/28 - FUNCTIONAL REVIEW AND EVALUATION

One of the responsibilities of E&A Branch is to establish technical policy, standards and guidelines pertaining to capital projects, procurement, development and maintenance within DIAND. The objectives of functional review and evaluation are twofold: to assess the suitability and effectiveness of the policy, standards and guidelines and to estimate the extent to which they are adhered in the Regions. The manual describes the manner in which these objectives will be met. Specifically it contains the policy, objectives and philosophy of review and evaluation, and details the methods in which they will be implemented.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
1.0	Management Summary	B
2.0	Introduction	B
3.0	Definition of Functional Review	B
4.0	Policy	B
5.0	Procedures	B
6.0	Program for Policies & Standards	B
7.0	Functional Review of Technical Activities	B
8.0	Functional Review of Facilities	B

DRM 10-7/34 - PROJECT MANAGEMENT

This manual is designed to give a general understanding of project management to all departmental staff who have an interest or involvement in the Capital Program. As well, the manual provides more detailed information on the project development and specific systems for those officers directly concerned with a particular project.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
1.0	Introduction	A
2.0	The Project Development Process	A
3.0	Systems	A

DRM 10-7/35 - CONSTRUCTION CONTRACT MANAGEMENT

This manual is a guideline for departmental contracting authorities carrying out construction by contract. Its purpose is to acquaint departmental employees with the ethical and common practices of the construction industry and to assist them in planning, preparing, supervising and administering construction contracts which protect the contractor's interests as well as those of Her Majesty, both of which must be protected to effect a good contract.

The manual is divided into three parts:

Phase I - Contract Administration Phase II - Construction Phase, Contract Method Phase III - Day Labour Construction

The appendices at the end of each part consist of samples of applicable approved forms pertaining to each section. As these forms are examples only, they may have to be modified to cover specific situations. All forms included in the appendices are listed in the Table of Contents preceding each stage.

Contracting should ensure that public monies are spent fairly. These procedures allow the contracting authority to get the best value for funds spent.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/35.1.	Phase I - Contract Administration	B
35.2.	Phase II - Contract Method	B
*	General Design and Construction Procedures for Building Projects (see 76.4.1)	

DRM 10-7/36 - CONTRACTS (NON-CONSTRUCTION)

This manual is being prepared to incorporate guidelines which will acquaint employees with the ethical and effective practices and methods involved in planning, preparing and administering contracts relating to such non-construction contracts as:

- Cost-sharing and Grant Arrangements - Consulting
- Contracts - Non-consulting Service Contracts

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/36.1.	Management Summary	D
36.2.	Policy	D
36.3.	Engineering and Architectural Consulting Contracts	B
36.4.	Non-consulting Services Contracts	B
36.5.	Expert Services Contracts	D
36.6.	Service Contracts	D
36.7.	Lump Sum, Payment for Municipal and Utility Services	B
36.8.	Revenue Contracts	D
36.9.	Criteria and Procedures for Retaining Consultants	B
36.10.	Post-evaluation of Consultants	B

DRM 10-7/38 - MASTER AND GUIDELINE SPECIFICATIONS IN DIAND

This manual will be designed to incorporate guidelines outlining the proper and effective use of the Canadian Government Master Specifications in the various DIAND Capital Programs.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/38.1.	System Description	D
38.2.	Use of the Canadian Government Master Specification System in DIAND	B

DRM 10-7/42 - MISCELLANEOUS PUBLICATIONS (CONTRACTS
AND CAPITAL PROGRAM)

This manual will cover technical guidelines for a variety of activities that do not logically fall into other manuals.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
42.3.	The Preparation, Costing and Use of Bills of Materials	C
42.4.	Construction by Day Labour	C
42.5.	Delegation of Contracting Authority	B
*	Procedures for Review and Processing of Treasury Board Submissions (see 2.2)	
42.6.	Guidelines for the Preparation of a Project Brief	B
*	The Preparation of a Building Project Brief for Contemporary Structures (see 76.2.3)	
42.7.	Guideline for Preparation of Project Completion Report	C
42.8.	Procedures for Inspection and Acceptance by DIAND of Works Undertaken by Public Works Canada (PWC) on Behalf of DIAND	B
42.10	Training Manual on Contract Management in the Government of Canada	C

DRM 10-7/43 - FIRE PREVENTION AND PROTECTION - GENERAL

This part is a collection of publications from manuals 44, 45 and 46 which are applicable to at least two of the Operational Programs. Has been created to eliminate the necessity of republishing the same publications under two or more different numbers.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/43.1.	Management Summary	D
43.2.	Fire Prevention (General)	D
43.3.	Fire Protection (General)	D
	1. (Spare)	
	2. Fire Exposure Protection	
	3. Fire Hazard Abatement in Outdoor tanks Above Ground	
	* Lightning Protection of Fire Alarm Systems in Buildings	
43.4.	Systems and Equipment (General)	
	1. Fittings for Portable Fire Pumps	B
	2. Portable Generators for Fire Service	D
	3. Fire Extinguishing Systems - Testing & Maintenance	D
	4. Fire Alarm and Detection System - Testing & Maintenance	D
	5. Fire Hydrant Maintenance, Testing and Record System	D
	6. Maintenance and Testing of Stationary Fire Pumps	D
	7. Standpipe Hose Equipment	D
	8. Fire Hose and Connection Threads	D

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
43.5.	Administration (General)	
	1. (Spare)	
	* Reporting of Fires (see DRM 10-6, D/D 96)	
	2. Property Inspection for Fire Prevention and Protection	D
	3. Training Volunteer Fire Fighters	C
	4. Fire Protection Staff Training	C
	5. Emergency Services by Volunteer Fire Brigades	D
	6. Workmen's Compensation for Volunteer Firefighters	D

DRM 10-7/46 - FIRE PREVENTION AND PROTECTION - NORTHERN
AFFAIRS

This manual comprises technical publications covering a wide variety of subjects aimed at providing coverage in the area of Fire Prevention, Fire Protection, Systems and Equipment and Administration with respect to the Northern Affairs Program.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/46.1.	Management Summary	D
46.2.	Fire Prevention	D
46.3.	Fire Protection	D
	* Fire Protection in National Parks (see 45.3.1)	
	* Fire Exposure Protection (see 43.3.2)	
	* Fire Hazard Abatement in Outdoor Tanks Above Ground (see 43.3.3)	
	* Lightning Protection of Fire Alarm Systems in Buildings (see 45.3.4)	
46.4.	Systems and Equipment	
	* Portable Pumps for Fire Fighting (see 43.4.1)	
	* Fire Extinguishing Systems - Testing and Maintenance (see 43.4.3)	
	* Fire Hydrant Maintenance, Testing and Record System (see 43.4.5)	
	* Maintenance and Testing of Stationary Fire Pumps (see 43.4.6)	

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
	* Standpipe Hose Equipment (see 43.4.7)	
	* Fire Hose and Connection Threads (see 43.4.8)	
46.5.	Administration	
	* Reporting of Fires (see DRM 10-6, D/D96)	
	* Property Inspection for Fire Prevention and Protection (see 43.5.2)	
	* Fire Protection Staff Training (see 43.5.4)	

DRM 10-7/47 - SAFETY

The purpose of this manual is to provide a number of technical papers covering the safety in general. It also covers construction safety for day-labour projects.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/47.1.	Management Summary	D
47.2.	(Spare)	
47.3.	Contract Construction Safety - Implementation by Regions	C
47.6.	(Spare)	
47.7.	Electrical Facilities - Safe Practices Standards	B
47.8.	Guidelines for Hazardous Confined Spaces	B
47.9.	Containing Oil Spills in Fuel Storage Installations	B
47.10.	Use of Ground Fault Circuit Interrupters with Portable Power Tools	D

DRM 10-7/51 - AERIAL PHOTOGRAPHY SERVICES

This manual sets out the detailed responsibilities and procedures for the acquisition of existing or new aerial photography, mosaics and photo maps.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
1.0	Management Summary	B
2.0	Existing Aerial Photography	B
3.0	New Photography	B
4.0	Purchasing New Aerial Photography	B
5.0	Mosaics and Photo Maps	B

DRM 10-7/52 - CONTROL SURVEYS SERVICES

This manual sets out the detailed responsibilities and procedures for the acquisition of survey control for the production of large scale topographical mapping.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/52.1.	Management Summary	B
52.2.	Planning the Survey Network	B
52.3.	Field Work	B
52.4.	Field Data Reduction	B
52.5.	Co-ordinate Systems and Map Projections	B
52.6.	Application of Control Surveys	B

DRM 10-7/53 - LARGE SCALE TOPOGRAPHICAL MAPPING SERVICES

This manual sets out the detailed responsibilities and procedures for the acquisition of large scale topographical mapping including settlements in the North.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
1.0	Management Summary	B
2.0	Policy	B
3.0	Photogrammetry	B
4.0	Specifications	B
5.0	Contract Negotiations	B
6.0	Monitoring	B
7.0	Receipt, Payment and Delivery	B

DRM 10-7/54 - AIR PHOTO INTERPRETATION SERVICES

This manual sets out the detailed responsibilities and procedures for the acquisition of Photo Interpretation studies of areas including Northern Settlements.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/54.1.	Management Summary	B
54.2.	Policy	B
54.3.	Specifications	B
54.4.	Contract Negotiations	B
54.5.	Monitoring	B
54.6.	Receipt, Payment, and Delivery	B

DRM 10-7/59 - ENVIRONMENTAL IMPACT ASSESSMENT

This manual outlines a proposal for comprehensive and flexible approach to environmental impact assessment within the context of a broad variety of activities carried out by the Department, the objective being to facilitate the implementation of the Environmental Assessment and Review Process (EARP) Policy. Specific chapters deal with discrete subject areas germane to environmental evaluations, e.g., impacts and mitigations measures related to highways and roads and legislation related to environmental impact assessment.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/59.1.	Management Summary	C
59.2.	Technical Guidelines for the Implementation of the Environmental Assessment and Review Process (EARP) and the E&A Function	B
59.3.	Impact and Mitigation Measures Related to Highways and Roads	C
59.4.	Federal, Provincial and Territorial Legislation Related to Environmental Impact Assessment	C
59.5	Guidelines for Rehabilitation of Disturbed Sites	C

DRM 10-7/60 - SELECTION, INVESTIGATION AND SITE DEVELOPMENT

This manual provides guidelines for design and field staff engaged in site development projects on a Departmental basis. It outlines present policy implications, planning and design criteria, procedures and techniques for solving site development problems. Emphasis will be placed on a sound environmental approach for site development projects.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/60.1.	Management Summary	D
60.2.	Introduction	D
60.3.	Existing Relevant Policy (1979)	C
60.4.	Departmental Capital Project Types	
	1. Northern Program	C
60.5.	Goals and Objectives of Good Site Development	C
60.6.	Alternative Goals and their Implications	D
60.7.	Typical Problem Areas and Results	C
60.8.	Solutions	
	1. Multidisciplinary Approach	C
	2. Procedures	C
	3. Concerns of	
	1. Management	C
	2. Planners	C
	3. Environmentalists	C
	4. Architects	C
	5. Engineers (Roads, Utilities, Soils)	C
	6. Landscape Architects	D
	7. Users	D

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
	4. Pre-design Stage	D
	5. Design Stage	D
	6. Construction/Supervisory Stage	D
	7. Operation and Maintenance Stage	D
	8. Rehabilitation	D
60.9.	Appendix	D
	1. Definition of Terms	D
	2. References/Bibliography	D
	3. Site Selection and Physical Planning Criteria	D
	4. Metric Considerations in Site Development	D
*	Guidelines for Rehabilitation of Disturbed Sites (see 59.5)	

DRM 10-7/61 - DEPARTMENTAL SIGNS

This manual summarizes Federal Identity Program policies and guidelines pertaining to signage. It provides details of sign layout, sizes, materials and maintenance procedures.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/61.1.	Management Summary	C
61.2.	Federal Identity Program - Technical Application	C
61.3.	Identification Signs	C
61.4.	Project Site Signs	B
61.5.	Graphic Symbols for Public Information	C
61.6.	Interior Signs	B
61.7.	Guide Signs	C
61.8.	Highway and Related Signs	C
61.9.	Industrial and Safety Signs	C
61.10.	Community Signs	C
61.11.	Sign Maintenance Procedures	C

DRM 10-7/62 - DAY-USE AND RECREATION FACILITIES AREAS

This manual provides design guidelines for the development of day-use areas on a Departmental basis. It will identify relevant and established policy for day-use areas/activities, including levels of service with capital and maintenance costs implications, planning and design criteria, and finally the facility design guidelines for each major activity.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/62.1.	Management Summary	D
62.2.	Introduction and Relevant Policy	B
62.3.	Definitions	D
62.4.	Environmental Considerations	D
62.5.	Planning and Design Criteria	D
62.6.	Levels of Service	D
62.7.	Day-use Activities and Facilities	
	1. Summer Facilities	
	1. Water-Oriented Activities	B
	2. Land-Oriented Activities	D
	2. Winter Facilities	D
62.8.	Technical Guides	D
62.9.	Bibliography	D

DRM 10-7/67 - MISCELLANEOUS PUBLICATIONS (ENVIRONMENTAL SERVICES)

This part covers technical publications for a variety of activities that do not logically fall into other manuals.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
67.2.	(Spare)	
*	Containing Oil Spills in Fuel Storage Installation (see 47.9)	

DRM 10-7/68 - WASTEWATER COLLECTION AND DISPOSAL

This manual sets out the various parameters for wastewater systems which are used to collect, treat and dispose of wastewater in a manner which is acceptable to the Department.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/68.1.	Management Summary	C
68.2.	Policies, Standards and Practices	
	1. Effluent Quality and Wastewater Treatment Standards	B
68.3.	Environmental Considerations	D
68.4.	Engineering - Reports, Plans and Specifications	D
68.5.	Design	C
	1. Design Standards for Domestic Wastewater Treatment Ponds	B
68.6.	Construction	C
68.7.	Operation	C
68.8.	Maintenance	
	1. Maintenance Quality Standards for Wastewater Systems	C
68.9.	Management	D

DRM 10-7/69 - POWER GENERATION AND DISTRIBUTION

This manual sets out the various parameters for the electrical power generation and distribution systems which are used to provide electrical energy for Departmental facilities.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/69.1.	Management Summary	D
69.2.	Power Supply	B
69.3.	Power Generation	C
69.4.	Power Distribution	D
69.5.	Testing Equipment	D
69.6.	Outdoor Lighting	D
69.7.	Maintenance	C

DRM 10-7/70 - SOLID WASTE COLLECTION AND DISPOSAL

This manual sets out the various parameters for domestic solid waste collection and disposal systems which are used to collect, process and treat and dispose of the solid wastes from domestic type buildings in a manner which is acceptable to the Department.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/70.1.	Management Summary	D
70.2.	Policies, Standards and Practices	C
70.3.	Environmental Considerations	D
70.4.	Engineering - Reports, Plans and Specifications	D
70.5.	Design	B
70.6.	Construction	D
70.7.	Operation	C
70.8.	Maintenance	C
70.9.	Management	D
	1. Day Labour	
	2. Contract	

DRM 10-7/71 - WATER SUPPLY AND DISTRIBUTION

This manual sets out the various parameters for domestic water supply and distribution systems which are used to acquire, treat, and distribute water to consumers in a manner which is acceptable to the Department.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/71.1.	Management Summary	C
71.2.	Policies, Standards and Practices	C
71.3.	Environmental Considerations	D
71.4.	Engineering - Reports, Plans and Specifications	D
71.5.	Design	D
71.6.	Construction	D
71.7.	Operation	C
71.8.	Maintenance	C
	1. Maintenance Quality Standards: Water Systems	
71.9.	Management	D

DRM 10-7/76 - ADMINISTRATION OF THE BUILDING DESIGN PROCESS

This manual covers the techniques and procedures involved in the design of a building project, from conception; development of requirements; retaining and briefing a consultant; reviewing and evaluating his work.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/76.1.	Management Summary	D
76.2.	Internal Design Procedures	
	1. Preparation of a Project Plan for Design and Construction (PPDC) for Building Projects	B
	2. Checklist for Pre-design Data for Building Projects	B
	3. The Preparation of a Building Project Brief for Contemporary Buildings	C
	4. Incorporation of Artwork/Use of Native Artists in Building Projects	C
76.3.	External (DPW and Consultants) Design Procedures	
	1. (Spare)	
	* Criteria and Procedures for Retaining Consultants (see 36.9)	
	2. Review of Submissions - Preliminary Design and Outline Specifications for Building Projects	B
	3. Review of Submissions - Working Drawings and Specifications for Building Projects	B

NUMBER

TITLE

STATUS

- * General Requirements for
Structural Plans and
Specifications for Building
Projects (see 84.5)
- * Post-contract Evaluation of
Consultants (see 36.10)
- * Engineering and Architectural
Consulting Contracts (see
36.3)

DRM 10-7/77 - ESTIMATING, COST DATA, BILLS OF QUANTITIES
FOR BUILDING PROJECTS

This manual will develop methods and procedures for the preparation of Bills of Quantities and the preparation of Cost Estimates from them, and, as well, identify alternate methods of the preparation of Cost Estimates by other means. These would include methods based on general surface areas of proposed buildings, volume of buildings and on number of users.

The manual will not attempt to reproduce text books for student use on the subject in ultimate detail.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/77.1.	Management Summary	D
77.2.	(Spare)	
77.3.	(Spare)	
77.4.	(Spare)	
*	The Preparation, Costing and Use of Bills of Materials (see 42.3)	
77.5.	Life Cycle Costing for Building Projects	C
77.6.	Extraction & Production of Cost Data Bank on Building Projects	D
77.7.	Use of Cost Data Bank in Preparing Annual Estimates & 5 Year Forecasts for Building Projects	D
77.8.	Capital Project Reporting System (Buildings)	D

DRM 10-7/79 - BUILDING DESIGN - GENERAL

This manual contains a collection of papers dealing with the technical requirements and principles for designing DIAND buildings which are applicable to all the operating programs.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/79.1.	Management Summary	D
79.2.	General Applications	
1.	Control of Environmental Effects in Building Design	B
2.	Use of the National Building Code	B
3.	(Spare)	
*	Life Cycle Costing (see 77.5)	
*	Energy Conservation in Existing Buildings (see 15.3.1)	
4.	(Spare)	
5.	Design Feedback Systems (Post Evaluation of Building Projects)	D
6.	Building Design for Minimum Maintenance	C
7.	Design Criteria for Building Projects - General	C
8.	Building Design Criteria for Day Labour Construction	
9.	Optimum Building Design for Fire Protection	C
10.	Design Standards for Northern and Remote Buildings	C

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
	11. (Spare)	
	12. (Spare)	
	13. Design Guidelines for a Warehouse/Garage	B
*	Vandalism Prevention in Buildings (see 90.2.6)	

DRM 10-7/82 - BUILDING DESIGN - NORTHERN AFFAIRS

This manual contains a series of papers dealing with the technical requirements and principles for designing DIAND buildings in general, plus some specific requirements and procedures for those in the North.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/82.1.	Management Summary	C
82.2.	General Applications (see 79.2)	
	* Control of Environmental Effects in Building Design (see 79.2.1)	
	* The National Building Code (see 79.2.2)	
	* Life Cycle Costing (see 77.5)	
	* Energy Conservation in existing Buildings (see 15.3.1)	
	* Vandalism Prevention in Buildings (see 90.2.6)	
	* Design Feedback System (Post Evaluation of Building Projects) (see 79.2.5)	
	* Building Design for Minimum Maintenance (see 77.2.6)	
	* Design Criteria for Building Projects (General) (see 79.2.7)	
	* Building Design Criteria for Day Labour Construction (see 79.2.8)	
	* Optimum Building Design for Fire Protection (see 79.2.9)	
	* Design Standards for Northern and Remote Buildings (see 79.2.10)	

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
	* Design Guidelines for a Warehouse/Garage (see 79.2.13)	
82.3.	Specific Applications	
	1. The Building Code for the North	B
	2. Procedures for Building Projects Development - Northern Affairs	C
	* Foundation Design for Building in the North (see 84.3)	

DRM 10-7/84 - STRUCTURAL DESIGN FOR CONTEMPORARY BUILDINGS

This manual establishes the standard of structural design for Departmental contemporary building projects which include new buildings, alterations, renovations and additions. It also draws attention to the special conditions of construction in remote and isolated areas.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/84.1.	Management Summary	D
84.2.	Criteria for Building Structure Design	B
84.3.	Foundation Design for Buildings in the North	C
84.4.	Foundation Design for Buildings	C
84.5.	General Requirements for Structural Plans and Specifications for Building Projects	C
*	Vandalism Prevention in Buildings (see 90.2.6)	

DRM 10-7/85 - BUILDING MATERIALS AND ARCHITECTURAL TECHNOLOGY

This manual deals with various types of groups of building materials in terms of their use for various purposes, their evaluation and assessment as to meeting technical requirements. It also deals with ways of combining various types of material to meet existing and new requirements, e.g., the new energy conservation standards.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/85.1.	Management Summary	D
85.2.	Building Materials	
1.	(Spare)	
*	Building Design for Minimum Maintenance (see 79.2.6)	
2.	(Spare)	
3.	(Spare)	
*	Design Feedback System (Post Evaluation of Building Projects) (see 79.2.5)	
4.	Interior Building Finishes Selection Guide	C
5.	Painting and Protective Coatings for Buildings	D
6.	Fastening Loose Unit Masonry with Epoxy	C
*	Selection of Gymnasium Flooring Materials (see 83.7.3)	
7.	Foamed Insulation (Special Considerations)	B
8.	Maintenance of Built-up Roofing	B
9.	Selection and Maintenance of Asphalt Shingles	D
10.	Flagpoles	B
11.	Non-combustible and Fire Retardant Fabrics	B

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
	* Vandalism Prevention in Buildings (see 90.2.6)	
	* Selection of Pavement Types (see 97.5.4)	
85.3.	Quality Assurance	
	1. (Spare)	
	* Use of the National Building Code (see 79.2.2)	
	2. Industry Standards for Building Materials	B
	3. Use of Qualified Building Products Lists	B
	* Quality Control of Concrete Structures (see 113.3.2)	
85.4.	Architectural Technology	
	1. Wall and Roof Construction for New Energy Conservation Standards	C
	2. Protected Membrane (Inverted) Roofing	B
	* Construction Systems - Schools (see 83.7.1)	
	3. Acoustics in Buildings	D

DRM 10-7/86 - PLUMBING SERVICES IN BUILDINGS

This manual sets the Branch's technical requirements for the quality, level and application of plumbing services installed in Departmental buildings. It relates these requirements to provincial, federal and municipal codes and regulations and graphically illustrates special applications indigenous to Departmental activities.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/86.1.	Management Summary	D
86.2.	(Spare)	
86.3.	Criteria for Specifying Plumbing Equipment and Materials	C
86.4.	Special Applications	
	1. Plumbing Venting Systems	D
	2. Self-contained In-house Sewage and Waste Disposal Units	B
	3. (Spare)	
	4. Thawing Frozen Water Pipes with Electricity	B

DRM 10-7/87 - SPACE CONDITIONING IN BUILDINGS

This manual establishes a design logic system with step-by-step procedures to be followed by the engineer in the design of all environmental systems for Departmental buildings. It ensures (when followed) the selection of the most suitable and economic environmental systems by the design engineer after due consideration of all influencing factors.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/87.1.	Management Summary	D
87.2.	General	
	1. Environmental Considerations (HVAC)	D
	2. Life Cycle Costing	D
	3. Energy Conservation in Buildings	D
	4. Thermographic Investigation of Buildings	D
	5. Space Conditioning Systems for Buildings	B
87.3.	Heating	
	1. Choosing the Heating Fuel	B
	2. Instrumentation for Performance Evaluation of Environmental Systems for Buildings	B
	3. Space Conditioning Systems for Special Building Types	B
87.4.	Ventilation	
	1. Ventilation of Buildings for Human Occupancy	C

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
87.5.	Cooling, Air Conditioning	
	1. Humidification in Buildings	B
87.6.	Special Applications	
	1. Solar Heating - State of the Art	D
	2. Anti-Freeze in Heating Systems	B

DRM 10-7/88 - ELECTRICAL SYSTEMS IN BUILDINGS

This manual provides guidelines relating to building electrical and associated systems and assure good quality of design, consistent with function, enhance energy conservation and safety in the operation and maintenance of electrical facilities.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/88.1.	Management Summary	D
88.2.	Electrical and Lighting Systems - General	
	1. Energy Conservation - Electrical systems in Buildings	B
	* Electrical Facilities - Safe Practices Standards (see 47.7)	
88.3.	Special Applications	
	1. (Spare)	
	* Lightning Protection of Fire Alarm Systems in Historic Buildings (see 43.3.4)	
	2. Intercom and Audio Systems	D

DRM 10-7/89 - SPECIAL BUILDING SYSTEMS

This manual deals with a series of non-conventional types of complete or partial building systems which are applicable, or could be applicable, to the needs of DIAND. It describes and assesses the suitability of these systems.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/89.1.	Management Summary	D
89.2.	Guideline for Selection of Temporary Buildings	B
89.3.	Use of Pre-engineered Buildings for Schools and Other Buildings	B
89.4.	(Spare)	
89.5.	Air-inflated Structures	D
89.6.	Prefabricated Wood Buildings	D
89.7.	Fibre Reinforced Plastic Building Systems	D
89.8.	Wood Basements for Housing	B

DRM 10-7/90 - MAINTENANCE AND OPERATION OF BUILDING FACILITIES

This manual is comprised of papers dealing with the maintenance and operational aspects of building facilities and services. Individual papers under the headings of: maintenance management; maintenance and operation general, mechanical systems, electrical systems, and fire prevention and protection systems will provide: requirements for design and maintenance; training material, policies, procedures, and practices for planning, scheduling, performing, and controlling related maintenance activities.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/90.1.	Management Summary	D
90.2.	Maintenance Management	
	1. (Spare)	
	2. Maintenance Operations	D
	3. Building Maintenance Management	D
	4. Custodial Management of Buildings	C
	5. Maintenance Quality Standards for Buildings	C
	6. Vandalism Prevention in Buildings	B
90.3.	Maintenance and Operation - General	
	1. Preventive Maintenance Inspection Procedures for Buildings	C
	2. Glue-laminated Timber Structures - Annual Routine Inspection	B
	3. Recommendations for Repainting Buildings	C
	4. (Spare)	
	* Maintenance of Built-up Roofing (see 85.2.8)	
	5. (Spare)	

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
	* Selection and Maintenance of Asphalt Shingles (see 85.2.9)	
	6. House Repairs and Maintenance	B
	7. Maintenance and Operation of Non-conventional Waste Disposal Systems	B
90.4.	Maintenance and Operation of Mechanical Systems	
	* Thawing Frozen Water Pipes with Electricity (see 86.4.4)	
90.5.	Maintenance and Operation of Electrical Systems	
	1. Preventive Maintenance of Electrical Systems in Buildings	D
	2. (Spare)	
	* Electrical Facilities - Safe Practices Standards (see 47.7)	
	3. Fluorescent Lighting Systems - Operation & Maintenance	C
	4. Mercury Vapour Lighting Systems - Operation & Maintenance	C
90.6.	Maintenance and Operation of Fire Prevention and Protection Systems	
	* Fire Extinguishign Systems - Testing & maintenance (see 43.4.3)	
	* Fire Alarm and Detection Systems - Testing & Maintenance (see 43.4.4)	

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Northern

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DRM 10-7/94 - MISCELLANEOUS PUBLICATIONS (BLDGS & SERVICES)

NUMBER

TITLE

STATUS

- * Containing Oil Spills in Fuel
Storage Installations
(see 47.9)

- * Use of Ground Fault Circuit
Interrupters with Portable
Power Tools (see 47.10)

DRM 10-7/96 - TRANSPORTATION PLANNING

This manual provides a summary of the principles, objectives and procedures of transportation planning. It will provide the engineer, planner and responsible work-crew with a good comprehension of the planning, analyzing and decision-making processes. It will be used as a guide in the analysis of projects and the monitoring of development plans.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/96.1.	Management Summary	C
96.2.	Transportation Planning Process	B
96.3.	Data Collection	B
96.4.	Transportation Demand	C
	1. General	
	4. Northern Affairs	
96.5.	Transportation Alternatives	
	1. General	C
	4. Northern Affairs	C
96.6.	Performance Measurements	C
	1. General	
	4. Northern Affairs	

DRM 10-7/97 - ROAD DEVELOPMENT/DESIGN

This manual contains road planning and design principles, standards and guidelines and is intended for the use of departmental administrators, planners and design engineers involved in road development and design. It describes the planning, classification, inventory and detail project design of the Northern Roads.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/97.1.	Management Summary	C
97.2.	Planning and Design of Transportation Facilities	
	1. Transportation Facility Development Sequence	B
	2. Road Design Requirements	B
97.3.	Classification System & Design Standards	
	3. Northern Development Road Classification System and Geometric Design Standards	B
	4. Design Standards	
	1. Roadway Detail Design	B
	2. Structural Design	
	a. Road Pavement Structural Design	B
97.4.	Inventory and Evaluation	
	3. Northern Affairs	B

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
97.5.	Project Design Guidelines	
	1. Air-photo Interp/Mapping	D
	2. Geotechnical Surveys & Investigations	B
	3. Aesthetics in Road Design	C
	4. Selection of Pavement Types	B
	5. Highway Drainage Design	D
	6. Railway Crossings	D
	7. Relocation of Utilities	D
	8. Roadside Safety	B
	9. Roadside Treatment	C
	10. Cost Estimation	D
	11. Review of Roadway Design	D
	12. Parking Areas	D
97.6.	Quantity Computation for Tendering	D
97.7.	Materials	D
97.8.	Sundry Construction	D
97.9.	Special Provisions	D
97.10.	Technical Aspects of Contract Documents	D
97.11.	Contract Drawings	D
97.12.	Appendices	
	1. Simulated 3 Dimensional Computer Graphics for Highways	B
	2. Road Design, Construction and Maintenance in SI (Metric) Units	B
	3. Electronic Computations	D
	4. Tables	D
	5. Abbreviations	D
	6. Bibliography	D

DRM 10-7/98 - ROAD CONSTRUCTION

This manual is issued as an aid to personnel for carrying out supervision of road construction. It is intended to fulfill the need for general guidelines in the field of road construction and serve as a consolidated source of reference material.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/98.1.	Management Summary	C
98.2.	Organization and Functions	D
98.3.	Construction Surveys and Layout	B
98.4.	Quality Control and Duties	B
98.5.	Documentation	B
98.6.	Progress and Final Measurements	C
98.7.	Preparation/Submission for Progress Claim	C

DRM 10-7/99 - ROAD MAINTENANCE

This manual is intended for the use of Maintenance Supervisors. It identifies road maintenance tasks and the accepted method of fulfilling them.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/99.1.	General	C
99.4.	Northern Affairs	D

DRM 10-7/109 - MOBILE CONSTRUCTION AND MAINTENANCE EQUIPMENT
AND PASSENGER VEHICLES

This manual covers all aspects of administration and operations and gives general direction in the areas of maintenance and safety. The contents apply to all departmental personnel who control, administer, operate, repair or use equipment.

<u>NUMBER</u>	<u>TITLE</u>	<u>STATUS</u>
DRM 10-7/109.1.	Management Summary	D
109.2.	Criteria for Supply	D
109.3.	Operation/Maintenance	D
109.4.	Equipment Management Manual	B
*	Motor Vehicle Policy (D/D 38)	
109.5.	Rust Prevention	B
109.6.	Battery Charging Operations and Battery Facilities	B