



THE CORPORATION OF THE CITY OF BRAMPTON

BY-LAW

Number 236-76

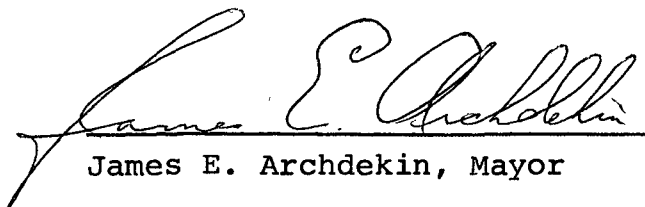
A By-law to authorize the execution
of Engineering Agreements.

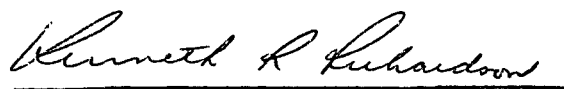
THE Council of The Corporation of the City of Brampton
ENACTS as follows:

That the Mayor and the Clerk are hereby authorized to
execute the following Engineering Agreements:

- (a) Parhet Engineering Limited - dated November 1st, 1976.
- (b) Wobco Associates Limited - dated November 5th, 1976.
- (c) W.O. Chisholm and Associates(Eastern) Limited - dated October 25th, 1976.
- (d) The Kleinfeldt Group - dated November 1st, 1976.

READ a FIRST, SECOND and THIRD TIME and PASSED in Open
Council this 8th day of November, 1976.


James E. Archdekin, Mayor


Kenneth R. Richardson, Clerk

PASSED November 8th 19 76



BY-LAW

No. 236-76

A By-law to authorize the
execution of Engineering
Agreements.

AGREEMENT
FOR
PROFESSIONAL ENGINEERING SERVICES
FOR THE DESIGN & ADMINISTRATION DURING CONSTRUCTION
OF ROADS & BRIDGES

MEMORANDUM OF AGREEMENT dated the 1st day
of November A. D. 19 76

BETWEEN The Corporation of City of Brampton.

hereinafter called the "Client"

- AND - PARHET ENGINEERING LIMITED.

hereinafter called the "Consultant"

WHEREAS the Client intends to construct

KENNEDY ROAD
BETWEEN No. 10 SIDE ROAD
AND SANDALWOOD PARKWAY
IN THE CITY OF BRAMPTON,
REGIONAL MUNICIPALITY OF PEEL.

hereinafter called the "Project" and has requested the Consultant to furnish
professional services in connection therewith;

NOW THEREFORE WITNESSETH that in consideration
of the mutual premises and covenants contained herein, the Client and the
Consultant mutually agree as follows:

REVISED JUNE 1974

ARTICLE 1 - GENERAL CONDITIONS1.1 Retainer

The Client hereby retains the services of the Consultant in connection with the Project and the Consultant hereby agrees to provide the engineering services described herein under the general direction and control of the Client.

1.2 Services

The services to be provided by the Consultant and by the Client for the Project are set forth in Article 2 and such services as changed, altered or added to, under Sections 1.8 and 1.9 are hereinafter called the "Work".

1.3 Compensation

The Client shall pay the Consultant in accordance with the provisions set forth in Article 3.

1.4 Staff and Methods

The Consultant shall use the best available methods in performing the Work and shall employ only skilled and competent staff thereon who will be under the supervision of a senior member of the Consultant's staff.

1.5 Drawings and Documents

Subject to clause (g) of Section 3.7, drawings and documents or copies thereof required for the Work shall be exchanged between the parties on a reciprocal basis, and those prepared by the Consultant for the Client shall be the property of the Client free of all claims by the Consultant of any nature and kind whatsoever.

1.6 Records and Audit

- (a) In order to provide data for the calculation of fees on a time basis, the Consultant shall keep a detailed record of the hours worked by and salaries paid to his staff employed on the Work.
- (b) The Client may inspect and audit the books, payrolls, accounts and records of the Consultant at any time with respect to any item which the Client is required to pay on a Time Scale or Disbursement basis as a result of this Agreement.

1.7 Schedules

Upon the execution of this Agreement, the Consultant shall provide a schedule acceptable to the Client showing the portion of the Work to be completed in each month under this Agreement and an estimate of the portion of the fee which will be payable for each such month. The Consultant shall carry out the Work in accordance with such schedule, subject only to such variation therein as have been agreed to in writing by the Client and, during the currency of the Agreement, the Consultant shall provide the Client with a monthly written report in such reasonable form and detail as the Client may require showing the portion of the Work completed in the preceding month.

1.8 Changes and Alterations

Subject to clause (d) of Section 3.1 the Client may in writing, at any time increase, decrease or otherwise alter the whole or any part of the design of the Work.

1.9 Additional Services

Subject to clause (e) of Section 3.1 the Client may in writing require the Consultant to perform services in addition to those required in Section 2.1 including any Client's services under Section 2.2 which the Client is unable to provide.

1.10 Suspension or Termination

Subject to clause (f) of Section 3.1 the Client may, at any time, by notice in writing to the Consultant, suspend or terminate the whole or any part of the Work.

1.11 Damages

The Consultant shall indemnify and save harmless the Client from and against all claims, actions, losses, expenses, costs or damages of every nature and kind whatsoever which the Client, his employees, officers, or agents may suffer as a result of the negligence of the Consultant, his employees, officers or agents in the performance of this Agreement.

1.12 Contracting for Construction

Neither the Consultant nor any person, firm or corporation associated or affiliated with or subsidiary to the Consultant shall tender for the construction of the Project, or have an interest either directly or indirectly in the construction of the Project.

1.13 Assignment

This Agreement or any portion thereof shall not be assigned or sublet without the consent in writing of the Client.

1.14 Previous Agreements

This Agreement supersedes all previous agreements, arrangements, or understandings between the parties whether written or oral in connection with or incidental to the Project or to the execution of the design thereof.

1.15 Approval by Other Authorities

Where the design of the Project is subject to the approval of an authority, department of government or agency other than the Client, such approval shall be obtained through the offices of the Client and unless authorized by the Client in writing, such approval shall not be obtained by direct contact by the Consultant with such other authority, department of government or agency.

1.16 Time

The Consultant shall perform the Work expeditiously to meet the requirements of the Client and shall complete any portion or portions of the Work in such order as the Client may require and the Client shall have the right to take possession of and use any completed or partially completed portions of the Work notwithstanding any provisions expressed or implied to the contrary and in any event, the Consultant shall execute the Work and deliver to the Client the completed drawings and documents required for the Project on or before the 30th day of June A.D. 1977

1.17 Principals and Executive Engineers

The use of principals and executive engineers, on a per diem basis during the course of design and administration during construction by the Consultant, will be subject to approval, in writing, by the Client prior to performing the Work.

ARTICLE 2 - ENGINEERING SERVICES

2.1 (a) Consultant's Services for Design

The services to be provided by the Consultant in the execution of the design of the Project shall include:

- (i) The preparation and submission to the Client of a field inspection report setting out the salient engineering features of the Work, and the engineer's proposed design methods in consideration of these features.
- (ii) Preliminary site investigation to inspect the topographical features and to obtain information which will facilitate the choice of the most suitable structure or structures.
- (iii) Field survey work required after the design criteria and functional alignment have been established, which shall include all survey work necessary for the estimating of quantities, the detailed setting of alignment and grade to fit controlling natural and artificial topographic and underground features, the design of culverts, ditches, drains and storm sewers, and the positioning of all appurtenances associated with the construction of the Project.
- (iv) A preliminary sketch plan showing the principal features and geometrics of any proposed structure or structures, which shall be submitted in duplicate to the Client for his approval before final detailed drawings are begun.
- (v) Drainage studies and preparation of design data for culverts and drainage works (for the purposes of this Agreement, a culvert is defined as any structure of which the roof or upper surface is not designed as an integral part of the travelled surface of the roadway).
- (vi) The preparation and submission of preliminary drawings, investigations and recommendations to the Client, on such alternatives or modifications to the Project that the Consultant in his professional judgement deems advantageous to the Client.
- (vii) The preparation of engineering plans showing any lands or interests in land required for the Project.
- (viii) The preparation of a plan showing the present and proposed location of any public utilities that must be relocated for that portion of the Work for which the design is prepared subject to clause (e) of Section 2.2.
- (ix) Participation in conferences and meetings for informative, negotiative or presentative purposes with the Client in connection with the services provided under this Agreement, after the establishment of the design criteria and functional alignment.

- (x) The preparation of contract documents for the Project including the detailed construction drawings, tender quantity forms, material lists, specifications and information to bidders.
- (xi) The preparation of detailed quantity and cost estimates, sundry engineering and materials.
- (xii) The provision of six complete sets of tendering documents and one complete set of reproduceable drawings for the Project.
- (xiii) Advice, consultation and assistance to the Client in the advertising, receiving and evaluation of bids, and awarding of a contract for construction.
- (xiv) ~~The preparation of reinforcing steel bar lists for structures subject to clause (c) of Section 3.1.~~

(b) Engineering Services for Administration during Construction of Roads and/or Bridges

Administrative Services

- (i) The review, modification and approval of the contractor's construction schedule, the processing of progress and final payment certificates for the Work, and the preparation and submission of work progress reports to the Client at such time and in such form and detail as the Client may require.
- (ii) The review and checking of ~~formwork drawings and~~ proposed construction methods as warranted, to ensure that the contractor's Work complies with the design requirements.
- (iii) Consideration and advice in respect to alternatives of construction methods or material proposed by the contractor and preparation of change orders.
- (iv) ~~Checking and approval of shop drawings where the design includes structural steel or prefabricated members.~~

Field Administration

- (i) Engineering direction of the Consultant's field staff, and review of the contractor's work to ensure compliance with the plans and specifications.
- (ii) Surveying and field stakeout for the layout control, and calculation of pay quantities for the Work.
- (iii) Calculation and recording of quantities, and the preparation of progress and final payment certificates prescribed by the Client, together with the compilation of such survey notes, diaries, records, and reports substantiating such certificates, during construction and on completion of the Work.
- (iv) Arranging, preparing and shipping for testing materials supplied by the contractor for incorporation in the Work and the review of test results and judgement of acceptability of said materials.
- (v) On-site tests during the construction of the Work to verify acceptability according to the specifications.

- (vi) The assignment of the necessary field staff to adequately control the accuracy and quality of the Work, and to perform such field operations necessary in the provision of the foregoing construction administration services.
- (vii) Investigating, reporting and advising on unusual circumstances which may arise during construction.
- (viii) Carrying out final inspection at the conclusion of the construction contract, at the end of the maintenance period, and as part of the acceptance programme to the municipality.
- (ix) The preparation and submission to the Client of revised contract drawings showing the "as constructed" Project.

2.2 Client's Services

The Client shall provide the Consultant with the following services, notwithstanding that, should the Client be unable to provide any of the services hereunder, services under clause (a) may be assigned to the Consultant under a "Pre-Design Services Agreement", and other services herein under Section 1.9, Additional Services.

- (a) Design criteria establishing the type of roadway, number of lanes, design speed, minimum sight distance, maximum grade and maximum curvature, and the desirable dimensional arrangement of pavements, median, shoulders, rights-of-way, intersections, auxiliary turning lanes, bus bays and entrances.
- (b) Access to and, where necessary, copies of existing plans, profiles or other topographic information showing or pertaining to existing conditions within the Project area.
- (c) Registered land plans, legal documents and surveys, where necessary, defining the property limits of the existing right-of-way and other parcels of land affected by the Project and as required in the acquisition of property and lands for the Project.
- (d) ~~Soils, foundation and hydrological reports for bridges, where required, for the proper engineering design of the Project.~~
- (e) All information respecting existing underground utilities.

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OB-MR-162
REVISED JUNE 1974

- 7 -

ARTICLE 3 - COMPENSATION

3.1 Basis of Payment

(a) The Client shall pay the Consultant a fee to be calculated in accordance with the following table:

(1) THE UPSET FEE IS ESTABLISHED AS \$112,500.00.

<u>COST OF WORK</u>		<u>FEE</u>	
Less than \$100,000		Time Basis	
\$ 100,000 - \$ 200,000		\$ 7,000 on first \$ 100,000	and 5.60% on next \$ 100,000
\$ 200,000 - \$ 500,000		\$ 12,600 on first \$ 200,000	and 5.05% on next \$ 300,000
\$ 500,000 - \$ 1,000,000		\$ 27,750 on first \$ 500,000	and 4.85% on next \$ 500,000
\$1,000,000 - \$ 2,000,000		\$ 52,000 on first \$ 1,000,000	and 4.60% on next \$1,000,000
\$2,000,000 - \$ 4,000,000		\$ 98,000 on first \$ 2,000,000	and 4.30% on next \$2,000,000
\$4,000,000 - \$ 6,000,000		\$184,000 on first \$ 4,000,000	and 4.15% on next \$2,000,000
\$6,000,000 - \$ 8,000,000		\$267,000 on first \$ 6,000,000	and 4.05% on next \$2,000,000
\$8,000,000 - \$10,000,000		\$348,000 on first \$ 8,000,000	and 4.00% on next \$2,000,000
Over \$10,000,000		\$428,000 on first \$10,000,000	plus a percentage on the amount exceeding \$10,000,000 to be negotiated between the Client and the Consultant

- (b) Prior to the commencement of construction the Client and the Consultant shall agree whether resident staff shall be required on a full time or part time basis.

Where it is agreed that at least one full time resident is required then all field staff employed on the project, although some may be required only intermittently, shall be paid for on the basis of payroll cost multiplied by a factor of 1.7.

Where it is agreed that less than one full time resident is required, then the Consultant shall provide staff on an intermittent basis and all staff so employed shall be paid for on the basis of payroll cost multiplied by a factor of 2.0.

- (c) ~~The Client will pay the Consultant a fee of \$7.50 a ton for each ton of reinforcing steel used in the bridges, concrete barrel arches, retaining walls and culverts, and for which the Consultant prepares detailed bar schedules. For the purpose of this agreement bridges means only structures in which the deck is designed as an integral part of the travelled surface of the roadway.~~
- (d) Where the Client has changed or altered the whole or any part of the Project under Section 1.8, and where such action by the Client required additional work by the Consultant for which, in the opinion of the Client, payment is not provided under clause (a) of Section 3.1, the Consultant will be paid two-hundred percent of the payroll costs of the Consultant's staff directly employed on such additional work, as recorded pursuant to Section 1.6.
- (e) Where additional services are required of the Consultant under Section 1.9, the Consultant will be paid two-hundred percent of the payroll costs of the Consultant's staff directly employed in providing such additional services as recorded pursuant to Section 1.6 in full satisfaction of any fee therefor.
- (f) Where the Client, under Section 1.10, terminates the services to be provided by the Consultant, the Consultant will be paid two-hundred percent of his payroll costs for any of the Consultant's staff employed directly in the provision of services for the Work as recorded pursuant to Section 1.6 in lieu of the fees prescribed under clause (a) of Section 3.1, in full satisfaction of any fee therefor.
- (g) Where the Client requires the Consultant to negotiate with representatives of utility commissions or utility companies concerning the moving of utilities and to prepare information necessary for application to public authorities for the purposes of negotiating distribution of costs or obtaining subsidies, the Consultant will be paid a fee on a time basis as set forth in clause (e) of Section 3.1.
- (h) Where the design of illumination or traffic control devices are required of the Consultant under Section 1.9, the Consultant will be paid a fee on a time basis as set forth in clause (e) of Section 3.1.

OB-MR-162
REVISED JUNE 1974

3.2 Payroll Costs

For the purpose of this Agreement, payroll costs means salary plus provision for statutory holidays, vacations with pay, unemployment insurance, workmen's compensation, health and medical insurance, group insurance, pension plan and sick time allowance where such benefits are paid by the Consultant but shall not include any bonus or profit sharing system or any premium paid for overtime, except for such overtime work as may be approved by the Client in writing in advance of the overtime hours being worked. Payment of overtime premium shall be in accordance with The Ontario Employment Standards Act.

The Consultant may use per Diem rates for principals and executive engineers in lieu of a percentage of their payroll costs, subject to approval under Section 3.3.

3.3 Approval of Consultant's Staff

The Consultant, within fourteen days of the execution of this Agreement shall provide a staff list showing the number, classifications and salary ranges of staff, for which the Consultant will seek payment on a time basis. The Consultant shall relate such information to the particular type of work that such staff is to perform, while employed on the work. Upon approval of such staff list, by the Client, the staff of the Consultant shall be employed on the work in accordance with such staff list.

3.4 Records for Time Scale Fees

Where the Consultant is to be paid a time scale fee for any part of the work, no part of such fee shall be based upon any hours of work that have not been recorded as required by Section 1.6 or upon any salary other than the salary applicable to the particular type of work performed as approved under Section 3.3.

3.5 Cost of the Project

(a) "Cost of the Project" means the total cost to the Client of all materials, equipment and labour necessary to complete the Project for which the Consultant prepares plans, drawings and specifications for which he is responsible, but does not include:

- (i) Fees and disbursements paid to the Consultant or to any other Consultant retained to provide professional services in relation to the Project.
- (ii) Legal fees and disbursements.
- (iii) The cost of property necessary for the Project.
- (iv) The cost of any portion of the Project for which the Consultant has been or is entitled to be paid a time scale design fee.
- (v) The cost of engineering services provided by the Client.

- (vi) Items of cost which, in the opinion of the Client, do not form part of the Project to be designed by the Consultant under this Agreement.
 - (vii) The cost of moving public utilities, notwithstanding that the Consultant must show in his design of the Project the nature and location of public utilities.
 - (viii) The cost of engineering administration during the construction of the Project.
- (b) Where the cost of material, transportation of material, equipment or labour, furnished by the Client and incorporated into the Project are to be included in the cost of the Project, such costs shall be equivalent to the fair market value of such material, transportation of material, equipment or labour.

3.6 Payment

(a) Monthly Payment for Design Services

The Consultant shall submit a monthly invoice to the Client during the execution of the design of the Work for seventy per cent of his fee for that part of the design of the Work completed in the immediately preceding month calculated upon the basis of the Consultant's estimate of the cost of that part of the Work, and, if the Client agrees with such estimate and that such part has been completed, the Consultant will be paid the amount of the fee so invoiced.

(b) On Award of Contract

Following the award of the contract for the construction of the Work, the Consultant shall recalculate his fee for design on the basis of the tender quantities and prices on which the contract for the construction of the Work was awarded, plus the estimated cost of material supplied by the Client, and upon such recalculation, the amount paid to the Consultant will be adjusted to equal eighty percent of the recalculated fee including, where necessary the rebate of any overpayment made to the Consultant.

(c) Monthly Payment for Administrative Services and Field Administration

The Consultant shall submit a monthly invoice to the Client during the construction of the Work for a further ten percent of the fee for administrative services specified under Section 3.1 (a) for that portion of the Project constructed during the preceding month and in addition thereto, fees due the Consultant for field administration in the full amount prescribed under Section 3.1(b)

(d) Balance of the Fee

Following the completion of the construction and acceptance of the Project by the Client, and upon receipt of an invoice therefor, the Client shall pay the Consultant the balance of the fee due him based on the actual cost of the Project.

3.7 Disbursements

The Client shall reimburse the Consultant for the following:

- (a) Toll charges paid by the Consultant for long distance telephone calls, telegraph messages and similar telecommunications in connection with the Work.
- (b) Amounts paid by the Consultant for reasonable out-of-town living and travelling expenses of the Consultant's personnel employed directly in connection with the Work where such travel has been approved by the Client.
- (c) Necessary and reasonable travelling and on-site expenses of the Consultant's personnel incurred in the engineering administration of the construction of the Project.
- (d) Amounts paid by the Consultant for specialized consulting services for the Project, performed by others, provided that prior approval has been obtained in writing from the client, including sub soil investigation.
- (e) Field office and field laboratory expenses properly incurred in administration during the construction of the Work excluding, however, stationery, office and engineering equipment or other tools of the trade.
- (f) The cost of electronic digital computers and associated equipment used with the consent of and at rates approved by the Client where, in the opinion of the Client, they have been used in lieu of the staff of the Consultant where the use of such staff would have entitled the Consultant to a fee on a time basis.
- (g) Except as otherwise provided under item (xii) of Section 2.1 (a), the cost of reproducing drawings, photographs, reports and similar documents required by the Client.

IN WITNESS WHEREOF the parties hereto have caused to be executed those presents by their officers properly authorized in that behalf on the day and year first above written.

SIGNED, SEALED AND DELIVERED)

In the presence of:)

) James E. Richdell MAYOR
) Kenneth L. Richardson CLERK
)
)
)

) Blottman
)
) FOR PARHET ENGINEERING LIMITED

AGREEMENT
FOR
PROFESSIONAL ENGINEERING SERVICES
FOR THE DESIGN & ADMINISTRATION DURING CONSTRUCTION
OF ROADS & BRIDGES

MEMORANDUM OF AGREEMENT dated the 5th day
of *November* A. D. 1976

BETWEEN The Corporation of the City of Brampton

hereinafter called the "Client"

- AND -

WBCO Associates Limited

hereinafter called the "Consultant"

WHEREAS the Client intends to construct

4 lane bridge and approaches on
Sandalwood Parkway at Etobicoke
Creek in Heart Lake Village in
the City of Brampton

hereinafter called the "Project" and has requested the Consultant to furnish
professional services in connection therewith;

NOW THEREFORE WITNESSETH that in consideration
of the mutual premises and covenants contained herein, the Client and the
Consultant mutually agree as follows:

REVISED JUNE 1974

ARTICLE 1 - GENERAL CONDITIONS1.1 Retainer

The Client hereby retains the services of the Consultant in connection with the Project and the Consultant hereby agrees to provide the engineering services described herein under the general direction and control of the Client.

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- (b) The Client may inspect and audit the books, payrolls, accounts and records of the Consultant at any time with respect to any item which the Client is required to pay on a Time Scale or Disbursement basis as a result of this Agreement.

1.7 Schedules

Upon the execution of this Agreement, the Consultant shall provide a schedule acceptable to the Client showing the portion of the Work to be completed in each month under this Agreement and an estimate of the portion of the fee which will be payable for each such month. The Consultant shall carry out the Work in accordance with such schedule, subject only to such variation therein as have been agreed to in writing by the Client and, during the currency of the Agreement, the Consultant shall provide the Client with a monthly written report in such reasonable form and detail as the Client may require showing the portion of the Work completed in the preceding month.

1.8 Changes and Alterations

Subject to clause (d) of Section 3.1 the Client may in writing, at any time increase, decrease or otherwise alter the whole or any part of the design of the Work.

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The Consultant shall indemnify and save harmless the Client from and against all claims, actions, losses, expenses, costs or damages of every nature and kind whatsoever which the Client, his employees, officers, or agents may suffer as a result of the negligence of the Consultant, his employees, officers or agents in the performance of this Agreement.

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1.16 Time

The Consultant shall perform the Work expeditiously to meet the requirements of the Client and shall complete any portion or portions of the Work in such order as the Client may require and the Client shall have the right to take possession of and use any completed or partially completed portions of the Work notwithstanding any provisions expressed or implied to the contrary and in any event, the Consultant shall execute the Work and deliver to the Client the completed drawings and documents required for the Project on or before the 31ST day of MAY A. D. 1977

1.17 Principals and Executive Engineers

The use of principals and executive engineers, on a per diem basis during the course of design and administration during construction by the Consultant, will be subject to approval, in writing, by the Client prior to performing the Work.

ARTICLE 2 - ENGINEERING SERVICES

2.1 (a) Consultant's Services for Design

The services to be provided by the Consultant in the execution of the design of the Project shall include:

- (i) The preparation and submission to the Client of a field inspection report setting out the salient engineering features of the Work, and the engineer's proposed design methods in consideration of these features.
- (ii) Preliminary site investigation to inspect the topographical features and to obtain information which will facilitate the choice of the most suitable structure or structures.
- (iii) Field survey work required after the design criteria and functional alignment have been established, which shall include all survey work necessary for the estimating of quantities, the detailed setting of alignment and grade to fit controlling natural and artificial topographic and underground features, the design of culverts, ditches, drains and storm sewers, and the positioning of all appurtenances associated with the construction of the Project.
- (iv) A preliminary sketch plan showing the principal features and geometrics of any proposed structure or structures, which shall be submitted in duplicate to the Client for his approval before final detailed drawings are begun.
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- (viii) The preparation of a plan showing the present and proposed location of any public utilities that must be relocated for that portion of the Work for which the design is prepared subject to clause (e) of Section 2.2.
- (ix) Participation in conferences and meetings for informative, negotiative or presentative purposes with the Client in connection with the services provided under this Agreement, after the establishment of the design criteria and functional alignment.

- (x) The preparation of contract documents for the Project including the detailed construction drawings, tender quantity forms, material lists, specifications and information to bidders.
- (xi) The preparation of detailed quantity and cost estimates, sundry engineering and materials.
- (xii) The provision of six complete sets of tendering documents and one complete set of reproduceable drawings for the Project.
- (xiii) Advice, consultation and assistance to the Client in the advertising, receiving and evaluation of bids, and awarding of a contract for construction.
- (xiv) The preparation of reinforcing steel bar lists for structures subject to clause (c) of Section 3.1.

(b) Engineering Services for Administration during Construction of Roads and/or Bridges

Administrative Services

- (i) The review, modification and approval of the contractor's construction schedule, the processing of progress and final payment certificates for the Work, and the preparation and submission of work progress reports to the Client at such time and in such form and detail as the Client may require.
- (ii) The review and checking of formwork drawings and proposed construction methods as warranted, to ensure that the contractor's Work complies with the design requirements.
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- (iv) Checking and approval of shop drawings where the design includes structural steel or prefabricated members.

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- (i) Engineering direction of the Consultant's field staff, and review of the contractor's work to ensure compliance with the plans and specifications.
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- (iii) Calculation and recording of quantities, and the preparation of progress and final payment certificates prescribed by the Client, together with the compilation of such survey notes, diaries, records, and reports substantiating such certificates, during construction and on completion of the Work.
- (iv) Arranging, preparing and shipping for testing materials supplied by the contractor for incorporation in the Work and the review of test results and judgement of acceptability of said materials.
- (v) On-site tests during the construction of the Work to verify acceptability according to the specifications.

- (vi) The assignment of the necessary field staff to adequately control the accuracy and quality of the Work, and to perform such field operations necessary in the provision of the foregoing construction administration services.
- (vii) Investigating, reporting and advising on unusual circumstances which may arise during construction.
- (viii) Carrying out final inspection at the conclusion of the construction contract, at the end of the maintenance period, and as part of the acceptance programme to the municipality.
- (ix) The preparation and submission to the Client of revised contract drawings showing the "as constructed" Project.

2.2 Client's Services

The Client shall provide the Consultant with the following services, notwithstanding that, should the Client be unable to provide any of the services hereunder, services under clause (a) may be assigned to the Consultant under a "Pre-Design Services Agreement", and other services herein under Section 1.9, Additional Services.

- (a) Design criteria establishing the type of roadway, number of lanes, design speed, minimum sight distance, maximum grade and maximum curvature, and the desirable dimensional arrangement of pavements, median, shoulders, rights-of-way, intersections, auxiliary turning lanes, bus bays and entrances.
- (b) Access to and, where necessary, copies of existing plans, profiles or other topographic information showing or pertaining to existing conditions within the Project area.
- (c) Registered land plans, legal documents and surveys, where necessary, defining the property limits of the existing right-of-way and other parcels of land affected by the Project and as required in the acquisition of property and lands for the Project.
- (d) Soils, foundation and hydrological reports for bridges, where required, for the proper engineering design of the Project.
- (e) All information respecting existing underground utilities.

ARTICLE 3 - COMPENSATION

3.1 Basis of Payment

(a) The Client shall pay the Consultant a fee to be calculated in accordance with the following table:

(1) THE UPSET FEE IS ESTABLISHED AS \$50,000.00.

<u>COST OF WORK</u>		<u>FEE</u>	
Less than \$100,000		Time Basis	
\$ 100,000 - \$ 200,000		\$ 7,000 on first \$ 100,000	and 5.60% on next \$ 100,000
\$ 200,000 - \$ 500,000		\$ 12,600 on first \$ 200,000	and 5.05% on next \$ 300,000
\$ 500,000 - \$ 1,000,000		\$ 27,750 on first \$ 500,000	and 4.85% on next \$ 500,000
\$1,000,000 - \$ 2,000,000		\$ 52,000 on first \$ 1,000,000	and 4.60% on next \$1,000,000
\$2,000,000 - \$ 4,000,000		\$ 98,000 on first \$ 2,000,000	and 4.30% on next \$2,000,000
\$4,000,000 - \$ 6,000,000		\$184,000 on first \$ 4,000,000	and 4.15% on next \$2,000,000
\$6,000,000 - \$ 8,000,000		\$267,000 on first \$ 6,000,000	and 4.05% on next \$2,000,000
\$8,000,000 - \$10,000,000		\$348,000 on first \$ 8,000,000	and 4.00% on next \$2,000,000
Over \$10,000,000		\$428,000 on first \$10,000,000	plus a percentage on the amount exceeding \$10,000,000 to be negotiated between the Client and the Consultant

- (b) Prior to the commencement of construction the Client and the Consultant shall agree whether resident staff shall be required on a full time or part time basis.

Where it is agreed that at least one full time resident is required then all field staff employed on the project, although some may be required only intermittently, shall be paid for on the basis of payroll cost multiplied by a factor of 1.7.

Where it is agreed that less than one full time resident is required, then the Consultant shall provide staff on an intermittent basis and all staff so employed shall be paid for on the basis of payroll cost multiplied by a factor of 2.0.

- (c) The Client will pay the Consultant a fee of \$7.50 a ton for each ton of reinforcing steel used in the bridges, concrete barrel arches, retaining walls and culverts, and for which the Consultant prepares detailed bar schedules. For the purpose of this agreement "bridges" means only structures in which the deck is designed as an integral part of the travelled surface of the roadway.
- (d) Where the Client has changed or altered the whole or any part of the Project under Section 1.8, and where such action by the Client required additional work by the Consultant for which, in the opinion of the Client, payment is not provided under clause (a) of Section 3.1, the Consultant will be paid two-hundred percent of the payroll costs of the Consultant's staff directly employed on such additional work, as recorded pursuant to Section 1.6.
- (e) Where additional services are required of the Consultant under Section 1.9, the Consultant will be paid two-hundred percent of the payroll costs of the Consultant's staff directly employed in providing such additional services as recorded pursuant to Section 1.6 in full satisfaction of any fee therefor.
- (f) Where the Client, under Section 1.10, terminates the services to be provided by the Consultant, the Consultant will be paid two-hundred percent of his payroll costs for any of the Consultant's staff employed directly in the provision of services for the Work as recorded pursuant to Section 1.6 in lieu of the fees prescribed under clause (a) of Section 3.1, in full satisfaction of any fee therefor.
- (g) Where the Client requires the Consultant to negotiate with representatives of utility commissions or utility companies concerning the moving of utilities and to prepare information necessary for application to public authorities for the purposes of negotiating distribution of costs or obtaining subsidies, the Consultant will be paid a fee on a time basis as set forth in clause (e) of Section 3.1.
- (h) Where the design of illumination or traffic control devices are required of the Consultant under Section 1.9, the Consultant will be paid a fee on a time basis as set forth in clause (e) of Section 3.1.

OB-MR-162
REVISED JUNE 1974

3.2 Payroll Costs

For the purpose of this Agreement, payroll costs means salary plus provision for statutory holidays, vacations with pay, unemployment insurance, workmen's compensation, health and medical insurance, group insurance, pension plan and sick time allowance where such benefits are paid by the Consultant but shall not include any bonus or profit sharing system or any premium paid for overtime, except for such overtime work as may be approved by the Client in writing in advance of the overtime hours being worked. Payment of overtime premium shall be in accordance with The Ontario Employment Standards Act.

The Consultant may use per Diem rates for principals and executive engineers in lieu of a percentage of their payroll costs, subject to approval under Section 3.3.

3.3 Approval of Consultant's Staff

The Consultant, within fourteen days of the execution of this Agreement shall provide a staff list showing the number, classifications and salary ranges of staff, for which the Consultant will seek payment on a time basis. The Consultant shall relate such information to the particular type of work that such staff is to perform, while employed on the work. Upon approval of such staff list, by the Client, the staff of the Consultant shall be employed on the work in accordance with such staff list.

3.4 Records for Time Scale Fees

Where the Consultant is to be paid a time scale fee for any part of the work, no part of such fee shall be based upon any hours of work that have not been recorded as required by Section 1.6 or upon any salary other than the salary applicable to the particular type of work performed as approved under Section 3.3.

3.5 Cost of the Project

- (a) "Cost of the Project" means the total cost to the Client of all materials, equipment and labour necessary to complete the Project for which the Consultant prepares plans, drawings and specifications for which he is responsible, but does not include:
- (i) Fees and disbursements paid to the Consultant or to any other Consultant retained to provide professional services in relation to the Project.
 - (ii) Legal fees and disbursements.
 - (iii) The cost of property necessary for the Project.
 - (iv) The cost of any portion of the Project for which the Consultant has been or is entitled to be paid a time scale design fee.
 - (v) The cost of engineering services provided by the Client.

- (vi) Items of cost which, in the opinion of the Client, do not form part of the Project to be designed by the Consultant under this Agreement.
 - (vii) The cost of moving public utilities, notwithstanding that the Consultant must show in his design of the Project the nature and location of public utilities.
 - (viii) The cost of engineering administration during the construction of the Project.
- (b) Where the cost of material, transportation of material, equipment or labour, furnished by the Client and incorporated into the Project are to be included in the cost of the Project, such costs shall be equivalent to the fair market value of such material, transportation of material, equipment or labour.

3.6 Payment

(a) Monthly Payment for Design Services

The Consultant shall submit a monthly invoice to the Client during the execution of the design of the Work for seventy percent of his fee for that part of the design of the Work completed in the immediately preceding month calculated upon the basis of the Consultant's estimate of the cost of that part of the Work, and, if the Client agrees with such estimate and that such part has been completed, the Consultant will be paid the amount of the fee so invoiced.

(b) On Award of Contract

Following the award of the contract for the construction of the Work, the Consultant shall recalculate his fee for design on the basis of the tender quantities and prices on which the contract for the construction of the Work was awarded, plus the estimated cost of material supplied by the Client, and upon such recalculation, the amount paid to the Consultant will be adjusted to equal eighty percent of the recalculated fee including, where necessary the rebate of any overpayment made to the Consultant.

(c) Monthly Payment for Administrative Services and Field Administration

The Consultant shall submit a monthly invoice to the Client during the construction of the Work for a further ten percent of the fee for administrative services specified under Section 3.1 (a) for that portion of the Project constructed during the preceding month and in addition thereto, fees due the Consultant for field administration in the full amount prescribed under Section 3.1(b)

(d) Balance of the Fee

Following the completion of the construction and acceptance of the Project by the Client, and upon receipt of an invoice therefor, the Client shall pay the Consultant the balance of the fee due him based on the actual cost of the Project.

3.7 Disbursements

The Client shall reimburse the Consultant for the following:

- (a) Toll charges paid by the Consultant for long distance telephone calls, telegraph messages and similar telecommunications in connection with the Work.
- (b) Amounts paid by the Consultant for reasonable out-of-town living and travelling expenses of the Consultant's personnel employed directly in connection with the Work where such travel has been approved by the Client.
- (c) Necessary and reasonable travelling and on-site expenses of the Consultant's personnel incurred in the engineering administration of the construction of the Project.
- (d) Amounts paid by the Consultant for specialized consulting services for the Project, performed by others, provided that prior approval has been obtained in writing from the client.
- (e) Field office and field laboratory expenses properly incurred in administration during the construction of the Work excluding, however, stationery, office and engineering equipment or other tools of the trade.
- (f) The cost of electronic digital computers and associated equipment used with the consent of and at rates approved by the Client where, in the opinion of the Client, they have been used in lieu of the staff of the Consultant where the use of such staff would have entitled the Consultant to a fee on a time basis.
- (g) Except as otherwise provided under item (xii) of Section 2.1 (a), the cost of reproducing drawings, photographs, reports and similar documents required by the Client.

IN WITNESS WHEREOF the parties hereto have caused to be executed those presents by their officers properly authorized in that behalf on the day and year first above written.

SIGNED, SEALED AND DELIVERED)

In the presence of:

) THE CORPORATION OF
) THE CITY OF BRAMPTON
)
) James E. Archdehn
) MAYOR
) Kenneth R. Richardson CLERK
)

WOBCO ASSOCIATES LIMITED

W.D. Quinn

AGREEMENT
FOR
PROFESSIONAL ENGINEERING SERVICES
FOR THE DESIGN & ADMINISTRATION DURING CONSTRUCTION
OF ROADS & BRIDGES

MEMORANDUM OF AGREEMENT dated the 25th day
of October A. D. 19 76

BETWEEN The Corporation of
THE CITY OF BRAMPTON
hereinafter called the "Client"

- AND -

W.O. CHISHOLM AND ASSOCIATES
(EASTERN) LIMITED

hereinafter called the "Consultant"

WHEREAS the Client intends to construct

A FOUR-LANE BRIDGE AND APPROACHES ON
WILLIAMS PARKWAY AT ETOBICOKE CREEK
EAST OF HIGHWAY 10 (MAIN STREET NORTH)
IN THE CITY OF BRAMPTON

hereinafter called the "Project" and has requested the Consultant to furnish
professional services in connection therewith;

NOW THEREFORE WITNESSETH that in consideration
of the mutual premises and covenants contained herein, the Client and the
Consultant mutually agree as follows:

REVISED JUNE 1974

ARTICLE 1 - GENERAL CONDITIONS1.1 Retainer

The Client hereby retains the services of the Consultant in connection with the Project and the Consultant hereby agrees to provide the engineering services described herein under the general direction and control of the Client.

1.2 Services

The services to be provided by the Consultant and by the Client for the Project are set forth in Article 2 and such services as changed, altered or added to, under Sections 1.8 and 1.9 are hereinafter called the "Work".

1.3 Compensation

The Client shall pay the Consultant in accordance with the provisions set forth in Article 3.

1.4 Staff and Methods

The Consultant shall use the best available methods in performing the Work and shall employ only skilled and competent staff thereon who will be under the supervision of a senior member of the Consultant's staff.

1.5 Drawings and Documents

Subject to clause (g) of Section 3.7, drawings and documents or copies thereof required for the Work shall be exchanged between the parties on a reciprocal basis, and those prepared by the Consultant for the Client shall be the property of the Client free of all claims by the Consultant of any nature and kind whatsoever.

1.6 Records and Audit

- (a) In order to provide data for the calculation of fees on a time basis, the Consultant shall keep a detailed record of the hours worked by and salaries paid to his staff employed on the Work.
- (b) The Client may inspect and audit the books, payrolls, accounts and records of the Consultant at any time with respect to any item which the Client is required to pay on a Time Scale or Disbursement basis as a result of this Agreement.

1.7 Schedules

Upon the execution of this Agreement, the Consultant shall provide a schedule acceptable to the Client showing the portion of the Work to be completed in each month under this Agreement and an estimate of the portion of the fee which will be payable for each such month. The Consultant shall carry out the Work in accordance with such schedule, subject only to such variation therein as have been agreed to in writing by the Client and, during the currency of the Agreement, the Consultant shall provide the Client with a monthly written report in such reasonable form and detail as the Client may require showing the portion of the Work completed in the preceding month.

1.8 Changes and Alterations

Subject to clause (d) of Section 3.1 the Client may in writing, at any time increase, decrease or otherwise alter the whole or any part of the design of the Work.

1.9 Additional Services

Subject to clause (e) of Section 3.1 the Client may in writing require the Consultant to perform services in addition to those required in Section 2.1 including any Client's services under Section 2.2 which the Client is unable to provide.

1.10 Suspension or Termination

Subject to clause (f) of Section 3.1 the Client may, at any time, by notice in writing to the Consultant, suspend or terminate the whole or any part of the Work.

1.11 Damages

The Consultant shall indemnify and save harmless the Client from and against all claims, actions, losses, expenses, costs or damages of every nature and kind whatsoever which the Client, his employees, officers, or agents may suffer as a result of the negligence of the Consultant, his employees, officers or agents in the performance of this Agreement.

1.12 Contracting for Construction

Neither the Consultant nor any person, firm or corporation associated or affiliated with or subsidiary to the Consultant shall tender for the construction of the Project, or have an interest either directly or indirectly in the construction of the Project.

1.13 Assignment

This Agreement or any portion thereof shall not be assigned or sublet without the consent in writing of the Client.

1.14 Previous Agreements

This Agreement supersedes all previous agreements, arrangements, or understandings between the parties whether written or oral in connection with or incidental to the Project or to the execution of the design thereof.

1.15 Approval by Other Authorities

Where the design of the Project is subject to the approval of an authority, department of government or agency other than the Client, such approval shall be obtained through the offices of the Client and unless authorized by the Client in writing, such approval shall not be obtained by direct contact by the Consultant with such other authority, department of government or agency.

1.16 Time

The Consultant shall perform the Work expeditiously to meet the requirements of the Client and shall complete any portion or portions of the Work in such order as the Client may require and the Client shall have the right to take possession of and use any completed or partially completed portions of the Work notwithstanding any provisions expressed or implied to the contrary and in any event, the Consultant shall execute the Work and deliver to the Client the completed drawings and documents required for the Project on or before the 31st day of MAY A.D. 1977

1.17 Principals and Executive Engineers

The use of principals and executive engineers, on a per diem basis during the course of design and administration during construction by the Consultant, will be subject to approval, in writing, by the Client prior to performing the Work.

ARTICLE 2 - ENGINEERING SERVICES

2.1 (a) Consultant's Services for Design

The services to be provided by the Consultant in the execution of the design of the Project shall include:

- (i) The preparation and submission to the Client of a field inspection report setting out the salient engineering features of the Work, and the engineer's proposed design methods in consideration of these features.
- (ii) Preliminary site investigation to inspect the topographical features and to obtain information which will facilitate the choice of the most suitable structure or structures.
- (iii) Field survey work required after the design criteria and functional alignment have been established, which shall include all survey work necessary for the estimating of quantities, the detailed setting of alignment and grade to fit controlling natural and artificial topographic and underground features, the design of culverts, ditches, drains and storm sewers, and the positioning of all appurtenances associated with the construction of the Project.
- (iv) A preliminary sketch plan showing the principal features and geometrics of any proposed structure or structures, which shall be submitted in duplicate to the Client for his approval before final detailed drawings are begun.
- (v) Drainage studies and preparation of design data for culverts and drainage works (for the purposes of this Agreement, a culvert is defined as any structure of which the roof or upper surface is not designed as an integral part of the travelled surface of the roadway).
- (vi) The preparation and submission of preliminary drawings, investigations and recommendations to the Client, on such alternatives or modifications to the Project that the Consultant in his professional judgement deems advantageous to the Client.
- (vii) The preparation of engineering plans showing any lands or interests in land required for the Project.
- (viii) The preparation of a plan showing the present and proposed location of any public utilities that must be relocated for that portion of the Work for which the design is prepared subject to clause (e) of Section 2.2.
- (ix) Participation in conferences and meetings for informative, negotiative or presentative purposes with the Client in connection with the services provided under this Agreement, after the establishment of the design criteria and functional alignment.

- (x) The preparation of contract documents for the Project including the detailed construction drawings, tender quantity forms, material lists, specifications and information to bidders.
- (xi) The preparation of detailed quantity and cost estimates, sundry engineering and materials.
- (xii) The provision of six complete sets of tendering documents and one complete set of reproduceable drawings for the Project.
- (xiii) Advice, consultation and assistance to the Client in the advertising, receiving and evaluation of bids, and awarding of a contract for construction.
- (xiv) The preparation of reinforcing steel bar lists for structures subject to clause (c) of Section 3.1.

(b) Engineering Services for Administration during Construction of Roads and/or Bridges

Administrative Services

- (i) The review, modification and approval of the contractor's construction schedule, the processing of progress and final payment certificates for the Work, and the preparation and submission of work progress reports to the Client at such time and in such form and detail as the Client may require.
- (ii) The review and checking of formwork drawings and proposed construction methods as warranted, to ensure that the contractor's Work complies with the design requirements.
- (iii) Consideration and advice in respect to alternatives of construction methods or material proposed by the contractor and preparation of change orders.
- (iv) Checking and approval of shop drawings where the design includes structural steel or prefabricated members.

Field Administration

- (i) Engineering direction of the Consultant's field staff, and review of the contractor's work to ensure compliance with the plans and specifications.
- (ii) Surveying and field stakeout for the layout control, and calculation of pay quantities for the Work.
- (iii) Calculation and recording of quantities, and the preparation of progress and final payment certificates prescribed by the Client, together with the compilation of such survey notes, diaries, records, and reports substantiating such certificates, during construction and on completion of the Work.
- (iv) Arranging, preparing and shipping for testing materials supplied by the contractor for incorporation in the Work and the review of test results and judgement of acceptability of said materials.
- (v) On-site tests during the construction of the Work to verify acceptability according to the specifications.

- (vi) The assignment of the necessary field staff to adequately control the accuracy and quality of the Work, and to perform such field operations necessary in the provision of the foregoing construction administration services.
- (vii) Investigating, reporting and advising on unusual circumstances which may arise during construction.
- (viii) Carrying out final inspection at the conclusion of the construction contract, at the end of the maintenance period, and as part of the acceptance programme to the municipality.
- (ix) The preparation and submission to the Client of revised contract drawings showing the "as constructed" Project.

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The Client shall provide the Consultant with the following services, notwithstanding that, should the Client be unable to provide any of the services hereunder, services under clause (a) may be assigned to the Consultant under a "Pre-Design Services Agreement", and other services herein under Section 1.9, Additional Services.

- (a) Design criteria establishing the type of roadway, number of lanes, design speed, minimum sight distance, maximum grade and maximum curvature, and the desirable dimensional arrangement of pavements, median, shoulders, rights-of-way, intersections, auxiliary turning lanes, bus bays and entrances.
- (b) Access to and, where necessary, copies of existing plans, profiles or other topographic information showing or pertaining to existing conditions within the Project area.
- (c) Registered land plans, legal documents and surveys, where necessary, defining the property limits of the existing right-of-way and other parcels of land affected by the Project and as required in the acquisition of property and lands for the Project.
- (d) Soils, foundation and hydrological reports for bridges, where required, for the proper engineering design of the Project.
- (e) All information respecting existing underground utilities.

ARTICLE 3 - COMPENSATION

3.1 Basis of Payment

(a) The Client shall pay the Consultant a fee to be calculated in accordance with the following table:

(1) THE UPSET FEE IS ESTABLISHED AS \$50,000.00.



<u>COST OF WORK</u>		<u>CALCULATION OF FEE</u>		<u>FEE</u>
Less than \$100,000		Time Basis		
\$ 100,000 - \$ 200,000		\$ 7,000 on first	\$ 100,000 and 5.60% on next	\$ 100,000
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\$1,000,000 - \$ 2,000,000		\$ 52,000 on first	\$ 1,000,000 and 4.60% on next	\$1,000,000
\$2,000,000 - \$ 4,000,000		\$ 98,000 on first	\$ 2,000,000 and 4.30% on next	\$2,000,000
\$4,000,000 - \$ 6,000,000		\$184,000 on first	\$ 4,000,000 and 4.15% on next	\$2,000,000
\$6,000,000 - \$ 8,000,000		\$267,000 on first	\$ 6,000,000 and 4.05% on next	\$2,000,000
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Over \$10,000,000		\$428,000 on first	\$10,000,000 plus a percentage on the amount exceeding \$10,000,000 to be negotiated between the Client and the Consultant	

- (b) Prior to the commencement of construction the Client and the Consultant shall agree whether resident staff shall be required on a full time or part time basis.

Where it is agreed that at least one full time resident is required then all field staff employed on the project, although some may be required only intermittently, shall be paid for on the basis of payroll cost multiplied by a factor of 1.7.

Where it is agreed that less than one full time resident is required, then the Consultant shall provide staff on an intermittent basis and all staff so employed shall be paid for on the basis of payroll cost multiplied by a factor of 2.0.

- (c) The Client will pay the Consultant a fee of \$7.50 a ton for each ton of reinforcing steel used in the bridges, concrete barrel arches, retaining walls and culverts, and for which the Consultant prepares detailed bar schedules. For the purpose of this agreement "bridges" means only structures in which the deck is designed as an integral part of the travelled surface of the roadway.
- (d) Where the Client has changed or altered the whole or any part of the Project under Section 1.8, and where such action by the Client required additional work by the Consultant for which, in the opinion of the Client, payment is not provided under clause (a) of Section 3.1, the Consultant will be paid two-hundred percent of the payroll costs of the Consultant's staff directly employed on such additional work, as recorded pursuant to Section 1.6.
- (e) Where additional services are required of the Consultant under Section 1.9, the Consultant will be paid two-hundred percent of the payroll costs of the Consultant's staff directly employed in providing such additional services as recorded pursuant to Section 1.6 in full satisfaction of any fee therefor.
- (f) Where the Client, under Section 1.10, terminates the services to be provided by the Consultant, the Consultant will be paid two-hundred percent of his payroll costs for any of the Consultant's staff employed directly in the provision of services for the Work as recorded pursuant to Section 1.6 in lieu of the fees prescribed under clause (a) of Section 3.1, in full satisfaction of any fee therefor.
- (g) Where the Client requires the Consultant to negotiate with representatives of utility commissions or utility companies concerning the moving of utilities and to prepare information necessary for application to public authorities for the purposes of negotiating distribution of costs or obtaining subsidies, the Consultant will be paid a fee on a time basis as set forth in clause (e) of Section 3.1.
- (h) Where the design of illumination or traffic control devices are required of the Consultant under Section 1.9, the Consultant will be paid a fee on a time basis as set forth in clause (e) of Section 3.1.

OB-MR-162
REVISED JUNE 1974

3.2 Payroll Costs

For the purpose of this Agreement, payroll costs means salary plus provision for statutory holidays, vacations with pay, unemployment insurance, workmen's compensation, health and medical insurance, group insurance, pension plan and sick time allowance where such benefits are paid by the Consultant but shall not include any bonus or profit sharing system or any premium paid for overtime, except for such overtime work as may be approved by the Client in writing in advance of the overtime hours being worked. Payment of overtime premium shall be in accordance with The Ontario Employment Standards Act.

The Consultant may use per Diem rates for principals and executive engineers in lieu of a percentage of their payroll costs, subject to approval under Section 3.3.

3.3 Approval of Consultant's Staff

The Consultant, within fourteen days of the execution of this Agreement shall provide a staff list showing the number, classifications and salary ranges of staff, for which the Consultant will seek payment on a time basis. The Consultant shall relate such information to the particular type of work that such staff is to perform, while employed on the work. Upon approval of such staff list, by the Client, the staff of the Consultant shall be employed on the work in accordance with such staff list.

3.4 Records for Time Scale Fees

Where the Consultant is to be paid a time scale fee for any part of the work, no part of such fee shall be based upon any hours of work that have not been recorded as required by Section 1.6 or upon any salary other than the salary applicable to the particular type of work performed as approved under Section 3.3.

3.5 Cost of the Project

- (a) "Cost of the Project" means the total cost to the Client of all materials, equipment and labour necessary to complete the Project for which the Consultant prepares plans, drawings and specifications for which he is responsible, but does not include:
- (i) Fees and disbursements paid to the Consultant or to any other Consultant retained to provide professional services in relation to the Project.
 - (ii) Legal fees and disbursements.
 - (iii) The cost of property necessary for the Project.
 - (iv) The cost of any portion of the Project for which the Consultant has been or is entitled to be paid a time scale design fee.
 - (v) The cost of engineering services provided by the Client.

- (vi) Items of cost which, in the opinion of the Client, do not form part of the Project to be designed by the Consultant under this Agreement.
 - (vii) The cost of moving public utilities, notwithstanding that the Consultant must show in his design of the Project the nature and location of public utilities.
 - (viii) The cost of engineering administration during the construction of the Project.
- (b) Where the cost of material, transportation of material, equipment or labour, furnished by the Client and incorporated into the Project are to be included in the cost of the Project, such costs shall be equivalent to the fair market value of such material, transportation of material, equipment or labour.

3.6 Payment

(a) Monthly Payment for Design Services

The Consultant shall submit a monthly invoice to the Client during the execution of the design of the Work for seventy per cent of his fee for that part of the design of the Work completed in the immediately preceding month calculated upon the basis of the Consultant's estimate of the cost of that part of the Work, and, if the Client agrees with such estimate and that such part has been completed, the Consultant will be paid the amount of the fee so invoiced.

(b) On Award of Contract

Following the award of the contract for the construction of the Work, the Consultant shall recalculate his fee for design on the basis of the tender quantities and prices on which the contract for the construction of the Work was awarded, plus the estimated cost of material supplied by the Client, and upon such recalculation, the amount paid to the Consultant will be adjusted to equal eighty percent of the recalculated fee including, where necessary the rebate of any overpayment made to the Consultant.

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The Consultant shall submit a monthly invoice to the Client during the construction of the Work for a further ten percent of the fee for administrative services specified under Section 3.1 (a) for that portion of the Project constructed during the preceding month and in addition thereto, fees due the Consultant for field administration in the full amount prescribed under Section 3.1(b)

(d) Balance of the Fee

Following the completion of the construction and acceptance of the Project by the Client, and upon receipt of an invoice therefor, the Client shall pay the Consultant the balance of the fee due him based on the actual cost of the Project.

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The Client shall reimburse the Consultant for the following:

- (a) Toll charges paid by the Consultant for long distance telephone calls, telegraph messages and similar telecommunications in connection with the Work.
- (b) Amounts paid by the Consultant for reasonable out-of-town living and travelling expenses of the Consultant's personnel employed directly in connection with the Work where such travel has been approved by the Client.
- (c) Necessary and reasonable travelling and on-site expenses of the Consultant's personnel incurred in the engineering administration of the construction of the Project.
- (d) Amounts paid by the Consultant for specialized consulting services for the Project, performed by others, provided that prior approval has been obtained in writing from the client.
- (e) Field office and field laboratory expenses properly incurred in administration during the construction of the Work excluding, however, stationery, office and engineering equipment or other tools of the trade.
- (f) The cost of electronic digital computers and associated equipment used with the consent of and at rates approved by the Client where, in the opinion of the Client, they have been used in lieu of the staff of the Consultant where the use of such staff would have entitled the Consultant to a fee on a time basis.
- (g) Except as otherwise provided under item (xii) of Section 2.1 (a), the cost of reproducing drawings, photographs, reports and similar documents required by the Client.

IN WITNESS WHEREOF the parties hereto have caused to be executed those presents by their officers properly authorized in that behalf on the day and year first above written.

SIGNED, SEALED AND DELIVERED)

In the presence of:)

) THE CORPORATION OF THE
) CITY OF BRAMPTON
)
) James E. Archibald
) Kenneth R. Richardson MAYOR
) CLERK

J. Mongeon

J. Mongeon

W.O. CHISHOLM AND ASSOCIATES
(EASTERN) LIMITED

W. O. Chisholm
President

R. M. Fleming
Vice President

AGREEMENT
 FOR
 PROFESSIONAL ENGINEERING SERVICES
 FOR THE DESIGN & ADMINISTRATION DURING CONSTRUCTION
 OF ROADS & BRIDGES

MEMORANDUM OF AGREEMENT dated the 1st day
 of November A. D. 1976

BETWEEN The Corporation of City of Brampton

hereinafter called the "Client"

- AND -

The Kleinfeldt Group,
 (Division of Warnock Hersey Professional
 Services Ltd.,)
 hereinafter called the "Consultant"

WHEREAS the Client intends to construct
 a bridge and approaches at Elgin Drive over
 Fletcher's Creek in the City of Brampton.

hereinafter called the "Project" and has requested the Consultant to furnish
 professional services in connection therewith;

NOW THEREFORE WITNESSETH that in consideration
 of the mutual premises and covenants contained herein, the Client and the
 Consultant mutually agree as follows:

ARTICLE 1 - GENERAL CONDITIONS

1.1 Retainer

The Client hereby retains the services of the Consultant in connection with the Project and the Consultant hereby agrees to provide the engineering services described herein under the general direction and control of the Client.

1.2 Services

The services to be provided by the Consultant and by the Client for the Project are set forth in Article 2 and such services as changed, altered or added to, under Sections 1.8 and 1.9 are hereinafter called the "Work".

1.3 Compensation

The Client shall pay the Consultant in accordance with the provisions set forth in Article 3.

1.4 Staff and Methods

The Consultant shall use the best available methods in performing the Work and shall employ only skilled and competent staff thereon who will be under the supervision of a senior member of the Consultant's staff.

1.5 Drawings and Documents

Subject to clause (g) of Section 3.7, drawings and documents or copies thereof required for the Work shall be exchanged between the parties on a reciprocal basis, and those prepared by the Consultant for the Client shall be the property of the Client free of all claims by the Consultant of any nature and kind whatsoever.

1.6 Records and Audit

- (a) In order to provide data for the calculation of fees on a time basis, the Consultant shall keep a detailed record of the hours worked by and salaries paid to his staff employed on the Work.
- (b) The Client may inspect and audit the books, payrolls, accounts and records of the Consultant at any time with respect to any item which the Client is required to pay on a Time Scale or Disbursement basis as a result of this Agreement.

1.7 Schedules

Upon the execution of this Agreement, the Consultant shall provide a schedule acceptable to the Client showing the portion of the Work to be completed in each month under this Agreement and an estimate of the portion of the fee which will be payable for each such month. The Consultant shall carry out the Work in accordance with such schedule, subject only to such variation therein as have been agreed to in writing by the Client and, during the currency of the Agreement, the Consultant shall provide the Client with a monthly written report in such reasonable form and detail as the Client may require showing the portion of the Work completed in the preceding month.

1.8 Changes and Alterations

Subject to clause (d) of Section 3.1 the Client may in writing, at any time increase, decrease or otherwise alter the whole or any part of the design of the Work.

1.9 Additional Services

Subject to clause (e) of Section 3.1 the Client may in writing require the Consultant to perform services in addition to those required in Section 2.1 including any Client's services under Section 2.2 which the Client is unable to provide.

1.10 Suspension or Termination

Subject to clause (f) of Section 3.1 the Client may, at any time, by notice in writing to the Consultant, suspend or terminate the whole or any part of the Work.

1.11 Damages

The Consultant shall indemnify and save harmless the Client from and against all claims, actions, losses, expenses, costs or damages of every nature and kind whatsoever which the Client, his employees, officers, or agents may suffer as a result of the negligence of the Consultant, his employees, officers or agents in the performance of this Agreement.

1.12 Contracting for Construction

Neither the Consultant nor any person, firm or corporation associated or affiliated with or subsidiary to the Consultant shall tender for the construction of the Project, or have an interest either directly or indirectly in the construction of the Project.

1.13 Assignment

This Agreement or any portion thereof shall not be assigned or sublet without the consent in writing of the Client.

1.14 Previous Agreements

This Agreement supersedes all previous agreements, arrangements, or understandings between the parties whether written or oral in connection with or incidental to the Project or to the execution of the design thereof.

1.15 Approval by Other Authorities

Where the design of the Project is subject to the approval of an authority, department of government or agency other than the Client, such approval shall be obtained through the offices of the Client and unless authorized by the Client in writing, such approval shall not be obtained by direct contact by the Consultant with such other authority, department of government or agency.

1.16 Time

The Consultant shall perform the Work expeditiously to meet the requirements of the Client and shall complete any portion or portions of the Work in such order as the Client may require and the Client shall have the right to take possession of and use any completed or partially completed portions of the Work notwithstanding any provisions expressed or implied to the contrary and in any event, the Consultant shall execute the Work and deliver to the Client the completed drawings and documents required for the Project on or before the 1st day of April A.D. 1976

1.17 Principals and Executive Engineers

The use of principals and executive engineers, on a per diem basis during the course of design and administration during construction by the Consultant, will be subject to approval, in writing, by the Client prior to performing the Work.

ARTICLE 2 - ENGINEERING SERVICES

2.1 (a) Consultant's Services for Design

The services to be provided by the Consultant in the execution of the design of the Project shall include:

- (i) The preparation and submission to the Client of a field inspection report setting out the salient engineering features of the Work, and the engineer's proposed design methods in consideration of these features.
- (ii) Preliminary site investigation to inspect the topographical features and to obtain information which will facilitate the choice of the most suitable structure or structures.
- (iii) Field survey work required after the design criteria and functional alignment have been established, which shall include all survey work necessary for the estimating of quantities, the detailed setting of alignment and grade to fit controlling natural and artificial topographic and underground features, the design of culverts, ditches, drains and storm sewers, and the positioning of all appurtenances associated with the construction of the Project.
- (iv) A preliminary sketch plan showing the principal features and geometrics of any proposed structure or structures, which shall be submitted in duplicate to the Client for his approval before final detailed drawings are begun.
- (v) Drainage studies and preparation of design data for culverts and drainage works (for the purposes of this Agreement, a culvert is defined as any structure of which the roof or upper surface is not designed as an integral part of the travelled surface of the roadway).
- (vi) The preparation and submission of preliminary drawings, investigations and recommendations to the Client, on such alternatives or modifications to the Project that the Consultant in his professional judgement deems advantageous to the Client.
- (vii) The preparation of engineering plans showing any lands or interests in land required for the Project.
- (viii) The preparation of a plan showing the present and proposed location of any public utilities that must be relocated for that portion of the Work for which the design is prepared subject to clause (e) of Section 2.2.
- (ix) Participation in conferences and meetings for informative, negotiative or presentative purposes with the Client in connection with the services provided under this Agreement, after the establishment of the design criteria and functional alignment.

- (x) The preparation of contract documents for the Project including the detailed construction drawings, tender quantity forms, material lists, specifications and information to bidders.
- (xi) The preparation of detailed quantity and cost estimates, sundry engineering and materials.
- (xii) The provision of six complete sets of tendering documents and one complete set of reproduceable drawings for the Project.
- (xiii) Advice, consultation and assistance to the Client in the advertising, receiving and evaluation of bids, and awarding of a contract for construction.
- (xiv) The preparation of reinforcing steel bar lists for structures subject to clause (c) of Section 3.1.

(b) Engineering Services for Administration during Construction of Roads and/or Bridges

Administrative Services

- (i) The review, modification and approval of the contractor's construction schedule, the processing of progress and final payment certificates for the Work, and the preparation and submission of work progress reports to the Client at such time and in such form and detail as the Client may require.
- (ii) The review and checking of formwork drawings and proposed construction methods as warranted, to ensure that the contractor's Work complies with the design requirements.
- (iii) Consideration and advice in respect to alternatives of construction methods or material proposed by the contractor and preparation of change orders.
- (iv) Checking and approval of shop drawings where the design includes structural steel or prefabricated members.

Field Administration

- (i) Engineering direction of the Consultant's field staff, and review of the contractor's work to ensure compliance with the plans and specifications.
- (ii) Surveying and field stakeout for the layout control, and calculation of pay quantities for the Work.
- (iii) Calculation and recording of quantities, and the preparation of progress and final payment certificates prescribed by the Client, together with the compilation of such survey notes, diaries, records, and reports substantiating such certificates, during construction and on completion of the Work.
- (iv) Arranging, preparing and shipping for testing materials supplied by the contractor for incorporation in the Work and the review of test results and judgement of acceptability of said materials.
- (v) On-site tests during the construction of the Work to verify acceptability according to the specifications.

- (vi) The assignment of the necessary field staff to adequately control the accuracy and quality of the Work, and to perform such field operations necessary in the provision of the foregoing construction administration services.
- (vii) Investigating, reporting and advising on unusual circumstances which may arise during construction.
- (viii) Carrying out final inspection at the conclusion of the construction contract, at the end of the maintenance period, and as part of the acceptance programme to the municipality.
- (ix) The preparation and submission to the Client of revised contract drawings showing the "as constructed" Project.

2.2 Client's Services

The Client shall provide the Consultant with the following services, notwithstanding that, should the Client be unable to provide any of the services hereunder, services under clause (a) may be assigned to the Consultant under a "Pre-Design Services Agreement", and other services herein under Section 1.9, Additional Services.

- (a) Design criteria establishing the type of roadway, number of lanes, design speed, minimum sight distance, maximum grade and maximum curvature, and the desirable dimensional arrangement of pavements, median, shoulders, rights-of-way, intersections, auxiliary turning lanes, bus bays and entrances.
- (b) Access to and, where necessary, copies of existing plans, profiles or other topographic information showing or pertaining to existing conditions within the Project area.
- (c) Registered land plans, legal documents and surveys, where necessary, defining the property limits of the existing right-of-way and other parcels of land affected by the Project and as required in the acquisition of property and lands for the Project.
- (d) Soils, foundation and hydrological reports for bridges, where required, for the proper engineering design of the Project.
- (e) All information respecting existing underground utilities.

ARTICLE 3 - COMPENSATION

3.1 Basis of Payment

(a) The Client shall pay the Consultant a fee to be calculated in accordance with the following table:

(1) THE UPSET FEE IS ESTABLISHED AS \$13,500.00.



<u>COST OF WORK</u>		<u>CALCULATION OF FEE</u>		<u>FEE</u>
Less than \$100,000		Time Basis		
\$ 100,000 - \$ 200,000		\$ 7,000 on first	\$ 100,000 and 5.60% on next	\$ 100,000
\$ 200,000 - \$ 500,000		\$ 12,600 on first	\$ 200,000 and 5.05% on next	\$ 300,000
\$ 500,000 - \$ 1,000,000		\$ 27,750 on first	\$ 500,000 and 4.85% on next	\$ 500,000
\$1,000,000 - \$ 2,000,000		\$ 52,000 on first	\$ 1,000,000 and 4.60% on next	\$1,000,000
\$2,000,000 - \$ 4,000,000		\$ 98,000 on first	\$ 2,000,000 and 4.30% on next	\$2,000,000
\$4,000,000 - \$ 6,000,000		\$184,000 on first	\$ 4,000,000 and 4.15% on next	\$2,000,000
\$6,000,000 - \$ 8,000,000		\$267,000 on first	\$ 6,000,000 and 4.05% on next	\$2,000,000
\$8,000,000 - \$10,000,000		\$348,000 on first	\$ 8,000,000 and 4.00% on next	\$2,000,000
Over \$10,000,000		\$428,000 on first	\$10,000,000 plus a percentage on the amount exceeding \$10,000,000 to be negotiated between the Client and the Consultant	

- (b) Prior to the commencement of construction the Client and the Consultant shall agree whether resident staff shall be required on a full time or part time basis.

Where it is agreed that at least one full time resident is required then all field staff employed on the project, although some may be required only intermittently, shall be paid for on the basis of payroll cost multiplied by a factor of 1.7.

Where it is agreed that less than one full time resident is required, then the Consultant shall provide staff on an intermittent basis and all staff so employed shall be paid for on the basis of payroll cost multiplied by a factor of 2.0.

- (c) The Client will pay the Consultant a fee of \$7.50 a ton for each ton of reinforcing steel used in the bridges, concrete barrel arches, retaining walls and culverts, and for which the Consultant prepares detailed bar schedules. For the purpose of this agreement "bridges" means only structures in which the deck is designed as an integral part of the travelled surface of the roadway.
- (d) Where the Client has changed or altered the whole or any part of the Project under Section 1.8, and where such action by the Client required additional work by the Consultant for which, in the opinion of the Client, payment is not provided under clause (a) of Section 3.1, the Consultant will be paid two-hundred percent of the payroll costs of the Consultant's staff directly employed on such additional work, as recorded pursuant to Section 1.6.
- (e) Where additional services are required of the Consultant under Section 1.9, the Consultant will be paid two-hundred percent of the payroll costs of the Consultant's staff directly employed in providing such additional services as recorded pursuant to Section 1.6 in full satisfaction of any fee therefor.
- (f) Where the Client, under Section 1.10, terminates the services to be provided by the Consultant, the Consultant will be paid two-hundred percent of his payroll costs for any of the Consultant's staff employed directly in the provision of services for the Work as recorded pursuant to Section 1.6 in lieu of the fees prescribed under clause (a) of Section 3.1, in full satisfaction of any fee therefor.
- (g) Where the Client requires the Consultant to negotiate with representatives of utility commissions or utility companies concerning the moving of utilities and to prepare information necessary for application to public authorities for the purposes of negotiating distribution of costs or obtaining subsidies, the Consultant will be paid a fee on a time basis as set forth in clause (e) of Section 3.1.
- (h) Where the design of illumination or traffic control devices are required of the Consultant under Section 1.9, the Consultant will be paid a fee on a time basis as set forth in clause (e) of Section 3.1.

3.2 Payroll Costs

For the purpose of this Agreement, payroll costs means salary plus provision for statutory holidays, vacations with pay, unemployment insurance, workmen's compensation, health and medical insurance, group insurance, pension plan and sick time allowance where such benefits are paid by the Consultant but shall not include any bonus or profit sharing system or any premium paid for overtime, except for such overtime work as may be approved by the Client in writing in advance of the overtime hours being worked. Payment of overtime premium shall be in accordance with The Ontario Employment Standards Act.

The Consultant may use per Diem rates for principals and executive engineers in lieu of a percentage of their payroll costs, subject to approval under Section 3.3.

3.3 Approval of Consultant's Staff

The Consultant, within fourteen days of the execution of this Agreement shall provide a staff list showing the number, classifications and salary ranges of staff, for which the Consultant will seek payment on a time basis. The Consultant shall relate such information to the particular type of work that such staff is to perform, while employed on the work. Upon approval of such staff list, by the Client, the staff of the Consultant shall be employed on the work in accordance with such staff list.

3.4 Records for Time Scale Fees

Where the Consultant is to be paid a time scale fee for any part of the work, no part of such fee shall be based upon any hours of work that have not been recorded as required by Section 1.6 or upon any salary other than the salary applicable to the particular type of work performed as approved under Section 3.3.

3.5 Cost of the Project

- (a) "Cost of the Project" means the total cost to the Client of all materials, equipment and labour necessary to complete the Project for which the Consultant prepares plans, drawings and specifications for which he is responsible, but does not include:
- (i) Fees and disbursements paid to the Consultant or to any other Consultant retained to provide professional services in relation to the Project.
 - (ii) Legal fees and disbursements.
 - (iii) The cost of property necessary for the Project.
 - (iv) The cost of any portion of the Project for which the Consultant has been or is entitled to be paid a time scale design fee.
 - (v) The cost of engineering services provided by the Client.

- (vi) Items of cost which, in the opinion of the Client, do not form part of the Project to be designed by the Consultant under this Agreement.
 - (vii) The cost of moving public utilities, notwithstanding that the Consultant must show in his design of the Project the nature and location of public utilities.
 - (viii) The cost of engineering administration during the construction of the Project.
- (b) Where the cost of material, transportation of material, equipment or labour, furnished by the Client and incorporated into the Project are to be included in the cost of the Project, such costs shall be equivalent to the fair market value of such material, transportation of material, equipment or labour.

3.6 Payment

(a) Monthly Payment for Design Services

The Consultant shall submit a monthly invoice to the Client during the execution of the design of the Work for seventy per cent of his fee for that part of the design of the Work completed in the immediately preceding month calculated upon the basis of the Consultant's estimate of the cost of that part of the Work, and, if the Client agrees with such estimate and that such part has been completed, the Consultant will be paid the amount of the fee so invoiced.

(b) On Award of Contract

Following the award of the contract for the construction of the Work, the Consultant shall recalculate his fee for design on the basis of the tender quantities and prices on which the contract for the construction of the Work was awarded, plus the estimated cost of material supplied by the Client, and upon such recalculation, the amount paid to the Consultant will be adjusted to equal eighty percent of the recalculated fee including, where necessary the rebate of any overpayment made to the Consultant.

(c) Monthly Payment for Administrative Services and Field Administration

The Consultant shall submit a monthly invoice to the Client during the construction of the Work for a further ten percent of the fee for administrative services specified under Section 3.1 (a) for that portion of the Project constructed during the preceding month and in addition thereto, fees due the Consultant for field administration in the full amount prescribed under Section 3.1(b)

(d) Balance of the Fee

Following the completion of the construction and acceptance of the Project by the Client, and upon receipt of an invoice therefor, the Client shall pay the Consultant the balance of the fee due him based on the actual cost of the Project.

3.7 Disbursements

The Client shall reimburse the Consultant for the following:

- (a) Toll charges paid by the Consultant for long distance telephone calls, telegraph messages and similar telecommunications in connection with the Work.
- (b) Amounts paid by the Consultant for reasonable out-of-town living and travelling expenses of the Consultant's personnel employed directly in connection with the Work where such travel has been approved by the Client.
- (c) Necessary and reasonable travelling and on-site expenses of the Consultant's personnel incurred in the engineering administration of the construction of the Project.
- (d) Amounts paid by the Consultant for specialized consulting services for the Project, performed by others, provided that prior approval has been obtained in writing from the client.
- (e) Field office and field laboratory expenses properly incurred in administration during the construction of the Work excluding, however, stationery, office and engineering equipment or other tools of the trade.
- (f) The cost of electronic digital computers and associated equipment used with the consent of and at rates approved by the Client where, in the opinion of the Client, they have been used in lieu of the staff of the Consultant where the use of such staff would have entitled the Consultant to a fee on a time basis.
- (g) Except as otherwise provided under item (xii) of Section 2.1 (a), the cost of reproducing drawings, photographs, reports and similar documents required by the Client.

IN WITNESS WHEREOF the parties hereto have caused to be executed those presents by their officers properly authorized in that behalf on the day and year first above written.

SIGNED, SEALED AND DELIVERED)

In the presence of:)

THE CORPORATION OF THE CITY OF BRAMPTON

James E. Archibald

 Mayor

Kenneth R. Richardson

 Clerk

THE KLEINFELDT GROUP (DIVISION OF WARNOCK HERSEY PROFESSIONAL SERVICES LTD.)

Douglas Barker

 D. R. Barker, P. Eng.
 Vice President - Technical Ser.

I. David

 I. David, P. Eng.
 Chief Municipal Engineer