

**US Army Corps  
of Engineers**

 National Research  
Council Canada

Conseil national  
de recherches Canada

**NRC-CMRC**

**ANNEX TO THE MASTER DATA EXCHANGE ARRANGEMENT  
BETWEEN  
THE DEPARTMENT OF DEFENSE  
OF THE UNITED STATES OF AMERICA  
AND  
THE DEPARTMENT OF NATIONAL DEFENCE OF CANADA  
COVERING  
CIVIL ENGINEERING TECHNOLOGY**

**DESCRIPTION AND CLASSIFICATION:**

This Annex provides for the exchange of research, development, test and evaluation data/information for the benefit and use of the Participants in leveraging their respective efforts, avoiding duplication of effort, and in identifying potential collaborative projects in the area of Civil Engineering Technology which includes such sub-topics as:

- (1) Building Construction Technologies
- (2) Infrastructure & Materials Technology
- (3) Environmental Issues in Construction
- (4) Water Resources/Coastal Engineering

**RECIPROCITY OF INFORMATION EXCHANGE:**

Information exchanges will take place on a reciprocal basis, so that overall the value of information exchanged is approximately equivalent, taking into consideration criteria such as quality, quantity and program schedules. The Parties further recognize, however, that information exchanges may not necessarily coincide in time.

**DURATION:**

This Annex shall expire five years from the date of its execution unless extended, or earlier amended or terminated, or unless the Master Arrangement is earlier terminated. This Annex may be terminated by either signatory by providing written notice at least 60 days in advance of the proposed termination.

Agreed to and signed by the following officials on June 27, 1996:

**J. L. ADAMS**  
Assistant Deputy Minister  
(Infrastructure & Environment)  
NDHQ, Ottawa, Ontario

**MICHAEL F. FISETTE**  
Principal Deputy for Technology  
HQAMC, Alexandria, Virginia

ANNEX NO. DEA-A-96-CA-1544

TO THE MASTER DATA EXCHANGE ARRANGEMENT

FOR THE

MUTUAL DEVELOPMENT OF WEAPONS SYSTEMS

BETWEEN

THE DEPARTMENT OF DEFENSE  
OF THE UNITED STATES OF AMERICA

AND

THE DEPARTMENT OF NATIONAL DEFENCE OF CANADA

COVERING

CIVIL ENGINEERING TECHNOLOGY

Pursuant to the terms and conditions of the Master Data Exchange Arrangement for the Mutual Development of Weapons Systems Between the Department of Defense of the United States of America and the Department of National Defence of Canada signed 10 April 1984 (hereafter referred to as the "Master Arrangement"), the two departments establish the following data exchange Annex.

1. DESCRIPTION AND CLASSIFICATION:

a. Scope. This Annex provides for the exchange of research, development, test and evaluation data/information for the benefit and use of the Participants in leveraging their respective efforts, avoiding duplication of effort, and in identifying potential collaborative projects in the area of Civil Engineering Technology which includes such sub-topics as:

(1) Building Construction Technologies - dealing with items such as:

(a) Structures - with respect to durability/service life, non-destructive testing, long-term monitoring, resistance to seismic forces, new technologies and evaluation criteria issues.

(b) Building Performance - dealing with systems that effectively control the transport of air, moisture, heat and sound; plus understanding the impact of sound, light, ventilation and air quality on occupant comfort, safety and productivity.

(c) Construction Productivity - dealing with the development and use of computer-based software tools to improve construction productivity.

*Canada  
1984  
July 96*

(d) Ice, Snow and Frozen Ground Engineering - dealing with the effects of snow, ice and frozen ground on construction and infrastructure including transportation on land and water.

(e) Topographic Engineering in Construction - dealing with test and evaluation for site surveys before, during, and after construction including remote sensing of materials and site conditions, and

(f) Terrain Visualization - dealing with site representation in 3D modeling.

(2) Infrastructure & Materials Technology - dealing with such items as:

(a) Infrastructure Renewal - includes the development of innovative, cost-effective technologies for the measurement, renewal and protection of buried infrastructure (e.g. watermains, sewers and utilities); the development of cost-effective technologies for improving the durability of pavements and protection of bridges, sidewalks, roads and runways; the seismic protection of existing infrastructure; and the development of methodologies and analytical techniques for evaluating the engineering and economic performance of projects and systems.

(b) High-Performance Construction Materials - includes the development of cement- and polymer-based materials with long service life, development of protection systems for rehabilitation and repair, design of new materials for special use and improving techniques to diagnose problems and evaluate durability.

(c) Materials Evaluation - covering the development of methodologies and procedures for evaluating the performance of new and innovative construction materials, products or systems.

(3) Environmental Issues in Construction - dealing with such issues as:

(a) Environmental Assessment - during all phases of project planning, design, and construction to support damage recognition and avoidance as well as remediation, restoration and mitigation.

(b) Recycling - of construction materials and waste.

(c) Control of Non-indigenous Aquatic Nuisance Species - dealing with control methods for aquatic nuisance species (e.g. zebra mussels, aquatic plants, etc.) and strategies for deployment.

(4) Water Resources/Coastal Engineering - dealing with such items as:

(a) Coastal Engineering - dealing with shore protection and restoration, coastal flooding, dredging, coastal navigation, coastal structures, and coastal port design.

(b) Navigation - dealing with deep- and shallow-draft inland waterway design, navigation evaluation, navigation structures, river engineering and ice engineering.

(c) Planning Methodologies - covering analytical tools, methods, decision-making techniques and policy evaluations for scaling, prioritizing, and selecting capital and O&M improvements for water resource systems.

(d) Surveying and Mapping - dealing with topographic and hydrographic data collection, mapping, feature data, positioning systems, precise survey technologies, and visualization systems.

b. Highest classification of information to be exchanged: Controlled Unclassified Information (CUI).

2. ESTABLISHMENTS AND AUTHORITIES CONCERNED:

a. For the Department of Defense of the United States of America:

(1) Establishments:

(a) Construction Engineering Research Laboratories  
U.S. Army Corps of Engineers  
P.O. Box 9005  
Champaign, Illinois 61826-9005

(b) U.S. Army Engineer Waterways Experiment Station  
3909 Halls Ferry Road  
Vicksburg, Mississippi 39180-6199

(c) Cold Regions Research and Engineering  
Laboratory  
U.S. Army Corps of Engineers  
72 Lyme Road  
Hanover, New Hampshire 03755

(d) Institute for Water Resources  
U.S. Army Corps of Engineers (Casey Building)  
7701 Telegraph Road  
Alexandria, Virginia 22315-3868

- (e) Navigation Data Center  
U.S. Army Corps of Engineers (Casey Building)  
7701 Telegraph Road  
Alexandria, Virginia 22315-3868
- (f) Hydrologic Engineering Center  
U.S. Army Corps of Engineers  
600 2nd Street  
Davis, California 95616-4687
- (g) Topographic Engineering Center  
U.S. Army Corps of Engineers  
7701 Telegraph Road Bldg 2592  
Alexandria, Virginia 22310-3864
- (h) U.S. Army Materiel Command  
International Cooperative Programs Activity  
ATTN: AMXIP-O  
5001 Eisenhower Ave  
Alexandria, Virginia 22333-0000
- (i) Commander, U.S. Army Research Development &  
Standardization Group, Canada  
ATTN: AMXSN-CA-ZA  
National Defence Headquarters  
MGen George R. Pearkes Building  
Ottawa, Ontario, K1A 0K2

(2) Authorities:

- (a) Project Officer:  
U.S. Army Materiel Command  
International Cooperative Programs Activity  
ATTN: AMXIP-O  
5001 Eisenhower Ave  
Alexandria, Virginia 22333-0000  
Phone: 703-274-9721, Fax: 703-274-4797
- (b) Technical Project Officer:  
Headquarters, U.S. Army Corps of Engineers  
Assistant Director, Civil Works Program  
(CERD-C)  
Directorate of Research and Development  
20 Massachusetts Ave NW  
Washington, DC 20314-1000  
Phone: 202-761-1845

(c) Associate Technical Project Officer(s):

Director  
Construction Engineering Research Laboratories  
U.S. Army Corps of Engineers  
P.O. Box 9005  
Champaign, Illinois 61826-9005  
Phone: 217-373-7201

Director  
Cold Regions Research and Engineering  
Laboratory  
U.S. Army Corps of Engineers  
72 Lyme Road  
Hanover, New Hampshire 03755  
Phone: 603-646-4201

Associate Director of Technology  
Topographic Engineering Center  
U.S. Army Corps of Engineers  
7701 Telegraph Road Bldg 2592  
Alexandria, Virginia 22310-3864  
Phone: 703-355-2600

Director  
U.S. Army Engineer Waterways Experiment Station  
3909 Halls Ferry Road  
Vicksburg, Mississippi 39180-6199  
Phone: 601-634-2110

Director  
Institute for Water Resources  
U.S. Army Corps of Engineers (Casey Building)  
7701 Telegraph Road  
Alexandria, Virginia 22315-3868  
Phone: 703-355-2015

b. For the Department of National Defence of Canada:

(1) Establishments:

- (a) Director General Infrastructure Management  
National Defence Headquarters  
MGen George R. Pearkes Building  
Ottawa, Ontario, K1A 0K2
- (b) Chief, Research and Development  
National Defence Headquarters  
MGen George R. Pearkes Building  
Ottawa, Ontario, K1A 0K2

- (c) Defence Research Establishment Suffield  
Ralston, Alberta, T0J 2N0
- (d) Military Engineering Research Group  
Royal Military College of Canada  
Vimy Post Office  
Kingston, Ontario, K7K 5L0
- (e) Canadian Defence Liaison Staff  
501 Pennsylvania Avenue NW  
Washington, DC 20001-2114
- (f) 1 Construction Engineering Unit  
Canadian Forces Base Moncton  
Moncton, New Brunswick, E1C 9L4
- (g) National Research Council Canada  
Institute for Research in Construction  
Montreal Road Campus, Building M-20  
Ottawa, Ontario, K1A 0R6

(2) Authorities:

- (a) Project Officer:  
Director General Infrastructure Management  
National Defence Headquarters  
MGen George R. Pearkes Building  
101 Colonel By Drive  
Ottawa, Ontario, K1A 0K2  
Phone: 613-945-7769, Fax: 613-996-9527
- (b) Technical Project Officer:  
Director General  
National Research Council Canada  
Institute for Research in Construction  
Montreal Road Campus, Building M-20  
Ottawa, Ontario, K1A 0R6  
Phone: 613-993-2443, Fax: 613-941-0822
- (c) Associate Technical Project Officer(s):  
  
Canadian Military Attaché  
Canadian Defence Liaison Staff  
501 Pennsylvania Avenue NW  
Washington, DC 20001-2114  
Phone: 202-682-7643, Fax: 202-682-7643  
  
Canadian Forces Liaison Officer (Engineer)  
U.S. Army Engineer School  
Ft. Leonard Wood, Missouri 65473-5000  
Phone: 314-563-4017, Fax: 314-569-0131

Commanding Officer  
1 Construction Engineering Unit  
Canadian Forces Base Moncton  
Moncton, New Brunswick, E1C 9L4  
Phone: 506-851-0500, Fax: 506-851-0228

3. CHANNELS OF COMMUNICATION, VISITS, AND REQUESTS FOR INFORMATION:

Correspondence, visits and requests for information between the Parties will be transmitted through the channels for correspondence prescribed in paragraph 4 of the Master Arrangement via the U.S. Technical Project Officer, in lieu of the Project Officer. The U.S. Technical Project Officer has been delegated limited authority to address these matters directly.

4. RECIPROCITY OF INFORMATION EXCHANGE:

Information exchanges will take place on a reciprocal basis, so that overall the value of information exchanged is approximately equivalent, taking into consideration criteria such as quality, quantity and program schedules. The Parties further recognize, however that information exchanges may not necessarily coincide in time.

5. RESOURCE REQUIREMENTS:

Each participant shall be responsible for its own costs in the performance of this Annex. Each participant's commitment to performance is subject to the availability of funds.

6. RESTRICTIONS PLACED ON PRODUCTION AND SOFTWARE DEVELOPMENT AND EXCHANGE OF INFORMATION TO A THIRD COUNTRY:

a. Data provided under this Annex shall be safeguarded and shall not be further disseminated without prior written approval. All information exchanges under this arrangement prohibit the exchange of manufacturing or production data or software development know-how to include weapon system computer software, weapon system-related computer software, weapon system computer software documentation, or the exchange and/or provision of defense equipment or services.

b. Information provided under this Annex shall be used for information and evaluation purposes only.

7. DURATION:

This Annex shall expire five years from the date of its execution unless extended, or earlier amended or terminated, or unless the Master Arrangement is earlier terminated. This Annex

may be terminated by either signatory by providing written notice at least 60 days in advance of the proposed termination.

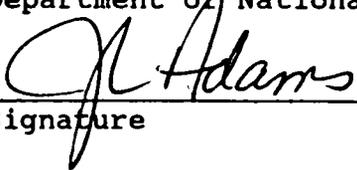
8. IN WITNESS THEREOF, the duly-authorized officials of the two Parties have executed this Annex No. DEA-A-96-CA-1544 to the Master Arrangement between the Department of Defense of the United States of America and the Department of National Defence of Canada as of the dates indicated below. This Annex will enter into force upon the date on which the last signature is affixed below.

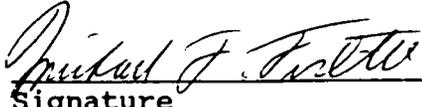
FOR THE DEPARTMENT OF NATIONAL  
DEFENCE OF CANADA

FOR THE DEPARTMENT OF DEFENSE  
OF THE UNITED STATES OF  
AMERICA

Department of National Defence

Department of Defense

  
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Signature

  
\_\_\_\_\_  
Signature

Mr J.L. Adams  
Assistant Deputy Minister  
(Infrastructure & Environment)

MICHAEL F. FISETTE  
Principal Deputy  
for Technology

\_\_\_\_\_  
Name and Title

\_\_\_\_\_  
Name and Title

13 MAY 96  
\_\_\_\_\_  
Date

27 JUNE 1996  
\_\_\_\_\_  
Date

NDHQ, Ottawa, Ontario

HQAMC, Alexandria, Virginia

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Location

\_\_\_\_\_  
Location