



THE CORPORATION OF THE CITY OF BRAMPTON

BY-LAW

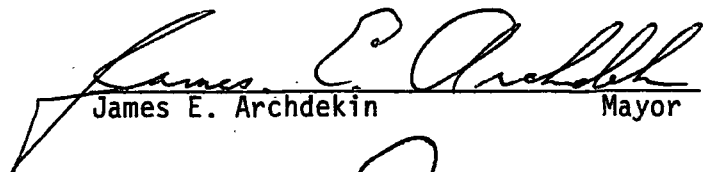
Number 248-81


To authorize the execution of the
Brampton Esker Hydrology Study
financing agreement

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE CITY OF BRAMPTON
ENACTS AS FOLLOWS:

1. The Mayor and Clerk are hereby authorized to execute an agreement dated 25 August 1981, between Armbro Materials and Construction Ltd., William and Lillian Cooper, David Graham, the executor of the David W. Bovaird estate, Bramalea Limited, Warfield Developments Limited, George Wimpey Canada Limited, and The Corporation of the City of Brampton, relating to the financing of the Brampton Esker Hydrology Study.

READ a FIRST, SECOND and THIRD TIME and PASSED in Open Council this
14th day of October, 1981.


James E. Archdekin Mayor


Ralph A. Everett Clerk



THIS AGREEMENT made on the twenty-fifth day of August, 1981,

BETWEEN:

ARMBRO MATERIALS AND CONSTRUCTION LTD.,
WILLIAM COOPER AND LILLIAN COOPER,
DAVID GRAHAM, EXECUTOR OF THE ESTATE OF DAVID W. BOVAIRD,
BRAMALEA LIMITED,
WARFIELD DEVELOPMENTS LIMITED, and
GEORGE WIMPEY CANADA LIMITED,

(hereinafter referred to collectively as the
"Owners" and individually as an "Owner")

and

THE CORPORATION OF THE CITY OF BRAMPTON
(hereinafter referred to as the "City")

WHEREAS the Owners are the registered owners of certain lands within
the City of Brampton, being part of the area known as the Brampton Esker area;

AND WHEREAS the Owners and the City have agreed that it is necessary
to prepare an overall secondary plan for the entire Brampton Esker area before
it can be determined when and how the proper and orderly development of the
Brampton Esker area should proceed;

NOW THEREFORE this agreement witnesses that in consideration of the
mutual covenants and agreements herein contained, and subject to the terms
hereinafter set out, the parties hereto agree as follows:

1. The City will enter into a contract with Morrison Beatty Ltd.,
in association with W.E. Coates & Associates Ltd., and Knox
Martin Kretch Ltd., requiring these consultants to do a
hydrology study of the Brampton Esker area in accordance with
the terms of reference dated August 1980, which are appended
hereto as Schedule A.
2. The said terms of reference may be amended by the City if such
amendments are agreed to by all parties to this agreement.
3. The City agrees to pay the said consultants no more than
\$85,450.00 to do the said hydrology study.
4. (a) Each Owner agrees to reimburse the City for such
proportion of the final cost, less the City's contribution
in accordance with Paragraph 7, of the said hydrology
study as the area of its land listed on Schedule B is of
the total contributing land area listed on Schedule B,
which proportion is set out for each Owner in Schedule B
attached hereto.

- (b) Each Owner shall forthwith, before the City enters into the contract referred to in paragraph 1, file with the City, in a form satisfactory to the City, a Letter of Credit in the amount set out in Schedule B, or alternatively make equivalent arrangements satisfactory to the City Treasurer.
 - (c) The amount of each Owner's contribution set out in Schedule B is the maximum possible contribution of that Owner.
 - (d) The Letter of Credit of each Owner shall be released upon the City receiving full reimbursement from that Owner in accordance with the provisions of paragraph 4(a).
 - (e) If an Owner, instead of providing a Letter of Credit, makes alternative financial arrangements in accordance with paragraph 4(b), such Owner will receive a refund of a proportionate share if the final cost of the said study is less than \$85,450.00.
5. It is agreed by all parties hereto that Phase II of the said study will proceed when the required funding is provided by Franceschini Brothers Construction Ltd., or Mary E. Parr Management, or both, or by the City Council.
6. (a) The City will pay for such proportion of the final cost of the said study as is attributable to Franceschini Brothers Construction Ltd., and Mary E. Parr Management, as set out in Schedule B.
- (b) The City agrees that it will require Franceschini Brothers Construction Ltd., and Mary E. Parr Management to reimburse the City for their proportion of the said study as a condition of approval of any development of their lands.
7. The City will be responsible, on its own account, for such portion of the final cost of the said study, not to exceed \$14,000.00, which is not the responsibility of the Owners, in accordance with paragraph 4, and is not attributable to Franceschini Brothers Construction Ltd., and Mary E. Parr Management, in accordance with paragraph 5.

IN WITNESS WHEREOF THE PARTIES HERETO have set their hands hereunder, and have hereunto affixed their corporate seals attested by the hands of their proper officers duly authorized in that behalf.

ARMBRO MATERIALS AND CONSTRUCTION LTD.

[Signature]
TITLE

[Signature] SEC
TITLE

[Signature]
WILLIAM COOPER

L. Cooper.
LILLIAN COOPER

W. Winterhalt
WITNESS

W. Winterhalt
WITNESS

EXECUTOR OF THE ESTATE OF DAVID W. BOVAIRD

David Graham
DAVID GRAHAM

Peter Simon
WITNESS

BRAMALEA LIMITED

[Signature] President
TITLE

[Signature]
TITLE

WARFIELD DEVELOPMENTS LIMITED

[Signature]
TITLE

GEORGE WIMPEY CANADA LIMITED

[Signature]
VICE-PRESIDENT
TITLE

[Signature]
SECRETARY
TITLE

THE CORPORATION OF THE CITY OF BRAMPTON

James C. [Signature]
MAYOR

[Signature]
CITY CLERK

I, Peter Siemons
of the City of Mississauga
in the Regional Municipality of Peel

make oath and say:

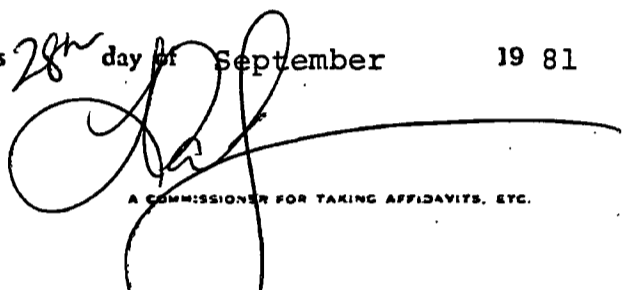
I am a subscribing witness to the attached instrument and I was present and saw it executed
at Toronto by David Graham, sole executor
of the Bovaird Estate

*See footnote

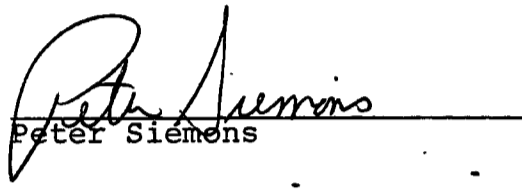
I verily believe that each person whose signature I witnessed is the party of the same name referred to in the instrument.

SWORN before me at the City of Brampton
in the Regional Municipality of Peel

this 28th day of September 19 81



A COMMISSIONER FOR TAKING AFFIDAVITS, ETC.


Peter Siemons

* Where a party is unable to read the instrument or where a party signs by making his mark or in foreign characters add "after the instrument had been read to him and he appeared fully to understand it". Where executed under a power of attorney insert "(name of attorney) as attorney for (name of party)"; and for next clause substitute "I verily believe that the person whose signature I witnessed was authorized to execute the instrument as attorney for (name)".

AMENDED MARCH 1977

Dye & Duhon Limited - Toronto, Canada

Form No. 347

AFFIDAVIT OF SUBSCRIBING WITNESS

I, William H. Winterhalt
of the City of Brampton
in the Regional Municipality of Peel

make oath and say:

I am a subscribing witness to the attached instrument and I was present and saw it executed
at Brampton by William Cooper and Lillian
Cooper.

*See footnote

I verily believe that each person whose signature I witnessed is the party of the same name referred to in the instrument.

SWORN before me at the City of Brampton,
in the Regional Municipality of Peel

this 28th day of September 19 81



A COMMISSIONER FOR TAKING AFFIDAVITS, ETC.


William H. Winterhalt

* Where a party is unable to read the instrument or where a party signs by making his mark or in foreign characters add "after the instrument had been read to him and he appeared fully to understand it". Where executed under a power of attorney insert "(name of attorney) as attorney for (name of party)"; and for next clause substitute "I verily believe that the person whose signature I witnessed was authorized to execute the instrument as attorney for (name)".

BRAMPTON ESKER HYDROLOGY STUDY

1.0

INTRODUCTION

The Brampton Esker Hydrology Study is intended to provide sufficient information about future hydrologic characteristics, potentials and constraints (with an emphasis on groundwater) to enable a Plan Formulation Committee to prepare a comprehensive Secondary Plan for a portion of the Brampton Esker Study Area.

The study area now contains a variety of land uses including public open space, sand and gravel extraction operations, residential subdivisions and isolated rural homes. See attached Map 1 which shows the boundaries of the Secondary Plan Area, the approximate extent of sand and gravel deposits (the Brampton Esker Study Area), existing major land uses, and major roads and utilities.

The Ministry of Transportation and Communications will soon begin the construction of the Highway 410 freeway from Queen Street to Bovaird Drive along the Heart Lake Road alignment, and will also up-grade Bovaird Drive as an arterial connection between Heart Lake Road and Highway 10. In the longer term, Highway 410 would be extended northward from Bovaird Drive to connect into Highway 10 north of the 17th Side-road. As indicated on Map 1, the exact alignment of Highway 410 north of Bovaird Drive is still under study.

The mining of aggregates in the Brampton Esker is expected to be completed within 20 years, during which time a linear open space system in conjunction with urban development will evolve throughout the study area.

As extraction activities in the Brampton Esker progress over the next 20 years and as the gravel pit operators determine that areas are exhausted, there should be ample opportunities to phase in the components of a land use plan in an evolving process.

Clearly, the City of Brampton is presented with a unique opportunity in the Esker Study Area to shape the physical character of the land for improved spatial relationships between urban development and open space functions. In co-operation with licensed producers, there may be considerable scope for carrying out future gravel extraction, backfilling and sloping operations in a manner which will create interesting building sites while maximizing the accessibility and utility of open space areas.

2.0 TERMS OF REFERENCE

It is important that the hydrologic implications of manipulating the physical character of the Esker be carefully evaluated in the hydrology study in order that appropriate decisions can be made at the planning and design stages.

It is judged that a two part hydrology study would be the most useful in the context of the overall Brampton Esker planning process.

The first part of the Brampton Esker Hydrology Study will include a basic hydrologic analysis of the existing state, the formulation of a "basic plan" and a detailed analysis of the hydrologic characteristics of this "basic plan". The data and analysis from this first phase of the study will then enable the Plan Formulation Committee to generate two or more alternative land use plans which would be analyzed (either consecutively or concurrently) with respect to their hydrology implications in the second part of the study. (Note: The Plan Formulation Committee will consist of approximately 12 representatives of the major landowners in the Study Area and of approximately 10 staff persons from the City, the Region and the Province.) A period of several months would separate the two parts of the study.

2.1 THE PART I STUDY

As noted above, part I of the Brampton Esker Hydrology Study will include the following three components:

2.1.1 Hydrologic Analysis of the Existing State

The term "existing state" refers to the existing extent of gravel extraction with the cessation of all de-watering activities. Specifically, with respect to this existing state, this component of the study will include:

- (i) An Identification of the Hydrologic System including:
 - (a) the extent of areas with high infiltration rates that are hydraulically connected to the Esker Feature (including lands beyond the Brampton Esker Study Area boundaries of Map 1),
 - (b) estimates of groundwater discharge rates and gradients, and the location of high-capacity aquifers,
 - (c) the estimated elevations and the short term (seasonal) and long term (50-100 year) fluctuations of the water table and of the lakes that will exist in the Brampton Esker Study Area,
 - (d) the identification of all surface drainage, including all wetland areas, ponds and surface streams and their status within the hydrologic system of the Esker, and
 - (e) the estimated water quality characteristics of the various lakes that will exist in the Brampton Esker Study Area,
 - (ii) An analysis of the Hydrologic Implications of Various Actions to determine:
 - (a) the nature and extent of the physical alterations which can be made in infiltration areas without adversely affecting their function,
-

- (b) the critical areas within the Brampton Esker Study Area which should be left undisturbed to minimize adverse effects to the groundwater flow system or to lakes and ponds,
- (c) the effect on water quality and groundwater flow rates of backfilling with various materials (with respect to permeability, etc.) throughout the Brampton Esker Study Area, and
- (d) potential areas of unstable slopes which should be stabilized, including a description of the appropriate percentage slope for various uses and of methods to be used in placing fill above and below the future water line.

This component of the Part I study will include whatever basic data gathering or additional testing or drilling is necessary to estimate surface water and groundwater elevations to a specified level of accuracy (i.e. within 0.5 metre, 1.0 metre or 2.0 metres as specified by the Plan Formulation Committee before the start of the study). Accordingly, the consultant shall propose and undertake a data collection program which provides sufficient information for the completion of the study.

2.1.2 Formulation of a Basic Plan

The consultant will undertake to prepare a basic land use plan for the study area which would reflect the current view of the landowners and the various government agencies on future optimum land use in the area. The "basic plan" is intended to be a reasonably realistic after-use assumption for the Brampton Esker which will serve as a useful reference point for a detailed hydrologic analysis and for the subsequent formulation of more refined alternative plans. The first step towards this basic plan will be the determination or formulation of the ultimate plans of each Brampton Esker landowner. These plans would then be assembled and adjusted through discussion with City of Brampton and other public agency staff. All parties would then be asked to accept a final basic plan on the understanding that this basic plan is merely a starting point for hydrologic impact study purposes and not a fixed commitment.

The basic plan need only contain the level of detail that is pertinent to a hydrologic study. It should indicate the topography of the land, characteristics of backfill material, extraction and rehabilitation strategy, angle of slopes, type of surface treatment (i.e buildings, vegetation, pavement, etc.), proposed storm drainage system, and depth of existing and proposed basements. The basic plan need not specify all of the details with respect to road patterns and land uses.

2.1.3 Hydrologic Analysis of the Basic Plan

Once the basic plan has been accepted, the consultant will be required to:

- (i) identify the hydrologic system that will correspond to this basic plan and provide the equivalent information to that requested in items (a) to (e) of subsection 2.1.1 (i) above, and
- (ii) analyze the hydrologic implications of the basic plan in order to provide the equivalent information to that requested in items (a) to (d) of subsection 2.1.1 (ii) above, and in order to identify:
 - (e) areas that will be susceptible to future basement flooding,
 - (f) the hydrologic effects of various degrees of reforestation,
 - (g) the hydrologic effects of various degrees of alteration in the land-water ratio, and
 - (h) the hydrologic effects of a greater or lesser amount of urban encroachment.

2.2 THE PART II STUDY

As noted above, the Plan Formulation Committee will utilize the information from the Part I Study, as well as additional input from the land-

owners and staffs of the City and of other public agencies, to generate one or more alternative Brampton Esker Plans which will be analyzed in Part II of the hydrology study.

For each defined alternative land use plan, the Consultant, through the Part II study will supplement the Part I study by providing the equivalent information to that requested with respect to the "basic plan" in subsection 2.1.3 above.

Comparisons as to the ratios between water, open space and developable land, and water quality, should be drawn between each alternative land use plan and the "basic plan". The Part II hydrology study will thus assist the Plan Formulation Committee to make minor adjustments to improve each alternative land use plan and ultimately to choose a preferred plan from these various alternatives.

At the beginning of the analysis of each alternative land use plan in the Phase II study, the consultant will be provided with the same type of information with respect to that alternative as was generated for the "basic plan".

3.0 SPECIFIC CONDITIONS

3.1 Consultant's Responsibilities

The successful consultant will be responsible for providing all of the information requested in subsections 2.1 (The Part I Study) and 2.2 (The Part II Study) of the Terms of Reference. As noted in subsection 2.1.1, the consultant will undertake the necessary basic data gathering, testing or drilling program as outlined in his proposal or as negotiated.

In addition to maintaining the usual contact with all relevant persons during the course of the study, the consultant will specifically be required to meet with the following persons and groups in the process of formulating the "basic plan" (see subsection 2.1.2):

- (i) Meet with the Region of Peel Resources Planner to obtain existing information on the future plans of the Brampton Esker gravel pit operators.
- (ii) Meet with Staff Committee (from City of Brampton and other public agencies) to discuss necessary adjustments to individual plans from (i) and to propose an acceptable composite plan.
- (iii) Meet with each gravel pit operator and significant landowner in the Esker area to discuss adjustments to their future plans in accordance with the composite plan from (ii).
- (iv) Meet with the total Plan Formulation Committee to finalize the Basic Plan.

The successful Consultant will be required to prepare drawings and other documentation as follows:

- (a) The "Basic Plan" and all other maps at a scale of 1:4000 on continuous (rolled) sheet.
- (b) 75 copies of a written report containing all information requested for the Part I Study and containing relevant mapping.
- (c) 75 copies of a report containing all information and analysis requested for each Part II Study and containing relevant mapping.
- (d) A presentation copy of all maps shall be provided at a scale of 1:2000.

Following the completion of the Part I study and of each phase of the Part II study, the Consultant will be required to attend a meeting of the Plan Formulation Committee for purposes of presenting the report and responding to any questions about the study.

3.2 Fees and Project Scheduling

Consultant proposals on the Brampton Esker Hydrology Study should quote separate costs for Parts I, II and the data collection program (for each of the three levels of accuracy noted in subsection 2.1.1) of the study and should assume the following periods for completion of each section. The Part I Study and data collection should be undertaken concurrently and should be completed within four months. Six weeks should be allocated to the analysis of each alternative plan in the Part II Study.

The Part II study should be quoted on a per alternative land use plan basis assuming that 1 to 4 alternatives may be studied either consecutively or concurrently. Completion times should be quoted for each part of the study.

3.3 Project Personnel

Consultant proposals should indicate the individuals who would be responsible for each aspect of the study and should outline their relevant education and experience. In addition to the primary expertise in groundwater and hydrologic analysis, the carrying out of the Brampton Esker Hydrology Study will require expertise in gravel extraction operations and in resource, environmental or land use planning, or landscape architecture.

3.4 City of Brampton Responsibility

The City of Brampton will provide the successful Consultant with:

- (i) copies of all relevant information in its possession (i.e. woodlot inventory, preliminary Brampton Esker study etc.), and
- (ii) a 1:2000 scale chronoflex base map of the study area and a 1:4000 scale chronoflex of Map 1 (print attached hereto) for the Part I study.

3.5 Ownership of Study Material

All data, inventories, detailed analysis, map originals, etc., gathered or produced as part of the Brampton Esker Hydrology Study shall become the property of the City of Brampton following completion of each part of the study.

SCHEDULE B
BRAMPTON ESKER HYDROLOGY STUDY
ALLOCATION OF COSTS

PARTICIPANT *

	<u>Size of Holding</u> (acres)	<u>% of Total</u> <u>Contributing</u> <u>Land Area</u>	<u>Maximum Possible</u> <u>Share Of Cost @</u> <u>\$120 Per Acre</u>
Total Contributing Land Area	604.9	100.00%	
<u>PHASE I</u>			
Armbro Materials and Construction Limited	180.0	29.76%	\$ 21,600.
William and Lillian Cooper	97.9	16.18%	11,748.
Estate of David W. Bovaird	57.6	9.52%	6,912.
Bramalea Limited	52.6	8.70%	6,312.
Warfield Developments Limited	20.4	3.37%	2,448.
George Wimpey Canada Limited	<u>6.7</u>	<u>1.11%</u>	<u>804.</u>
Sub-total (Landowner share Phase I)	415.2	68.64%	\$ 49,824.
City of Brampton ***			<u>\$ 13,126.</u>
Total Phase I			\$ 62,950.
<u>PHASE II</u>			
Franceschini Brothers Construction Limited **	98.5	16.28%	\$ 11,820.
Mary E. Parr Management **	<u>91.2</u>	<u>15.08%</u>	<u>\$ 10,944.</u>
Sub-total (Landowner Share Phase II)	189.7	31.36%	\$ 22,764.
City of Brampton ***			- <u>\$ 264.</u>
Total Phase II			\$ 22,500.
Total Study	604.9	100.00%	\$ 85,450.

* The Peel County Game Farm (1981) Limited is exempted from cost sharing on the basis that it is a non-profit recreational club.

Blue Mount Subdivision is exempted on the basis that part of this plan is registered and the other part is draft approved.

** See Paragraph 6 of agreement.

*** See Paragraph 7 of agreement.

PASSED October 14th 1981



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