

HAMILTON-WENTWORTH CATHOLIC DISTRICT SCHOOL BOARD

416-420 MOHAWK ROAD EAST - OUR LADY OF LOURDES

PARKING LOT RECONSTRUCTION

CONTRACT NO. 23096-01

OPS General Conditions of Contract



OPSS MUNI GENERAL CONDITIONS OF CONTRACT

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SECTION GC 1.0 - INTERPRETATION

GC 1.01 Captions

.01 The captions appearing in these General Conditions have been inserted as a matter of convenience and for ease of reference only and in no way define, limit, or enlarge the scope or meaning of the General Conditions or any provision hereof.

GC 1.02 Abbreviations

.01 The abbreviations on the left below are commonly found in the Contract Documents and represent the organizations and phrases listed on the right:

"AASHTO"	-	American Association of State Highway Transportation Officials
"ACI"	-	American Concrete Institute
"ANSI"	-	American National Standards Institute
"ASTM"	-	ASTM International
"AWG"	-	American Wire Gauge
"AWWA"	-	American Water Works Association
"CCIL"	-	Canadian Council of Independent Laboratories
"CGSB"	-	Canadian General Standards Board
"CSA"	-	CSA Group - formerly Canadian Standards Association
"CWB"	-	Canadian Welding Bureau
"GC"	-	General Conditions
"ISO"	-	International Organization for Standardization
"MECP"	-	Ontario Ministry of the Environment, Conservation and Parks
"MTO"	-	Ontario Ministry of Transportation
"MUTCD"	-	Manual of Uniform Traffic Control Devices, published by MTO
"OHSA"	-	Ontario Occupational Health and Safety Act
"OLS"	-	Ontario Land Surveyor
"OPS"	-	Ontario Provincial Standard
"OPSD"	-	Ontario Provincial Standard Drawing
"OPSS"	-	Ontario Provincial Standard Specification
"OTM"	-	Ontario Traffic Manual
"PEO"	-	Professional Engineers Ontario
"SAE"	-	SAE International
"SCC"	-	Standards Council of Canada
"SSPC"	-	The Society for Protective Coatings
"UL"	-	Underwriters Laboratories
"ULC"	-	Underwriters Laboratories Canada
"WHMIS"	-	Workplace Hazardous Materials Information System
"WSIB"	-	Workplace Safety & Insurance Board

GC 1.03 Gender and Singular References

.01 References to the masculine or singular throughout the Contract Documents shall be considered to include the feminine and the plural and vice versa, as the context requires.

GC 1.04

Definitions

.01 For the purposes of the Contract Documents the following definitions shall apply:

Abnormal Weather means an extreme climatic condition characterized by wind speed, air temperature, precipitation, or snow fall depth, that is less than or greater than 1-1/2 standard deviations from the mean determined from the weather records of the 25-year period immediately preceding the tender opening date.

Actual Measurement means the field measurement of that quantity within the approved limits of the Work.

Addenda means any additions or change in the Tender documents issued by the Owner prior to Tender closing.

Additional Work means work not provided for in the Contract Documents and not considered by the Contract Administrator to be essential to the satisfactory completion of the Contract within its intended scope.

Agreement means the agreement between the Owner and the Contractor for the performance of the Work that is included in the Contract Documents.

Base means a layer of Material of specified type and thickness placed immediately below the pavement, driving surface, finished grade, curb and gutter, or sidewalk.

Business Day means any Day except Saturdays, Sundays, and statutory holidays.

Certificate of Subcontract Completion means the certificate issued by the Contract Administrator in accordance with clause GC 8.02.04.02, Certification of Subcontract Completion.

Certificate of Substantial Performance means the certificate issued by the Contract Administrator at Substantial Performance.

Change Directive means any written instruction signed by the Owner, or by the Contract Administrator where so authorized, directing that a Change in the Work or Extra Work be performed.

Change in the Work means the deletion, extension, increase, decrease, or alteration of lines; grades; dimensions; quantities; methods; drawings; substantial changes in geotechnical, subsurface, surface, or other conditions; changes in the character of the Work to be done; or Materials of the Work or part thereof, within the intended scope of the Contract.

Change Order means a written amendment to the Contract signed by the Contractor and the Owner, or the Contract Administrator where so authorized, covering contingencies, a Change in the Work, Extra Work, Additional Work; and establishing the basis for payment and the time allowed for the adjustment of the Contract Time.

Completion means contract completion as set out in the Construction Act.

Completion Certificate means the certificate issued by the Contract Administrator at Completion.

Completion Payment means the payment described more particularly in clause GC 8.02.04.07.

Construction Act means as set out in the Construction Act, R.S.O. 1990, c. C.30, as amended.

Constructor means, for the purposes of, and within the meaning of the Occupational Health and Safety Act, R.S.O. 1990, c.O.1, as amended and amendments thereto, the Contractor who executes the Contract.

Contract means the undertaking by the Owner and the Contractor to perform their respective duties, responsibilities, and obligations as prescribed in the Contract Documents.

Contract Administrator means the person, partnership, or corporation designated by the Owner to be the Owner's representative for the purposes of the Contract.

Contract Documents mean the executed Agreement between the Owner and the Contractor, Tender, General Conditions of Contract, Supplemental General Conditions of Contract, Standard Specifications, Special Provisions, Contract Drawings, Addenda incorporated in a Contract Document before the execution of the Agreement, such other documents as may be listed in the Agreement, and subsequent amendments to the Contract Documents made pursuant to the provisions of the Agreement.

Contract Drawings or **Contract Plans** mean drawings or plans, any Geotechnical Report, any Subsurface Report, and any other reports and information provided by the Owner for the Work, and without limiting the generality thereof, may include soil profiles, foundation investigation reports, reinforcing steel schedules, aggregate sources list, Quantity Sheets, and cross-sections.

Contract Time means the time stipulated in the Contract Documents for Substantial Performance or Completion of the Work, including any extension of time made pursuant to the Contract Documents.

Contractor means the person, partnership, or corporation undertaking the Work as identified in the Agreement.

Control Monument means any horizontal or vertical (benchmark) monument that is used to lay out the Work.

Controlling Operation means any component of the Work that, if delayed, may delay the completion of the Work.

Cut-Off Date means the date up to which payment shall be made for Work performed.

Daily Work Records mean daily Records detailing the number and categories of workers and hours worked or on standby, types and quantities of Equipment and number of hours in use or on standby, and description and quantities of Material utilized.

Day means a calendar day.

Drawings or **Plans** mean any Contract Drawings or Contract Plans, or any Working Drawings or Working Plans, or any reproductions of drawings or plans pertaining to the Work.

End Result Specification means specifications that require the Contractor to be responsible for supplying a product or part of the Work. The Owner accepts or rejects the final product or applies a price adjustment that is commensurate with the degree of compliance with the specification.

Engineer means a professional engineer licenced by the Professional Engineers of Ontario to practice in the Province of Ontario.

Equipment means all machinery and equipment used for preparing, fabricating, conveying or erecting the Work and normally referred to as construction machinery and equipment.

Estimate means a calculation of the quantity or cost of the Work or part of it depending on the context.

Extra Work means work not provided for in the Contract as awarded but considered by the Contract Administrator to be essential to the satisfactory completion of the Contract within its intended scope, including unanticipated Work required to comply with legislation and regulations that affect the Work.

Final Acceptance means the date on which the Contract Administrator determines that the Work has passed all inspection and testing requirements and the Contract Administrator is satisfied that the Contractor has rectified all imperfect Work and has discharged all of the Contractor's obligations under the Contract Documents.

Final Acceptance Certificate means the certificate issued by the Contract Administrator at Final Acceptance of the Work.

Final Detailed Statement means a complete evaluation prepared by the Contract Administrator showing the quantities, unit prices, and final dollar amounts of all items of Work completed under the Contract, including variations in tender items and Extra Work, all as set out in the same general form as the monthly Estimates.

Geotechnical Report means a report or other information identifying soil, rock, and ground water conditions in the area of any proposed Work.

Grade means the required elevation of that part of the Work.

Hand Tools means tools that are commonly called tools or implements of the trade and include small power tools.

Highway means a common and public highway any part of which is intended for or used by the general public for the passage of vehicles and includes the area between the lateral property lines thereof.

Inclement Weather means weather conditions or conditions resulting directly from weather conditions that prevent the Contractor from proceeding with a Controlling Operation.

Lot means a specific quantity of Material or a specific amount of construction normally from a single source and produced by the same process.

Lump Sum Item means a tender item indicating a portion of the Work for which payment will be made at a single tendered price. Payment is not based on a measured quantity, although a quantity may be given in the Contract Documents.

Major Item means any tender item that has a value, calculated based on its actual or estimated tender quantity, whichever is the larger, multiplied by its tender unit price, which is equal to or greater than the lesser of,

- a) \$100,000, or
- b) 5% of the total tender value calculated based on the total of all the estimated tender quantities and the tender unit prices.

Material means Material, machinery, equipment and fixtures forming part of the Work.

Monument means either a Property Monument or a Control Monument.

Owner means the party to the Contract for whom the Work is being performed, as identified in the Agreement, and includes, with the same meaning and import, "Authority."

Pavement means a wearing course or courses placed on the Roadway and consisting of asphaltic concrete, hydraulic cement concrete, Portland cement concrete, or plant or road mixed mulch.

Performance Bond means the type of security furnished to the Owner to guarantee completion of the Work in accordance with the Contract and to the extent provided in the bond.

Plan Quantity means that quantity as computed from within the boundary lines of the Work as shown in the Contract Documents.

Project means the construction of the Work as contemplated by this Contract.

Proper Invoice has the meaning as set out in the Construction Act.

Property Monument means any property bar, concrete pillar, rock post, cut cross or other object that marks the boundary between real property ownership.

Quality Assurance (QA) means a system or series of activities carried out by the Owner to ensure that Work meets the specified requirements.

Quality Control (QC) means a system or series of activities carried out by the Contractor, Subcontractor, supplier, and manufacturer to ensure that Work meets the specified requirements.

Quantity Sheet means a list of the quantities of Work to be done.

Quarried Rock means Material removed from an open excavation made in a solid mass of rock that, prior to removal, was integral with the parent mass.

Quarry means a place where aggregate has been or is being removed from an open excavation made in a solid mass of igneous, sedimentary, or metamorphic rock or any combination of these that, prior to removal, was integral with the parent areas.

Rate of Interest means the prejudgment interest rate determined under subsection 127(2) of the *Courts of Justice Act* or, if the contract or subcontract specifies a different interest rate for the purpose, the greater of the prejudgment interest rate and the interest rate specified in the contract or subcontract.

Records mean any books, payrolls, accounts, or other information that relate to the Work or any Change in the Work, Extra Work, Additional Work or claims arising therefrom.

Roadway means that part of the Highway designed or intended for use by vehicular traffic and includes the Shoulders.

Shoulder means that portion of the Roadway between the edge of the travelled portion of the wearing surface and the top inside edge of the ditch or fill slope.

Special Provisions mean directions containing requirements specific to the Work.

Standard Drawing or Standard Specification means a standard practice required and stipulated by the Owner for performance of the Work.

Statutory Holdback means the holdbacks required under the Construction Act.

Subbase means a layer of Material of specified type and thickness between the Subgrade and the Base.

Subcontractor means a person, partnership or corporation undertaking the execution of a part of the Work by virtue of an agreement with the Contractor.

Subgrade means the earth or rock surface, whether in cut or fill, as prepared to support the pavement structure, consisting of Base, Subbase, and Pavement.

Substantial Performance has the meaning as set out in the Construction Act, R.S.O. 1990, c. C.30, as amended.

Subsurface Report means a report or other information identifying the location of Utilities, concealed and adjacent structures, and physical obstructions that fall within the influence of the Work.

Superintendent means the Contractor's authorized representative in charge of the Work and who shall be a "competent person" within the meaning of the definition contained in the Occupational Health and Safety Act, R.S.O. 1990, c. 0.1, as amended.

Surety means the person, partnership or corporation, other than the Contractor, licensed in Ontario to transact business under the Insurance Act, R.S.O. 1990, c.1.8, as amended, executing a bond provided by the Contractor.

Tender means an offer in writing from the Contractor, submitted in the format prescribed by the Owner, to complete the Work.

Time and Material means costs calculated according to clause GC 8.02.05, Payment on a Time and Material Basis.

Utility means an aboveground or underground facility maintained by a municipality, public utility authority or regulated authority and includes services such as sanitary sewer, storm sewer, water, electric, gas, oil, steam, data transmission, telephone, and cable television.

Warranty Period means the applicable time period according to clause GC 7.16.02, Warranty.

Work means the total construction and related services required by the Contract Documents.

Working Area means all the lands and easements owned or acquired by the Owner for the construction of the Work.

Working Day means any Day,

- a) except Saturdays, Sundays and statutory holidays;
- b) except a Day as determined by the Contract Administrator, on which the Contractor is prevented by inclement weather or conditions resulting immediately therefrom, from proceeding with a Controlling Operation. For the purposes of this definition, this shall be a Day during which the Contractor cannot proceed with at least 60% of the normal labour and Equipment force effectively engaged on the Controlling Operation for at least 5 hours;
- c) except a Day on which the Contractor is prevented from proceeding with a Controlling Operation, as determined by the Contract Administrator by reason of,
 - i. any breach of the Contract by the Owner or if such prevention is due to the Owner, another contractor hired by the Owner, or an employee of any one of them, or by anyone else acting on behalf of the Owner.
 - ii. non-delivery of Owner supplied Materials.
 - iii. any cause beyond the reasonable control of the Contractor that can be substantiated by the Contractor to the satisfaction of the Contract Administrator.

Working Drawings or Working Plans means any Drawings or Plans prepared by the Contractor for the execution of the Work and may, without limiting the generality thereof, include formwork, falsework, and shoring plans; Roadway protection plans; shop drawings; shop plans; or erection diagrams.

GC 1.05 Ontario Traffic Manual

- .01 All references in the Contract Documents to the MUTCD, including all Parts and Divisions thereof, or MTO Traffic Control Manual for Roadway Work Operations, or Traffic Control Manual for Roadway Operations Field Edition are hereby deleted and replaced by all currently available books which make up the Ontario Traffic Manual.

GC 1.06 Final Acceptance

- .01 For the purposes of determining whether Final Acceptance has occurred, the Contract Administrator shall not take into account, in determining the discharge of the Contractor's obligations, any warranty obligation of the Contractor to the extent that the warranty extends beyond 12 months after Substantial Performance.

GC 1.07 Interpretation of Certain Words

- .01 The words "acceptable," "approval," "authorized," "considered necessary," "directed," "required," "satisfactory," or words of like import, shall mean approval of, directed, required, considered necessary, or authorized by and acceptable or satisfactory to the Contract Administrator, unless the context clearly indicates otherwise.

SECTION GC 2.0 - CONTRACT DOCUMENTS

GC 2.01 Reliance on Contract Documents

- .01 The Owner warrants that the information furnished in the Contract Documents can be relied upon with the following limitations or exceptions:
- a) Based on available information at the time of the contract, the location of all mainline underground Utilities that may affect the Work shall be shown to a tolerance of:
 - i. 1 m horizontal, and
 - ii. 0.3 m vertical
- .02 The Owner does not warrant or make any representation with respect to:
- a) interpretations of data or opinions expressed in any Subsurface Report available for the perusal of the Contractor, that are not included as part of the Contract Documents, and
 - b) other information specifically excluded from this warranty.

GC 2.02 Order of Precedence

- .01 In the event of any inconsistency or conflict in the contents of the following documents, such documents shall take precedence and govern in the following descending order:
- a) Agreement
 - b) Addenda
 - c) Special Provisions
 - d) Contract Drawings
 - e) Standard Specifications
 - f) Standard Drawings
 - g) Tender
 - h) Supplemental General Conditions
 - i) OPSS.MUNI 100 General Conditions of Contract
 - j) Working Drawings

Later dates shall govern within each of the above categories of documents.

- .02 In the event of any conflict among or inconsistency in the information shown on Drawings, the following rules shall apply:
- a) Dimensions shown in figures on a Drawing shall govern where they differ from dimensions scaled from the same Drawing;
 - b) Drawings of larger scale shall govern over those of smaller scale;
 - c) Detailed Drawings shall govern over general Drawings; and

- d) Drawings of a later date shall govern over those of an earlier date in the same series.
- .03 In the event of any inconsistency or conflict in the contents of Standard Specifications the following descending order of precedence shall govern:
- a) Owner's Standard Specifications
 - b) Ontario Provincial Standard Specifications
 - c) Other standards referenced in OPSSs and OPSDs (e.g., CSA, CGSB, ASTM, and ANSI).
- .04 The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all.

SECTION GC 3.0 - ADMINISTRATION OF THE CONTRACT

GC 3.01 Contract Administrator's Authority

- .01 The Contract Administrator shall be the Owner's representative during construction and until the issuance of the Completion Certificate or the issuance of the Final Acceptance Certificate, whichever is later. All instructions to the Contractor, including instructions from the Owner, shall be issued by the Contract Administrator. The Contract Administrator shall have the authority to act on behalf of the Owner only to the extent provided in the Contract Documents.
- .02 All claims, disputes and other matters in question relating to the performance and the quality of the Work or the interpretation of the Contract Documents shall be referred to the Contract Administrator in writing by the Contractor.
- .03 The Contract Administrator may inspect the Work for its conformity with the Contract Documents, and to record the necessary data to establish payment quantities under the schedule of tender quantities and unit prices or to assess the value of the Work completed in the case of a lump sum price Contract.
- .04 The Contract Administrator shall provide an estimate of the amounts owing to the Contractor under the Contract as provided for in section GC 8.0, Measurement and Payment.
- .05 The Contract Administrator, to not cause delay in the schedule, shall, with reasonable promptness, review and take appropriate action upon the Contractor's submissions such as shop drawings, product data, and samples in accordance with the Contract Documents .
- .06 The Contract Administrator shall investigate all allegations of a Change in the Work made by the Contractor and issue appropriate instructions.
- .07 The Contract Administrator shall prepare Change Directives and Change Orders for the Owner's approval.
- .08 Upon written application by the Contractor, the Contract Administrator and the Contractor shall jointly conduct an inspection of the Work to establish the date of Substantial Performance of the Work or the date of Completion of the Work or both.
- .09 The Contract Administrator shall be, in the first instance, the interpreter of the Contract Documents and the judge of the performance thereunder by both parties to the Contract. Interpretations and decisions of the Contract Administrator shall be consistent with the intent of the Contract Documents and, in making these decisions, the Contract Administrator shall not show partiality to either party.
- .10 The Contract Administrator shall have the authority to reject any part of the Work or Material that does not conform to the Contract Documents.
- .11 In the event that the Contract Administrator determines that any part of the Work performed by the Contractor is defective, whether the result of poor workmanship the use of defective Material or damage through carelessness or other act or omission of the Contractor and whether or not incorporated in the Work or otherwise fails to conform to the Contract Documents, then the Contractor shall if directed by the Contract Administrator promptly, as directed by the Contract Administrator, remove the Work and replace, make good, or re-execute the Work at no additional cost to the Owner.
- .12 Any part of the Work destroyed or damaged by such removals, replacements, or re-executions shall be made good, promptly, at no additional cost to the Owner.

- .13 If, in the opinion of the Contract Administrator it is not expedient to correct defective Work or Work not performed in accordance with the Contract Documents, the Owner may deduct from monies otherwise due to the Contractor the difference in value between the Work as performed and that called for by the Contract Documents amount that will be determined in the first instance by the Contract Administrator.
- .14 Notwithstanding any inspections made by the Contract Administrator or the issuance of any certificates or the making of any payment by the Owner, the failure of the Contract Administrator to reject any defective Work or Material shall not constitute acceptance of defective Work or Material.
- .15 The Contract Administrator shall have the authority to temporarily suspend the Work for such reasonable time as may be necessary:
 - a) to facilitate the checking of any portion of the Contractor's construction layout;
 - b) to facilitate the inspection of any portion of the Work; or
 - c) for the Contractor to remedy its non-compliance with any provisions of the Contract Documents.

The Contractor shall not be entitled to any compensation for suspension of the Work in these circumstances.
- .16 The Owner has the right to terminate the Contract for wilful or persistent violation by the Contractor or its workers of any applicable laws or bylaws, including but not limited to, the Occupational Health and Safety Act legislation and regulations, Workplace Safety and Insurance Board Act, and Regulation 347 of the Environmental Protection Act.
- .17 If the Contract Administrator determines that any worker employed on the Work is incompetent, as defined by the Occupational Health and Safety Act, or is disorderly, then the Contract Administrator shall provide written notice to the Contractor and the Contractor shall immediately remove the worker from the Working Area. Such worker shall not return to the Working Area without the prior written consent of the Contract Administrator.

GC 3.02 Working Drawings

- .01 The Contractor shall arrange for the preparation of clearly identified and dated Working Drawings as called for by the Contract Documents.
- .02 The Contractor, to not cause delay in the Work, shall submit Working Drawings to the Contract Administrator with reasonable promptness and in orderly sequence . If either the Contractor or the Contract Administrator so requests, they shall jointly prepare a schedule fixing the dates for submission and return of Working Drawings. Working Drawings shall be submitted in printed form. At the time of submission, the Contractor shall notify the Contract Administrator in writing of any deviations from the Contract Documents that exist in the Working Drawings.
- .03 The Contract Administrator shall review and return Working Drawings in accordance with an agreed upon schedule, or otherwise, with reasonable promptness so as not to cause delay.
- .04 The Contract Administrator's review shall be to check for conformity to the design concept and for general arrangement only and such review shall not relieve the Contractor of responsibility for errors or omissions in the Working Drawings or of responsibility for meeting all requirements of the Contract Documents, unless a deviation on the Working Drawings has been approved in writing by the Contract Administrator.

- .05 The Contractor shall make any changes in Working Drawings that the Contract Administrator may require to make the Working Drawings consistent with the Contract Documents and resubmit, unless otherwise directed by the Contract Administrator. When resubmitting, the Contractor shall notify the Contract Administrator in writing of any revisions other than those requested by the Contract Administrator.
- .06 Work related to the Working Drawings shall not proceed until the Working Drawings have been signed and dated by the Contract Administrator.
- .07 The Contractor shall keep one set of the reviewed Working Drawings, marked as above, at the site at all times.

GC 3.03 Right of the Contract Administrator to Modify Methods and Equipment

- .01 The Contractor shall, when requested in writing, make alterations in the method, Equipment, or work force at any time the Contract Administrator considers the Contractor's actions to be unsafe, or damaging to either the Work or existing facilities or the environment.
- .02 The Contractor shall, when requested in writing, alter the sequence of its operations on the Contract so as to avoid interference with work being performed by others.
- .03 Notwithstanding the foregoing, the Contractor shall ensure that all necessary safety precautions and protection are maintained throughout the Work.

GC 3.04 Emergency Situations

- .01 The Contract Administrator has the right to determine the existence of an emergency situation and, when such an emergency situation is deemed to exist, the Contract Administrator may instruct the Contractor to take action to remedy the situation. If the Contractor does not take timely action or, if the Contractor is not available, the Contract Administrator may direct others to remedy the situation.
- .02 If the emergency situation was the fault of the Contractor, the remedial Work shall be done at the Contractor's expense. If the emergency situation was not the fault of the Contractor, the Owner shall pay for the remedial Work.

GC 3.05 Layout Information

- .01 The Contract Administrator shall provide background information, including without limitation, baseline and benchmark information, to facilitate the general location, alignment, elevation and layout of the Work.
- .02 The Contract Administrator shall provide pre and post construction inventories of all Monuments, etc. that are located within the Working Area.
- .03 The Owner shall be responsible only for the correctness of the layout information provided by the Contract Administrator.

GC 3.06 Extension of Contract Time

- .01 An application for an extension of Contract Time shall be made in writing by the Contractor to the Contract Administrator as soon as the need for such extension becomes evident and at least 15 Days prior to the expiration of the Contract Time. The application for an extension of Contract Time shall enumerate the reasons and state the length of extension required.

- .02 Circumstances suitable for consideration of an extension of Contract Time include the following:
 - a) Delays, subsection GC 3.07.
 - b) Changes in the Work, clause GC 3.10.01.
 - c) Extra Work, clause GC 3.10.02.
 - d) Additional Work, clause GC 3.10.03.
- .03 The Contract Administrator shall, in reviewing an application for an extension to the Contract Time, consider whether the delays, Changes in the Work, Extra Work, or Additional Work involve a Controlling Operation.
- .04 The Contract Time shall be extended for such additional time as may be recommended by the Contract Administrator and deemed fair and reasonable by the Owner.
- .05 The terms and conditions of the Contract shall continue for such extension of Contract Time.

GC 3.07 Delays

- .01 If the Contractor is delayed in the performance of the Work by,
 - a) war, blockades, and civil commotions;
 - b) errors in the Contract Documents;
 - c) an act or omission of the Owner or Contract Administrator, or anyone employed or engaged by them directly or indirectly, contrary to the provisions of the Contract Documents;
 - d) a stop work order issued by a court or public authority, provided that such order was not issued as the result of an act or omission of the Contractor or anyone employed or engaged by the Contractor directly or indirectly;
 - e) the Contract Administrator giving notice under section GC 7.0, Suspension of Work;
 - f) Abnormal Weather; or
 - g) archaeological finds, in accordance with subsection GC 3.15, Archaeological Finds,

then the Contractor shall be reimbursed by the Owner for reasonable costs incurred by the Contractor as the result of such delay, provided that in the case of an application for an extension of Contract Time due to Abnormal Weather, the Contractor shall, with the Contractor's application, submit evidence from Environment Canada in support of such application. Extension of Contract Time may be granted in accordance with subsection GC 3.06, Extension of Contract Time.
- .02 If the Work is delayed by labour disputes, strikes or lock-outs, including lock-outs decreed or recommended to its members by a recognized contractor's association, of which the Contractor is a member or to which the Contractor is otherwise bound, which are beyond the Contractor's control, then the Contract Time shall be extended in accordance with subsection GC 3.06, Extension of Contract Time.
- .03 In no case shall the extension of Contract Time be less than the time lost as the result of the event causing the delay, unless a shorter extension is agreed to by the Contractor. The Contractor shall not be entitled to payment for costs incurred as the result of such delays unless such delays are the result of actions by the Owner.

- .04 The Contractor shall not be entitled to payment for the cost of delays incurred as a result of a dispute between the Contractor and Owner. The Contractor shall execute the Work and may pursue resolution of the dispute in accordance with subsection GC 3.13, Claims, Negotiations, Mediations.

GC 3.08 Assignment of Contract

- .01 The Contractor shall not assign the Contract, either in whole or in part, without the prior written consent of the Owner.

GC 3.09 Subcontracting by the Contractor

- .01 Subject to clause GC 3.09.03, Subcontracting by the Contractor, the Contractor may subcontract any part of the Work, in accordance with the Contract Documents and any limitations specified therein.
- .02 The Contractor shall notify the Contract Administrator in writing in 10 Days prior to the start of construction of the intention to subcontract. Such notification shall identify the part of the Work, and the Subcontractor with whom it is intended.
- .03 The Contract Administrator shall, within 5 Days of receipt of such notification, accept or reject the intended Subcontractor. The rejection shall be in writing and shall include the reasons for the rejection.
- .04 The Contractor shall not, without the written consent of the Owner, change a Subcontractor who has been engaged in accordance with this subsection.
- .05 The Contractor shall preserve and protect the rights of the Owner under the Contract Documents with respect to that part of the Work to be performed under subcontract and shall,
- a) enter into agreements with the intended Subcontractors to require them to perform their Work in accordance with the Contract Documents; and
 - b) be as fully responsible to the Owner for acts and omissions of the Contractor's Subcontractors and of persons directly or indirectly employed by them as for acts and omissions of persons directly employed by the Contractor.
- .06 The Owner's consent to subcontracting by the Contractor shall not be construed to relieve the Contractor from any obligation under the Contract and shall not impose any liability upon the Owner. Nothing contained in the Contract Documents shall create a contractual relationship between a Subcontractor and the Owner.

GC 3.10 Changes

GC 3.10.01 Changes in the Work

- .01 The Owner, or the Contract Administrator where so authorized, may, by order in writing, make a Change in the Work without invalidating the Contract. The Contractor shall not be required to proceed with a Change in the Work until in receipt of a Change Order or Change Directive. Upon the receipt of such Change Order or Change Directive the Contractor shall proceed with the Change in the Work.
- .02 The Contractor may apply for an extension of Contract Time according to the terms of clause GC 3.06, Extension of Contract Time.

- .03 If the Change in the Work relates solely to quantities, payment for that part of the Work shall be made according to the conditions specified in clause GC 8.01.02, Variations in Tender Quantities. If the Change in the Work does not solely relate to quantities, then either the Owner or the Contractor may initiate negotiations upwards or downwards for the adjustment of the Contract price in respect of the Change in the Work pursuant to subsection GC 3.13, Claims, Negotiations, Mediation or payment may be made according to the conditions contained in clause GC 8.02.05, Payment on a Time and Material Basis.

GC 3.10.02 Extra Work

- .01 The Owner, or Contract Administrator where so authorized, may instruct the Contractor to perform Extra Work without invalidating the Contract. The Contractor shall not be required to proceed with the Extra Work until in receipt of a Change Order or Change Directive. Upon receipt of such Change Order or Change Directive the Contractor shall proceed with the Extra Work.
- .02 The Contractor may apply for an extension of Contract Time according to the terms of clause GC 3.06, Extension of Contract Time.
- .03 Either the Owner or Contractor may initiate negotiations upwards or downwards for the payment for the Extra Work pursuant to subsection GC 3.13, Claims, Negotiations, Mediation, or payment may be made according to the conditions contained in clause GC 8.02.05, Payment on a Time and Material Basis.

GC 3.10.03 Additional Work

- .01 The Owner, or Contract Administrator where so authorized, may request the Contractor to perform Additional Work without invalidating the Contract. If the Contractor agrees to perform Additional Work, the Contractor shall proceed with such Additional Work upon receipt of a Change Order.
- .02 The Contractor may apply for an extension of Contract Time according to the terms of subsection GC 3.06, Extension of Contract Time.
- .03 Payment for the Additional Work may be negotiated pursuant to subsection GC 3.13, Claims, Negotiations, Mediation, or payment may be made according to the conditions contained in clause GC 8.02.05, Payment on a Time and Material Basis.

GC 3.11 Notices

- .01 Any notice permitted or required to be given to the Contract Administrator or the Superintendent in respect of the Work shall be deemed to have been given to and received by the addressee on the date of delivery if delivered by hand, email, or by facsimile transmission and on the fifth Day after the date of mailing, if sent by mail.
- .02 The Contractor and the Owner shall provide each other with the mail and email addresses; cell phone, and telephone numbers for the Contract Administrator and the Superintendent at the commencement of the Work, and update as necessary.
- .03 In the event of an emergency situation or other urgent matter the Contract Administrator or the Superintendent may give a verbal notice, provided that such notice is confirmed in writing within 2 Days.
- .04 Any notice permitted or required to be given to the Owner or the Contractor shall be given in accordance with the notice provision of the Contract.

GC 3.12 Use and Occupancy of the Work Prior to Substantial Performance

- .01 Where it is not contemplated elsewhere in the Contract Documents, the Owner may use or occupy the Work or any part thereof prior to Substantial Performance, provided that at least 30 Days written notice has been given to the Contractor.
- .02 The use or occupancy of the Work or any part thereof by the Owner prior to Substantial Performance shall not constitute an acceptance of the Work or parts so occupied. In addition, the use or occupancy of the Work shall not relieve the Contractor or the Contractor's Surety from any liability that has arisen, or may arise, from the performance of the Work in accordance with the Contract Documents. The Owner shall be responsible for any damage that occurs because of the Owner's use or occupancy. Such use or occupancy of any part of the Work by the Owner does not waive the Owner's right to charge the Contractor liquidated damages in accordance with the terms of the Contract.

GC 3.13 Claims, Negotiations, Mediation

GC 3.13.01 Continuance of the Work

- .01 Unless the Contract has been terminated or completed, the Contractor shall in every case, after serving or receiving any notification of a claim or dispute, verbal or written, continue to proceed with the Work with due diligence and expedition. It is understood by the parties that such action shall not jeopardize any claim it may have.

GC 3.13.02 Record Keeping

- .01 Immediately upon commencing Work that may result in a claim, the Contractor shall keep Daily Work Records during the course of the Work, sufficient to substantiate the Contractor's claim, and the Contract Administrator shall keep Daily Work Records to be used in assessing the Contractor's claim, all in accordance with clause GC 8.02.07, Records.
- .02 The Contractor and the Contract Administrator shall attempt to reconcile their respective Daily Work Records on a daily basis, to simplify review of the claim, when submitted. If the Contractor and the Contract Administrator fail to reconcile their respective Daily Work Records, then the Contractor shall submit its Daily Work Records as part of its claim, whereby the resolution of the dispute about the Daily Work Records shall not be resolved until there is a resolution of the claim.
- .03 The keeping of Daily Work Records by the Contract Administrator or the reconciling of such Daily Work Records with those of the Contractor shall not be construed to be acceptance of the claim.

GC 3.13.03 Claims Procedure

- .01 The Contractor shall give verbal notice of any situation that may lead to a claim for additional payment immediately upon becoming aware of the situation.
- .02 The Contractor shall provide written notice within 7 Days of the commencement of any part of the Work that may be affected by the situation.
- .03 The Contractor shall submit detailed claims as soon as reasonably possible and in any event no later than 30 Days or such time as mutually agreed after completion of the Work affected by the situation. The detailed claim shall:
 - a) identify the item or items in respect of which the claim arises;
 - b) state the grounds, contractual or otherwise, upon which the claim is made; and

- c) include the Records maintained by the Contractor supporting such claim.
- .04 Within 30 Days of the receipt of the Contractor's detailed claim, the Contract Administrator may request the Contractor to submit any further and other particulars as the Contract Administrator considers necessary to assess the claim. The Contractor shall submit the requested information within 30 Days of receipt of such request.
- .05 Within 90 Days of receipt of the detailed claim, the Contract Administrator shall advise the Contractor, in writing, of the Contract Administrator's opinion regarding the validity of the claim.

GC 3.13.04 Negotiations

- .01 The parties shall make all reasonable efforts to resolve their dispute by amicable negotiations and agree to provide, without prejudice, open and timely disclosure of relevant facts, information, and documents to facilitate these negotiations.
- .02 Should the Contractor disagree with the opinion given in clause GC 3.13.03.05, with respect to any part of the claim, the Contract Administrator shall enter into negotiations with the Contractor to resolve the matters in dispute. Where a negotiated settlement cannot be reached and it is agreed that payment cannot be made on a Time and Material basis in accordance with clause GC 8.02.05, Payment on a Time and Material Basis, the parties shall proceed in accordance with clause GC 3.13.05, Mediation, or subsection GC 3.14, Arbitration.
- .03 Prior to the expiry of 30 Business Days from the date of receipt of the Contractors claim, the Contract Administrator shall provide a written response to the Contractor stating the Contract Administrator's final price for the Change Order and an explanation of the rationale and basis of the Contract Administrator's position which shall be deemed to be the initial site response.

GC 3.13.05 Mediation

- .01 If a claim is not resolved satisfactorily through the negotiation stage noted in clause GC 3.13.04, Negotiations, within a period of 30 Days following the opinion given in clause GC 3.13.03.05, and the Contractor wishes to pursue the issue further, the parties may, upon mutual agreement, utilize the services of an independent third-party mediator.
- .02 The mediator shall be mutually agreed upon by the Owner and Contractor.
- .03 The mediator shall be knowledgeable regarding the area of the disputed issue. The mediator shall meet with the parties together or separately, as necessary, to review all aspects of the issue. In a final attempt to assist the parties in resolving the issue themselves prior to proceeding to arbitration the mediator shall provide, without prejudice, a non-binding recommendation for settlement.
- .04 The review by the mediator shall be completed within 90 Days following the opinion given in clause GC 3.13.03.05.
- .05 Each party is responsible for its own costs related to the use of the mediation process. The cost of the third-party mediator shall be equally shared by the Owner and Contractor.

GC 3.13.06 Payment

- .01 Payment of the claim shall be made no later than 28 Days after the date of resolution of the claim or dispute. Such payment shall be made according to the terms of section GC 8.0, Measurement and Payment.

GC 3.13.07 Rights of Both Parties

- .01 It is agreed that no action taken under subsection GC 3.13, Claims, Negotiations, Mediation, by either party shall be construed as a renunciation or waiver of any of the rights or recourse available to the parties, provided that the requirements set out in this subsection are fulfilled.
- .02 It is further agreed that the parties may at any time resort to the adjudication procedure contained in the Construction Act.

GC 3.14 Arbitration

GC 3.14.01 Conditions of Arbitration

- .01 If a claim is not resolved satisfactorily through the negotiation stage noted in clause GC 3.13.04, Negotiations, or the mediation stage noted in clause GC 3.13.05, Mediation, either party may invoke the provisions of subsection GC 3.14, Arbitration, by giving written notice to the other party.
- .02 Notification that arbitration shall be implemented to resolve the issue shall be communicated in writing as soon as possible and no later than 60 Days following the opinion given in clause GC 3.13.03.05. Where the use of a third-party mediator was implemented, notification shall be within 120 Days of the opinion given in clause GC 3.13.03.05.
- .03 The parties shall be bound by the decision of the arbitrator.
- .04 The rules and procedures of the Arbitration Act, 1991, S.O. 1991, c.17, as amended, shall apply to any arbitration conducted hereunder except to the extent that they are modified by the express provisions of subsection GC 3.14, Arbitration.

GC 3.14.02 Arbitration Procedure

- .01 The following provisions are to be included in the agreement to arbitrate and are subject only to such right of appeal as exist where the arbitrator has exceeded his or her jurisdiction or have otherwise disqualified him or herself:
 - a) All existing actions in respect of the matters under arbitration shall be stayed pending arbitration;
 - b) All outstanding claims and matters to be settled are to be set out in a schedule to the agreement. Only such claims and matters as are in the schedule shall be arbitrated; and
 - c) Before proceeding with the arbitration, the Contractor shall confirm that all matters in dispute are set out in the schedule.

GC 3.14.03 Appointment of Arbitrator

- .01 The arbitrator shall be mutually agreed upon by the Owner and Contractor to adjudicate the dispute.
- .02 Where the Owner and Contractor cannot agree on a sole arbitrator within 30 Days of the notification of arbitration noted in clause GC 3.14.01.02, the Owner and the Contractor shall each choose an appointee within 37 Days of the notice of arbitration.
- .03 The appointees shall mutually agree upon an arbitrator to adjudicate the dispute within 15 Days after the last appointee was chosen or they shall refer the matter to the ADR Institute of Ontario (ADRIO), which may select an arbitrator to adjudicate the dispute within 7 Days of being requested to do so.
- .04 The arbitrator shall not be interested financially in the Contract nor in either party's business and shall not be employed by either party.

- .05 The arbitrator may appoint independent experts and any other persons to assist him or her.
- .06 The arbitrator is not bound by the rules of evidence that govern the trial of cases in court but may hear and consider any evidence that the arbitrator considers relevant.
- .07 The hearing shall commence within 90 Days of the appointment of the arbitrator.

GC 3.14.04 Costs

- .01 The arbitrator's fee shall be equally shared by the Owner and the Contractor.
- .02 The fees of any independent experts and any other persons appointed to assist the arbitrator shall be shared equally by the Owner and the Contractor.
- .03 The arbitration hearing shall be held in a place mutually agreed upon by both parties or in the event the parties do not agree, a site shall be chosen by the arbitrator. The cost of obtaining appropriate facilities shall be shared equally by the Owner and the Contractor.
- .04 The arbitrator may, in his or her discretion, award reasonable costs, related to the arbitration.

GC 3.14.05 The Decision

- .01 The reasoned decision shall be made in writing within 90 Days of the conclusion of the hearing. An extension of time to make a decision may be granted with consent of both parties. Payment shall be made in accordance with clause GC 3.13.06, Payment.

GC 3.15 Archaeological Finds

- .01 If the Contractor's operations expose any items that may indicate an archaeological find, such as but not limited to building remains, hardware, accumulations of bones, pottery, or arrowheads, the Contractor shall immediately notify the Contract Administrator and suspend operations within the area identified by the Contract Administrator. Notification may be verbal provided that such notice is confirmed in writing within 2 Days. Work shall remain suspended within that area until otherwise directed by the Contract Administrator in writing, in accordance with subsection GC 7.09, Suspension of Work.
- .02 Any delay in the completion of the Contract that is caused by such a suspension of Work shall be considered to be beyond the Contractor's control in accordance with clause GC 3.07.01.
- .03 Any Work directed or authorized in connection with an archaeological find shall be considered as Extra Work in accordance with clause GC 3.10.02, Extra Work.
- .04 The Contractor shall take all reasonable action to minimize additional costs that may accrue as a result of any work stoppage.

SECTION GC 4.0 - OWNER'S RESPONSIBILITIES AND RIGHTS

GC 4.01 Working Area

.01 The Owner shall acquire all property rights that are deemed necessary by the Owner for the construction of the Work, including temporary working easements, and shall indicate the full extent of the Working Area on the Contract Drawings.

GC 4.02 Approvals and Permits

.01 The Owner shall pay for all plumbing and building permits.

.02 The Owner shall obtain and pay for all permits, licences, and certificates solely required for the design of the Work.

GC 4.03 Management and Disposition of Materials

.01 The Owner shall identify in the Contract Documents the Materials to be moved within or removed from the Working Area and any characteristics of those Materials that necessitates special Materials management and disposition.

.02 In accordance with regulations under the Occupational Health and Safety Act, R.S.O. 1990, c.O.1, as amended, the Owner advises that,

- a) the designated substances silica, lead, and arsenic are generally present throughout the Working Area occurring naturally or as a result of vehicle emissions;
- b) the designated substance asbestos may be present in cement products, asphalt, and conduits for Utilities;
- c) the following hazardous materials are ordinarily present in construction activities: limestone, gypsum, marble, mica, and Portland cement; and
- d) exposure to these substances may occur as a result of activities by the Contractor such as sweeping, grinding, crushing, drilling, blasting, cutting, and abrasive blasting.

.03 The Owner shall identify in the Contract Documents any designated substances or hazardous materials other than those identified above and their location in the Working Area.

.04 If the Owner or Contractor discovers or is advised of the presence of designated substances or hazardous Materials that are in addition to those listed in clause GC 4.03.02, or not clearly identified in the Contract Documents according to clause GC 4.03.03, then verbal notice shall be provided to the other party immediately with written confirmation within 2 Days. The Contractor shall stop Work in the area immediately and shall determine the necessary steps required to complete the Work in accordance with applicable legislation and regulations.

.05 The Owner shall be responsible for any reasonable additional costs of removing, managing and disposing of any Material not identified in the Contract Documents, or where conditions exist that could not have been reasonably foreseen at the time of tendering. All work under this paragraph shall be deemed to be Extra Work.

- .06 Prior to commencement of the Work, the Owner shall provide to the Contractor a list of those products controlled under the Workplace Hazardous Materials Information System (WHMIS), that the Owner may supply or use on the Contract, together with copies of the Safety Data Sheets for these products. All containers used in the application of products controlled under WHMIS shall be labelled. The Owner shall notify the Contractor in writing of changes to the list and provide relevant Safety Data Sheets.
- .07 Unless expressly permitted in the Contract Documents, the Contractor shall not bring onto the Work Area any designated substance or hazardous Material per OHSA without the prior written authorization of the Contract Administrator.
- .08 The Contractor shall use all reasonable care to avoid spilling or disturbing any designated substances or hazardous Material per OHSA.

GC 4.04 Construction Affecting Railway Property

- .01 The Owner shall pay the costs of all flagging and other traffic control measures required and provided by the railway company unless such costs are solely a function of the Contractor's chosen method of completing the Work.
- .02 Every precaution shall be taken by the Contractor to protect all railway property at track crossings; or otherwise, on which construction operations are to take place in accordance with the terms of this Contract.
- .03 The Contractor shall be required to conduct the construction operations in such a manner as to avoid a possibility of damaging any railway property in the vicinity of the Works. Every reasonable precaution shall be taken by the Contractor to ensure the safety of the workers, Subcontractors, and Equipment, as well as railway property throughout the duration of the Contract.

GC 4.05 Default by the Contractor

- .01 If the Contractor fails to commence the Work within 14 Days of a formal order to commence Work signed by the Contract Administrator or, upon commencement of the Work, should neglect to prosecute the Work properly or otherwise fails to comply with the requirements of the Contract and, if the Contract Administrator has given a written statement to the Owner and Contractor that sufficient cause exists to justify such action, the Owner may, without prejudice to any other right or remedy the Owner may have, notify the Contractor in writing that the Contractor is in default of the Contractor's contractual obligations and instruct the Contractor to correct the default in the 5 Working Days immediately following the receipt of such notice.
- .02 If the Contractor is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the Contractor's insolvency or if a receiver is appointed because of the Contractor's insolvency, the Owner may, without prejudice to any other right or remedy the Owner may have, by giving the Contractor or receiver or trustee in bankruptcy notice in writing, terminate the Contract.

GC 4.06 Contractor's Right to Correct a Default

- .01 The Contractor shall have the right within the 5 Working Days following the receipt of a notice of default to correct the default and provide the Owner with satisfactory proof that appropriate corrective measures have been taken.
- .02 If the Owner determines that the correction of the default cannot be completed within the 5 Working Days following receipt of the notice, the Contractor shall not be in default if the Contractor,
 - a) commences the correction of the default within the 5 Working Days following receipt of the notice;

- b) provides the Owner with a schedule acceptable to the Owner for the progress of such correction;
and
- c) completes the correction in accordance with such schedule.

GC 4.07 Owner's Right to Correct Default

- .01 If the Contractor fails to correct the default within the time specified in subsection GC 4.06, Contractor's Right to Correct a Default, or subsequently agreed upon, the Owner, without prejudice to any other right or remedy the Owner may have, may correct such default and deduct the cost thereof, as certified by the Contract Administrator, from any payment then or thereafter due to the Contractor.

GC 4.08 Termination of Contractor's Right to Continue the Work

- .01 Where the Contractor fails to correct a default within the time specified in subsection GC 4.06, Contractor's Right to Correct a Default, or subsequently agreed upon, the Owner, without prejudice to any other right or remedy the Owner may have, may terminate the Contractor's right to continue the Work in whole or in part by giving written notice to the Contractor.
- .02 If the Owner terminates the Contractor's right to continue with the Work in whole or in part, the Owner shall be entitled to,
 - a) take possession of the Working Area or that portion of the Working Area devoted to that part of the Work terminated;
 - b) utilize any Material within the Working Area;
 - d) withhold further payments to the Contractor with respect to the Work or the portion of the Work withdrawn from the Contractor until the Work or portion thereof withdrawn is completed;
 - d) charge the Contractor the additional cost over the Contract price of completing the Work or portion thereof withdrawn from the Contractor, as certified by the Contract Administrator and any additional compensation paid to the Contract Administrator for such additional service arising from the correction of the default;
 - e) charge the Contractor a reasonable allowance, as determined by the Contract Administrator, to cover correction to the Work performed by the Contractor that may be required under subsection GC 7.16, Warranty;
 - f) charge the Contractor for any damages the Owner sustained as a result of the default; and
 - g) charge the Contractor the amount by which the cost of corrections to the Work under subsection GC 7.16, Warranty, exceeds the allowance provided for such corrections.

GC 4.09 Final Payment to Contractor

- .01 If the Owner's cost to correct and complete the Work in whole or in part is less than the amount withheld from the Contractor under subsection GC 4.08, Termination of Contractor's Right to Continue the Work, the Owner shall pay the balance to the Contractor as soon as the final accounting for the Contract is complete.

GC 4.10 Termination of the Contract

- .01 Where the Contractor is in default of the Contract the Owner shall, without prejudice to any other right or remedy the Owner may have, terminate the Contract by giving written notice of termination to the Contractor, the Surety, and any trustee or receiver acting on behalf of the Contractor's estate or creditors.
- .02 If the Owner elects to terminate the Contract, the Owner shall provide the Contractor and the trustee or receiver with a complete accounting to the date of termination.

GC 4.11 Continuation of Contractor's Obligations

- .01 The Contractor's obligation under the Contract as to quality, correction, and warranty of the Work performed prior to the time of termination of the Contract or termination of the Contractor's right to continue with the Work in whole or in part shall continue to be in force after such termination.

GC 4.12 Use of Performance Bond

- .01 If the Contractor is in default of the Contract and the Contractor has provided a Performance Bond, the provisions of section GC 4.0, Owner's Responsibilities and Rights, shall be exercised in accordance with the conditions of the Performance Bond.

GC 4.13 Payment Adjustment

- .01 If any situation should occur in the performance of the Work that would result in a Change in the Work, the Owner shall be entitled to an adjustment and those adjustments shall be managed in accordance with clause GC 3.10.01, Changes in the Work.

SECTION GC 5.0 - MATERIAL

GC 5.01 Supply of Material

- .01 All Material necessary for the proper completion of the Work, except that listed as being supplied by the Owner, shall be supplied by the Contractor. The Contract price for the appropriate tender items shall be deemed to include full compensation for the supply and delivery of such Material.

GC 5.02 Quality of Material

- .01 All Material supplied by the Contractor shall be new, unless otherwise specified in the Contract Documents.
- .02 Material supplied by the Contractor shall conform to the requirements of the Contract.
- .03 As specified in the Contract Documents or as requested by the Contract Administrator, the Contractor shall make available, for inspection or testing, a sample of any Material to be supplied by the Contractor.
- .04 The Contractor shall obtain for the Contract Administrator the right to enter onto the premises of the Material manufacturer or supplier to carry out such inspection, sampling, and testing as specified in the Contract Documents or as requested by the Contract Administrator.
- .05 The Contractor shall notify the Contract Administrator of the sources of supply sufficiently in advance of the Material shipping dates to enable the Contract Administrator to perform the required inspection, sampling, and testing.
- .06 The Owner shall not be responsible for any delays to the Contractor's operations where the Contractor fails to give sufficient advance notice to the Contract Administrator to enable the Contract Administrator to carry out the required inspection, sampling, and testing before the scheduled shipping date.
- .07 The Contractor shall not change the source of supply of any Material without the written authorization of the Contract Administrator.
- .08 Material that is not specified shall be of a quality best suited to the purpose required, and the use of such Material shall be subject to the approval of the Contract Administrator.
- .09 All Material inspection, sampling, and testing shall be carried out on random basis in accordance with the standard inspection or testing methods required for the Material. Any approval given by the Contract Administrator for the Materials to be used in the Work based upon the random method shall not relieve the Contractor from the responsibility of incorporating Material that conforms to the Contract Documents into the Work or properly performing the Contract and of any liability arising from the failure to properly perform as specified in the Contract Documents.

GC 5.03 Rejected Material

- .01 Rejected Material shall be removed from the Working Area expeditiously after the notification to that effect from the Contract Administrator. Where the Contractor fails to comply with such notice, the Contract Administrator may cause the rejected Material to be removed from the Working Area and disposed of, in what the Contract Administrator considers to be the most appropriate manner, and the Contractor shall pay the costs of disposal and the appropriate overhead charges.

GC 5.04 Substitutions

- .01 Where the Contract Documents require the Contractor to supply a Material designated by a trade or other name, the Tender shall be based only upon supply of the Material so designated, that shall be regarded as the standard of quality required by the Contract Documents. After the acceptance of the Tender, the Contractor may apply to the Contract Administrator to substitute another Material identified by a different trade or other name for the Material designated as aforesaid. The application shall be in writing and shall state the price for the proposed substitute Material designated as aforesaid, and such other information as the Contract Administrator may require.
- .02 Rulings on a proposed substitution shall not be made prior to the acceptance of the Tender. Substitutions shall not be made without the prior approval of the Contract Administrator. The approval or rejection of a proposed substitution shall be at the discretion of the Contract Administrator.
- .03 If the proposed substitution is approved by the Contract Administrator, the Contractor shall be entitled to the first \$1,000 of the aggregate saving in cost by reason of such substitution and to 50% of any additional saving in cost in excess of such \$1,000. Each such approval shall be conveyed to the Contractor in writing or by issuance of a Certificate of Equality on the Owner's standard form of "Certification of Equality" and, if any adjustment to the Contract price is made by reason of such substitution, a Change Order shall be issued as well.

GC 5.05 Owner Supplied Material

GC 5.05.01 Ordering of Excess Material

- .01 Where Material is supplied by the Owner and where this Material is ordered by the Contractor in excess of the amount specified to complete the Work, such excess Material shall become the property of the Contractor on completion of the Work and shall be charged to the Contractor at cost plus applicable overheads.

GC 5.05.02 Care of Material

- .01 The Contractor shall, in advance of receipt of shipments of Material supplied by the Owner, provide adequate and proper storage facilities acceptable to the Contract Administrator, and on the receipt of such Material shall promptly place it in storage, except where it is to be incorporated forthwith into the Work.
- .02 The Contractor shall be responsible for acceptance of Material supplied by the Owner, at the specified delivery point and for its safe handling and storage. If such Material is damaged while under the control of the Contractor, it shall be replaced or repaired by the Contractor at no expense to the Owner, and to the satisfaction of the Contract Administrator. If such Material is rejected by the Contract Administrator for reasons that are not the fault of the Contractor, it shall remain in the care and at the risk of the Contractor until its disposition has been determined by the Contract Administrator.
- .03 Where Material supplied by the Owner arrives at the delivery point in a damaged condition or where there are discrepancies between the quantities received and the quantities shown on the bills of lading, the Contractor shall immediately report such damage or discrepancies to the Contract Administrator who shall arrange for an immediate inspection of the shipment and provide the Contractor with a written release from responsibility for such damage or deficiencies. Where damage or deficiencies are not so reported, it shall be assumed that the shipment arrived in good condition and order, and any damage or deficiencies reported thereafter shall be made good by the Contractor at no extra cost to the Owner.

- .04 The full amount of Material supplied by the Owner in each shipment shall be accounted for by the Contractor and such Material shall be at the risk of the Contractor after taking delivery. Such Material shall not, except with the written permission of the Contract Administrator, be used by the Contractor for purposes other than the performance of the Work under the Contract.
- .05 Empty reels, crates, containers, and other type of packaging from Material supplied by the Owner shall become the property of the Contractor when they are no longer required for their original purpose and shall be disposed of by the Contractor at the Contractor's expense unless otherwise specified in the Contract Documents.
- .06 Immediately upon receipt of each shipment, the Contractor shall provide the Contract Administrator copies of bills of lading, or such other documentation the Contract Administrator may require to substantiate and reconcile the quantities of Material received.
- .07 Where Material supplied by the Owner is ordered and stockpiled prior to the award of the Contract, the Contractor shall, at no extra cost to the Owner, immediately upon commencement of operations, check the Material, report any damage or deficiencies to the Contract Administrator and take charge of the Material at the stockpile site. Where damage or deficiencies are not so recorded by the Contractor, it shall be assumed that the stockpile was in good condition and order when the Contractor took charge of it, and any damage or deficiencies reported thereafter shall be made good by the Contractor at no extra cost to the Owner.

SECTION GC 6.0 - INSURANCE, PROTECTION AND DAMAGE

GC 6.01 Protection of Work, Persons and Property

- .01 The Contractor, the Contractor's agents, and all workers employed by or under the control of the Contractor, including Subcontractors, shall protect the Work, persons, and property from damage or injury. The Contractor shall be responsible for all losses and damage that may arise as the result of the Contractor's operations under the Contract, unless indicated to the contrary below.
- .02 The Contractor is responsible for the full cost of any necessary temporary protective Work and the restoration of all damage where the Contractor damages the Work or property in the performance of the Contract. If the Contractor is not responsible for the damage that occurs to the Work or property, the Contractor shall restore such damage, and such Work and payment shall be administered according to these General Conditions.
- .03 The Contractor shall immediately inform the Contract Administrator of all damage and injuries that occur during the term of the Contract. The Contractor shall then investigate and report back to the Contract Administrator within 15 Days of occurrence of incident, or as soon as possible. The Contract Administrator may conduct its own investigation and the Contractor shall provide all assistance to the Contract Administrator as may be necessary for that purpose.
- .04 The Contractor shall not be responsible for loss and damage that occurs as a result of,
 - a) war;
 - b) blockades and civil commotions;
 - c) errors in the Contract Documents; or
 - d) acts or omissions of the Owner, the Contract Administrator, their agents and employees, or others not under the control of the Contractor, but within the Working Area with the Owner's permission.
- .05 The Contractor and the Contractor's Surety shall not be released from any term or provision of any responsibility, obligation, or liability under the Contract or waive or impair any of the rights of the Owner, except by a release duly executed by the Owner.

GC 6.02 Indemnification

- .01 The Contractor shall indemnify and hold harmless the Owner and the Contract Administrator, their elected officials, agents, officers, and employees from and against all claims, demands, losses, expenses, costs, damages, actions, suits, or proceedings by third parties, hereinafter called "claims", directly or indirectly arising or alleged to arise out of the performance of or the failure to perform the Work, provided such claims are,
 - a) attributable to bodily injury, sickness, disease, or death or to damage to or destruction of tangible property;
 - b) caused by negligent acts or omissions of the Contractor or anyone for whose acts the Contractor may be liable; and
 - c) made in writing within a period of 6 years from the date of Substantial Performance of the Work as set out in the Certificate of Substantial Performance of the Work or, where so specified in the Contract Documents, from the date of certification of Final Acceptance.

- .02 The Contractor shall indemnify and hold harmless the Owner from all and every claim for damages, royalties or fees for the infringement of any patented invention or copyright occasioned by the Contractor in connection with the Work performed or Material furnished by the Contractor under the Contract.
- .03 The Owner expressly waives the right to indemnity for claims other than those stated in clauses GC 6.02.01 and GC 6.02.02.
- .04 The Owner shall indemnify and hold harmless the Contractor, their elected officials, agents, officers, and employees from and against all claims, demands, losses, expenses, costs, damages, actions, suits, or proceedings arising out of the Contractor's performance of the Contract that are attributable to a lack of or defect in title or an alleged lack of or defect in title to the Working Area.
- .05 The Contractor expressly waives the right to indemnity for claims other than those stated in clause GC 6.02.04.

GC 6.03 Contractor's Insurance

GC 6.03.01 General

- .01 Without restricting the generality of subsection GC 6.02, Indemnification, the Contractor shall provide, maintain, and pay for the insurance coverages listed under clauses GC 6.03.02 and GC 6.03.03. Insurance coverage in clauses GC 6.03.04, GC 6.03.05, and GC 6.03.06 shall only apply when so specified in the Contract Documents.
- .02 The Contractor shall provide the Contract Administrator with an original Certificate of Insurance for each type of insurance coverage that is required by the Contract Documents. The Contractor shall ensure that the Contract Administrator is, at all times in receipt of a valid Certificate of Insurance for each type of insurance coverage, in such amounts as specified in the Contract Documents. The Contractor will not be permitted to commence Work until the Contract Administrator is in receipt of such proof of insurance. The Contract Administrator may withhold payments of monies due to the Contractor until the Contractor has provided the Contract Administrator with original valid Certificates of Insurance as required by the provisions of the Contract Documents.

GC 6.03.02 Commercial General Liability Insurance

- .01 Commercial General Liability Insurance shall be in the name of the Contractor, with the Owner and the Contract Administrator named as additional insureds, with limits of not less than five million dollars inclusive per occurrence for bodily injury, death, and damage to property including loss of use thereof. The insurance shall be provided in a form acceptable to the Owner.
- .02 Approval of this insurance shall be conditional upon the Contractor obtaining the services of an insurer licensed to underwrite insurance in the Province of Ontario and obtaining the insurer's certificate of equivalency to the required insurance.
- .03 The Contractor shall submit annually to the Owner, proof of continuation of the completed operations coverage and, if the Contractor fails to do so, the limitation period for claiming indemnity described in clause GC 6.02.01 c), shall not be binding on the Owner.
- .04 Should the Contractor decide not to employ Subcontractors for operations requiring the use of explosives for blasting, pile driving or caisson work, removal or weakening of support of property building or land, the Commercial General Liability Insurance shall include the appropriate endorsements.
- .05 The policies shall be endorsed to provide the Owner with not less than 30 Days written notice in advance of cancellation, termination, or material change.

.06 "Claims Made" insurance policies shall not be permitted.

GC 6.03.03 Automobile Liability Insurance

.01 Automobile liability insurance in respect of licensed vehicles shall have limits of not less than five million dollars inclusive per occurrence for bodily injury, death and damage to property, in the following forms endorsed to provide the Owner with not less than 30 Days written notice in advance of any cancellation, termination, or material change.

- a) standard non-owned automobile policy including standard contractual liability endorsement, and
- b) standard owner's form automobile policy providing third party liability and accident benefits insurance and covering licensed vehicles owned or operated by the Contractor.

GC 6.03.04 Aircraft and Watercraft Liability Insurance

GC 6.03.04.01 Aircraft Liability Insurance

.01 Aircraft liability insurance with respect to owned or non-owned aircraft used directly or indirectly in the performance of the Work, including use of additional premises, shall be subject to limits of not less than five million dollars inclusive per occurrence for bodily injury, death, and damage to property including loss of use thereof, and limits of not less than five million dollars for aircraft passenger hazard. Such insurance shall be in a form acceptable to the Owner. The policies shall be endorsed to provide the Owner with not less than 30 Days written notice in advance of cancellation, change, or amendment restricting coverage.

GC 6.03.04.02 Watercraft Liability Insurance

.01 Watercraft liability insurance with respect to owned or non-owned watercraft used directly or indirectly in the performance of the Work, including use of additional premises, shall be subject to limits of not less than five million dollars inclusive per occurrence for bodily injury, death, and damage to property including loss of use thereof. Such insurance shall be in a form acceptable to the Owner. The policies shall be endorsed to provide the Owner with not less than 30 Days written notice in advance of cancellation, change, or amendment restricting coverage.

GC 6.03.05 Property and Boiler Insurance

GC 6.03.05.01 Property Insurance

.01 All risks property insurance shall be in the name of the Contractor, with the Owner and the Contract Administrator named as additional insureds, insuring not less than the sum of the amount of the Contract price and the full value, as may be stated in the Contract Documents, of Material that is specified to be provided by the Owner for incorporation into the Work.

GC 6.03.05.02 Boiler Insurance

.01 Boiler insurance insuring the interests of the Contractor, the Owner and the Contract Administrator for not less than the replacement value of boilers and pressure vessels forming part of the Work, shall be in a form acceptable to the Owner.

GC 6.03.05.03 Use and Occupancy of the Work Prior to Completion

.01 Should the Owner wish to use or occupy part or all of the Work prior to Substantial Performance, the Owner shall give 30 Days written notice to the Contractor of the intended purpose and extent of such use or occupancy. Prior to such use or occupancy, the Contractor shall notify the Owner in writing of

the additional premium cost, if any, to maintain property and boiler insurance, which shall be at the Owner's expense. If because of such use or occupancy the Contractor is unable to provide coverage, the Owner upon written notice from the Contractor and prior to such use or occupancy shall provide, maintain, and pay for property and boiler insurance insuring the full value of the Work, including coverage for such use or occupancy, and shall provide the Contractor with proof of such insurance. The Contractor shall refund to the Owner the unearned premiums applicable to the Contractor's policies upon termination of coverage.

- .02 The policies shall provide that in the event of a loss or damage, payment shall be made to the Owner and the Contractor as their respective interests may appear. The Contractor shall act on behalf of both the Owner and the Contractor for the purpose of adjusting the amount of such loss or damage payment with the insurers. When the extent of the loss or damage is determined, the Contractor shall proceed to restore the Work. Loss or damage shall not affect the rights and obligations of either party under the Contract, except that the Contractor shall be entitled to such reasonable extension of Contract Time relative to the extent of the loss or damage as the Contract Administrator may decide in consultation with the Contractor.

GC 6.03.05.04 Payment for Loss or Damage

- .01 The Contractor shall be entitled to receive from the Owner, in addition to the amount due under the Contract, the amount at which the Owner's interest in restoration of the Work has been appraised, such amount to be paid as the restoration of the Work proceeds, and in accordance with the requirements of section GC 8.0, Measurement and Payment. In addition, the Contractor shall be entitled to receive from the payments made by the insurers the amount of the Contractor's interest in the restoration of the Work.
- .02 The Contractor shall be responsible for deductible amounts under the policies, except where such amounts may be excluded from the Contractor's responsibility by the terms of this Contract.
- .03 In the event of a loss or damage to the Work arising from the action or omission of the Owner or others, the Owner shall pay the Contractor the cost of restoring the Work as the restoration of the Work proceeds and in accordance with the requirements of section GC 8.0, Measurement and Payment.

GC 6.03.06 Contractor's Equipment Insurance

- .01 All risks Contractor's Equipment insurance covering construction equipment used by the Contractor for the performance of the Work, including boiler insurance on temporary boilers and pressure vessels, shall be in a form acceptable to the Owner and shall not allow subrogation claims by the insurer against the Owner. The policies shall be endorsed to provide the Owner with not less than 30 Days written notice in advance of cancellation, change, or amendment restricting coverage. Subject to satisfactory proof of financial capability by the Contractor for self-insurance of the Contractor's Equipment, the Owner agrees to waive the equipment insurance requirement, and for the purpose of this Contract, the Contractor shall be deemed to be insured. This policy shall be amended to provide permission for the Contractor to grant prior releases with respect to damage to the Contractor's Equipment.

GC 6.03.07 Insurance Requirements and Duration

- .01 Each insurance policy as noted in the Contract Documents shall be in effect from the date of commencement of the Work until 10 Days after the date of Final Acceptance of the Work, as set out in the Final Acceptance Certificate.
- .02 The Contractor shall provide the Owner, on a form acceptable to the Owner, proof of insurance prior to commencement of the Work and signed by the underwriter or the broker.

- .03 The Contractor shall, on request, promptly provide the Owner with a certified true copy of each insurance policy exclusive of information pertaining to premium or premium bases used by the insurer to determine the cost of the insurance. The certified true copy shall include the signature of an officer of the insurer.
- .04 Where a policy is renewed, the Contractor shall provide the Owner, on a form acceptable to the Owner, renewed proof of insurance immediately following completion of renewal.
- .05 Unless specified otherwise, the Contractor shall be responsible for the payment of deductible amounts under the policies.
- .06 If the Contractor fails to provide or maintain insurance as required in subsection GC 6.03, Contractor's Insurance, or elsewhere in the Contract Documents, then the Owner shall have the right to provide and maintain such insurance and give evidence thereof to the Contractor. The Owner's cost thereof shall be payable by the Contractor to the Owner on demand.
- .07 If the Contractor fails to pay the cost of the insurance placed by the Owner within 28 Days of the date on which the Owner made a formal demand for reimbursement of such costs, the Owner may deduct the costs thereof from monies which are due or may become due to the Contractor.

GC 6.04 Bonding

- .01 The Contractor shall provide the Owner with the surety bonds in the amount required by the Contract Documents.
- .02 Such bonds shall be issued by a duly licensed surety company authorized to transact a business of suretyship in the Province of Ontario and shall be to the satisfaction of the Owner. The bonds shall be maintained in good standing until the Final Acceptance.

GC 6.05 Workplace Safety and Insurance Board

- .01 The Contractor shall provide the Contract Administrator with a copy of a Certificate of Clearance indicating the Contractor's good standing with the Workplace Safety and Insurance Board, as follows:
 - a) Immediately prior to the Contract Administrator authorizing the Contractor to commence Work.
 - b) Prior to issue of the Certificate of Substantial Performance.
 - c) Prior to expiration of the Warranty Period.
 - d) At any other time when requested by the Contract Administrator.

SECTION GC 7.0 - CONTRACTOR'S RESPONSIBILITIES AND CONTROL OF THE WORK

GC 7.01 General

GC 7.01.01 Site Visit

- .01 The Contractor warrants that the site of the Work has been visited during the preparation of the Tender and the character of the Work and all local conditions that may affect the performance of the Work are known.

GC 7.01.02 Commencement of Work

- .01 The Contractor shall not commence the Work nor deliver anything to the Working Area until the Contractor has received a written order to commence the work from the Contract Administrator.

GC 7.01.03 Control and Responsibility

- .01 The Contractor shall have complete control of the Work and shall effectively direct and supervise the Work so as to ensure conformity with the Contract Documents. The Contractor shall be responsible for construction means, methods, techniques, sequences, and procedures and for coordinating the various parts of the Work.
- .02 The Contractor shall provide adequate labour, Equipment, and Material to ensure the completion of the Contract in accordance with the Contract Documents. The Work shall be performed as vigorously and as continuously as weather conditions or other interferences may permit.
- .03 The Contractor shall have the sole responsibility for the design, erection, operation, maintenance, and removal of temporary structures and other temporary facilities and the design and execution of construction methods required in their use.
- .04 Notwithstanding clause GC 7.01.03, where the Contract Documents include designs for temporary structures and other temporary facilities or specify a method of construction in whole or part, such facilities and methods shall be considered to be part of the design of the Work, and the Contractor shall not be held responsible for that part of the design or the specified method of construction. The Contractor shall, however, be responsible for the execution of such design or specified method of construction in the same manner that the Contractor is responsible for the execution of the Work.
- .05 The Contractor shall comply with and conform to all statutes, laws, by-laws, regulations, requirements, ordinances, notices, rulings, orders, directives and policies of the municipal, provincial and federal governments and any other lawful authority and all court orders, judgments and declarations of a court of competent jurisdiction (collectively referred to as the "Laws"), applicable to the Work to be provided by, and the undertakings and obligations of, the Contractor under this Contract.

GC 7.01.04 Compliance with the Occupational Health and Safety Act

- .01 The Contractor shall execute the terms of the Contract in strict compliance with the requirements of the Occupational Health and Safety Act, R.S.O. 1990, c.O.1, as amended, (the "Act") and Ontario Regulation 213/91, as amended, (that regulates Construction Projects) and any other regulations as amended under the Act (the "Regulations") that may affect the performance of the Work, as the "Constructor" or "employer," as defined by the Act, as the case may be. The Contractor shall ensure that:
- a) worker safety is given priority in planning, pricing, and performing the Work;

- b) its officers and supervisory employees have a working knowledge of the duties of a "Constructor" and "employer" as defined by the Act and the provisions of the Regulations applicable to the Work, and a personal commitment to comply with them;
 - c) a copy of the most current version of the Act and the Regulations are available at the Contractor's office within the Working Area, or, in the absence of an office, in the possession of the supervisor responsible for the performance of the Work;
 - d) workers employed to carry out the Work possess the knowledge, skills, and protective devices required by law or recommended for use by a recognized industry association to allow them to work in safety;
 - e) its supervisory employees are "Competent Persons" as defined in the OHSA, and carry out their duties in a diligent and responsible manner with due consideration for the health and safety of the workers;
 - f) all Subcontractors and their workers are properly protected from injury while they are at the Working Area; and
 - g) following execution of the Contract and prior to the issuance of the order to commence by the Owner, upon request the Contractor submits to the Contract Administrator a copy of the Notice of Project issued to the Ministry of Labour.
- .02 The Contractor, when requested, shall provide the Owner with a copy of its health and safety policy and program at the pre-start meeting and shall respond promptly to requests from the Owner for confirmation that its methods and procedures for carrying out the Work comply with the Act and Regulations. The Contractor shall cooperate with representatives of the Owner and the inspectors appointed to enforce the Act and the Regulations in any investigations of worker health and safety in the performance of the Work. The Contractor shall indemnify and save the Owner harmless from any additional expense that the Owner may incur to have the Work performed as a result of the Contractor's failure to comply with the requirements of the Act and the Regulations.
- .03 Prior to commencement of the Work, the Contractor shall provide to the Contract Administrator a list of those products controlled under the Workplace Hazardous Materials Information System or "WHMIS", which the Contractor expects to use on the Contract. Related Safety Data Sheets shall accompany the submission. All containers used in the application of products controlled under "WHMIS" shall be labelled. The Contractor shall notify the Contract Administrator in writing of changes in the products to be used and provide relevant Safety Data Sheets.
- .04 During the course of the Work, the Contractor shall furnish forthwith to the Contract Administrator a copy of all correspondence, reports, orders or charges respecting occupational health and safety, including under the Act, Technical Standards and Safety Act, 2000, S.O. 2000, c.16 as amended, and the Criminal Code, R.S.C., 1985, c. C-46 as amended, which are received by, or which come to the notice of, the Contractor that apply or are relevant to any of the Work or activities conducted under the terms of the Contract.
- .05 Nothing in this Contract shall be construed as requiring the Owner to monitor or approve the workplace health and safety practices of the Contractor.

GC 7.01.05 Contractor's Representatives

- .01 The Contractor shall have an authorized representative on the site while any Work is being performed, to supervise the Work and act for or on the Contractor's behalf. Prior to commencement of construction, the Contractor shall notify the Contract Administrator of the names, addresses, positions, and cell phone, and telephone numbers of the Contractor's representatives who can be contacted at any time to deal with matters relating to the Contract, and update as necessary.

- .02 The Contractor shall designate a person to be responsible for traffic control and work zone safety. The designated person shall be a competent worker who is qualified because of knowledge, training, and experience to perform the duties; is familiar with Book 7 of the Ontario Traffic Manual; and has knowledge of all potential or actual danger to workers and motorists. Prior to the commencement of construction, the Contractor shall notify the Contract Administrator of the name; address; position; cell phone, and telephone numbers of the designated person, and update as necessary. The designated person may have other responsibilities, including other construction sites, and need not be present in the Working Area at all times.

GC 7.01.06 Assistance to the Contract Administrator

- .01 The Contractor shall, at no additional cost to the Owner, furnish all reasonable aid, facilities, and assistance required by the Contract Administrator for the proper inspection and examination of the Work or the taking of measurements for the purpose of payment.

GC 7.01.07 Schedule

- .01 The Contractor shall prepare and update, as required, a construction schedule of operations, indicating the proposed methods of construction and sequence of Work and the time the Contractor proposes to complete the various items of Work within the time specified in the Contract Documents. The schedule shall be submitted to the Contract Administrator within 14 Days from the Contract award. If the Contractor's schedule is materially affected by changes in the work, the Contractor shall submit an updated construction schedule, if requested by the Contract Administrator, within 7 Days of the request. This updated schedule shall show how the Contractor proposes to perform the balance of the Work, to complete the Work within the time specified in the Contract Documents.
- .02 For Contracts with a specified number of Working Days, the construction time shown on the initial schedule shall not exceed the specified number of Working Days. The activities on the critical path shall assist the Contract Administrator in determining the Controlling Operation for the purpose of the charging of Working Days. The construction schedule shall include all non-working periods and appropriate allowances for Inclement Weather.
- .03 For Contracts which specify a Contract Time, the construction time shown on the initial construction schedule shall not extend beyond the specified Contract Time. The construction schedule shall include all non-working periods and appropriate allowances for Inclement Weather.

GC 7.01.08 Errors and Inconsistencies Relating to the Contract

- .01 Where the Contractor finds any error, inconsistency, or omission relating to the Contract, the Contractor shall promptly report it to the Contract Administrator and shall not proceed with the activity affected until receiving direction from the Contract Administrator.
- .02 The Contractor shall promptly notify the Contract Administrator in writing if the subsurface conditions observed in the Working Area differ materially from those indicated in the Contract Documents.

GC 7.01.09 Utilities

- .01 The Contractor shall arrange with the appropriate Utility authorities for the stake out of all underground Utilities and service connections that may be affected by the Work. The Contractor shall observe the location of the stake outs prior to commencing the Work and if there is a discrepancy between the location of the stake outs and the locations shown on the Contract Documents, that may affect the Work, the Contractor shall immediately notify the Contract Administrator and the affected Utility companies, in order to resolve the discrepancy. The Contractor shall be responsible for any damage done to the underground Utilities and service connections by

the Contractor's forces during construction if the stake out locations are within the tolerances given in clause GC 2.01.01 a).

- .02 In the case of damage to or interference with any Utilities, pole lines, pipe lines, conduits, farm tiles, or other public or privately-owned works or property, the Contractor shall immediately notify the Owner, Contract Administrator, and the owner of the works of the location and details of such damage or interference.

GC 7.02 Monuments and Layout

- .01 Prior to commencement of construction, the Contract Administrator and the Contractor shall locate on site those Monuments that delineate the Working Area and may be used to lay out the Work, all as shown on the Contract Drawings. Property Monuments shall be inventoried in the report format required by the Owner.
- .02 These Monuments shall be protected by highly visible T-bars or 1.0 metre tall stakes with survey ribbon set within 0.3 metres of the Monument.
- .03 The Contractor shall be responsible for the preservation of all Property Monuments while the Work is in progress, except those Property Monuments that must be removed to facilitate the Work as identified and agreed by the Contractor and Contract Administrator. Monuments removed to facilitate the Work shall be replaced at the Owner's expense, and all others shall be replaced at the Contractor's expense.
- .04 All Monuments disturbed, damaged, or removed by the Contractor's operations shall be documented in the inventory report and replaced under the supervision of an Ontario Land Surveyor.
- .05 The Monument inventory report referred to in clauses GC 7.02.01 and GC 7.02.04 shall include as a minimum:
 - a) Contract number, Contract name, Contract Administrator's name;
 - b) Project/site construction limits;
 - c) Rough location, type, identification number, and condition of each Monument before and after construction;
 - d) The solutions for protection of the Monuments that may be impacted by construction;
 - e) Reference ties;
 - f) A summary of those Monuments affected by the Work and how they were reset or replaced, and by what type of Monument.
- .06 At no extra cost to the Owner, the Contractor shall provide the Contract Administrator with such materials and devices as may be necessary to lay out the baseline and benchmarks, and as may be necessary for the inspection of the Work.
- .07 The Contractor shall provide qualified personnel to lay out and establish all lines and grades necessary for construction. The Contractor shall notify the Contract Administrator of any layout work carried out, so that the same may be checked by the Contract Administrator.
- .08 The Contractor shall install and maintain substantial alignment markers and secondary benchmarks as may be required for the proper execution of the Work. The Contractor shall supply one copy of all alignment and grade sheets to the Contract Administrator.
- .09 The Contractor shall assume full responsibility for alignment, elevations, and dimensions of each and all parts of the Work, regardless of whether the Contractor's layout work has been checked by the Contract Administrator.

- .10 All stakes, marks, and reference points shall be carefully preserved by the Contractor. In the case of their destruction or removal, for any reason, before the end of the Contract Time such stakes, marks, and reference points shall be replaced, unless otherwise mutually agreed between the Contractor and the Contract Administrator, at the Contractor's expense.
- .11 Benchmarks and survey monuments identified in the Contract Documents shall be protected by the Contractor. In the case of their destruction or removal, such benchmarks and survey monuments shall be replaced by the Owner at the Contractor's expense.

GC 7.03 Working Area

- .01 The Contractor shall maintain the Working Area in a tidy condition and free from the accumulation of debris and prevent dust nuisance, mud, and ponding water, other than that caused by the Owner or others.
- .02 The Contractor's sheds, site offices, toilets, other temporary structures, and storage areas for Material and Equipment shall be grouped in a compact manner, maintained in a neat and orderly condition at all times and removed upon completion of the Work.
- .03 The Contractor shall confine the construction operations to the Working Area. Should the Contractor require additional space, the Contractor shall obtain such space at no additional cost to the Owner.
- .04 The Contractor shall not enter upon or occupy any private property for any purpose, unless the Contractor has received prior written permission from the property owner.
- .05 Upon completion of the Contract, the Working Area used by the Contractor shall be restored to its original condition or better unless otherwise specified in the Contract Documents including the removal of all excavated and stockpiled materials at the Contractor's expense.

GC 7.04 Damage by Vehicles or Other Equipment

- .01 If at any time, in the opinion of the Contract Administrator, damage is being done or is likely to be done to any Roadway or any improvement thereon, outside the Working Area, by the Contractor's vehicles or other Equipment, whether licensed or unlicensed Equipment, the Contractor shall, on the direction of the Contract Administrator, and at no extra cost to the Owner, make changes or substitutions for such vehicles or Equipment, and shall alter loadings, or in some other manner, remove the cause of such damage to the satisfaction of the Contract Administrator.

GC 7.05 Excess Loading of Motor Vehicles

- .01 Where a vehicle is hauling Material for use on the Work, in whole or in part; upon a Highway; and where motor vehicle registration is required for such vehicle, the Contractor shall not cause or permit such vehicle to be loaded beyond the legal limit specified in the Highway Traffic Act, R.S.O. 1990, c.H.8, as amended, whether such vehicle is registered in the name of the Contractor or otherwise, except where there are designated areas within the Working Area where overloading is permitted. The Contractor shall bear the onus of weighing disputed loads.

GC 7.06 Maintaining Roads and Detours

- .01 Unless otherwise specified in the Contract Documents, if an existing Roadway is affected by construction, it shall be kept open to both vehicular and pedestrian traffic.
- .02 Subject to the approval of the Contract Administrator, the Contractor shall, at no additional cost to the Owner, be responsible for providing and maintaining for the duration of the Work an alternative route for both pedestrian and vehicular traffic through the Working Area in accordance with the OTM,

whether along the existing Highway under construction or on a detour road beside or adjacent to the Highway under construction.

- .03 Subject to the approval of the Contract Administrator, the Contractor may block traffic for short periods of time to facilitate construction of the Work in accordance with the OTM. Any temporary lane closures shall be kept to a minimum.
- .04 The Contractor shall not be required to maintain a road through the Working Area until such time as the Contractor has commenced operations or during seasonal shut down or on any part of the Contract that has been accepted in accordance with these General Conditions. The Contractor shall not be required to apply de-icing chemicals or abrasives or carry out snowplowing.
- .05 Where only localized and separated sections of the Highway are affected by the Contractor's operations, the Contractor shall not be required to maintain intervening sections of the Highway until such times as these sections are located within the limits of the Highway affected by the Contractor's general operations under the Contract.
- .06 Where the Contract Documents provide for or the Contract Administrator requires detours at specific locations, payment for the construction of the detours and, if required, for the subsequent removal of the detours, shall be made at the Contract prices appropriate to such Work.
- .07 Compensation for all labour, Equipment, and Materials to do this Work shall be at the Contract prices appropriate to the Work and, where there are no such prices, at negotiated prices. Notwithstanding the foregoing, the cost of blading required to maintain the surface of such roads and detours shall be deemed to be included in the prices bid for the various tender items and no additional payment shall be made.
- .08 Where Work under the Contract is discontinued for any extended period, including seasonal shutdown, the Contractor shall, when directed by the Contract Administrator, open and place the Roadway and detours in a passable, safe, and satisfactory condition for public travel.
- .09 Where the Contractor constructs a detour that is not specifically provided for in the Contract Documents or required by the Contract Administrator, the construction of the detour and, if required, the subsequent removal shall be performed at the Contractor's expense. The detour shall be constructed and maintained to structural and geometric standards approved by the Contract Administrator. Removal and site restoration shall be performed as directed by the Contract Administrator.
- .10 Where, with the prior written approval of the Contract Administrator, the Highway is closed and the traffic diverted entirely off the Highway to any other Highway, the Contractor shall, at no extra cost to the Owner, supply, erect, and maintain traffic control devices in accordance with the OTM.
- .11 Compliance with the foregoing provisions shall in no way relieve the Contractor of its obligations under subsection GC 6.01, Protection of Work, Persons, and Property, dealing with the Contractor's responsibility for damage claims, except for claims arising on sections of Highway within the Working Area that are being maintained by others.

GC 7.07 Access to Properties Adjoining the Work and Interruption of Utility Services

- .01 The Contractor shall provide at all times and at no extra cost to the Owner,
 - a) safe and adequate pedestrian and vehicular access;
 - b) continuity of Utility services; and

c) access for emergency response services;

to properties adjoining the Working Area.

- .02 The Contractor shall provide at all times and at no extra cost to the Owner access to fire hydrants, water and gas valves, and all other Utilities located in the Working Area.
- .03 Where any interruptions in the supply of Utility services are required and are authorized by the Contract Administrator, the Contractor shall give the affected property owners notice in accordance with subsection GC 7.11, Notices by the Contractor, and shall arrange such interruptions so as to create a minimum of interference to those affected.

GC 7.08 Approvals and Permits

- .01 Except as specified in subsection GC 4.02, Approval and Permits, the Contractor shall obtain and pay for any permits, licences, and certificates, which at the date of tender closing, are required for the performance of the Work.
- .02 The Contractor shall arrange for all necessary inspections required by the approvals and permits specified in clause GC 7.08.01, Approvals and Permit.

GC 7.09 Suspension of Work

- .01 The Contractor shall, upon written notice from the Contract Administrator, discontinue or delay any or all of the Work and Work shall not be resumed until the Contract Administrator so directs in writing. Delays, in these circumstances, shall be administered according to subsection GC 3.07, Delays.

GC 7.10 Contractor's Right to Stop the Work or Terminate the Contract

- .01 If the Owner is adjudged bankrupt or makes a general assignment for the benefit of creditors because of insolvency or if a receiver is appointed because of insolvency, the Contractor may, without prejudice to any other right or remedy the Contractor may have, by giving the Owner or receiver or trustee in bankruptcy written notice, terminate the Contract.
- .02 If the Work is stopped or otherwise delayed for a period of 30 Days or more under an order of a court or other public authority and provided that such order was not issued as the result of an act or fault of the Contractor or of anyone directly employed or engaged by the Contractor, the Contractor may, without prejudice to any other right or remedy the Contractor may have, by giving the Owner written notice, terminate the Contract.
- .03 The Contractor may notify the Owner in writing, with a copy to the Contract Administrator, that the Owner is in default of contractual obligations if,
- a) the Contract Administrator fails to issue certificates in accordance with the provisions of section GC 8.0, Measurement and Payment;
 - b) the Owner fails to pay the Contractor, within 28 Days of the due dates identified in clause GC 8.02.04, Certification and Payment, the amounts certified by the Contract Administrator or within 28 Days of an award by an arbitrator or court; or
 - c) the Owner fails to comply with the requirements of the Contract.
- .04 The Contractor's written notice to the Owner shall advise that if the default is not corrected in the 7 Days immediately following receipt of the written notice, the Contractor may, without prejudice to any other right or remedy the Contractor may have, stop the Work or terminate the Contract.

- .05 If the Contractor terminates the Contract under the conditions set out in subsection GC 7.10, Contractor's Right to Stop the Work or Terminate the Contract, the Contractor shall be entitled to be paid for all Work performed according to the Contract Documents and for any losses or damage as the Contractor may sustain as a result of the termination of the Contract.

GC 7.11 Notices by the Contractor

- .01 Before any Work is carried out that may affect the property or operations of any Ministry or agency of government or any person; company; partnership; or corporation, including a municipal corporation or any board or commission thereof, and in addition to such notices of the commencement of specified operations as are prescribed elsewhere in the Contract Documents, the Contractor shall give at least 48 hours advance written notice of the date of commencement of such Work to the person, company, partnership, corporation, board, or commission so affected.

GC 7.12 Environmental Incident Management under Legislation Protecting the Environment and Natural Resources

- .01 The Contractor shall be in strict compliance with the requirements of the following legislation, as amended, regarding environmental incidents under the control of the Contractor or that are a result of the Contractor's operations:
- a) Environmental Protection Act, R.S.O. 1990, c. E.19
 - b) Fisheries Act, R.S.C. 1985, c. F-14
 - c) Technical Standards and Safety Act, 2000, S.O. 2000, c. 16
 - d) Pesticides Act, R.S.O. 1990, c. P.11
 - e) Ontario Water Resources Act, R.S.O. 1990, c. O.40
 - f) Transportation of Dangerous Goods Act, 1992, S.C.1992, c. 34
- .02 The requirements of the legislation listed in clause GC 7.12.01 include but are not restricted to:
- a) Immediate containment of the material, pollutant, contaminant, deleterious substance, or dangerous good;
 - b) Immediate notification of the environmental incident to the proper authority; and
 - c) Clean up and restoration of the environment to preconditions.
- .03 The Contractor shall possess a plan demonstrating that environmental incidents shall be managed to satisfy the requirements of clauses GC 7.12.01 and GC 7.12.02.
- .04 The Contractor shall provide a copy of the environmental incident plan to the Contract Administrator when required and shall inform the Contract Administrator immediately of:
- a) An environmental incident when it occurs; and
 - b) Any actions taken or intended to be taken by the Contractor regarding the environmental incident.

- .05 The Contractor shall indemnify and save the Owner harmless from any additional expense that the Owner may incur to have the Work performed as a result of the Contractor's failure to comply with the requirements of the legislation listed in clause GC 7.12.01.

GC 7.13 Obstructions

- .01 Except as otherwise noted in these General Conditions, the Contractor assumes all the risks and responsibilities arising out of any obstruction encountered in the performance of the Work and any traffic conditions, including traffic conditions on any Highway or road giving access to the Working Area caused by such obstructions, and the Contractor shall not make any claim against the Owner for any loss, damage, or expense occasioned thereby.
- .02 Where the obstruction is an underground Utility or other man-made object, the Contractor shall not be required to assume the risks and responsibilities arising out of such obstruction, unless the location of the obstruction is shown on the Plans or described in the Contract Documents and the location so shown is within the tolerance specified in clause GC 2.01.01 a), or unless the presence and location of the obstruction has otherwise been made known to the Contractor or could have been determined by the visual site investigation made by the Contractor in accordance with these General Conditions.
- .03 During the course of the Contract, it is the Contractor's responsibility to consult with Utility companies or other appropriate authorities for further information in regard to the exact location of these Utilities, to exercise the necessary care in construction operations, and to take such other precautions as are necessary to safeguard the Utilities from damage.

GC 7.14 Limitations of Operations

- .01 Except for such Work as may be required by the Contract Administrator to maintain the Work in a safe and satisfactory condition, the Contractor shall not carry out operations under the Contract on Saturdays, Sundays, and any holidays recognized by the Owner without permission in writing from the Contract Administrator.
- .02 The Contractor shall cooperate and coordinate the Work with other Contractors, Utility companies, and the Owner and they shall be allowed access to their Work or plant at all reasonable times.

GC 7.15 Cleaning Up Before Acceptance

- .01 Upon attaining Substantial Performance of the Work, the Contractor shall remove surplus materials, tools, and Equipment not required for the performance of the remaining Work. The Contractor shall also remove all temporary works and debris other than that caused by the Owner or others and leave the Work and Working Area clean and suitable for occupancy by the Owner, unless otherwise specified.
- .02 The Work shall not be deemed to have reached Completion until the Contractor has removed surplus materials, tools, and Equipment. The Contractor shall also have removed debris, other than that caused by the Owner, or others.

GC 7.16 Warranty

- .01 Unless otherwise specified in the Contract Documents for certain Materials or components of the Work, the Contractor shall be responsible for the proper performance of the Work only to the extent that the design and standards permit such performance.
- .02 Subject to the previous paragraph the Contractor shall correct promptly, at no additional cost to the Owner, defects or deficiencies in the Work that appear,

- a) prior to and during the period of 12 months from the date of Substantial Performance of the Work, as set out in the Certificate of Substantial Performance of the Work,
- b) where there is no Certificate of Substantial Performance, 12 months from the date of Completion of the Work as set out in the Completion Certificate, or
- c) such longer periods as may be specified in the Contract Documents for certain Materials or some of the Work.

The Contract Administrator shall promptly give the Contractor written notice of observed defects or deficiencies.

- .03 The Contractor shall correct or pay for damage resulting from corrections made under the requirements of clause GC 7.16.02.

GC 7.17 Contractor's Workers

- .01 The Contractor shall only employ orderly, competent, and skillful workers to do the Work and whenever the Contract Administrator shall inform the Contractor in writing that any worker or workers involved in the Work are, in the opinion of the Contract Administrator, incompetent, or disorderly such worker or workers shall be removed from the Work and shall not be employed on the Work again without the consent in writing of the Contract Administrator.

GC 7.18 Drainage

- .01 During construction and until the Work is completed, the Contractor shall make all reasonable efforts to keep all portions of the Work properly and efficiently drained, to at least the same degree as that of the existing drainage conditions.

SECTION GC 8.0 - MEASUREMENT AND PAYMENT

GC 8.01 Measurement

GC 8.01.01 Quantities

- .01 The Contract Administrator shall make an Estimate in writing once a month, unless otherwise specified in the Contract Documents, of the quantity of Work performed and provide such Estimate to the Contractor within 10 Days of the Cut-Off Date.
- .02 Quantities for progress payments shall be construed and held to approximate. The final quantities for the issuance of the Completion Payment shall be based on the measurement of Work completed.
- .03 Measurement of the quantities of the Work performed may be either by Actual Measurement or by Plan Quantity principles as indicated in the Contract. Adjustments to Plan Quantity measurements shall normally be made using Plan Quantity principles but may, where appropriate, be made using Actual Measurements. Those items identified on the Tender by the notation (P) in the unit column shall be paid according to the Plan Quantity. Items where the notation (P) does not occur shall be paid according to Actual Measurement or lump sum.

GC 8.01.02 Variations in Tender Quantities

- .01 Where it appears that the quantity of Work to be done or Material to be supplied or both by the Contractor under a unit price tender item may exceed or be less than the tender quantity, the Contractor shall proceed to do the Work or supply the Material or both required to complete the tender item and payment shall be made for the actual amount of Work done or Material supplied or both at the unit prices stated in the Tender except as provided below:
 - a) In the case of a Major Item where the quantity of Work performed or Material supplied or both by the Contractor exceeds the tender quantity by more than 15%, either party to the Contract may make a written request to the other party to negotiate a revised unit price for that portion of the Work performed or Material supplied or both which exceeds 115% of the tender quantity. The negotiation shall be carried out as soon as reasonably possible. Any revision of the unit price shall be based on the actual cost of doing the Work or supplying the Material or both under the tender item plus a reasonable allowance for profit and applicable overhead. Alternatively, where both parties agree, an allowance equal to 10% of the unit price on the amount of the underrun in excess of 15% of the tender quantity shall be paid.
 - b) In the case of a Major Item where the quantity of Work performed or Material supplied or both by the Contractor is less than 85% of the tender quantity, the Contractor may make a written request to negotiate for the portion of the actual overheads and fixed costs applicable to the amount of the underrun in excess of 15% of the tender quantity. For purposes of the negotiation, the overheads and fixed costs applicable to the item are deemed to have been prorated uniformly over 100% of the tender quantity for the item. Overhead costs shall be confirmed by a statement certified by the Contractor's senior financial officer or auditor and may be audited by the Owner. Alternatively, where both parties agree, an allowance equal to 10% of the unit price on the amount of the underrun in excess of 15% of the tender quantity shall be paid.

Written requests for compensation must be received no later than 60 Days after the issuance of the Completion Payment.

GC 8.02 Payment

GC 8.02.01 Non-Resident Contractor

- .01 If the Contractor is not a registered entity in Ontario, the Contractor shall obtain all necessary approvals, consents, permits, licences, certificates, registrations, and other authorizations prior to execution of the Contract.
- .02 The Contractor shall ensure that all Subcontractors the Contractor proposes to use for carrying out any of the Work required by the Contract and who are not a registered entity in Ontario have obtained all necessary approvals, consents, permits, certificates, registrations, and other authorizations prior to execution of the subcontract.

GC 8.02.02 Price for Work

- .01 Prices for the Work shall be full compensation for all labour, Equipment and Material required in its performance. The term "all labour, Equipment, and Material" shall include Hand Tools, supplies, and other incidentals.
- .02 Payment, for Work which is identified in the Contract Documents but not specifically detailed as part of any one item shall be deemed to be included in the items with which it is associated.

GC 8.02.03 Advance Payments for Material

- .01 The Owner shall make advance payments for Material intended for incorporation in the Work upon the written request of the Contractor and according to the following terms and conditions:
 - a) The Contractor shall deliver the Material to a site approved by the Contract Administrator and the Contractor shall, in advance of receipt of the shipment of the Material, arrange for adequate and proper storage facilities.
 - b) The value of aggregates, processed and stockpiled, shall be assessed by the following procedure:
 - i. Sources Other Than Commercial
 - (A) Granular A, B, BI, BII, BIII, M, and O shall be assessed at the rate of 60% of the Contract price.
 - (B) Coarse and fine aggregates for hot mix asphaltic concrete, surface treatment and Portland cement concrete shall be assessed at the rate of 25% of the Contract price for each aggregate stockpiled.
 - ii. Commercial Sources
 - Payment for separated coarse and fine aggregates shall be considered at the above rate when such Materials are stockpiled at a commercial source where further processing is to be carried out before incorporating such Materials into a final product. Advance payments for other Materials located at a commercial source shall not be made.
 - c) Payment for all other Materials, unless otherwise specified elsewhere in the Contract Documents, shall be based on the invoice price, and the Contractor shall submit proof of cost to the Contract Administrator before payment can be made by the Owner.
 - d) The payment for all Materials shall be prorated against the appropriate tender item by paying for sufficient units of the item to cover the value of the Material. Such payment shall not exceed 80% of the Contract price for the item.

- e) All Materials for which the Contractor wishes to receive advance payment shall be placed in the designated storage location immediately upon receipt of the Material and shall thenceforth be held by the Contractor in trust for the Owner as collateral security for any monies advanced by the Owner and for the due completion of the Work. The Contractor shall not exercise any act of ownership inconsistent with such security, or remove any Material from the storage locations, except for inclusion in the Work, without the consent, in writing, of the Contract Administrator.
 - f) Such materials shall remain at the risk of the Contractor who shall be responsible for any loss, damage, theft, improper use, or destruction of the Material however caused.
- .02 Where the Owner makes advance payments subject to the conditions listed in clause GC 8.02.03.01, such payment shall not constitute acceptance of the Material by the Owner. Acceptance shall only be determined when the Material meets the requirements of the appropriate specification.

GC 8.02.04 Certification and Payment

GC 8.02.04.01 Progress Payment

- .01 The Contractor shall submit a Proper Invoice for progress payments monthly or at intervals specified in the Contract Documents after starting the Work on this Contract. The Contractor shall submit the Proper Invoice to the Contract Administrator and to the Owner. This Proper Invoice shall be for work completed at the agreed to Cut-Off Date.
- .02 A Proper Invoice shall include;
 - a) the requirements as set out in section 6.1 of the Construction Act;
 - b) the quantities of Work performed;
 - c) the value of Work performed;
 - d) any advanced payment for Material;
 - e) the amount of Statutory Holdback, liens, Owner's set-off;
 - f) the amount of any applicable taxes;
 - g) the amount due to the Contractor; and
 - h) any other information that may be prescribed in the Contract Documents.
- .03 Payment shall be made within 28 Days of the submission of the Proper Invoice unless a notice of non-payment has been issued in accordance with the Construction Act.
- .04 The Owner shall retain the Statutory Holdback in the form and amount as required under the Construction Act.

GC 8.02.04.02 Certification of Subcontract Completion

- .01 Before the Work has reached the stage of Substantial Performance, the Contractor may notify the Contract Administrator, in writing that a subcontract is completed satisfactorily and ask that the Contract Administrator certify the completion of such subcontract.

- .02 The Contract Administrator shall issue a Certificate of Subcontract Completion, if the subcontract has been completed in a form satisfactory to the Contract Administrator, and all required inspection and testing of the works covered by the subcontract have been carried out and the results are satisfactory to the Contract Administrator.
- .03 The Contract Administrator shall set out in the Certificate of Subcontract Completion the date on which the subcontract was completed and, within 7 Days of the date the subcontract is certified complete, the Contract Administrator shall give a copy of the certificate to the Contractor and to the Subcontractor concerned.

GC 8.02.04.03 Subcontract Statutory Holdback Release Certificate and Payment

- .01 Following receipt of the Certificate of Subcontract Completion, the Owner shall release and pay the Contractor the Statutory Holdback retained in respect of the subcontract. Such release shall be made 61 Days after the date the subcontract was certified complete and providing the Contractor submits the following to the Contract Administrator:
 - a) a document satisfactory to the Contract Administrator that shall release the Owner from all further claims relating to the subcontract, qualified by stated exceptions such as holdback monies;
 - b) evidence satisfactory to the Contract Administrator that the Subcontractor has discharged all liabilities incurred in carrying out the subcontract;
 - c) a satisfactory clearance certificate or letter from the Workplace Safety and Insurance Board relating to the subcontract; and
 - d) a copy of the contract between the Contractor and the Subcontractor and a satisfactory statement showing the total amount due the Subcontractor from the Contractor.
- .02 Clause GC 8.02.04.03.01 d), shall only apply to Lump Sum Items and then only when the Contract Administrator specifically requests it.
- .03 Upon receipt of the Statutory Holdback, the Contractor shall forthwith give the Subcontractor the payment due under the subcontract.
- .04 Release of Statutory Holdback by the Owner in respect of a subcontract shall not relieve the Contractor, or the Contractor's Surety, of any of their responsibilities.

GC 8.02.04.04 Substantial Performance of Work

- .01 The Contractor, as part of the application for Substantial Performance, shall submit an itemized list of the outstanding work.
- .02 Upon application by the Contractor and when the Contract Administrator has verified that the Contract has been substantially performed, the Contract Administrator shall issue a Certificate of Substantial Performance.
- .03 The Contract Administrator shall set out in the Certificate of Substantial Performance the date on which the Contract was substantially performed and, within 7 Days after signing the said certificate, and shall provide a copy to the Contractor.
- .04 Upon receipt of a copy of the Certificate of Substantial Performance, the Contractor shall forthwith, as required by Section 32(1) Paragraph 5 of the Construction Act, as amended, publish a copy of the certificate in the manner set out in the regulations.

- .05 Where the Contractor fails to publish a copy of the Certificate of Substantial Performance as required above within 7 Days after receiving a copy of the certificate signed by the Contract Administrator, the Owner may publish a copy of the certificate at the Contractor's expense.
- .06 Except as otherwise provided for in Section 31 of the Construction Act, the 60 Day lien period prior to the release of holdback as referred to in clause GC 8.02.04.05, Substantial Performance Payment and Statutory Holdback Release Payment Certificates, shall commence from the date of publication of the Certificate of Substantial Performance as provided for above.

GC 8.02.04.05 Substantial Performance Payment and Substantial Performance Statutory Holdback Release Payment Certificates

- .01 Prior to the Contract Administrator issuing the Certificate of Substantial Performance, the Contractor shall submit a Proper Invoice for the Work completed. In addition to the requirements specified under section 8.02.04.01.02, the Proper Invoice shall include:
 - a) the value of Work performed to the date of Substantial Performance;
 - b) the value of outstanding or incomplete Work;
 - c) the amount of the Statutory Holdback, allowing for any previous releases of Statutory Holdback to the Contractor in respect of completed subcontracts and deliveries of pre-selected Equipment; and
 - d) the amount due the Contractor.
- .02 Payment shall be made within 28 Days of the date of submission of the Proper Invoice.
- .03 The Substantial Performance Statutory Holdback Release Payment Certificate shall be a payment certificate releasing to the Contractor the Statutory Holdback due in respect of Work performed up to the date of Substantial Performance. Payment of such Statutory Holdback shall be due 61 Days after the date of publication of the Certificate of Substantial Performance but subject to the provisions of the Construction Act and the submission by the Contractor of the following documents:
 - a) a satisfactory Certificate of Clearance from the Workplace Safety and Insurance Board; and
 - b) proof of publication of the Certificate of Substantial Performance.
- .04 Any amount of security retained shall be identified on the Substantial Performance Payment Certificate.

GC 8.02.04.06 Certification of Completion

- .01 Upon application by the Contractor and when the Contract Administrator has verified that the Contract has reached Completion, the Contract Administrator shall issue a Completion Certificate.
- .02 The Contract Administrator shall set out in the Completion Certificate the date on which the Work was completed and, within 7 Days of signing the said certificate, the Contract Administrator shall provide a copy to the Contractor.

GC 8.02.04.07 Completion Payment and Completion Statutory Holdback Release Payment Certificates

- .01 Prior to the Contract Administrator issuing the Completion Certificate, the Contractor shall submit a Proper Invoice for the Work completed. In addition to the requirements noted under section 8.02.04.01.02, the Proper Invoice shall include:
 - a) measurement and value of Work at Completion;
 - b) the amount of the further Statutory Holdback based on the value of further Work completed over and above the value of Work completed shown in the Substantial Performance Payment Certificate referred to above; and
 - c) the amount due the Contractor.
- .02 The Completion Statutory Holdback Release Payment Certificate shall be a payment certificate releasing to the Contractor the further Statutory Holdback. Subject to any outstanding liens and permissible set-offs and upon submission of a satisfactory Certificate of Clearance from the Workplace Safety and Insurance Board, the Owner shall pay the remaining holdback on the Work done, within 28 Days after the expiration of the 60-Day lien period.
- .03 Any amount of security retained shall be identified on the Completion Payment Certificate.

GC 8.02.04.08 Interest

- .01 Interest due to the Contractor shall be based on simple interest and calculated using the applicable Rate of Interest. Interest shall begin to accrue on an amount that is not paid when it is due to be paid under Part-I of the Construction Act, at the prejudgment interest rate determined under subsection 127 (2) of the *Courts of Justice Act* or, if the Contract specifies a different interest rate for this purpose, the greater of the prejudgment interest rate and the interest rate specified in the Contract.

GC 8.02.04.09 Interest for Late Payment

- .01 Provided the Contractor has complied with the requirements of the Contract, including all documentation requirements, when payment by the Owner to the Contractor for Work performed, or for release of Statutory Holdback, is delayed by the Owner, then the Contractor shall be entitled to receive interest on the outstanding payment at the Rate of Interest, if payment is not received on the dates set out below:
 - a) Progress Payment: 28 Days after submission of Proper Invoice;
 - b) Subcontract Statutory Holdback Release Payment: 89 Days after the date on which the subcontract was completed;
 - c) Substantial Performance Payment: 28 Days after the date of issuance of the certificate;
 - d) Substantial Performance Statutory Holdback Release Payment: 89 Days after publication of the Payment Certificate of Substantial Performance;
 - e) Completion Payment: 28 Days after the date certified as the date on which the Contract reached Completion; and
 - f) Completion Statutory Holdback Release Payment: 89 Days after the date certified as the date that the Work was completed.

- .02 If the Contractor has not complied with the requirements of the Contract, including all documentation requirements, prior to expiration of the time periods described in clause GC 8.02.04.09.01, interest shall only begin to accrue when the Contractor has completed those requirements.

GC 8.02.04.10 Interest for Negotiations and Claims

- .01 Except as hereinafter provided, where a notice of negotiation, notice of intent to claim and the subsequent claims are submitted in accordance with the time limits or procedure or both described by subsection GC 3.13, Claims, Negotiations, Mediation, the Owner shall pay the Contractor the Rate of Interest on the amount of the negotiated price for that part of the Work or on the amount of the settled claim. Such interest shall not commence until 30 Days after the satisfactory completion of that part of the Work.
- .02 Where the Contractor fails to give notice of a claim within the time limit prescribed by subsection GC 3.13, Claims, Negotiations, Mediation, interest shall not be paid.
- .03 Where a Contractor fails to comply with the 30 Day time limit and the procedures prescribed in clause GC 3.13.03.03 for submission of claims, interest shall not be paid for the delay period.

GC 8.02.04.11 Owner's Set-Off

- .01 Pursuant to the Construction Act, the Owner may retain from monies owing to the Contractor under this Contract an amount sufficient to cover any outstanding or disputed liabilities, including the cost to remedy deficiencies, the reduction in value of substandard portions of the Work, claims for damages by third parties that have not been determined in writing by the Contractor's insurer, undetermined claims by the Owner, and any assessment due the Workplace Safety and Insurance Board.
- .02 Under these circumstances the Owner will give the Contractor appropriate notice of such action.

GC 8.02.04.12 Delay in Payment

- .01 The Owner shall not be deemed to be in default of the Contract provided any delay in payment does not exceed the due dates as defined in clause GC 8.02.04.09.01.

GC 8.02.05 Payment on a Time and Material Basis

GC 8.02.05.01 Definitions

- .01 For the purpose of clause GC 8.02.05 the following definitions apply:

Cost of Labour means the amount of wages, salary, travel, travel time, food, lodging, or similar items and Payroll Burden paid or incurred directly by the Contractor to or in respect of labour and supervision actively and necessarily engaged on the Work based on the recorded time and hourly rates of pay for such labour and supervision but shall not include any payment or costs incurred for general supervision, administration, and management time spent on the entire Work or any wages, salary, or Payroll Burden for which the Contractor is compensated by any payment made by the Owner for Equipment.

Cost of Material means the cost of Material purchased or supplied from stock and valued at current market prices for the purpose of carrying out Extra Work by the Contractor or by others, when such arrangements have been made by the Contractor for completing the Work, as shown by itemized invoices.

Operated Rented Equipment means Rented Equipment for which an operator is provided by the supplier of the Equipment and for which the rent or lease includes the cost of the operator.

Payroll Burden means the payments in respect of workplace insurance, vacation pay, employment insurance, public liability and property damage insurance, sickness and accident insurance, pension fund, and such other welfare and benefit payments forming part of the Contractor's normal labour costs.

Rented Equipment means Equipment that is rented or leased for the special purpose of Work on a Time and Material Basis from a person, firm, or corporation that is not an associate of the lessee as the word "associate" is defined by the Securities Act, R.S.O. 1990, c.S.5, as amended, and is approved by the Contract Administrator.

Road Work means the preparation, construction, finishing, and construction maintenance of roads, streets, Highways, and parking lots and includes all work incidentals thereto other than Work on structures.

Sewer and Watermain Work means the preparation, construction, finishing, and construction maintenance of sewer systems and watermain systems, and includes all work incidental thereto other than Work on structures.

Standby Time means any period of time that is not considered Working Time and which together with the Working Time does not exceed 10 hours in any one Working Day and during which time a unit of Equipment cannot practically be used on other Work but must remain on the site in order to continue with its assigned task and during which time the unit is in fully operable condition.

Structure Work means the construction, reconstruction, repair, alteration, remodelling, renovation, or demolition of any bridge, building, tunnel, or retaining wall and includes the preparation for and the laying of the foundation of any bridge, building, tunnel, or retaining wall and the installation of Equipment and appurtenances incidental thereto.

The 127 Rate means the rate for a unit of Equipment as listed in OPSS.PROV 127, Schedule of Rental Rates for Construction Equipment, Including Model and Specification Reference, that is current at the time the work is carried out or for Equipment that is not so listed, the rate that has been calculated by the Owner, using the same principles as used in determining The 127 Rates.

Work on a Time and Material Basis means Changes in the Work, Extra Work, and Additional Work approved by the Contract Administrator for payment on a Time and Material basis. The Work on a Time and Material Basis shall be subject to all the terms, conditions, Standard Specifications and provisions of the Contract.

Working Time means each period of time during which a unit of Equipment is actively and of necessity engaged on a specific operation and the first 2 hours of each immediately following period during which the unit is not so engaged but during which the operation is otherwise proceeding and during which time the unit cannot practically be transferred to other Work but must remain on the site in order to continue with its assigned tasks and during which time the unit is in a fully operable condition.

GC 8.02.05.02 Daily Work Records

- .01 Daily Work Records, prepared as the case may be by either the Contractor's representative or the Contract Administrator reporting the labour and Equipment employed and the Material used on each Time and Material project, should be reconciled and signed each Day by both the Contractor's representative and the Contract Administrator. If it is not possible to reconcile the Daily Work Records, then the Contractor shall submit the un-reconciled Daily Work Records with its claim, whereby the resolution of the dispute about the Daily Work Records shall not be resolved until there is a resolution of the claim.

GC 8.02.05.03 Payment for Work

- .01 Payment as herein provided shall be full compensation for all labour, Equipment, and Material to do the Work on a Time and Material Basis except where there is agreement to the contrary prior to the commencement of the Work on a Time and Material Basis. The payment adjustments on a Time and Material basis shall apply to each individual Change Order authorized by the Contract Administrator.

GC 8.02.05.04 Payment for Labour

- .01 The Owner shall pay the Contractor for labour employed on each Time and Material project at 135% of the Cost of Labour up to \$3,500, then at 120% of any portion of the Cost of Labour in excess of \$3,500.
- .02 The Owner shall make payment in respect of Payroll Burden for Work on a Time and Material Basis at the Contractor's actual cost of Payroll Burden.
- .03 At the Owner's discretion, an audit may be conducted in which case the actual Payroll Burden so determined shall be applied to all Time and Material work on the Contract.

GC 8.02.05.05 Payment for Material

- .01 The Owner shall pay the Contractor for Material used on each Time and Material project at 120% of the Cost of the Material up to \$3,500, then at 115% of any portion of the Cost of Material in excess of \$3,500.

GC 8.02.05.06 Payment for Equipment

GC 8.02.05.06.01 Working Time

- .01 The Owner shall pay the Contractor for the Working Time of all Equipment, other than Rented Equipment and Operated Rented Equipment, used on the Work on a Time and Material basis at The 127 Rates with a cost adjustment as follows:
 - a) Cost \$12,000 or less - no adjustment;
 - b) Cost greater than \$12,000 but not exceeding \$24,000 - payment \$12,000 plus 90% of the portion in excess of \$12,000; and
 - c) Cost greater than \$24,000 - \$22,800 plus 80% of the portion in excess of \$24,000.
- .02 The Owner shall pay the Contractor for the Working Time of Rented Equipment used on the Work on a Time and Material Basis at 110% of the invoice price approved by the Contract Administrator up to a maximum of 110% of the 127 Rate. This constraint shall be waived when the Contract Administrator approves the invoice price prior to the use of the Rented Equipment.
- .03 The Owner shall pay the Contractor for the Working Time of Operated Rented Equipment used on the Work on a Time and Material Basis at 110% of the Operated Rented Equipment invoice price approved by the Contract Administrator prior to the use of the Equipment on the Work on a Time and Material Basis.

GC 8.02.05.06.02 Standby Time

- .01 The Owner shall pay the Contractor for Standby Time of Equipment at 35% of The 127 Rate or 35% of the invoice price whichever is appropriate. The Owner shall pay reasonable costs for Rented Equipment where this is necessarily retained in the Working Area for extended periods agreed to by

the Contract Administrator. This shall include Rented Equipment intended for use on other work, but has been idled due to the circumstances giving rise to the Work on a Time and Material Basis.

- .02 In addition, the Owner shall include the Cost of Labour of operators or associated labourers who cannot be otherwise employed during the Standby Time or during the period of idleness caused by the circumstances giving rise to the Work on a Time and Material Basis.
- .03 The Contract Administrator may require Rented Equipment idled by the circumstances giving rise to the Work on Time and Material Basis to be returned to the lessor until the Work requiring the Equipment can be resumed. The Owner shall pay such costs as a result from such return.
- .04 When Equipment is transported, solely for the purpose of the Work on a Time and Material Basis, to or from the Working Area on a Time and Material basis, payment shall be made by the Owner only in respect of the transporting units. When Equipment is moved under its own power it shall be deemed to be working. The method of moving Equipment and the rates shall be subject to the approval of the Contract Administrator.

GC 8.02.05.07 Payment for Hand Tools

- .01 Notwithstanding any other provision of this Section, no payment shall be made to the Contractor for or in respect of Hand Tools or Equipment that are tools of the trade.

GC 8.02.05.08 Payment for Work by Subcontractors

- .01 Where the Contractor arranges for Work on a Time and Material Basis, or a part of it, to be performed by Subcontractors on a Time and Material basis and has received approval prior to the commencement of such Work, in accordance with the requirements of subsection GC 3.09, Subcontracting by the Contractor, the Owner shall pay the cost of Work on a Time and Material Basis by the Subcontractor calculated as if the Contractor had done the Work on a Time and Material Basis, plus a markup calculated on the following basis:
 - a) 20% of the first \$3,500; plus
 - b) 15% of the amount from \$3,500 to \$12,000; plus
 - c) 5% of the amount in excess of \$12,000.
- .02 No further markup shall be applied regardless of the extent to which the work is assigned or sublet to others. If Work is assigned or sublet to an associate, as defined by the Securities Act, no markup whatsoever shall be applied.

GC 8.02.05.09 Submission of Invoices

- .01 At the start of the Work on a Time and Material Basis, the Contractor shall provide the applicable labour and Equipment rates not already submitted to the Contract Administrator during the course of such Work.
- .02 Separate summaries shall be completed by the Contractor. Each summary shall include the Change Directive or Change Order number and covering dates of the Work and shall itemize separately the labour, Materials, and Equipment. Invoices for Materials, Rented Equipment, and other charges incurred by the Contractor on the Work on a Time and Material Basis shall be included with each summary.

- .03 Each month the Contract Administrator shall include with the monthly progress payment, the costs of the Work on a Time and Material Basis incurred during the preceding month all in accordance with the contract administrative procedures and the Contractor's invoice of the Work on a Time and Material Basis.
- .04 The final summary as per clause 8.02.05.09.02 shall be submitted by the Contractor within 60 Days after the completion of the Work on a Time and Material Basis.

GC 8.02.05.10 Payment Other Than on a Time and Material Basis

- .01 Clause GC 8.02.05 does not preclude the option of the Contract Administrator and the Contractor negotiating a Lump Sum Item or unit price payment for Change in the Work, Extra Work, and Additional Work.

GC 8.02.05.11 Payment Inclusions

- .01 Except where there is agreement in writing to the contrary, the compensation, as herein provided, shall be accepted by the Contractor as compensation in full for profit and all costs and expenses arising out of the Work, including all cost of general supervision, administration, and management time spent on the Work, and no other payment or allowance shall be made in respect of such Work.

GC 8.02.06 Final Acceptance Certificate

- .01 After the acceptance of the Work or, where applicable, after the Warranty Period has expired, the Contract Administrator shall issue the Final Acceptance Certificate. The Final Acceptance Certificate shall not be issued until all known deficiencies have been adjusted or corrected, as the case may be, and the Contractor has discharged all obligations under the Contract.
- .02 Any remaining amount of security shall be released upon Final Acceptance of the Contract.

GC 8.02.07 Records

- .01 The Contractor shall maintain and keep accurate Records relating to the Work, Changes in the Work, Extra Work, Additional Work and claims arising therefrom. Such Records shall be of sufficient detail to support the total cost of the Work, Changes in the Work, Extra Work, Additional Work and claims arising therefrom. The Contractor shall preserve all such original Records until 12 months after the Final Acceptance Certificate is issued or until all claims have been settled, whichever is longer. The Contractor shall require that Subcontractors employed by the Contractor preserve all original Records pertaining to the Work, Changes in the Work, Extra Work, Additional Work and claims arising therefrom for a similar period of time.
- .02 The Owner may inspect and audit the Contractor's Records relating to the Work, Changes in the Work, Extra Work, and Additional Work at any time during the period of the Contract. The Contractor shall supply certified copies of any part of its Records required, whenever requested by the Owner.

GC 8.02.08 Taxes

- .01 Where a change in Canadian Federal or Provincial taxes occurs after the date of tender closing for this Contract, and this change could not have been anticipated at the time of Tender, the Owner shall increase or decrease Contract payments to account for the exact amount of tax change involved.

- .02 Claims for compensation for additional tax cost shall be submitted by the Contractor to the Contract Administrator on forms provided by the Contract Administrator to the Contractor. Such claims for additional tax costs shall be submitted not less than 30 Days after the date of Final Acceptance.
- .03 Where the Contractor benefits from a change in Canadian Federal or Provincial taxes, the Contractor shall submit to the Contract Administrator on forms provided by the Contract Administrator, a statement of such benefits. This statement shall be submitted not later than 30 Days after Final Acceptance.
- .04 Changes in Canadian Federal or Provincial taxes that impact upon commodities, which when left in place form part of the finished Work, or the provision of services, where such services form part of the Work and where the manufacture or supply of such commodities or the provision of such services is carried out by the Contractor or a Subcontractor, are subject to a claim or benefit as detailed above. Services in the latter context means the supply and operation of Equipment, the provision of labour, and the supply of commodities that do not form part of the Work.
- .05 The Contractor shall add the Harmonized Sales Tax (HST) to all invoices.

GC 8.02.09 Liquidated Damages

- .01 When liquidated damages are specified in the Contract and the Contractor fails to complete the Work in accordance with the Contract, the Contractor shall pay such amounts as are specified in the Contract Documents.

HAMILTON-WENTWORTH CATHOLIC DISTRICT SCHOOL BOARD**416-420 MOHAWK ROAD EAST - OUR LADY OF LOURDES****PARKING LOT RECONSTRUCTION****CONTRACT NO. 23096-01****SPECIAL PROVISIONS AND SPECIFICATIONS****INDEX**

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SPECIAL PROVISIONS

SP 1 MAINTENANCE OF TRAFFIC AND ACCESS TO SITE

The Contractor shall control traffic in accordance with the Manual of Uniform Traffic Control Devices (Division 5 – Temporary Conditions) as published by the Ministry of Transportation and as required by the Engineer. No payment will be made for traffic control unless otherwise specified in the Special Provisions.

Access to and from the site for all materials, equipment and construction operations shall be from Mohawk Road East, via an approved truck route.

The Contractor will be responsible for protecting the work area, vehicles and equipment, and repair any unnecessary damage to Municipal property resulting from this construction project.

The Contractor will be responsible on a daily basis for keeping adjacent roadways not under construction clear of mud and debris to the satisfaction of the Engineer and Public Works.

The Contractor and all employees on this project shall be responsible for obeying all parking regulations in this area.

Vehicle access must be maintained to all businesses (where applicable) at all times and residences wherever possible. When access is denied to residential properties, on-street parking permits will be issued by the Traffic and Parking Division allowing residents to park on adjacent side streets.

The Contractor must give the governing Municipality three days advanced notice for any partial road closures.

SP 2 NOISE

The Contractor shall thoroughly acquaint themselves with the local regulations governing acceptable noise limits for construction operations and equipment and shall govern their tender prices to take into account all such regulations and requirements.

SP 3 SNOW, ICE, AND FROST

The Contractor will be required to clear the site of any and all snow, ice, and frost that in the opinion of the Engineer hinders the normal progress of the work. These conditions would be considered minor within basic servicing, grading, and roadworks works. Significant and longer-term conditions will need to be brought up by the contractor if hindering their ability to complete works.

SP 4 CONCRETE IN MANHOLES, VALVE CHAMBERS, THRUST BLOCKS, CATCHBASINS, DITCH INLETS AND SEWER PIPE

Concrete used and poured in pre-cast manholes, valve chambers, catchbasins, ditch inlet structures, sewers and thrust blocks shall be made with Type 50 sulphate resistant cement.

SP 5 COMPACTION REQUIREMENTS

The Contractor will be responsible for settlements caused by the placement of fill or installation of any underground services. Trial sections for earth fills, trench backfill and street construction will be required by the Engineer to determine the lift thickness and compactive effort required to achieve the following Standard Proctor Density values:

- a) Grading - 98% SPD except where otherwise specified.
- b) Road Subgrades - 98% SPD.
- c) Granular Road Base - 100% SPD
- d) Structural/Engineered Fill – 100% SPD.
- e) Granular Trench Backfill under Pavement – 100% SPD.
- f) Native Soil Trench Backfill under Pavement – 98% SPD.
- g) Native Soil Trench Backfill under Landscaping – 95% SPD.
- h) Item specific requirements noted within specified SP section.

Although the Owner will retain the services of a Soils Consultant to monitor and report on the degree of compaction being achieved for all items, it is solely the Contractor's responsibility and obligation to provide an end product that conforms to all the requirements of the Contract Documents. Any areas tested by qualified field personnel that do not meet the specified requirements shall be re-excavated if necessary and corrected to the satisfaction of the Engineer.

SP 6 MATERIALS TO BE SUPPLIED BY THE CONTRACTOR

The Contractor shall supply all materials as required to complete the works under this contract. Where the Standard Specifications state otherwise, such clauses shall not apply to this Contract. All materials shall conform to the material requirements as contained in the governing Municipalities Standard Material Specifications.

Prior to construction, the Contractor shall submit a list of the watermain and water service materials they propose to use for approval. This list shall provide for the name of the supplier and the manufacturer's catalogue number for fittings, watermain, copper service pipe, corporation stops, curbs stops, curb boxes, valves, valve boxes and hydrants.

SP 7 TEMPORARY PRE-MANUFACTURED WATERTIGHT BULKHEADS/PLUGS

Temporary plug shall be installed in the outlet pipe of the first upstream manhole at each connection to the existing sewer system to prevent migration of silt into the existing sewers. It will be the responsibility of the contractor to drain the system of any accumulated water prior to testing of the sewer system.

SP 8 TESTING AND CCTV INSPECTION OF SEWERS

Exfiltration testing will be carried out, using low air pressure as per OPSS 410.07.16.04.03 and the Municipal Standards on all sanitary sewers upon completion of the installation of the sanitary sewers.

A mandrel test as per to OPSS 410.07.15.05, shall be conducted on all flexible sewer pipe (sanitary and storm) twice, once upon completion of the installation of the new sewers and once prior to the end of the maintenance period.

A CCTV inspection of the new storm and sanitary sewers shall be completed and reports prepared in accordance with the Municipal guidelines and OPSS 409. The contractor shall supply two copies of the report complete with copies of the inspection video on CD or another approved digital format. A CCTV inspection shall be completed twice, once upon completion of the installation of the new sewers and once prior to the expiration of the maintenance period.

These items will be paid under the applicable tender items and shall include flushing of the sewers prior to all testing and video inspection. Flushing of the sewers shall consist of a maximum of four passes of the jet and shall include sourcing of the water. If additional flushing is required it shall be paid under the provisional items as approved by the engineer.

SP 9 UTILITY INSTALLATIONS AND UNDER-PAVEMENT CROSSINGS

During the progress of this Contract, Utility Providers contractors will be installing their underground services. The installation of these services will commence at the completion of the road construction to binder asphalt. However, where utility company under pavement crossings are required to be installed in open cut, this Contractor shall take the delivery of the required materials from the utility companies and install the under-pavement crossings prior to placing the binder asphalt. The under-pavement crossings shall extend a minimum of 1.0 metres outside the back of the future curb lines. Payment for this work will be made at the prices bid in Item J-11 and shall include all costs for excavation, placing of crossings, granular backfill and compaction to 95% Standard Proctor Density.

The Contractor's attention is drawn to the presence of utilities on this project. The locations of underground and overhead utilities shown on the Contract Drawings is for the Owner's use only and is not guaranteed by the Owner or the Engineer.

It is the Contractor's responsibility to contact Utility Companies for further information in regard to these utilities, to acquire locates for all utilities, and to exercise the necessary care in construction operations or take other precautions to safeguard the Utility Company from damage. The cost of all damages to utilities both overhead and underground, caused by the Contractor's operations, shall be borne by the Contractor.

SP 10 RESTORATION

The Contractor shall be responsible for all labour, materials and equipment to restore all disturbed areas including topsoil and sod equal to, or better than their original condition to the satisfaction of the Engineer and the governing Municipality. All cost applicable to these restorations shall be included in the appropriate unit prices. All mud and debris on existing streets or in catchbasin structures from Contractor activities shall be removed at the Contractor's expense.

All sodded areas to have a minimum of 100mm topsoil and No. #1 Nursery Sod including fertilizer and three waterings. Garden area and flowerbeds to be restored with a minimum of 300mm topsoil.

Restoration of all disturbed areas outside the limits of construction shall be restored at the Contractor's expense.

SP 11 CONSTRUCTION LAYOUT

The Contractor is to provide all construction layout, all costs are to be included in the final price of the project. The Contractor shall arrange for setting such stakes as are necessary to mark properly the general location, alignment elevation and grade of work.

The Contractor shall assume full responsibility for detail, dimension and elevations so established. All stages, marks and reference points shall be replaced by the Contractor at the Contractor's expense.

The Contractor shall complete topographic surveys of the existing conditions, as well as the final pre-grading condition and submit as-constructed surveys to the Engineer to confirm that the desired pre-grading extents have been achieved.

S. Llewellyn & Associates Limited and the OWNER shall not be held liable for errors or poor workmanship in relation to construction layout. The Contractor shall be solely responsible for interpretation of lay out points derived from the digital drawings. The Contractor shall be aware of all applicable standards and in using S. Llewellyn & Associates Limited drawings, be responsible for application of layout in accordance with these standards.

Digital copies can be provided at the discretion of S. Llewellyn and Associates upon request of the contractor and prior to the release of any digital data, the Contractor shall enter into digital data agreement with S. Llewellyn and Associated Limited. Any digital data released under the agreement is provided for the Contractor's use only on "as is" basis as stipulated in the digital data agreement.

Any costs for the preparation of the digital data agreement and assembling and release of this information shall be borne by the Contractor.

SP 12 COORDINATION OF SITE MEETINGS

The Contractor shall attend any required coordination site meetings that may be deemed to be appropriate by the Engineer, and to facilitate the preparation and presentation of any documentation, including up to date schedules, at the time of these meetings.

In addition to regular site meetings, an initial pre-construction meeting will be held to review the approach to the project, introduce the various contact personnel involved in the project and to discuss the startup procedure, coordination details, specific project scheduling issues, and other related coordination requirements.

The Contractor's Superintendent will be required to attend the regular site meetings as well as the initial pre-construction meeting. Site meetings are anticipated to be approximately two weeks apart and to be held at a pre-arranged location, preferably in the project site office. The time and date of the site meetings will be determined at the initial pre-construction meeting and may be updated from time to time to suit the requirements of project progress.

Emergency meetings will be held as required, and will be attended by the Contractor, as requested by the Engineer.

SP 13 SUPERVISION

The Contractor shall provide skilled and qualified supervisory staff on the project at all times to ensure proper execution of the work. The Contractor shall provide a qualified full time superintendent capable of communicating by both written and oral means to ensure that the work proceeds in a proper and efficient manner.

If, in the opinion of the Engineer, the assigned superintendent is not competent to carry out appropriate direction of the work, the Contractor shall replace the superintendent immediately upon written request of the Engineer.

All supervisory personnel who will be assigned to this project must be entirely familiar with the terms, conditions and details of the Contract and related documents.

SP 14 DISPOSAL SITE

The Contractor is advised that no specific disposal site has been identified for surplus or unsuitable materials for this project. Therefore, it will be the Contractor's responsibility to arrange for a suitable disposal site(s) for all removals, excess, and waste materials generated by the work of this project. With inclusion of the required OPS and municipal signed documentation. There will be no extra payment to the Contractor for the cost of disposing material off site.

SP 15.01 - Construction Layout

.01.01 General

The Contractor is to provide all construction layout, all costs are to be included in this item's unit price.

The Contractor shall arrange for setting such stakes as are necessary to mark properly the general location, alignment elevation and grade of work.

The Contractor shall assume full responsibility for detail, dimension and elevations so established. All stages, marks and reference points shall be replaced by the Contractor at the Contractor's expense.

S. Llewellyn & Associates Limited and the OWNER shall not be held liable for errors or poor workmanship in relation to construction layout. The Contractor shall be solely responsible for interpretation of lay out points derived from the digital drawings. The Contractor shall be aware of all applicable standards and in using S. Llewellyn & Associates Limited drawings, be responsible for application of layout in accordance with these standards.

.01.02 Digital Drawing

Digital copies can be provided at the discretion of S. Llewellyn and Associates upon request of the contractor and prior to the release of any digital data, the Contractor shall enter into digital data agreement with S. Llewellyn and Associated Limited. Any digital data released under the agreement is provided for the Contractor's use only on "as is" basis as stipulated in the digital data agreement.

Any costs for the preparation of the digital data agreement and assembling and release of this information shall be borne by the Contractor.

.01.03 Payment

.01.03.01 Basis of Payment

Payment at the unit price for the above tender item shall be full compensation for all labour, equipment and materials to do the work. Payment will be segmented as the project progresses.

SP 15.04 - Install Heavy Duty Siltation Fence

.04.01 General

For the unit price bid for this item, the Contractor shall supply all labour, materials and equipment to install and maintain heavy duty siltation fence including the repair and disposal of damaged siltation control fence as required and final removal when directed. The sediment control barrier construction shall be accordance with OPSS.

.04.02 References

The following Ontario Provincial Specification Drawings, latest revision, shall be referenced in conjunction with the details shown on proposed drawings;

- OPSD 219.130, Heavy Duty Silt Fence Barrier.
- OPSD 219.131, Heavy Duty Wire Backed Silt Fence Barrier.

.04.03 Materials

Materials used for the sedimentation barrier shall comply with OPSS 805 and OPSD 219.131 modified as follows:

- T-Bar Posts shall be driven a min of 1.00m into the ground with a min of 1.2m exposed above grade. T-Bars will be spaced to a maximum spacing of 2.35m.
- Welded wire mesh support fencing (min. 9 gauge) with 120 x 240mm wire spacing. Mesh to be tire wired to every T-Bar post at a spacing of 300mm vertically.
- Woven Geotextile (Terra Track 24-15 or approved equal) attached to welded wire support fence every 750mm (max) horizontally and 300mm vertically. Geotextile to be min. 1.0m exposed above grade and buried in a 400mm x 200mm trench at the base of the fence. Trench to be backfilled and compacted. Geotextile is to be placed on the side under construction or on upstream side of fence.
- Straw bales.

.04.04 Construction

The contractor shall be responsible for constructing the siltation control fence at the locations indicated on the contract drawings or as directed by the engineer. Where silt fence has already been affixed to the existing chainlink fence the contractor is responsible to repair the fence as required.

Where page and wire fence has already been established along the property line, the contractor is responsible to install heavy-duty filter fabric and key in the fabric to the ground per specifications.

The contractor shall install sediment control barriers at the base of all stockpiles until such time as the stockpiles have been removed or vegetation has been established.

.04.05 Payment

.04.05.01 Measurement for Payment

Measurement for payment shall be by lump sum.

.04.05.02 Basis of Payment

Payment at the unit price for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP 15.06 - Supply and Install Catchbasin and Ditch Inlet Sediment Control

.06.01 General

For the unit price bid for this item, the Contractor shall supply all labour, materials and equipment to install and maintain catch basin filter bags including the repair and final removal when directed. The catch basin filter bag installation shall be accordance with the governing municipality, the governing area's Conservation Authorities' Erosion and Sediment Control Guideline for Urban Construction and this Special Provision.

.06.02 Materials

Catch basin filter bags shall be Terrafix SILTSACK® or approved alternate. Catch basin filter bags are to be manufactured from woven polypropylene geotextile and sewn by a double needle machine using high strength nylon thread. Seams are to comply with ASTM D-4884.

RLCB and DICB siltation control to consist of filter fabric wrapped around the frame and grate, with 300mm of 19mm Clear Stone placed on top of lid.

.06.03 Construction

The contractor shall be responsible for installing the catch basin filter bag in accordance with the contract drawings or as directed by the engineer and in accordance with the governing area's Conservation Authorities' Erosion and Sediment Control Guideline for Urban Construction and to the manufacturer's specifications.

.06.04 Payment

.06.04.01 Measurement for Payment

Measurement for payment shall be by lump sum.

.06.04.02 Basis of Payment

Payment at the unit price for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP 15.07 - Supply and Install Fencing

.07.01 General

Chain link fence shall be in accordance with OPSS 772 and this special provision.

.07.02 Materials

Chain link fencing materials shall be in accordance with OPSS 1541.

Wood Privacy fencing materials shall be per the details on the engineering drawings.

.07.03 Construction

Chain link fence shall be installed in accordance with OPSD 972.130. This item shall include all costs to of the installation of the fencing at the same location specified shown on the Contract drawings including the supply of the specified fencing.

Any chain link fencing identified for re-installation damaged during removal or re-installation shall be replaced with new materials at the Contractor's expense.

.07.04 Payment

.07.04.01 Measurement for Payment

Measurement for payment shall be by lump sum.

.07.04.02 Basis of Payment

Payment at the unit price for the above tender items shall be full compensation for all labour, equipment and Material to do the work.

SP 15.11 - Retaining Walls

.11.01 General

Retaining walls to be constructed in accordance with the approved engineering drawings. The Contractor is to specify wall type and manufacture that is priced for this item. Shop drawings are to be provide to the Engineer prior to construction of the walls for approval.

.11.02 Construction

Included shall be all costs to construct the retaining wall system including procurement of shop drawings, granular base and backfill, filter fabric, wall tie backs, and weeping tile, in accordance with the approved shop drawings and engineering drawings.

The Contractor is responsible to provide as-constructed topographic survey by an OLS of the retaining wall upon completion, along with having the wall certified by a qualified professional.

.11.03 Bidding

The Contractor shall supply the manufacturer and product information as a part of their bid submission package.

.11.04 Payment

.11.04.01 Measurement of Payment

Measurement for payment shall be by lump sum.

.11.04.02 Basis of Payment

Payment at the unit price for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP 15.13 - Removal and Disposals From Site

.13.01 General

For the unit price bid for these items, the Contractor shall supply all labour, materials and equipment to excavate, strip, load, haul and dispose of the item or material identified in the specified items.

.13.02 Salvaged Material

Where the existing materials are re-usable on site as qualified by the Engineer, the materials shall be stockpiled in a location determined by the Engineer as re-used as directed.

.13.03 Payment

.13.03.01 Measurement of Payment

Measurement for payment shall be by the unit outlined under the specific items.

.13.03.02 Basis of Payment

Payment at the unit price for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP 15.15 - Traffic Control.15.01 General

All traffic control shall be in accordance with OPSS 706 as amended, the Ministry of Transportation, Ontario Traffic Manual, Book 7 - Temporary Conditions, and Special Provision General - Traffic Requirements.

.15.02 Construction

This item shall include all costs for the supply, installation, maintenance, relocation and removals for all traffic control measures that may be required to do the Work.

.15.02 Payment

.15.02.01 Measurement of Payment

Measurement for payment for shall be by lump sum.

.15.02.02 Basis of Payment

This item shall apply to all traffic control for the entire project.

Payment at the unit price for the above tender items shall be full compensation for all labour, equipment and Material to do the work.

The lump sum price will be pro-rated and paid in equal monthly installments for the duration project, whenever there is active construction.

SP 15.20 - Topographic Surveys.20.01 General

The Contractor is to provide a Topographic Survey conducted by a certified OLS (Ontario Land Surveyor) or a pre-approved third party topographic survey company. All costs are to be included in this item's unit price. The topographic survey is to be conducted for the purposes of verifying quantities, layout, and completion of other contractual item(s).

.20.02 Scope

The contractor is to collect the following information but not limited to;

- Ground elevations at a minimum 15m x 15m grid of the property. Ground elevations are also to be provided at all changes in slope direction, at high/low points, along top and bottom of banks, along swales/ditches/channels, along all surface items inside or outside of the property line, etc.
- Ground elevations along the property line at a minimum 15m interval, at each corner/vertices of the property line and at high/low points.

- All retaining walls on or near the property. Top of wall elevation, bottom of wall elevation, the front and back of the wall in 5m increments or when there are elevation changes/steps within the wall.
- Road structure elevations at the center line of road and each edge of pavement in 20m increments.
- Curbs, sidewalks, aprons, granular road base, and asphalt as noted for survey.
- Manholes (Various Types), Catchbasin (Various Types), Chambers (various Types) invert elevations of the connected pipes at the connection location, Top of Grate elevations.
- Sanitary, storm or water stub inverts.
- Individual lot/unit sanitary, storm and water service inverts.

.20.03 Digital File

The Contractor is to submit a Digital file of the Topographic survey conducted. The file is to meet the following requirements to be considered acceptable.

- Topographic information to be provided in the form of an AutoCAD drawing.
- Is to be within the same coordinate system as the original topographic survey used in the design.
- All data is to be metric, and elevations are to be geodetic.
- All ground elevations to be 3D points and should have a dedicated Z coordinates associated with the point/node. A 3D surface is to be completed using the 3D elevations and break lines.

Any costs for the preparation of the digital file, assembling and submission to S. Llewellyn and Associated Limited shall be built into the unit price for the item.

.20.04 Payment

.20.04.01 Measurement of Payment

Measurement for payment shall be by lump sum.

.20.04.02 Basis of Payment

This item shall apply to each noted topographic survey item as per the form of tender.

Payment at the unit price for the above tender items shall be full compensation for all labour, equipment, material and data to do the complete and submit the work.

The item will be paid out once the appropriate file has been received and verified.

SP 16.01 - Storm and Sanitary Sewers

.01.01 General

Sewer construction shall be in accordance with OPSS 401 and 410 as amended by the municipality's guidelines and Construction and Materials Specifications Manual and this Special Provision.

.01.02 Materials

Supply and installation of pipe materials in accordance with OPSS 1820, and the municipality's guidelines. All materials shall be listed on the Approved Sewer Products List.

.01.03 Construction

The Contractor shall supply and install the main sewer complete, in accordance with the lines, grades and elevations shown on the Contract drawings and shall include:

- continuous maintenance of existing flow of all mainline sewers and drains
- pavement saw-cutting, excavation, trench wall stabilization and disposal of excavated materials.
- removal and disposal of existing sewer pipe, maintenance holes and bedding where required.
- removal and disposal of existing lined sewer pipes where encountered.
- connection of new sewer to existing sewer system.
- supply and installation of replacement "in-service" junctions and risers for all existing private drains and catch basin leads where encountered.
- supply and installation of all proposed junctions and risers for private drains and catch basin leads as shown on the Contract drawings.
- All connections or reconnections of proposed and existing "in-service" private drains and catch basin leads.
- cleaning, flushing, removal and disposal of construction debris from all new sewer installations prior to closed circuit television inspection.
- protection of existing utilities.
- dewatering of the excavation as required.
- infiltration/exfiltration testing using water or low air pressure and/or joint testing.
- in addition to OPSS 410.07.16.05, a mandrel shall be pulled through the pipe prior to the expiration of the two-year maintenance period at the Contractor's expense.
- supply and placement of unshrinkable material (U-Fill) in any excavated area extending beyond the front and rear of the building footprint where the installation of the RYCB lead is below the proposed USF for the adjacent buildings. Unshrinkable material to be placed from top of pipe to 0.6m above proposed USF.
- supply and placement of concrete encasement per details on the Engineering Drawings on rear lot catchbasins and sewers connecting RLCBMH's

.01.03.01 Excavation of Shale and Rock

All material identified as Shale on site or by a geotechnical investigation issued for the purposes of soil and rock identification and analysis shall not be considered rock. The breaking and excavation of shale shall be considered earthworks and the Contractor will not receive any extra payment for the breaking and removal of shale. The excavation of rock shall be paid under a separate item of the contract.

.01.03.02 Bedding and Cover

Supply, placement and compaction of Granular A bedding and cover materials compacted to 95% SPMDD.

.01.03.03 Backfill

Trenches shall be backfilled with approved, selected, excavated earth materials from trenches. Excavated rock may be used for backfill providing such rock meets the gradation requirements for Granular "B". Sewer trenches within existing Municipal right of ways to be backfilled with Granular 'A' to Municipal specifications and shall include restoration of the granular sub-base asphalt with binder asphalt to match existing conditions, surface asphalt and milling to be paid under the appropriate separate item.

In locations where rock has been removed the Contractor shall use the onsite stockpiled structural fill or imported structural fill as backfill, as directed by the Engineer or Geotechnical Engineer.

Unshrinkable fill in accordance with OPSS 1359 shall be used where normal procedures cannot produce the required degree of compaction of materials.

.01.03.04 Break into Existing Maintenance Holes

The requirements of OPSS 407 shall apply to this item except as otherwise specified in the following: The Contractor shall supply all labour, equipment and materials to break into existing maintenance holes at the locations shown on the Contract drawings and shall also include:

- preparation of the required openings as necessary in the existing maintenance holes and mortaring the required pipes in place.
- continuous maintenance of existing flow for all existing drains and sewers.
- removal and disposal of existing benching and construction of new concrete benching as required

.01.04 Payment

.01.04.01 Measurement for Payment

Measurement for payment shall be by lump sum.

.01.04.02 Basis of Payment

Payment at the unit price for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP 16.02 - Storm and Sanitary Maintenance Holes

.02.01 General

Maintenance hole shall be in accordance with OPSS 402, 407, 408, and 410 as amended by the Construction and Materials Specification Manual and this special Provision.

.02.02 References

The following Ontario Provincial Specification Drawings, latest revision, shall be referenced;

- OPSD 701.010, Precast Concrete Maintenance Hole, 1200mm dia.
- OPSD 701.011, Precast Concrete Maintenance Hole, 1500mm dia.
- OPSD 701.012, Precast Concrete Maintenance Hole, 1800mm dia.
- OPSD 701.013, Precast Concrete Maintenance Hole, 2400mm dia.
- OPSD 701.014, Precast Concrete Maintenance Hole, 3000mm dia.
- OPSD 701.015, Precast Concrete Maintenance Hole, 3600mm dia.

.02.03 Materials

All maintenance holes shall be as listed on the Approved Sewer Products List, as amended.

.02.03.01 Cast-in-Place Manholes

All concrete used for cast-in-place structures shall be manufactured with Type 50 Cement.

.02.04 Construction

The Contractor shall supply and install new manholes or remove and replace existing maintenance holes, in accordance with the locations and elevations shown on the Contract drawings and shall include:

- Poured in-place or precast bases, precast risers, taper sections and flat caps as required.
- supply, placement and compaction of Granular "A" bedding and backfill materials
- supply, placement of frames and covers adjusted to binder course asphalt. Where final course asphalt is not postponed to the following year, the frame and cover shall be adjusted to surface course asphalt.
- benching, ladder rungs, drop pipes, safety grating and all appurtenances shown on the Contract drawings, maintenance hole detail drawings or where required.
- cleaning, flushing, removal and disposal of construction debris from all maintenance holes prior to closed circuit television inspection.
- removal and disposal of existing maintenance holes where required.
- continuous maintenance of existing flow of all mainline sewers and drains.
- all precast and cast-in-place sections shall be manufactured using Type 50 cement.
- excavation dewatering where required.

.02.04.01 Excavation of Rock and Shale

All material identified as Shale on site or by a geotechnical investigation issued for the purposes of soil and rock identification and analysis shall not be considered rock. The breaking and excavation of shale shall be considered earthworks and the Contractor will not receive any extra payment for the breaking and removal of shale. The excavation of rock shall be paid under a separate item of the contract.

.02.04.02 Bedding

Bedding material shall be Granular "A" compacted to 95% SPMDD.

.02.04.03 Backfill

.02.04.03.01 Existing Right-of-Way

Excavations for manholes located within the existing right-of-way shall be backfilled with imported granular 'A' only (full depth). Unit prices shall include all cost to supply, place and compact granular 'A' trench backfill and to remove and dispose of all excavated materials.

Unshrinkable fill in accordance with OPSS 1359 shall be used where normal procedure cannot produce the required degree of compaction of materials.

.02.04.03.02 Proposed Right-of-Way

Granular backfill shall be placed to a minimum thickness of 600mm all around the maintenance hole. The remaining backfill shall be approved, selected, excavated earth materials from trenches. Excavated rock may be used for backfill providing such rock meets the gradation requirements of Form 600 for Granular "B".

Unshrinkable fill in accordance with OPSS 1359 shall be used where normal procedure cannot produce the required degree of compaction of materials.

.02.04.04 Cast-in-Place Structures

The Contractor shall supply the Engineer with Engineer's stamped shop drawings for approval prior to the construction of any cast-in-place structure, for review.

The Contractor shall provide certification of the structures construction by a qualified professional prior to acceptance of the structure by the Engineer.

.02.05 Payment

.02.05.01 Measurement for Payment

Measurement for payment shall be by lump sum.

.02.05.02 Basis of Payment

Payment at the unit price for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP 16.03 - Roadway Catchbasins

.03.01 General

Concrete catch basins shall be in accordance with OPSS 407, as amended by the Construction and Materials Specifications Manual and this special provision.

.03.02 References

The following Ontario Provincial Specification Drawings, latest revision, shall be referenced;

- OPSD 705.010, Precast Concrete Catch Basin, 600 mm x 600 mm
- OPSD 705.020, Precast Concrete Twin Inlet Catch Basin, 600 mm x 1450 mm
- OPSD 400.100, Cast Iron, Square Frame With Square Flat Grate For Catch Basins, Perforated Openings

.03.03 Materials

Single catch basins shall be in accordance with OPSD 705.010, twin catch basins shall be in accordance with OPSD 705.020. Catch basins shall be selected from the Approved Sewer Products List.

.03.04 Construction

The unit price shall include all costs to:

- supply and install new catch basins with goss trap and stopper if required by municipal standards, and frame and cover
- supply, placement and compaction of Granular "A" bedding and backfill materials

Frame and cover in accordance with OPSD 400.100 as specified in the Schedule of Quantities and Prices. All frames and covers shall be adjusted to binder course asphalt. Where final course asphalt is not postponed to the following year, the frame and cover shall be adjusted to surface course asphalt.

Where there is no continuous perforated sub-drain to be installed, this item shall include all costs for the supply, installation and connection of 3.0m of 150mm dia. perforated pipe with filter "sock" and clear stone encasement on each side of the catch basin.

Catch basin junction and riser connections at the main sewer shall have a minimum of 150mm concrete encasement extending to 1.0 metre above the mainline sewer.

.03.04.01 Excavation of Rock and Shale

All material identified as Shale on site or by a geotechnical investigation issued for the purposes of soil and rock identification and analysis shall not be considered rock. The breaking and excavation of shale shall be considered earthworks and the Contractor will not receive any extra payment for the breaking and removal of shale.

.03.04.02 Bedding

Bedding material shall be Granular "A" compacted to 95% SPMDD.

.03.04.03 Backfill

Backfill shall be approved, selected, excavated earth materials from trenches. Excavated rock may be used for backfill providing such rock meets the gradation requirements of Form 600 for Granular "B". Unshrinkable fill in accordance with OPSS 1359 shall be used where normal procedures cannot produce the required degree of compaction of materials.

.03.05 Payment

.03.05.01 Measurement for Payment

Measurement for payment shall be for each catch basin installed.

.03.05.02 Basis of Payment

Payment at the unit price for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP 16.07 - CCTV Inspection of Storm and Sanitary Sewers

.07.01 Scope

The work covered by this item consists of furnishing all plant, personnel, equipment, materials and performance required to complete CCTV inspection of all existing mainline sewers and any sewers constructed or repaired under this Contract.

All CCTV inspection shall be in accordance with this Special Provision and OPSS 409.

.07.02 General

Following installation of the sewer pipe and before the start of maintenance and prior to the end of maintenance, the Contractor shall arrange for CCTV inspection of all new sewers within the limits of the project, including RLCB leads, DICB leads, and TCCB Leads.

Any cleaning and flushing required in new sewers, shall be included in the unit price for the CCTV inspection at the expense of the Contractor.

Any cleaning and flushing required for the end of maintenance CCTV inspections, shall be included in the unit price for the CCTV inspection, up to **five passes**. Any cleaning and flushing required above the **five passes** shall be paid under the appropriate provisional item. The contractor shall receive approval from the Engineer before proceeding with additional cleaning and flushing and provide sufficient documentation of its requirement. Mandrel testing of the PVC pipe will also be included in the end of maintenance CCTV inspection.

The cleaning and flushing of sewers shall incorporate the use of a vacuum truck to remove debris from the cleaned sewer prior to entering any downstream sewers. Sewers shall be cleaned and CCTV inspected to the next available maintenance hole even if it is outside the sewer construction or project limits.

.07.03 CCTV Sewer Inspections

All works shall be in accordance with these Special Provisions and OPSS 409, with precedents being these Special Provisions.

Unless otherwise specified, Inspect and code all observations in accordance to:

- CSA PLUS 4012-10 “Technical Guide - Visual inspection of sewer pipe”
- NASSCO PACP “Pipeline Assessment Certification Program – Canadian Edition” for mainline inspections.
- NASSCO LACP “Lateral Assessment & Certification Program” for lateral inspections.

Unless otherwise specified, the Contractor shall ensure that all sewers are completely clean and free of debris and ready for CCTV inspection.

Unless otherwise specified, OPS 409.09 “Measurement for Payment” shall apply.

Inspection shall only be carried out by experienced operators with current and valid certification in NASSCO PACP. Operators with less than 3 years of NASSCO certification must provide sufficient evidence of experience in sewer CCTV inspection (i.e. former NAAPI certification/training, resume, references.)

Pan and Tilt to observe features of the pipe only when the camera has stopped at the desired distance. Video footage with evidence of pan and tilt movements while the camera is traveling will not be accepted by the Engineer for review and payment.

Ensure picture quality and clarity is maintained during entire inspection. Lighting and focus should be adjusted to sufficiently illuminate and observe the circumference of the pipe during inspection.

At the start of each survey use a video overlay system to clearly display the inspection header information for 5 seconds.

During the inspection clearly display ‘From’ and ‘To’ Manhole IDs and travel distance in meters on the periphery of the screen. Arrange the information to minimize interference with the inspection image. Defect code and description should appear on the screen while ‘coding’ for at least 5 seconds.

.07.04 CCTV Reports and Submittals

The Contractor shall submit the following once all inspections are complete:

- A printed inspection report, including an index for each inspection, and detailed records for every inspection performed

- A PDF version of the printed report
- Electronic media generated during inspection arranged and identified in a manner that facilitates referencing to each inspection record.
- A database as specified in section 0, Data Format

The Contractor is required to keep a record of all inspection material for the duration of the maintenance period, or a minimum of 3 years from the date of inspection.

.07.05 Inspection Related Instruction

The Contractor will be held responsible for damage to road surfaces, curbs, gutters, existing utilities, etc. that result from their negligence during any inspection.

The Contractor shall repair, at their cost, any damage resulting there from, which shall be subject to approval, by the governing Municipality and the Engineer.

The Contractor will be required to inspect all sewers without disturbing the existing condition of the sewer. Should the contractor decide to use a stringing method to inspect the sewer, the stringing lines shall not be left in the sewer for more than five days or without consent of the governing Municipality and the Engineer.

All obstructions, cracks, irregularities must be fully inspected and documented. The Contractor must inform the Engineer's representative immediately of any obstruction encountered, locations of hazardous atmosphere, or sewers that are in immediate danger of structural failure while the inspection is still in progress. Where possible, the survey shall be reversed so that the extent of the blockage can be assessed.

The Contractor, under the supervision of the Engineer or governing Municipality, may install plugs in the sewers to prevent the flow of sewage during inspection for a period of no longer than 10 minutes. The plugs must then be removed for a minimum of 10 minutes after which time they may be installed again for the period stated above. Plugs shall only be installed when and for the time period directed by the Engineer or governing Municipality where the existing flow hinders a proper inspection.

.07.06 Occupational Health and Safety – Confined Space Entry

The Contractor shall ensure that all aspects of the required work are, at all times, in full and complete compliance with the Occupational Health and Safety Act, as amended.

The Contractor shall provide approved equipment and training to personnel who enter confined spaces as may be required on this project. The procedures the contractor follows for Confined Space Entry must meet or exceed the requirements outlined by the Occupational Health and Safety Act.

.07.07 Data Format

Data structure shall be as specified in the latest NASSCO standard for mainline, manhole, or lateral inspection.

Database file shall be in Microsoft Access format.

Key fields issued by the governing Municipality to identify inspection records and assets shall be used during inspection and be included in the database inspection records.

.07.08 Payment

.07.08.01 Measurement for Payment

Measurement for payment shall be lump sum under the respective items.

.07.08.02 **Basis of Payment**

Payment at the unit price for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP 18.01 - Roadway Fine Grading

.01.01 General

These items shall include all costs to complete the right-of-way grading to sub-grade levels with in the road, and with boulevards to 0.1m below final grade as per the contract drawings using on-site materials, existing stockpiled materials and imported fill materials.

For the unit bid price for this item, the Contractor shall:

- Supply, place and compact approved imported fill as required to a depth no greater than 150mm. Compaction to be as per Special provision SP5, Compaction Requirements.
- Fine grade the roads to the proposed subgrade elevations.
- Incorporate the surplus materials from the trench excavations into fill areas as required.
- Proof roll road sub-base prior to the placement of granular materials to the satisfaction of the Geotechnical Consultant.

.01.02 Payment

.01.02.01 Measurement for Payment

Measurement for payment shall be by lump sum.

.01.02.02 Basis of Payment

Payment at the unit price for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP 18.02 - Granular Road Base

.02.01 General

Granular sub-base and base shall be in accordance with OPSS 314 and 1010 as amended by the Construction and Materials Specifications Manual and this special provision.

.02.02 Materials

All granular material shall be supplied from an approved source and shall meet the requirements of OPSS 1010 and the governing municipality.

- Granular A material shall be in accordance with OPSS 314 and 1010
- Granular B - Type II, shall meet the requirements of OPSS 1010 Table 2. Or approved by Geotechnical Engineer

.02.03 Construction

This item shall include all costs to supply, transport place and compact the specified depths of granular material for use under the road and curb.

The granular bases shall be compacted to 100% Standard Proctor Density.

.02.04 Payment

.02.04.01 Measurement for Payment

Measurement for payment shall be by lump sum.

.02.04.02 Basis of Payment

Payment at the unit price for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP 18.03 - Concrete Barrier Curb and Gutter

.03.01 General

Concrete curb shall be in accordance with OPSS 353 as amended by the Construction and Materials Specifications Manual and this special provision.

.03.02 Material

Granular A and Granular B material shall be in accordance with OPSS 314 and 1010. Material shall be supplied from an approved source and shall meet the requirements of OPSS 1010, Form 600 and 900.

Concrete shall be in accordance with the governing municipalities requirements.

Asphalt shall be in accordance with the governing municipalities requirements.

.03.03 Construction

This Item shall include all costs for any required excavation and disposal, grading, shaping and compaction required to construct the proposed curb type where it is not covered by the breakout area of the road and all costs to:

- excavate, remove and dispose of all existing materials including but not limited to granular, asphalt or concrete sidewalks, culverts, curbs, boulevards and driveways.
- supply, re-grade and compact fill where required in accordance with the sections and grades detailed in the Contract drawings.
- supply, grade and compact specified depth of granular bedding beneath curb, per governing municipality standards.
- supply, grade and compact specified depth and width of asphalt over pave for two-stage style curbs.
- supply, grade and compact specified depth and width of asphalt "infill" between curb and binder asphalt when two-stage or temporary curb types are used during initial construction.
- construction of the proposed curb in the locations shown on the drawings, including keyways and extra curb depths when adjacent to a proposed concrete road base and pedestrian crossing ramps per municipal standards.

- construct curb offsets and curb outlets at catch basins as per municipal standards.
- all handwork and forming at any obstructions such as but not limited to; poles or catch basins which cannot be laid by machine.
- OLS verification of concrete curb location post-pour to ensure conformance with the Contract Drawings and site plan layouts. Survey shall be submitted to the Engineer upon receipt for review and approval.

There shall be 225mm offset from face of curb to face of all obstructions in sidewalks.

Where concrete curb is to be constructed or replaced adjacent to a section of roadway that is not to be reconstructed, this item shall include all costs for the supply, placement and compaction of 600mm in width of Granular material.

.03.04 Payment

.03.04.01 Measurement for Payment

Measurement for payment shall be by lump sum. Or as noted below.

Measurement for payment shall be by the horizontal linear metre of barrier curb and gutter constructed, as measured along the face of the curb, as approved by the Engineer.

Measurement for payment of the temporary concrete curb will be 50% of the measured distance at the time of installation. The remaining 50% will be paid upon removal and infill of binder asphalt.

Measurement for payment of the provisional items related to extra width asphalt shall be by the horizontal linear metre of barrier curb and gutter constructed, as measured along the face of the curb, as approved by the Engineer.

Measurement for payment shall be by the horizontal linear metre of various staged curb types have individual line items, as measured along the face of the curb, as approved by the Engineer.

.03.04.02 Basis of Payment

Payment at the unit price for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP 18.04 - Subdrain

.04.01 General

Perforated Polyethylene drain pipe shall be in accordance with OPSS 405 as amended by the Construction and Materials Specifications Manual and this special provision.

.04.02 Materials

A 150mm diameter polyethylene corrugated weeping tile pipe with filter "sock" shall be used.

.04.03 Construction

Pipe shall be placed under curb and roadways and shall be approved by the Project Manager prior to placement. The perforated pipe is to have clear stone encasement as detailed on the Contract drawings

and municipal standards. Installation of sub-drain shall be carried out as a separate operation after the entire road is graded to sub-grade level.

The unit price provided shall include all costs to:

- Supply and install sub-drain parallel to the proposed curb lines. All perforated pipe shall flow toward, and be properly connected to, the nearest convenient catch basin or catch basin drain as directed by the Project Manager.
- All required excavation, supply, placement and connection of the sub-drain including all clear stone encasement and backfill.
- Trimmed flush with catch basin walls

.04.04 Payment

.04.04.01 Measurement for Payment

Measurement for payment shall be by lump sum.

.04.04.02 Basis of Payment

Payment at the unit price for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP 18.05 - Hot Mix Asphalt

This specification covers the supply, placement and compaction of specified asphalt.

.05.01 References

This special provision refers to and is to be read in conjunction with the following standards and specifications as amended:

OPSS 310 (including Appendix C), OPSS 1003, OPSS.MUNI 1101 and OPSS.MUNI 1151.

.05.02 Design Requirements

.05.02.01 Submission Requirements – Marshall Mix Asphalt

A minimum of 4 weeks prior to paving, the following information shall be submitted to the Project Manager, in writing:

- a) The name of the supplier.
- b) The mix design for the specified asphalt.

.05.03 Materials

Aggregates used shall be in accordance with OPSS.MUNI 1003 Material Specification for Aggregates, November 2006 as amended by the following:

.05.04 Construction

The supply and placement of hot mix and warm mix asphalt shall be in accordance with the following:

a) OPSS 310 Construction Specification for Hot Mix Asphalt, latest edition.

.05.04.01 Pre-pave Meeting (Secondary Services)

At least one (1) week prior to any scheduled milling or paving operation to occur, a mandatory pre-pave meeting shall be held. The Contractor shall ensure that all required documentation relating to the milling and paving operations has been submitted for review and approved prior to the meeting. The items shall include, but are not limited to, the following:

- a) approved mix designs and Job Mix Formulas;
- b) proposed milling and paving dates and paving equipment to be used;
- c) asphalt placement and compaction rolling patterns;
- d) roadway, lane closures and vehicle access restrictions;
- e) tack coat scheduling and application patterns.

.05.04.02 Tack Coat

Prior to the application of any of surface coarse asphalt or padding, tack coat shall be applied, and paid for under item the appropriate item.

.05.04.03 Placement of Binder and Surface Course Asphalt

Any type of asphalt having a thickness of 80mm or more shall be placed in a minimum of 2 lifts unless otherwise directed by the Project Manager.

The finished elevation of the surface course asphalt shall be placed so as to be flush with the lower edge of curb at the depressed portion of all wheelchair ramps. The surface course asphalt shall slope down and away from the curb to form a gutter line in front of the wheelchair ramp.

.05.04.03.01 Binder Course Asphalt – Temporary Ramping

When the surface course asphalt is to be delayed or placed the following year, temporary asphalt ramps shall be placed at all wheelchair ramps and driveway approaches. The top of the temporary asphalt ramps shall be placed so as to be flush with the lower edge of curb at the depressed portion of all wheelchair ramps and driveway approaches. The temporary asphalt ramps shall be removed at the time of placement of the surface course asphalt at no additional cost.

.05.04.04 Re-Heating and Compaction of Longitudinal Joints

OPSS 310.07.07 is amended with the addition of the following paragraph:

For surface course, the Contractor shall use an approved method of re-heating, re-working and compacting all centreline longitudinal cold joints. Pricing shall be based on an infra-red heating system capable of maintaining a minimum temperature of 93° C to produce a welded joint, without scorching or burning the mix.

All re-heating methods shall be approved prior to the start of any asphalt placement.

The density of the mix at any longitudinal joint shall be within 1.5 percent of the mainline mat density. Compaction of longitudinal joint shall be measured within 0.3 m from the joint.

.05.04.04.01 Review of Longitudinal Joint Quality

Prior to the expiry of the 24 month maintenance period, all joints in surface course asphalt shall be reviewed. The review will consider weld quality, proper compaction and separation. All joints showing signs of separation or poor welding shall be re-heated and compacted to achieve a welded joint. All repairs to longitudinal joints shall be at the cost of the Contractor.

.05.04.05 Aggregate Gradation and Asphalt Cement Content Acceptance

OPSS 310.08.02 is deleted and replaced by the following:

If the HMA is borderline for aggregate gradation or asphalt cement content specified in Table 7, the Contractor shall take immediate corrective action through process control at the HMA plant. A total of three consecutive borderline test results for any attribute representing up to 1,000 tonnes of HMA production shall result in the work being deemed rejectable and shall be removed and replaced with acceptable HMA.

Rejected HMA due to aggregate gradation, such as non-compliance on the DLS 4.75mm, 600 µm, or 75 µm sieve sizes, or non-compliance due to the asphalt cement content specified in Table 7, shall be removed and replaced with acceptable HMA.

.05.04.06 Asphalt Layer Segregation

All hot mix asphalt shall be inspected for segregation in accordance with the following:

.05.04.06.01 Types of Segregation

Segregation consists of areas with comparatively coarser texture than that of the surrounding pavement. All segregation is deemed to be deficient materials and/or workmanship, regardless of the type, location, cause or severity. The Contractor shall provide traffic control, as required, to conduct all segregation assessments.

Two main types of segregation are recognized:

Mid-lane Segregation: consists of any continuous or semi-continuous longitudinal mark or "streak", typically no greater than 300mm in width. Such segregation is often found in the middle of the lane, in the vicinity of a paver's gearbox, but may be located anywhere across the width of the lane.

Other Segregation: consists of discrete areas or patches of regular, irregular or chevron shape.

.05.04.06.02 Severity of Segregation

The severity of segregation is categorized as follows:

Slight Segregation: The pavement matrix is in place between the coarse aggregate particles; however there are slightly more coarse aggregate particles in comparison with the surrounding acceptable mix.

Medium Segregation: The pavement has significantly more coarse aggregate particles than the surrounding acceptable mat and usually exhibits some lack of surface matrix.

Severe Segregation: The pavement appears very coarse, with coarse aggregate particle against coarse aggregate particle and the pavement has little or no matrix.

.05.04.06.03 Paving Segregation

If the Contractor fails to prevent slight segregation in paving, the Project Manager will issue a written warning and request the Contractor to address the problem. The contractor may be allowed to continue paving at the discretion of the Project Manager. If medium segregation is observed, the paving operation will be stopped. The Contractor shall prove to the satisfaction of the Project Manager that the paving can be continued without any medium segregation.

.05.04.06.04 Correction of Segregation

If the Contractor's actions fail to prevent continued slight to medium segregation from any source, the Project Manager may instruct the Contractor to cease paving until the problem has been corrected and the Developer shall not be held responsible for any additional costs that the Contractor may incur as a result.

From the time that the Contractor receives notification of mid-lane segregation, the Contractor will be allowed a maximum of 100 tonnes of mix to be placed on the Contract, in order to demonstrate the effectiveness of any repairs and/or adjustments that have been made to a defective paver.

The Contractor shall demonstrate the repairs and/or adjustments to the paver, which is acceptable to the Project Manager. If the Contractor is unable to eliminate segregation to the satisfaction of the Project Manager, by making repairs or adjustments to the paver within the allowable 100 tonnes of hot mix, then the Contractor shall discontinue the use of that machine.

.05.04.06.05 Mid-Lane Segregation

Medium to severe mid-lane segregation shall be repaired by removal and replacement at no cost to the Developer or Town. Slight mid-lane segregation will be accepted into the work with no payment reduction.

.05.04.06.06 Other Segregation

The disposition of Other Segregation shall be as follows:

Slight Segregation: Slightly segregated mix will be accepted into the work with no payment reduction.

Medium Segregation: Medium segregation in all HMA lifts shall be repaired at the direction of the Project Manager at no cost to the Developer.

Severe Segregation: All severely segregated mix shall be repaired by removal and replacement at no cost to the Developer.

Levelling or padding courses with a total thickness which is less than that is normally placed in a lift of hot mix (i.e., usually 40mm), that is not machine-laid and any areas of "handwork" shall not be assessed on the basis of segregation but on the basis of other workmanship-related problems. However, if they deteriorate prior to being overlaid by another pavement course, the Project Manager will assess the causes of the deterioration before determining responsibility for the cost of repairs.

.05.04.06.07 Repairs

All repairs shall be subjected to the approval by the Project Manager.

Repairs shall consist of removal and replacement with new hot mix or a hot mix overlay, where permitted.

Repairs for segregated hot mix shall be full lane or shoulder width. However, localized repairs may be permissible for mid-lane segregation in binder courses provided hot joints are used or the mat is still hot.

A paver shall be used for all repairs except those where localized repairs are allowed.

Where localized repairs are allowed for mid-lane segregation in binder courses, these repairs shall be:

- Less than or equal to 300mm in width;
- To the full depth of the subject lift; and
- Entirely tack-coated.

Hot mix used in all repairs shall meet the requirements specified for the tender item in the Contract. All repairs shall be done in a workmanlike manner complying with all requirements for placing hot mix stated in the Contract. All repaired areas must be entirely tack-coated and all transverse joints in surface course repairs must butt up to a vertical face.

For surface and binder courses, all repairs for remedial work due to visually defective mix, including pavement removal and replacement, overlays where permitted, additional shouldering, traffic control and any other work which has to be redone such as line painting shall be made entirely at the Contractor's expense.

.05.05 Payment Adjustment for Changes in the "Asphalt Cement Price Index"

The price index will be based on the price, excluding taxes. One index will be used to establish and calculate the payment adjustment for all grades. The payment adjustment calculated shall be considered full compensation for any and all PGAC grades specified and is independent of any other payment adjustments made to the hot mix tender items.

As of July 2006 the price index for each month will reflect the average of the same month's prices and be published on the last day of the month and be retroactively applied to HMA laid in the same month. Contractors should bid the hot mix asphalt item using the cost of the PGAC specified. The AC Price Index is only a tool for qualifying hot mix prices and is not intended as a standard AC price to be incorporated into the bid.

The Engineer will use the Asphalt Price Index issued the month prior to tender close (**May 2024 – AC Index = \$1,104.00**) to determine the adjustment, if any:

A payment adjustment per tonne of asphalt cement will be established for each month in which paving occurs when the price index for the month differs by more than \$15.00/tonne from the price index for the month prior to tender close.

When the price index differential is less than \$15.00/tonne, there will be no payment adjustment for that month. Only the amount of the change that is greater than \$15.00 is used to calculate payment adjustments.

Adjustments will only be considered on items where the measurement for payment quantity specified in the Schedule of Quantities and Price is by the tonne. The payment adjustment per tonne will apply to the quantity of asphalt cement in the hot mix accepted into the Work during the month for which it is established.

The payment adjustment for each month will be calculated by the following means:

.05.05.01 When AC Prices are Rising by more than a \$15.00/tonne difference:

The payment adjustment to be paid to the Contractor is the result of subtracting the price index in effect when the tender was submitted from the price index in effect when paving took place, minus the \$15.00 float, multiplied by the number of tonnes of PGAC incorporated in the mix(s) as determined from the average of samples taken during paving operations. If the answer is negative, no adjustment is made.

.05.05.02 When AC Prices are Falling by more than \$15.00/tonne difference:

The payment adjustment made in favour of the Owner is the result of subtracting the price index in effect when paving took place, plus \$15.00 from the price index when the tender was submitted, multiplied by the number of tonnes of PGAC incorporated in the mix(s) as determined from the average of samples taken during paving operations.

The quantity of new asphalt cement includes all grades of asphalt cement supplied by the Contractor with and without polymer modifiers. For each month in which a payment adjustment has been established, the quantity will be calculated using the hot mix quantity accepted into the Work and its corresponding asphalt cement content as determined from the average of samples taken during paving operations. For mixes which contain reclaimed asphalt pavement, the increase due the Contractor or the rebate due the owner will be calculated as if virgin hot mix asphalt has been supplied. This fairly reflects the increasing value of the Contractor's RAP pile when AC prices are increasing and the opposite when they are declining.

.05.05.03 Examples of Payment Adjustment Calculations

Example 1 – AC Prices Increasing:

- PGAC 64-28 specified, 3,000 tonnes of SP 9.5 @ 5.2% AC (156.0 tonnes AC)
- The Price index on April 5, 2006 on tender closing is \$332.90(actual)/tonne, PG 58-28
- The applicable Price Index as published on August 31st effective for the August 17th-24th, 2006 actual paving dates is \$475(fictional)/tonne (PG 58-28)
- Payment adjustment to be paid to the Contractor:
- $[(\$475 - \$15) - \$332.90] \times 156 \text{ tonnes AC} = \$19,827.60$

Example 2 – AC Prices Decreasing:

- PGAC 58-28 specified, 4,500 tonnes of SP 19 @ 4.6% AC (207.0 tonnes AC)
- The Price index on July 5, 2006 on tender closing is \$500(fictional)/tonne, PG 58-28
- The applicable Price Index as published on October 31st effective for the October 11th-18th, 2006 actual paving dates is \$470(fictional)/tonne, PG 58-28
- Payment for hot mix items reduced by:
- $[\$500 - (\$470 + \$15)] \times 207 \text{ tonnes AC} = \$3,105.00$

Example 3 – Work Within Subdivision:

- PGAC 64-28 specified, 17,000m² of SP 9.5 placed 40mm thick @ 5.2% AC
- Average MRD of Asphalt is 2.51 and is compacted to 93%
- $17,000\text{m}^2 \times 0.04\text{m} \times 2.51 \times 93\% \times 5.2\% = 82.541 \text{ tonnes of AC}$
- The Price index on April 5, 2006 on tender closing is \$332.90(actual)/tonne, PG 58-28
- The applicable Price Index as published on August 31st effective for the August 17th-24th, 2006 actual paving dates is \$475(fictional)/tonne (PG 58-28)
- Payment adjustment to be paid to the Contractor:
- $[(\$475 - \$15) - \$332.90] \times 82.541 \text{ tonnes AC} = \$10,490.94$

.05.06 Payment

.05.06.01 Measurement for Payment

Measurement for payment shall be by lump sum.

.05.02 Basis of Payment

Payment at the unit price for the above tender item shall include all costs for equipment, labour and materials associated with the design, supply and placement of surface and binder course asphalt including joint heaters and all required QA/QC testing. Payments and the application of any adjustment factors will be made on asphalt quantities confirmed with original weigh tickets.

SP 18.07 - Clean and Sweep Binder Asphalt and Apply Tack Coat

.07.01 General

The cleaning and sweeping of the base course asphalt and the application of tack coat shall be in accordance with OPSS 310 as amended by the Construction and Materials Specification Manual and this special provision. It will be assumed that this item will be used post home construction and the roads will be severely dirty.

.07.02 Construction

This item shall include all costs to clean the roadway and to supply and place the tack coat to the road surface.

.07.02.1 Application of Tack Coat

310.07.03.01 of OPSS 310 is amended by the addition of the following:

Where a curing compound has been applied to the top of a concrete road base, the Contractor shall power wash and sweep the concrete road base surface to remove such compound prior to the application of tack coat.

Areas of tack coat ponding must be rectified/removed immediately upon identification through the use of absorbent and disposed of properly. Costs for removal and replacement of the affected area will be the responsibility of the Contractor with no cost or claim to the Developer or the Municipality.

Where tack coat is tracked onto existing pavement, or onto adjacent streets, the Contractor will be required to clean all fouled pavements daily as directed. The cost of all such cleaning measures shall be borne solely by the Contractor.

.07.03 Payment

.07.03.1 Measurement for Payment

Measurement for payment shall be by lump sum.

.07.03.2 Basis of Payment

Payment at the unit price for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP 18.08 - Adjustments of Maintenance Holes, Catch Basins, and Valve Chambers and Boxes

.08.01 General

This item shall include all costs to adjust the elevations of all catch basins, maintenance holes, and valve chamber frames and covers to match the surface elevation of the proposed road.

Frames and covers requiring a change in elevation up to and including 300mm shall be considered an adjustment under this item.

.08.02 Materials

All concrete for permanent adjustment shall be 32 MPa and in accordance with OPSS 1350 and Form 700 with polypropylene fibres reinforcement Fibermesh 300 or approved equivalent; fibre reinforcement to be applied per the manufacturer's specifications. Concrete placed to finished grade shall be a heavy broom finish.

.08.03 Construction

This item shall include all costs to adjust the elevations of all existing catch basins, maintenance holes, and valve chamber frames and covers to match the final surface elevation of the proposed road. The Contractor shall ensure all structures are adjusted to the proposed elevations prior to placement of surface asphalt. Paving over, saw-cutting and exposure of structures post-surface asphalt is strictly prohibited.

All forming, removal and disposal of forms and all debris shall be included.

Removal and disposal of the existing adjustment, removal and re-installation of existing frames and covers or the installation new frames and covers to finished grade. The supply of new frames and covers shall be paid under a separate item.

.08.03.01 Adjustment of Maintenance Hole, Catch Basin – Standard Method

Maintenance hole, catch basin and valve chamber adjustments by standard method shall be done using one continuous pour of 32MPa concrete extending from underside of the frame and cover to 150mm below the top of the chamber on the outside. The minimum horizontal concrete thickness shall be 150mm. Paving over, saw-cutting and exposure of structures post-surface asphalt is strictly prohibited.

.08.03.02 Valve Box Adjustments – Standard Method

The Contractor shall adjust all valve boxes as required under this contract. Where surface course asphalt is postponed to the following year, the Contractor shall re-adjust all valve boxes in accordance with the approved work schedule. There will be no separate payment for the adjustment of valve boxes. Paving over, saw-cutting and exposure of structures post-surface asphalt is strictly prohibited.

.08.03.03 Valve Chamber Adjustments – Standard Method

Valve chambers shall have a poured in place, 32MPa (high-early strength mix) concrete pad one continuously poured around the extents of the roof structure, extending from the top of the structure to the surface. Paving over, saw-cutting and exposure of structures post-surface asphalt is strictly prohibited.

.08.03.04 Postponement of Surface Asphalt

When surface course asphalt is scheduled to be placed the following year, adjustments will prior to surface asphalt being placed.

.08.04 Payment

.08.04.01 Measurement for Payment

Measurement for payment shall be by lump sum.

.08.04.02 Basis of Payment

Payment at the unit price for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP 18.09 - Construct Concrete Sidewalk - Various Widths

.09.01 General

Concrete sidewalks shall be in accordance with OPSS 351, 353 and Municipal standards, as amended by the Construction and Materials Specifications Manual and this special provision. The Contractor assumes full responsibility for security and/or protection of concrete until the curing process has concluded, and shall not claim for compensation due to graffiti and/or damage incurred during the curing process.

.09.02 Materials

Granular A material shall be in accordance with OPSS 314 and 1010. Material shall be supplied from an approved source and shall meet the requirements of OPSS 1010, and Municipal standards.

Concrete for sidewalks shall be in accordance with Municipal standards.

.09.03 Construction

This Item shall include all costs for any required excavation and disposal, grading, shaping and compaction required to construct the proposed sidewalk where it is not covered by the breakout area of the road and all costs to:

- excavate, remove and dispose of all existing materials including but not limited to granular, asphalt or concrete sidewalks, culverts, curbs, boulevards and driveways
- supply, re-grade and compact fill where required in accordance with the sections and grades detailed in the Contract drawings
- supply and place the specified granular material and concrete
- construct the proposed sidewalk, wheelchair ramps with integrated accessibility features at wheelchair ramps (directional lines and tactile/tonal stamped concrete surfaces) as shown on the Contract drawings and municipal standard drawings, including all grading, shaping, compaction, granular and concrete materials.
- placement of expansion joint material without dummy joint tool forming.
- saw cutting of contraction joints without dummy joint tool forming for sidewalks
- there shall be a 225mm dimension for face of curb to face of all obstructions in sidewalks. When utility poles are encountered in the sidewalk, expansions joints are to be provided and are to be included in the prices of the sidewalk.

.09.03.01 Sidewalk Joints

Expansion joint material shall be placed at all construction joints, where sidewalk changes in direction and where new sidewalk abuts any rigid surfaces.

Expansion joints shall be perpendicular to the longitudinal sidewalk edge.
Contraction joints shall be wet saw-cut, without dummy joint tool forming. Cuts shall be 40mm deep at 1.5m spacing, perpendicular to the longitudinal edge of the sidewalk.

Contraction joints shall be cut as soon as possible once the concrete has hardened sufficiently to permit sawing and no later than 24 hours after the pouring of concrete in order to prevent cracking.

Concrete saw cuts lines in the sidewalk should match the cuts in concrete curbs where possible.

The Contractor shall take the appropriate measures and provide such protection to minimize the escape of dust such that no visible dust reaches the residences or property outside the right-of-way limits.

.09.03.02 California Approaches

Unless otherwise noted, this item shall include all costs to construct California Type Concrete Approaches as per municipal standard drawings.

.09.03.03 Wheelchair Ramps with Integrated Accessibility Features

All wheelchair ramps shall be constructed as shown on municipal standard drawings.

Directional lines and Tactile/Tonal Stamped Concrete surfaces (for use by the visually impaired) shall only be constructed at protected intersections.

Directional lines are to be regular dummy joints using an edging tool having a 15mm radius. The concrete shall be broom finished.

All cost for the construction of wheelchair ramps and integrated accessibility features are to be included in the unit price bid for concrete sidewalk construction.

.09.03.04 Construct Community Mail Box Pad

This item shall include all costs to excavate and dispose of the existing material where required, supply and place granular material and concrete at the locations specified on the Contract drawings. The Contractor will supply all concrete, granular material required to construct the mail box pad as per Canada Post specifications.

.09.04 Payment

.09.04.01 Measurement for Payment

Measurement for payment shall be lump sum.

.09.04.02 Basis of Payment

Payment at the unit price for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP 18.10 - Pavement Markings

10.01 General

The Contractor shall supply pavement markings in accordance with OPSS 710, 1712, 1713, 1714, 1716, the Manual of Uniform Traffic Control Devices and this special provision.

10.02 Material

Water-Borne Traffic Paint (OPSS 1716) shall be used between May 1 and October 15 where the pavement temperature is 10° C and above. Paint temperature shall be between 40° and 70° C.

Organic Solvent Based Traffic Paint (OPSS 1712) shall be used where the pavement surface temperature is below 10° C.

Durable pavement markings (OPSS 1713 and 1714) shall be used for:

- (1) all directional arrow symbols,
- (2) all 1-1 lane skips,
- (3) all railway crossings including crossing symbol and associated stop bars,
- (4) all standard cross-walks,
- (5) all stop bars,
- (6) ladder style pedestrian cross-walks including bars and outside lines,
- (7) all bicycle facility symbols and longitudinal lines, bicycle lane symbols, shared use lane symbols, diamond symbols, buffer hatching, coloured longitudinal lines, coloured areas (example: bike boxes), all cross ride markings including elephant's feet, arrows, pedestrian and bike symbols),
- (8) all wording (example: 'ENDS' or 'BUS ONLY'),
- (9) bicycle loop detection symbols,
- (10) 'Yield to Pedestrian' lines (i.e shark teeth),
- (11) reserved lane diamonds.

10.03 Equipment

The paint and glass beads shall be applied with a self-propelled lane line marking machine(s). The unit(s) shall be capable of producing high quality markings with true edges free from variation. The unit shall be capable of spraying at the full force required as soon as it is turned on and to remain at constant pressure to produce a uniform shade. The pressurized application of drop-on glass beads will take place simultaneously and shall be uniformly applied.

The loading of paint into the unit shall take place on the property of the Contractor only. Where the loading or re-loading of paint is required on-site, it shall be done in a location and method that ensures that no paint can be spilled onto adjacent properties or enter any ditches or sewer systems. Contractor to ensure that a method of spill control is available at all times.

10.04 Construction

This item shall include all costs to supply and apply all required pavement markings and the reflectorizing drop-on glass beads.

Pavement markings shall include all lines and symbols including centre, edge, lane, other transverse lines, hatching, stop bars, crosswalks, arrows and any other markings that may be required or shown on the pavement marking drawings.

All paint lines and markings shall consist of 2 coats of White or Yellow colour, drop-on glass beads. Pavement markings to be in accordance with the Ontario Traffic Manual, unless directed otherwise. All durable marking applications will include 1 coat, unless otherwise directed.

All roadways shall be pre-marked and painted as soon possible, weather permitting, after paving operations are complete. Prior to the placement of any pavement markings, the Contractor shall pre-mark

the entire limits of the project as required. All pre-marking shall be in accordance with the paving marking drawings provided and approved by the Project Manager prior to the placement of any pavement markings.

10.04.01 Quality Control - Paint and Glass Beads

All traffic paint and drop-on glass beads shall conform to OPSS 1712, 1716, 1750 and the following:

All layout and line painting accuracy is to be +/- 0.1 metre and shall be conducted using automated line layout to achieve accurate spacing and length of the lines.

All traffic paint and beads supplied by the Contractor shall meet the Ministry of Transportation of Ontario (MTO) Designated Sources of Material Lists DSM# 5.85.40.

The Contractor shall provide a letter of compliance to the Project Manager prior to the start of any painting operations the manufacturer of the paint to confirm that the product meets the specification for traffic paint OPSS 1712, 1716 and specification for glass beads OPSS 1750.

The Contractor shall be responsible for providing the City with the following information regarding the paint and glass beads proposed for use:

- Name of Manufacturer
- Manufacturer's batch number
- MTO approval number

The Contractor, where requested, shall provide a sample of the paint of beads being applied. The Contractor will comply immediately with this request and supply a minimum of 1 litre of paint or 0.5 kg of beads.

In the event that any of the paint or glass beads used fails to meet the specifications, the Contractor shall be responsible for the total cost to repaint those sections where the non-specified paint and glass beads from the same batch were applied.

10.04.02 Paint Thickness

Paint application shall produce a wet paint thickness of 15 Mils to 20 Mils and a dry thickness of 8 Mils to 10 Mils. The contractor will permit regular measurement of paint thickness by City staff. When requested, the Contractor shall discontinue application of beads momentarily to allow the sampling of paint thickness.

In the event that the thickness of the paint fails to meet the specifications, the Contractor shall be responsible for the total cost to repaint all areas painted from the last test to the time of testing on that day's painting.

10.04.03 Bead Application

All painted lines shall have glass beads applied. The rate of glass beads is to be 0.7 kg. per litre of paint applied. Beads must be applied such that the beads are evenly distributed and cover at least 80% of the width of the line. In the event that the quantity or distribution of the glass beads fails to meet the specifications, the Contractor shall be responsible for the total cost to repaint those sections of the roads where the beads were improperly applied.

Beads are to be applied immediately after the paint. Beads are to be applied to the paint using a pressurized application for all longitudinal lines. Gravity application of beads will only be accepted for transverse hatching, arrow and symbol paint. The use of premix beads will not be accepted.

10.04.04 Painted Line Dimensions

Standard lane, edge and centre lines, as well as crosswalk and hatching lines, are to be 100mm minimum to 115mm maximum in width. Lines narrower than 100mm will be repainted by the Contractor.

Lines wider than 115mm will be removed in accordance with the section entitled "Errors, Tracking and Corrections" and repainted. with the Contractor responsible for the total cost to repaint those sections of the road.

Where double width lines are required, all standards in the above paragraph shall be doubled. Spacing between the lines shall be 110mm, plus/minus 10mm.

The edge of the painted line shall be clean and straight. In the event the line edge quality deteriorates, the Contractor may be asked to cease application and make necessary repairs to restore the line edge quality.

Lane dividing lines are typically 3m painted, with a 6m space. Some special markings are 3m painted and 3m space or 1m painted, 1m space. The nominal 3m skips shall be 3.05m plus/minus 0.05m. Skips shorter than 3.00 m will be repainted by the Contractor, with the Contractor responsible for the total cost to repaint those sections of the road.

Spacing shall be 6.10m plus/minus 0.10, Spaces greater than 6.10 m will be repainted by the Contractor, with the Contractor responsible for the total cost to repaint those sections of the road, unless this was an existing pattern. Payment is based on a standard 3.05 skip, and no extra charges will be entertained for skips longer than 3.05m.

Stop bars are to be nominal 300mm. Stop bars narrower than 270mm will be repainted by the Contractor, with the Contractor responsible for the total cost to repaint those sections of the road. Payment is based on 3 standard 100mm lines for 300mm stop bars and 6 standard lines for 600mm stop bars. For 600mm stop bars, minimum width is 560mm.

Arrows are to be as per the Ontario Traffic Manual Book 11, figure 53. Beads are required on arrows. 80% bead coverage is the minimum acceptable. Improperly painted arrows will be repainted by the Contractor, with the Contractor responsible for the total cost to repaint those arrows.

10.04.05 Errors and Tracking

The Contractor shall be responsible for the corrections of any errors or tracking. All errors and tracking must be permanently corrected (removal of error and repainting of line) within two business days. All corrections must be by means of soda blasting or sand blasting. A rotary grinder shall not be used. The use of black-out paint or stripalene as a method of correction will not be permitted. All debris from any form of removal must be properly removed and disposed of in accordance with the Ministry of the Environment regulations.

10.05 Payment

10.05.01 Measurement for Payment

Measurement for payment shall be based on a lump sum.

10.05.02 Basis of Payment

Payment at the unit price for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP 20.01 - Flush and Clean Out Storm and Sanitary System01.01 General

This item is a provisional item and will be used only as directed by the Engineer and to the extent as determined by the Engineer for cleaning prior to the final take over by the Municipality.

.01.02 Payment

.01.02.01 Measurement of Payment

Payment for this item will be the total length of sewer to be flushed and cleaned as directed by the Engineer and will include the distances through manholes and catchbasin leads.

.01.02.02 Basis of Payment

The price bid for this item will include the supply of all labour and equipment to flush and clean out sections of the storm and sanitary sewers and manholes.

It should be noted that the clean out of the sewer systems immediately following installation and prior to the TV inspection shall be at the Contractor's expense.

SP 20.02 - Vacuum Catchbasins.02.01 General

This item will be used only as directed by the Engineer and to the extent as determined by the Engineer for cleaning out catchbasins prior to the final take over by the Municipality.

.02.02 Payment

.02.02.01 Measurement of Payment

Measurement for payment for shall be per unit vacuumed.

.02.02.02 Basis of Payment

The price bid for this item shall include the supply of labour and equipment to vacuum out the catchbasins regardless of the number required and dispose of all debris off the site.

It should be noted that the clean out of catchbasins immediately following installations and prior to the start of maintenance would be at the Contractor's expense.

SP 20.03 - Remove and Replace Concrete Curb and Gutter, and Remove and Replace Concrete Sidewalk

.03.01 General

These items are provisional items and will be used only to remove and replace curbs, sidewalks damaged by others as directed by the Engineer and to the extent as determined by the Engineer.

.03.01.01 Allocation of Responsibility

The Engineer will be responsible to associate the cause and responsibility of the damage to the curb or sidewalk, and attribute costs accordingly to the responsible parties.

.03.02 Payment

.03.02.01 Measurement of Payment

Measurement for payment for shall be per metre of curb or square metre of sidewalk removed and replaced.

.03.02.02 Basis of Payment

The prices bid for these items shall include saw cutting, removal and disposal of all the existing concrete and replacement of the concrete in accordance with the Standard Drawings and Specifications.

SP 20.04 - Remove and Replace Base Asphalt

.04.01 General

This item is a provisional item and will be used only to remove and replace base course asphalt damaged by others as directed by the Engineer and to the extent as determined by the Engineer.

.04.01.01 Allocation of Responsibility

The Engineer and Soils Consultant will be responsible to associate the cause and responsibility of the damage to the base course, and attribute costs accordingly to the responsible parties.

.04.02 Payment

.04.02.01 Measurement of Payment

Measurement for payment for shall be per metre of curb or square metre of base course asphalt removed and replaced.

.04.02.02 Basis of Payment

The prices bid for these items shall include saw cutting, removal and disposal of all the existing asphalt and replacement of the asphalt in accordance with the Standard Drawings and Specifications.

SP 20.05 - Mill Base Asphalt (various depths)

.05.01 General

This item is a provisional item and will be used only to mill base course asphalt damaged by others as directed by the Engineer and to the extent as determined by the Engineer.

.05.02 Payment

.05.02.01 Measurement of Payment

Measurement for payment for shall be per hour of milling machine operation on site. Price for this item shall include disposal of asphalt millings.

.05.02.02 Basis of Payment

The prices bid for these items shall include milling, sweeping, removal and disposal of all the existing asphalt and replacement of the asphalt in accordance with the Standard Drawings and Specifications.

SP 20.09 - Sub-excavation of Unsuitable Material and Replacement with Specified Materials

.09.01 General

This item is a provisional item and will be used only as directed by the Engineer to sub-excavate unsuitable material in the subgrade as determined by the Geotechnical Consultant.

Excavated material shall be deposited on site at locations as directed by the Engineer. The sub-excavated area shall be backfilled with Granular 'B' material compacted to 98% Standard Proctor Density. Dependent on the location of sub-excavation, the area may also be backfilled with approved engineered fill material, compacted to 100% Standard Proctor Density as directed by the Geotechnical Consultant.

.09.02 Payment

.09.02.01 Measurement of Payment

The measurement for payment of this item shall be by the cubic meter based on the recommended depth of excavation by the Geotechnical Consultant and the area excavated

.09.02.02 Basis of Payment

The price bid for this item shall include all labour, material and equipment to excavate any deficient subgrade areas as directed by the Engineer.

The price bid for this item shall include the supply and installation of the Granular 'B' material.

Excavated material shall be deposited on site at locations as directed by the Engineer. The sub-excavated area shall be backfilled with Granular 'B' material compacted to 95% Standard Proctor Density.

SP 20.10 - 20mm Clear Stone Trench-Support

.10.01 General

This item is a provisional item and will be used only as directed by the Engineer to supply and place 20mm clear stone trench support in the bottom of the trench.

.10.02 Payment

.10.02.01 Measurement of Payment

The measurement for payment of this item shall be by the tonne.

.10.02.02 Basis of Payment

For the unit price per tonne for this item, the Contractor shall supply all labour, materials and equipment to install the 20mm clear stone trench support.

SP 20.12 - Contingency Allowances

.12.01 General

This item is a contingency allowance and will be used only as directed by the Engineer.

.12.02 Payment

.12.02.01 Basis of Payment

The payment of this item shall equate to the value of the works required. If the Contractor is expecting to exceed this set value the Contractor must provide written warning to the Engineer and receive approval prior to exceeding the value set by the item.

SP 20.13 - Dust Suppression

.13.01 General

This item is a provisional item and will be used only as directed by the Engineer to supply and place water as a dust control measure.

.13.02 Payment

.13.02.01 Measurement of Payment

The measurement for payment of this item shall be by the kilogram. The Contractor is to provide the Contract Administrators representative on site with daily tickets of water usage.

.13.02.02 Basis of Payment

For the unit price per kilogram for this item, the Contractor shall supply all labour, materials and equipment to place the water for dust suppression.