



ST. CLAIR CATHOLIC
DISTRICT SCHOOL BOARD

Lighting the Way ~ Rejoicing in Our Journey

REQUEST FOR TENDER: 636-CP2002

Parking Lot Resurfacing

St. Joseph Catholic School

43 St. Clair Street, Tilbury, ON N0P 2L0

Submission Deadline and Location:

Thursday, June 4, 2020

4:00:00 PM Local Time

Submission Via Email

ISSUED: May 15, 2020

Specifications for Architectural

St Clair Catholic District School Board

ST JOSEPH CATHOLIC SCHOOL
ASPHALT RESURFACING
43 ST. CLAIR STREET
TILBURY, ON N0P 2L0

PROJECT # 2044

May 14, 2020

Architect:

Architectura Inc.
180 Eugenie Street West
Windsor, ON N8X 2X6
Ph. (519) 258-1390

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Part 1: INTRODUCTION

1.1. **INTRODUCTION**

The St. Clair Catholic District School Board (hereafter referred to as the “SCCDSB” or the “Board”) invites interested parties to submit sealed submissions in response to this Request for Tender (“RFT”) document. The SCCDSB currently operates 25 elementary schools, 2 secondary schools, and an administrative office within the regions of Sarnia-Lambton and Chatham-Kent.

1.2. **PURPOSE**

The purpose of this RFT document is to provide interested parties with sufficient information to enable them to prepare and submit bids for consideration by the SCCDSB for the Scope of Work provided, subject to the terms and conditions described herein.

1.3. **INTERPRETATION AND DEFINITIONS**

The following words are used throughout the bid document and proponents should note these conditions when completing their RFT submission.

“ADDENDUM” means a written instruction and/or clarification issued to the RFT Document. The term addenda is to mean the same as Addendum.

“AGREEMENT” or “CONTRACT” means the final document including, but not limited to, the terms and conditions of this document.

“APPLICABLE LAW” and “APPLICABLE LAWS” means any common law requirement and all applicable and enforceable statutes, regulations, directives, policies, administrative interpretations, orders, by laws, rules, guidelines, approvals and other legal requirements of any government and/or regulatory authority in effect from time to time.

“BID IRREGULARITY” means a deviation between the requirements (terms, conditions, specifications, special instructions) of a bid response for the purposes of this bid; bid irregularities are further classified as major irregularities or minor irregularities. The classification of what is a major irregularity or a minor irregularity shall be the sole discretion of the SCCDSB.

“BID SUBMISSION” or “SUBMISSION” means all of the documentation and information submitted by a Proponent in response to this request.

“CONFLICT OF INTEREST” means any situation or circumstance where, in relation to performance of obligations under the RFT, the Proponent’s other commitments, relationships, or financial interests could result in a real, perceived, or potential unfair advantage to the Proponent.

“CONTRACTOR” means an entity that submits a bid in response to this tender document, as the context may suggest, refers to a potential Contractor.

“INFORMAL” shall mean bid submissions will be eliminated from further evaluation if the submission does not include the required information.

“MUST” shall mean proponents “must” include the required information in the bid submission. Failure to include the required information will deem the submission informal.

“PROPONENT” means an entity that submits a bid in response to this tender document, as the context may suggest, refers to a potential Proponent.

“SHOULD” shall mean proponents “should” include the required information in the bid submission.

“SUBCONTRACTOR” means the subcontractor and/or business who contracts to provide some service or material necessary for the performance of another’s contract.

[End of Part 1]

PART 2: RFT PROCESS, INSTRUCTIONS, TERMS & CONDITIONS

2.1. **RFT SCHEDULE**

For the purposes of this RFT, the Board has established the following timing deadlines for the completion of the RFT process.

Event	Date & Time
Issue Date:	Friday, May 15, 2020
Site Visit:	Refer to section 2.8 Examination of Site & Site Visit
Question Deadline:	Wednesday, May 27 @ 4:00 PM
Responses to Questions Received:	Friday, May 29, 2020
Closing Date and Time:	Thursday June 4, 2020 @ 4:00:00 PM

2.2. **RFT CONTACT**

Tony Prizio, Supervisor – Procurement
St. Clair Catholic District School Board
420 Creek Street, Wallaceburg, ON
P: (519) 627-6762 x10256
E: tony.prizio@st-clair.net

2.3. **DOCUMENT AVAILABILITY**

RFT documents are available on the Board’s Website www.st-clair.net under Bid Opportunities or on Biddingo www.biddingo.com. Documents will also be provided to local construction associations: Sarnia Construction Association, Windsor Construction Association, Lambton Area Builders Exchange and the London & District Construction Association.

The Board assumes no responsibility for the proponent’s failure to examine all of the RFT Documents.

2.4. **ACCEPTANCE OF TERMS**

The submission of a bid by a Proponent represents that the Proponent has read and completely understands, and accepts all provisions contained within this RFT. Any bid that has alternative terms and conditions to those contained herewith may be considered a counteroffer to the Board’s request and may be rejected.

2.5. **AGREEMENT TO ABIDE BY ESTABLISHED PROCESS**

It is vital to the Board that the process leading the acceptance of a submission(s) be open and fair and that each Bidder be treated equally. No Bidder can be seen to be deriving, intentionally or otherwise, and advantage or information, which is not equally available to all other Bidders. Nor is it acceptable that any advantage or information sought or obtained from any unauthorized staff and representatives of the Board or any benefit is derived from any special or personal relationships or contacts.

The following rules must be observed to protect the integrity of the competitive procurement process:

- All communications, including requests for information, must be between only the Representative of the Board and each Bidder who have been authorized and designated for that particular purpose.
- Apart from the communications between and among the designated representatives, there must be no communication between any other Board staff and any other representatives of the Bidder, and no giving of information with respect to the competitive procurement process and the final contract.
- Any attempt on the part of the Bidder, or any of its Employees, Agents, Vendors, or Representatives to contact any person(s) other than the designated SCCDSB representative(s) with respect to the competitive procurement process or any violation of the above requirements will be grounds for disqualification. The Board may, at its discretion, in addition to any other rights or remedies available at law, reject any potential or actual submission submitted by that Bidder.

Bidders accepts and agrees to observe the conditions listed herein, inform their staff thereof, and ensure their compliance by submitting an executed Bid Submission in response to this RFT.

2.6. SCOPE OF WORK

The St. Clair Catholic District School Board (Board) is seeking a Contractor to provide all of the necessary materials, equipment and labour to complete **Parking Lot Resurfacing at St. Joseph Catholic School, in Tilbury, ON**. Please refer to Appendix C: Specifications and Drawings.

2.7. CONTRACT PRICING

Proponents must complete the Bid Form. Prices must include all travel, reimbursements, delivery (FOB Destination).

All charges must include the cost of the product or service. Prices quoted must be for products or services exactly as specified, unless otherwise noted or requested on the Bid Form.

2.8. EXAMINATION OF SITE & SITE VISIT

Location: St. Joseph Catholic School, 43 St Clair Street, Tilbury, ON N0P 2L0

Contact: Paul Lernout, Cell # 519-360-6262

Instructions: Due to the COVID-19 Pandemic, no official site meeting has been scheduled. Interested bidders should visit the site individually while upholding the guidelines set out by provincial and local public health authorities. All questions must be submitted in writing in accordance with section 2.12 Questions and Requests for Clarification.

In submitting a bid, bidders agree that they have familiarized themselves with the site conditions, have carefully examined the drawings and have included in the bid price the complete cost of the work contemplated by the drawings and specifications and other bid documents.

2.9. TIMING OF PROJECT

The schedule for the completion of the project is:

- Commencement immediately after award
- Completion no later than August 21, 2020

Work is to be completed during regular business hours. Working outside of school hours, including daytime access during weekends, holidays, March break, etc. shall be at the sole discretion of the SCCDSB's Project Manager.

It is the Board's intent to adhere to the schedule as set out in this tender documents. The successful bidder should make all reasonable efforts to attain the schedule as set out; however, due to limitations relating to Covid-19, the Board will work with the successful bidder on a revised schedule that is both reasonable and fair to both parties, including but not restricted to, changing the completion date that accommodates both parties.

2.10. COORDINATION WITH OCCUPANTS

The Owner will not occupy site of the construction during entire construction period. However, due to the COVID-19 pandemic and the Ministry of Education direction, that could change, and the end of the school year may be happening within the timing of project (section 2.9). The characteristics of the project allow accommodating the coordination with the occupants if the Owner is to occupy the building. The school board coordinator for this project will ensure all parties are informed about the areas to be occupied by the contractor, as well as access/exit routes.

The childcare provider (Tilbury Tots) may occupy a portion of the building and parking lot. All services to the childcare must be maintained for the duration of the project. The contractor will be completely responsible for the portion of the site under construction during the length of the contract period until turned back over to the Owner. The contractor is to cooperate with the childcare operator during construction operations to minimize conflicts and facilitate childcare operator usage. Perform the work so as not to interfere with childcare operator's day-to-day operations. Maintain existing exits unless otherwise indicated.

- Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner, childcare operator, and approval of authorities having jurisdiction.
- Notify Owner and Childcare operator not less than 48 hours in advance of activities that will affect Childcare Operator operations.

2.11. BID SUBMISSION

As a result of the COVID-19 Pandemic, the Board has suspending in-person and hard copy submissions.

Bids shall be submitted with the project clearly identified in the subject line of an email:

RFT # 636-CP2002 Bid Submission – COMPANY NAME

The Bid Submission and any supplementary documentation must be returned to:

Purchasing Department: purchasing@st-clair.net

Bids MUST be received no later than the date and time specified in this RFT document. Any bid submissions received after the deadline will be rejected. It is the Bidder's responsibility to ensure their Bid Submission is received by a Board representative on or before the submission deadline.

Bidders are cautioned that the timing of their Bid Submissions is based on when the Bid is RECEIVED by the Board's Server not when a bid is submitted, as email transmissions can be delayed in an "Internet Traffic Jam" due to file transfer size, transmission speed, etc.

Bidders should submit all requested information in one email with multiple attachments. In the event that the size of the bid results in a large submission, responsibility is with the bidder to send the bid in multiple emails to ensure receipt by the Board, advising the Board as to the number of emails being submitted. The Purchasing department will reply to an email submission simply stating that that bid has been received.

For the above reasons, it is recommended that you give yourself sufficient time to complete your Bid Submission and to resolve any issues that may arise.

Bids shall be filled out in ink or typed, signed in longhand by a duly authorized company official (having authority to bind). Failure to provide all of the requested information on the Bid Form may result in disqualification of the bid. Please refer to Appendix A: Bidder's Response Guide provided in these bid documents.

Bids submitted by hardcopy, telephone, or fax will not be accepted.

After bid closing all submissions will be reviewed by the Board's evaluation team. Bid will not be opened publicly. Bids are considered unofficial until reviewed and deemed formal by the evaluation team.

Supplier's Bid Submission, all Bid Documents and CCDC 2-2008 Stipulated Price Contract will form the agreement.

2.12. QUESTIONS AND REQUESTS FOR CLARIFICATION

Proponents finding discrepancies, ambiguities or omissions in the RFT documents or having doubt as to the meaning or intent thereof, shall immediately notify the Procurement Department in writing. Verbal verification shall not be interpreted to change the intent or contents of the tender. Questions must be received in writing by the date and time specified in the RFT Document. Responses will be provided in writing for the benefit of all Proponents in the same manner the original RFT documents were issued. The Board reserves the right to edit questions for clarity, exclude questions that are unclear, or answer similar questions from various Proponents only once.

All questions to be addressed in writing to: Purchasing Department
E-mail: purchasing@st-clair.net

For the purpose of this RFT, Proponents shall not contact anyone in the Board other than the designated contact listed in these bid documents. Any unauthorized communications may result in disqualification.

The Board is not responsible for any misunderstanding of the RFT on the part of a Proponent. It is the responsibility of the Proponent to seek clarification on any matter it considers to be unclear. Proponents shall not, after the submission of a Bid, claim that there was any misunderstanding or claim there were discrepancies, ambiguities, or omissions with respect to the Bid Documents. Nor shall a Proponents claim that the Purchaser is responsible for any of the circumstances listed above.

2.13. ADDENDA

Proponents may also, during the RFT Process, be advised by Addendum of any additions, deletions or alterations to RFT documents. All such Addenda shall become part of the RFT Documents.

If an addendum is issued, the document(s) will be made available to Proponents through the same platform that the original RFT documents were issued. Proponents are responsible for verifying before submitting its response that it has received all addenda that may have been issued.

Where a Bid Submission has been received by the Board prior to the publication of an Addendum or notice, the Board shall allow that Proponent to submit a revised Bid Submission prior to the closing date for the RFT or send written acknowledgement (which may be by email) to the RFT contact that the original Bid Submission still stands.

2.14. WITHDRAWAL OR AMENDMENT OF SUBMISSION

A Proponent may alter, amend, or withdraw a submitted proposal if such request is received in writing by the contact person for this RFT prior to the closing date and time specified in this document. The last submission shall supersede and invalidate all previous submission by that Proponent as it applies to this bid. Such requests received after the closing date and time will not be permitted. It is solely the Proponent's responsibility to ensure their bid is resubmitted no later than the bid submission deadline

2.15. BID ACCEPTANCE

It shall be understood by all proponents, that the RFT submission shall be valid and subject to acceptance by the Board, and that no adjustments shall be made to the proposal for a period of up to and including sixty (60) days from the RFT Closing Date.

The Board reserves the right to determine the successful proponent at its sole discretion. The lowest cost may not be accepted. The Board reserves the right to decline any or all submissions, in whole or in part, at any time prior to making an award. The Board may accept or reject a Bid if only one (1) bid is received.

The successful proponent shall be required to enter into a formal contract with the Board, which will include the terms and conditions of the RFT documents, the Proponent's bid, and all other applicable documents.

2.16. CANCELLATION

The Board may cancel this RFT at its discretion at any time prior to an award. The Board may do so if:

- The Board determines it would be in the best interest of the Board not to award an Agreement
- The Bid prices exceed the bid prices received by the Board for services acquired of a similar nature and previously done work
- The Bid prices exceed the costs the Board would incur by doing the work, or most of the work, with its own resources
- The Bid prices exceed the funds available
- The funding for the acquisition of the proposed Goods or Services has been revoked, modified, or not approved.

Where the Board cancels this RFT, the Board may do so without providing reasons and may issue a new request for tender, request for qualifications, sole source, or do nothing.

2.17. CLARIFICATION

The Board reserves the right to seek clarification from any Proponents without being obligated to all Proponents if it finds certain aspects of a bid unclear. The Purchaser shall not be obliged to seek clarification of any aspect of any Bid.

Any clarification sought shall not be an opportunity for the Proponent to either correct errors or to change its Bid in any substantive manner.

2.18. BOARD'S RIGHT TO WAIVE MINOR IRREGULARITY

The Board reserves the right to accept or waive a minor irregularity, or where practical to do so, the Board may as a condition of bid acceptance request a Proponent to correct a minor irregularity with no change in bid price. Items of non-compliance on any bid submissions which do not strictly comply with the provisions, procedures and requirements of this bid, or are incomplete, ambiguous, or which contain errors, alterations, misleading information, omissions, or irregularities of any kind, may be rejected and disqualified at the discretion of the Board. All proponents agree to provide all such additional information as, and when requested, at their own expense, provided no proponent in supplying any such information shall be allowed, in any way to change the pricing or other cost quotations originally given in its bid submission or in any way materially alter or add to the solution originally proposed.

2.19. ERRORS AND OMISSIONS

The Board will not be held liable for any errors or omissions in any part of the RFT. While the Board has used considerable effort to ensure an accurate representation in the RFT, the information contained in the RFT is supplied solely as a guideline for the Proponents. The information is not guaranteed or warranted to be accurate by the Board, nor is it necessarily comprehensive or exhaustive.

2.20. PROPONENT EXPENSES

Any and all costs and expenses incurred by Proponents in the development, preparation, submission or presentation of their bids, or otherwise related to its participation in this RFT process will be borne by the Proponents. The selection of any bid, or the rejection of any or all bids, or the termination/cancellation of this RFT process, or initiation of a new RFT process shall not render the Board liable to pay or reimburse any such costs or damages incurred by any Proponent, or any partner or contractor of such Proponents.

2.21. VOLUNTARY ALTERNATE & SEPARATE PRICES

The bid amounts are to be based on the bid documents. Where there is any conflict within the bid documents, the bid amount shall include the higher cost alternative. Alternative proposals are encouraged and should be clearly identified in the bid. Submit complete information including any impact on schedule to allow a full evaluation of the proposal including, as applicable, any particulars in which the alternate proposal is at variance with or unable to meet the specifications. Note also any impact on other trades if the alternative is accepted. Alternative proposals may be made without limitation, including for items specified as single sourced. The Board in its sole and unfettered discretion reserves the right to accept or reject alternatives.

2.22. BID INELIGIBILITY

Bids may, at the discretion of the Owner, be declared informal for any of the following reasons:

- the Bid is incomplete, unsigned, improperly signed or sealed, conditional, illegible, obscure, contains arithmetical errors, erasures, alterations, or irregularities of any kind, or
- the Bid does not include the required bonding/ consent of surety
- the Bid Forms and enclosures are improperly prepared, or
- the prices seem to be so unbalanced as to adversely affect the interests of the Owner, or
- the Bid is based upon an unreasonable period of time for completion or delivery, or
- the Proponent does not provide the required Proof of Insurance within the time specified in these Bid Documents

2.23. AWARD

The Board has the right to reject any or all bids. The lowest Bid will not necessarily be accepted. The invitation to bid does not constitute an offer by the Contractor to enter into a contract. In the event of a tie, a coin flip conducted by the Supervisor – Procurement (or designate) with a minimum of one other Board staff will determine the successful proponent.

Acceptance of the Bid and/or award is subject to the approval of the St. Clair Catholic District School Board.

The SCCDSB reserves the right to withdraw the award of the contract to a successful bidder(s) within 30 days of the award if, in the opinion of the SCCDSB, the successful bidder(s) is unable or unwilling to enter into a form of contract satisfactory to the SCCDSB. The SCCDSB shall be entitled to do so without any liability being incurred by the SCCDSB to the bidder.

The Board will post a contract award notification in the same manner the Bid Documents were posted following the execution of the Agreement.

2.24. ENTITLEMENT TO A DEBRIEFING

In accordance with the Broader Public Sector Procurement Directive unsuccessful Bidders are entitled to a debriefing, during which they will be provided with feedback regarding their Tender. In order to be debriefed, unsuccessful Bidders must contact the Owner representative identified in the Bid Documents in writing to request a debriefing within sixty (60) days from the date of the notification of award.

2.25. BID DISPUTE PROCEDURE

In the event that a Bidder wishes to review the decision of the Board in respect of any material aspect of the Request For Tender process, the Bidder shall submit a protest in writing to the Board to the attention of the Supervisor – Procurement within ten (10) days of the closing date of the Tender.

Any protest in writing shall include the following:

- a) a specific identification of the provision and/or procurement procedure that is alleged to have been breached;
- b) a specific description of each act alleged to have breached the procurement process;
- c) a precise statement of the relevant facts;
- d) an identification of the issues to be resolved;
- e) the Bidder's arguments and supporting documentation;
- f) the Bidder's requested remedy.

2.26. INVOICING & PAYMENT

The Board shall pay by electronic funds transfer (EFT), P-Card, or cheque within twenty eight (28) days after the receipt of a proper invoice. Invoices will be reviewed and certified by the Board's Consultant, if applicable, before the invoice is processed for payment. Invoices must include all back-up material for time and material charges, disbursements, and other fees.

Invoices should be sent digitally to the architect and be based upon the architect's approved format for invoicing with copies sent to victoria.iaccino@st-clair.net. Digital invoices will be processed as an original. Please do not send duplicate copies by mail.

Note: Invoices should reflect a 10% holdback (final construction cost) which will be retained by Board through substantial completion of the project in accordance with relevant legislation.

2.27. TAXES

Include in Bid all Taxes and all other Customs Duties and Excise Taxes which are in force at Bid date as detailed in General Conditions. Harmonized Sales Tax (H.S.T.) is **not** to be included in the bid. The H.S.T. amount and the Bidder's **H.S.T. Registration Number** are to be indicated on the Bid Form in the spaces provided.

2.28. CHANGE NOTICES, CHANGE ORDERS

The following fee percentage and overhead charges shall be applied to additional work ordered by the Board:

- For work carried out by the Contractor's own forces – 10% Overhead & Profit
- For work involving a subcontractor, the subcontractor may charge a maximum 10% fee. The General Contractor may charge a maximum of 5% in addition to subcontractor's fee.

2.29. PROJECT SPECIFIC REQUIREMENTS

Any and all damages to facilities while under the control of the contractor shall be repaired at the contractor's cost. Please be advised that the Owner has a No Smoking Requirement on the Owners' property. Contractors shall provide their own washroom facilities for their employees; board washrooms will be off limits to the contractor's employees. Contractors are requested to ensure that employees and suppliers are advised of these Requirements. Contractor shall remove rubbish and debris from the site on a daily basis or as directed by the Board. On completion of the work, all debris shall be removed; the floor shall be thoroughly cleaned and swept; the site shall be left in a tidy condition (construction clean). Do not use the Board's equipment or facilities for cleaning or for any reason.

2.30. SUBCONTRACTORS

The successful Proponent(s) may not, at any time, subcontract any portions of its contract with the Board nor shall it assign the contract without the written permission of the Board. The successful Proponent(s) must not, at any time, change subcontractors approved by the Board without the written permission of the Board.

2.31. GENERAL TERMS AND CONDITIONS

The issuance of this bid document shall not constitute an obligation on the part of the Board to any proponent who submits a bid.

The laws of the Province of Ontario shall govern any dispute occasioned as a result of the performance or non-performance and/or workmanship of a contract issued pursuant to the bid and any dispute arising out of the issuance of and response to this bid document.

All SCCDSB policies, procedures and regulations must be adhered to by the successful bidder(s).

Some of the Board sites are equipped with video surveillance cameras.

The successful proponent(s) is obliged to cooperate with all recycling and environmental procedures and initiatives established by government, the Board and each school.

The successful bidder(s)' employees and contracted staff shall not be considered SCCDSB employees and shall not represent themselves as an agent of the SCCDSB nor be eligible for any of the benefits provided to SCCDSB employees.

The SCCDSB reserves the right to demand the removal of any successful bidder's employees or contracted staff engaged in this contract if, in the SCCDSB's opinion, their conduct has been of an unacceptable nature.

The successful bidder(s) will be responsible for ensuring that regular supervision is maintained over all working personnel. It is the bidder's responsibility to ensure that all their activities are properly coordinated with the SCCDSB's operations and modify assignments as required.

This bid document is being issued pursuant to the SCCDSB's Purchasing Policies and Procedures.

The acceptance of the bid by the successful proponent(s) and the award of the contract contemplated by this bid document may be subject to approval of the Board of Trustees.

2.32. BONDING

On bids exceeding \$100,000.00 (inclusive of all taxes) the following tender security / bonding is required and must accompany the bid:

- Agreement to Bond: 50% Performance and 50% Labour and Material
- Bid Bond: 10% of the bid price, payable to the St. Clair Catholic District School Board

If the bid amount is greater than \$100,000 and less than \$500,000 (inclusive of all taxes) the Surety or Bid Bond may be provided in the form of an irrevocable letter of credit, a certified cheque, or money order payable to the Board in the value of 10% of the bid amount.

Only bond and agreements to bond issued by a licenced Canadian surety company authorized to do business in the Province of Ontario will be accepted. Upon request, the successful Bidder will be required to present the bonds to the Purchasing Department. Bonds must be issued as prescribed by the Construction Act regarding Broader Public Sector contracts. Failure to provide the proper surety to the Board upon award will result in rejection of that Bid. The cost of bonding shall be included in the Bid price, if applicable.

2.33. INSURANCE

The successful Proponent(s) must maintain, at the Proponent's expense for the entire term of the Contract or as otherwise required, all insurance as set out below. It is not mandatory to submit Proof of Insurance as part of the bid submission. The low bidder and second low bidder will be contacted after the tender opening and will be required to submit Proof of Insurance to the Board within 5 business days.

- Comprehensive General Liability and Property Damage with a limit of not less than **\$5,000,000.00 (five million dollars)**.
- Motor Vehicle Public Liability and Property Insurance on all owned and rented equipment with a limit of not less than **\$2,000,000.00 (two million dollars)**.

The successful Proponent shall provide the Board with a complete certified copy of all policies. Copies of renewed policies must be provided to the Board on or before the policy renewal date for projects that extend past the original policy term or for multi-year contracts. The successful Proponent must name the St. Clair Catholic District School Board as additional insured on their insurance policies.

The Proponent agrees to indemnify, hold harmless, and defend the Board, its Consultants, agents or employees from and against any and all liability for loss, damage and expense, which the Board may suffer

or for which the Board may be held liable by reason of injury (including death) or damage to any property arising out of negligence on the part of the proponent or any of its representatives, employees, or subcontractors in the execution of the work performed or by way of ownership or operation of an automobile.

2.34. WORKPLACE SAFETY INSURANCE BOARD (WSIB)

Successful Proponent(s) must ensure that all workers are covered by the Workplace Safety and Insurance Board coverage for the duration of this contract. It is not mandatory to submit Proof of WSIB coverage (clearance certificate) as part of the bid submission. The low bidder and second low bidder will be contacted after the tender opening and will be required to submit Proof of Coverage to the Board within 5 business days.

Proponents must furnish a Certificate of Clearance from the Workplace Safety and Insurance Board as evidence that all returns have been made and all necessary assessments have been paid as required, or levied, by the Workplace Safety and Insurance Board.

Alternatively, if the Proponent is an Independent Operator and is not classified under Class G: Construction, the proponent must provide a letter from the Work Place Safety & Insurance Board confirming independent operator status and identification number under the WSIB Act.

2.35. PERMITS

The Board will apply and pay for a building permit if applicable. The contractor is to obtain all other permits as required to complete the project, including but not limited to ESA, hot work permit etc.

2.36. MEETINGS

A Post Bid Meeting may be convened and chaired by the Board who will invite the Successful Proponent and his major Subcontractors to review the Contract Documents and Bid submitted. This meeting will be prior to the Board issuing a Letter of Intent or Contract. This meeting does not constitute or infer any contract award to the proposed contractor or any other contractor, nor that will the project proceed.

During the course of Work, scheduled progress meetings may be required at the call of the Project Leader.

2.37. WARRANTY

The vendor/contractor warrants that all goods/services, materials and equipment supplied under contract are free of all defects in manufacture and workmanship for a period of not less than 1 year from date of delivery, installation or performance (whichever is the later) whether or not any portion or trade has been sublet.

The vendor/contractor shall promptly remedy any defect or deficiency in any goods/services, materials and equipment supplied under contract to the satisfaction of the Board within seven (7) calendar days following notice to do so from the Board at no additional cost to the Board, unless otherwise specified.

In the event that the vendor/contractor doesn't promptly honour the above warranties to the satisfaction of the Board, the Board may, at the sole cost of the vendor/contractor do whatever it deems necessary and advisable to remedy, rectify or replace the defective, deficient or non-compliant goods, services, materials or equipment. The Board shall inform the vendor/contractor in advance of the approximate cost of such work to be done by the Board.

All goods/services and/or equipment furnished or supplied pursuant to the contract shall be installed or attached in such a manner as to preserve all manufacturer's and vendor/contractor's warranties, which shall, together with all parts and components, become the property of the Board after the successful and satisfactory installation or attachment.

2.38. GUARANTEE

The vendor/contractor guarantees that all goods/services, materials and equipment supplied under contract are new manufacture. The products must not contain re-manufactured parts and/or accessories and must not have been used under contract with any other customer(s) unless specified by the Board. The submissions will be of the latest design and technology at the time of submission by the vendor.

The vendor/contractor represents and warrants that the goods and/or services supplied pursuant to this bid will be manufactured and/or supplied under such conditions that do not contravene the Ontario Human Right Code or the minimum standards of Ontario workplace legislation and regulations or are otherwise unethical. In the event in the opinion of the Board, the bidder is in breach of the foregoing representation and warranty, the Board may cancel the award or any such subsequent contract entered into between the Board and bidder pursuant thereto.

2.39. SCHEDULE

The Contractor will be required to perform the work in accordance with the Schedule dates provided in 2.9. Timing of Project. Ordering of major and long delivery items shall begin immediately upon successful bidder's receipt of contract award. The Contractor will provide a construction schedule within five (5) days of being awarded the project.

Time is of the essence. Bidders are to include adequate manpower, overtime and shift work necessary to meet or improve the schedule, and to make up any time lost to weather or normal delays. Include travel, room and board costs for out of town workers, shop overtime and other premiums to expedite material and equipment, shipping premiums and any incentive costs required to meet the schedule.

2.40. CONTRACTED SERVICES PROGRAM

Contractors performing work on Board property must complete the Contracted Services Program. The Contracted Services Program is a joint program with Lambton Kent District School Board. This program has three basic components that **must** be met before the bid is awarded. Contractors who cannot meet the minimum requirements of this program will not be awarded this tender. Program information can be found on the Board's web site at www.st-clair.net or through the Board contact identified previously in this document. If the contractor has already been pre-qualified by LKDSB they must provide proof of completion. Identification badges can be used on SCCDSB or LKDSB property. All Insurance and WSIB certificates must be up to date under the Contracted Services Program.

2.41. HEALTH and SAFETY

The Occupational Health and Safety Act describes the responsibilities of an employer. The Board requires Contractors to maintain procedures, training, and enforcement so that the responsibilities are carried out in the workplace. The Contractor shall abide by and strictly adhere to the regulations and conditions set out and laid down by the most current versions of the Occupational Health and Safety Act. All staff employed or hired by the Contractor and working on the Board's premise **MUST** be trained in WHMIS in accordance with Occupational Health and Safety Act and Regulations. They **MUST** adhere to all of the Board's Health and Safety Procedures and Guidelines and to Municipal By-Laws.

Contractor will submit proof of its health and safety program, procedures and training as detailed above upon request by the Board.

The Contractor shall appoint a Competent Person as the Supervisor of this project. The Competent Person shall be as defined in Section 1 of the Occupational Health and Safety Act.

The successful Contractor shall conform to the Ontario "Occupational Health and Safety Act" and all regulations made under said act and assume full responsibility for contraventions of same.

All workplace injuries or accidents on Board property MUST be reported by the Contractor to the Board's representative within 24 hours.

Any workplace injury that is defined under the Occupational Health and Safety Act as a "Critical Injury" must be reported to the Board's representative IMMEDIATELY.

COVID-19 SAFETY MEASURES: Contractors must observe and enforce all safety measures and standardized protocols as they pertain to construction site health and safety during the COVID-19 Pandemic. Prior to the commencement of work contractors are required to submit their Jobsite Measures to Protect Against COVID-19 with their health & safety program. Contractors should note that the following resources are available and should form part of their standards: Government of Ontario: <https://www.ontario.ca/page/construction-site-health-and-safety-during-covid-19>. Canadian Construction Association: <https://www.cca-acc.com/covid-19-resources/>.

2.42. ELECTRICAL AND SAFETY APPROVALS

All electrical/electronic components supplied by the vendor/contractor must be CSA, ULC and/or Ontario Hydro/Ontario Electrical Safety Authority approved. Appropriate labels must be affixed to the equipment prior to delivery. The vendor/contractor is responsible for ensuring goods or services supplied to the Board must comply with the Occupational Health and Safety Act and Regulations of Industrial Establishments.

2.43. DESIGNATED SUBSTANCES

The contractor shall conduct work in recognition of the most current regulations related to Designated Substances. The contractor is required to review the site specific designated substances report to ascertain potential for exposure to designated materials and notify the board of instances where the scope of work under this contract will require remediation. If the report does not schedule designated materials in the attached report and should the contractor uncover material which is believed to be asbestos, work is to cease immediately and the Board staff are to be contacted immediately.

2.44. SAFE SCHOOL PROCEDURES

Contractor's staff is required to report to the main office of the site where work will be carried out during regular school hours and notify the school office staff of the purpose of the visit. The Contractor is required to adhere to all school specific procedures if applicable.

It is the responsibility of the Contractor's staff to sign in and sign out of the Log Book, which is located in the main office area, while performing their duties.

The following information must be recorded in a legible manner:

Date
Company Name

Employee Name
Employee Signature
Reason for Visit
Time Entering Building
Time Leaving Building

2.45. HOISTING, SCAFFOLDS, ELEVATED WORK PLATFORMS

The Contractor is responsible for all hoisting and other equipment necessary to facilitate their work if required.

2.46. TEMPORARY POWER

A source of electric power will be designated by the Board. The Board will allow a tie-in connection with fuse or breaker protection for the Contractor's estimated load requirements. The Contractor must provide the power connections and all extensions from the point to the job site. All electrical connections and extensions must meet ESA requirements and must be approved by the Board. The Contractor's estimated load requirements must not be exceeded without the Owner's permission.

2.47. NOISE AND TRAFFIC CONTROL

Bidders shall comply with all applicable **noise by-laws** (or local requirements governing same) and traffic routing that may be in effect during the life of the Project.

This **may** limit some activities to restricted time periods. Where the schedule requires for after hour work, the Contractor shall include all costs associated with obtaining the necessary permits to work such time periods.

The Contractor shall be responsible for all costs associated with providing a traffic officer as necessary to facilitate construction.

2.48. SITE ACCESS AND EGRESS

Contractors will be required to sign out a master key and will be assigned an access code for the alarm system. Successful Contractor will be responsible for building security during working hours and locking up the facility at night, which includes setting the alarm.

Any false alarms generated by the Contractor's workforce will result in a back charge for the costs incurred to the Board.

The Contractor shall make good any damage to roads, curbs, sidewalks, fencing, or grass damaged by vehicles or equipment during the course of construction.

2.49. PARKING

Contractors must park within the designated areas and allow for provisions to and from the designated parking area onto the job site.

2.50. CONTRACTOR'S PERSONNEL

The Contractor shall, at its own expense, provide all the personnel required to take a proactive role in managing the project as it relates to their work and its coordination with other trades. This will include but is not limited to the following:

- Competent supervision of the work of the Contract and coordination with the work of other Subcontractors. This includes being responsible for and properly supervising any subcontractors of this subcontractor.
- All layout work required to complete the work of the trade contract.
- Competent supervision of the work of the trade contract to ensure work is done in accordance with the OHSA and any other applicable regulations.
- Expediting the procurement of material and equipment to ensure delivery by their required dates.
- Submission of Requests for Information where required in a timely manner and wherever possible providing the Board with information to assist in the answering of these requests.
- Submission in a timely manner of all required shop drawings and samples and assistance to the Board required to obtain approvals to suit the schedule. All shop drawings are to be reviewed by the Contractor prior to submitting for approval.
- Attendance at all construction coordination meetings when requested by the Board.
- Provision of all necessary information requested by the Board for cost control and billing purposes.
- Inspection of the work of the Trade Contract for defects and deficiencies and cooperation with the Board and other inspection authorities to allow their inspections to take place.
- Submission of pricing for all changes to the work within five (5) working days after receipt of change documentation including the breakdown and backup necessary to allow checking and approval.

2.51. ACCESSIBILITY FOR ONTARIANS WITH DISABILITIES ACT

The Purchaser is committed to the highest possible standards for accessibility. Proponent(s) must be capable to recommend and deliver, as appropriate for each Deliverable, accessible and inclusive Services consistent with the Ontario Human Rights Code (OHRC), the Ontarians with Disabilities Act, 2001 (ODA) and Accessibility for Ontarians with Disabilities Act, 2005 (AODA) and its regulations in order to achieve accessibility for Ontarians with disabilities.

In accordance with Ontario Regulation 429-07 made under the Accessibility for Ontarians with Disabilities Act, 2005 (Accessibility Standards for Customer Service), the Purchaser has established policies, practices and procedures governing the provision of its services to persons with disabilities.

Proponents are required to comply with the Purchaser's accessibility standards, policies, practices, and procedures, which may be in effect during the Term of the Agreement and which apply to the Deliverables to be provided by the Proponent.

2.52. CANADA'S ANTI-SPAM LEGISLATION

Please note that vendors are required to comply with all applicable laws, including CASL, in providing goods or services to the Board. This also extends to communications sent on the Boards behalf. The successful proponent(s) will be required to indemnify the Board for any failure by the successful proponent(s) to comply with CASL, to the extent that the successful proponent(s) action, or inaction, could expose the Board to liability.

2.53. CONFIDENTIAL INFORMATION

All correspondence, documentation, and information of any kind provided to any Proponent in connection with or arising out of this Request for Tender or the acceptance of any Bid:

- Remains the property of the Purchaser and shall be removed from the Purchaser's premises only with the prior written consent of the Purchaser.
- Must be treated as confidential and shall not be disclosed except with the prior written consent of the Purchaser.
- Must not be used for any purpose other than for replying to this RFT and for the fulfilment of any related subsequent agreement.
- Must be returned to the Purchaser upon request.

Except as provided otherwise in this request, or as may be required by Applicable Laws, the Purchaser shall treat the Proponents' Proposals and any information gathered in any related process as confidential, provided that such obligation shall not include any information that is or becomes generally available to the public other than as a result of disclosure by the Purchaser.

During any part of this Request for Tender process, the Purchaser or any of its representatives or agents shall be under no obligation to execute a confidentiality agreement.

All correspondence, documentation, and information provided in response to or because of this RFT may be reproduced for the purposes of evaluating the Proponent's Bid Submission.

If a portion of a Proponent's Bid Submission is to be held confidential, such provisions must be clearly identified in the Bid.

The Purchaser reserves the right to require any Proponent to enter into a non-disclosure and/or confidentiality agreement satisfactory to the Purchaser.

2.54. CONFLICT OF INTEREST

Proponents must declare all conflicts of interest or any situation that may reasonably be perceived as a conflict of interest in relation to the Project that exists now or may exist in the future. The Board, at its sole discretion, waives any and all actual, potential, or perceived conflicts of interest, on such terms and conditions and the Board, at its sole discretion, considers to be appropriately managed, mitigated, and minimized. In this regard the Board may require the Proponent to implement measures or take steps to manage or mitigate the impact of any actual, potential, or perceived conflict of interest.

2.55. COMPETITION ACT

Under Canadian Law, a Proponent's Bid Submission must be prepared without conspiracy, collusion, or fraud.

2.56. MUNICIPAL FREEDOM OF INFORMATION AND PROTECTION OF PRIVACY ACT

The *Municipal Freedom of Information and Protection of Privacy Act* (Ontario) applies to information provided by Proponents. A Proponent should identify any information in its Quotation or any accompanying documentation supplied in confidence for which confidentiality is to be maintained by the Purchaser. The confidentiality of such information will be maintained by the Purchaser, except as otherwise required by law or by order of a court, tribunal, or the Ontario Privacy Commissioner.

By submitting a Bid, including any Personal Information requested in this RFT, Proponents agree to the use of such information for the evaluation process, for any audit of this procurement process, and for contract management purposes.

2.57. PERSONAL INFORMATION PROTECTION AND ELECTRONIC DOCUMENTS ACT

The Proponent represents and warrants that if the Proponent becomes subject to any private sector privacy legislation in responding hereto, or in carrying out its obligations under any subsequent agreement, the

bidder will be solely responsible with such legislation. Without limitation, the Proponent represents and warrants that if the Proponent is subject to the *Personal Information Protection and Electronic Documents Act* (PIPEDA) the Proponent shall ensure compliance of all PIPEDA Protected Information that the Bidder:

- Collects directly from the individuals or indirectly from the Board or others;
- Uses or discloses in the course of responding hereto or in performing its obligations under and subsequent agreement; or
- Transfers or discloses to the Board

2.58. TRADE AGREEMENTS

Proponents should note that procurements within the scope of either Chapter 5 of the Canadian Free Trade Agreement, Chapter 19 of the Comprehensive Economic and Trade Agreement, within the scope of the Trade and Cooperation Agreement between Quebec and Ontario or any other applicable agreement not listed herein are subject to such agreements, although the rights and obligations of the parties shall be governed by the specific terms of this RFT.

2.59. INTELLECTUAL PROPERTY

Proponents shall not use any intellectual property of the Purchaser, including but not limited to logos, registered trademarks, or trade names of the Purchaser, at any time without the prior written approval of the Purchaser.

All Deliverables, documentation, services, and intellectual property rights of any kind derived from and/or developed pursuant to this Agreement shall remain the exclusive property of the Purchaser.

2.60. WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM

The Proponent should provide Workplace Hazardous Materials Information System (WHMIS) material safety data sheets (MSDS) for all Services. Additionally, the Proponent should provide the Purchaser's personnel WHMIS training, as it relates to the Services, in accordance with the Ontario Occupational Health and Safety Act.

2.61. VENDOR PERFORMANCE

Where the Contractor fails to comply with any of its obligations under the Contract, the Board may issue a notice setting out the manner and time-frame for rectification. Within seven (7) Business Days of receipt of that notice or in a timeframe as otherwise agreed to, the Contractor shall either: (a) comply with that rectification notice; or (b) provide a rectification plan satisfactory to the Board. If the Contractor fails to either comply with that rectification notice or provide a satisfactory rectification plan, the Board may immediately terminate the Contract. Where the Contractor has been given a prior rectification notice, the same subsequent type of non-compliance by the Contractor may allow the Board to immediately terminate the Contract and result in the suspension of bidding privileges to the Board for up to two years at the sole unfettered discretion of the Board.

2.62. FORCE MAJEURE

Force Majeure are causes beyond a party's control, which are not avoidable by the exercise of reasonable foresight. Neither party shall be responsible for any delay or failure to perform its obligations under this agreement by reason of force majeure. If either party is unable to perform any of its obligations in this contract by reason of force majeure, including flood, fire or other casualty, strike, order of a public authority, Act of God, or other cause beyond reasonable control of such party, then such party shall be excused from such performance of the contract for the duration of such cause.

If a force majeure event occurs which delays or threatens to delay performance of its obligations by a party, the party shall give prompt notice to the other party and shall take all reasonable steps to eliminate the cause or reduce the potential disruption and consequent losses.

In the event such inability to perform shall continue longer than 30 days, the Board may terminate the agreement without further liability or cost of any kind by giving written notice to the other party.

2.63. TERMINATION OF CONTRACT

Either party may terminate the Agreement on written notice to the other where such other party neglects or fails to perform or observe any material term or obligation of the Agreement and such failure has not been cured within 30 Days of written notice being provided.

If the Proponent fails to execute the work properly or otherwise fails to comply with the requirements of the contract to a substantial degree, the Board may correct such default and deduct the cost thereof from any payment then or thereafter due to the contractor.

The Board shall be entitled to terminate the Agreement immediately, without liability, cost, or penalty on written notice to the Proponent:

- if any proceeding in bankruptcy, receivership, liquidation, or insolvency is commenced against the Proponent or its property;
- if the Proponent makes an assignment for the benefit of its creditors, becomes insolvent, commits an act of bankruptcy, ceases to carry on its business or affairs as a going concern, files a notice of intention or a proposal, or seeks any arrangement or compromise with its creditors under any statute or otherwise;
- following the occurrence of any material change in the Board's requirements which results from a regulatory or funding changes, or recommendations issued by a Governmental Authority;
- in the event of a breach of the representation regarding conflict of interest;
- in the event of a misrepresentation or material breach;
- if the proponent uses, destroys, exploits, or discloses any Board Confidential Information to any Personal Information contrary to this Agreement; and
- in accordance with any provision of the Agreement that provides for early termination;

The Board reserves the right to terminate the Agreement, without cause, upon sixty (60) days' prior written notice to the Proponent.

The Board shall be liable to the Vendor only for the payment of Deliverable(s) supplied and accepted up to the date of termination.

The Board, at its sole and unfettered discretion, may extend the timelines for termination if it is deemed to be in the Board's best interest to do so.

Any termination of the Agreement shall not in any respect limit any of either party's rights or remedies either in law or in equity or relieve either party of any obligation incurred prior to the effective date of such termination.

[End of Part 2]

APPENDIX A: Bidder's Response Guide

Each bid submission should be structured using only the criteria identified in this bid document.

1. A completed copy of APPENDIX B: Bid Form **must** be included in your bid submission.
2. The low bidder and second low bidder will be contacted after the tender opening and will be required to submit Proof of Insurance and WSIB Coverage to the Board within 5 business days.
3. Bonding, if required, **must** be included in your bid submission.
4. Supplemental material will not qualify as substitutes for direct responses to the bid's requirements, except for specifically requested material.
5. The successful contractor must be prequalified under the contracted services program before an award is made.
6. Bid Submission will only be accepted via email to purchasing@st-clair.net

APPENDIX B: Bid Form

Submitted By: _____

To: St. Clair Catholic District School Board
636-CP2002 Parking Lot Resurfacing
St. Joseph Catholic School, Tilbury

B1. Base Bid Price

The Drawings, Specifications and other Contract Documents for this Project have been examined, as well as the premises and job site conditions affecting the work. The undersigned hereby offers to complete the work in accordance with the Contract Documents for the following bid price, except as defined below for HST:

_____ Dollars (\$ _____)

in Canadian funds EXCLUDING HST. HST will be added to the bid price.

In submitting this Bid, the undersigned recognizes and accepts the right of the Owner to accept any Bid, which is deemed the most advantageous to the Owner, (or any part thereof), at the price submitted, or to reject any or all Bids. Acceptance of the Bid and/or award of the contract is subject to the approval of the Board.

In the event that a discrepancy arises between the written bid price and the associated numerical price, the written bid price will be deemed to be correct.

B2. Harmonized Sales Tax (HST)

The bidder shall not include the applicable HST in the bid price. The successful contractor will indicate on each application for payment as a separate amount the appropriate HST the Owner is obliged to pay.

HST Registration # _____

B3. Cash Allowances

Include a Stipulated Sum of Three Thousand Five Hundred Dollars (\$3,500.00) to cover over the following items from which the Consultant shall direct payment for services, labour, and material.

- a. Testing & Inspection

Time and Materials rates to be applied against Cash Allowance work. Final reconciliation will adjust the cash allowance as credit to the SCCDSB for unexpended amounts and extra to the contractor for over expenditure. The contractor shall mark-up sub-trade time and materials billing for this portion of work at 10% only.

B4. Itemized Prices

The following prices have been included in the Base Bid amount. The following prices, if accepted by the owner, shall include all labour, material, tools, equipment, overhead and profit, but exclude H.S.T. No other cost consideration shall be added to the contract for the scope of this work if accepted by the owner. The owner retains the right to cancel any or all of the sites for any reason.

Itemized Price #1: None at this time.

B5. Unit Prices

The following are our list Unit Prices for the Units of Work listed hereunder. The Unit Prices listed apply to performing the Units of Work only during the time schedules for such work in the project schedule. CONTRACTOR MUST COMPLETE SUCH COPY AND RETURN WITH YOUR TENDER PROPOSAL DOCUMENTS.

Unit Price #1:

Remove & dispose of existing subgrade and install Granular B fill: \$ _____

B6. Separate Prices

It is accepted that the intent of separate prices is to allow the Owner to select a separate scope of work at a price which is declared below, and solely at the owner's discretion.

The following price has not been included in the Base Bid amount. The following prices, if accepted by the owner, shall include all labour, material, tools, equipment, overhead and profit, but exclude H.S.T. No other cost consideration shall be added to the contract for the scope of this work if accepted by the owner.

Separate Price #1:

Replace existing storm sewer lines by the lineal meter as indicated on drawings
\$ _____/lm

Separate Price #2:

Replace existing catch basins but reuse existing metal grate lid \$ _____ ea

B7. List of Subcontractors

Trade / Contractor _____

Trade / Contractor _____

Trade / Contractor _____

B8. Project Superintendent / Supervisor

The Owner requires the General Contractor provide a full time site supervisor for the duration of the project. A minimum of 5 years supervisory experience is required. List proposed personnel and their experience in the table below. Supervisory experience with firms other than the Bidder is acceptable to include on the list. The General Contractor shall indicate the person chosen in writing to the Owner within 5 days of contract award.

Name	Firm/Position	Qualifications/ Experience

B9. Conflict of Interest

I /We confirm that: (please check one)

_____ There is not nor was there any actual or perceived Conflict of Interest or any other type of unfair advantage in our submitting this Proposal or performing or observing the contractual obligations of the Contractor in the Agreement.

OR

_____ Complete with this bid submission is a declaration on company letterhead of situations which may be a Conflict of Interest or an instance of unfair advantage or appears as potentially a Conflict of Interest or unfair advantage in our company submitting this Proposal or the contractual obligations of the Contractor under the Agreement.

Please note that the Board has the right to waive an actual or perceived conflict of interest as described in section 2.54 CONFLICT OF INTEREST.

B10. Agreement of Terms

I/We hereby acknowledge and agree that I/we have read, accepted, and completed all Contract Terms and Conditions and Appendices.

I/We declare that the bid is made without and connection, knowledge, comparison or figures or arrangements with any other Bidder or firms submitting a bid for the same work and is in all respects fair and without collusion or fraud.

I/We agree to Abide by the Established Process as outlined in section 2.4.

I/We understand it is the SCCDSB's intention that this RFT and the successful proponent(s)'s returned RFT submission will form the basis of the proposed contract. All of the terms and conditions of this RFT must be accepted by the proponent(s) and incorporated into the proponent(s) RFT submission. It is the SCCDSB's intention to use a CCDC 2-2008 Stipulated Price Contract when establishing a contract with the successful proponent(s).

The undersigned acknowledges receipt of Addenda Numbers _____ through _____ inclusive, and that the price, or adjustment thereof, for all work required therein is included in this submission.

This page must be signed below and returned with your submission for your bid to be accepted.

I/We the undersigned are duly authorized to execute this Bid Submission on behalf of:

Company:

Address:

Name:

Title:

Signature:

Date:

Phone:

Fax:

Email:

Please refer to Appendix A: Bidder's Response Guide to ensure you include all necessary documentation with your bid submission

APPENDIX C: Specifications and Drawings



ST. CLAIR CATHOLIC
DISTRICT SCHOOL BOARD

Lighting the Way ~ Rejoicing in Our Journey

CCDC 2- 2008

Stipulated Price Contract

Supplementary Conditions

November 10, 2009

2nd Revision: 1 February 2013

3rd Revision: 3 July 2013

The Standard Construction Document CCDC 2 2008 for a Stipulated Price Contract, English version, consisting of the Agreement Between *Owner* and *Contractor*, Definitions and General Conditions of the Stipulated Price Contract, Parts 1 to 12 inclusive, governing same is hereby made part of these *Contract Documents*, with the following amendments, additions and modifications:

AGREEMENT BETWEEN OWNER AND CONTRACTOR

ARTICLE A-3 – CONTRACT DOCUMENTS

3.1 Add the following to the list of *Contract Documents* in paragraph 3.1:

- Amendments to CCDC 2 – 2008
- *Drawings*
- *Specifications*
- Performance Bond
- Labour and Material Payment Bond

ARTICLE A-5 – PAYMENT

5.1.3 Amend paragraph 5.1.3, in the first line, by deleting the words "...the issuance of the..." and replacing them with "...receipt of the *Consultant's*..."

5.3.1 Delete paragraph 5.3.1 in its entirety and replace it with the following:

Interest

.1 Should either party fail to make payments as they become due under the terms of the Contract or in an award by arbitration or court, interest shall also become due and payable on such unpaid amounts at 0% above the prime rate. Such interest shall be compounded on a monthly basis. The prime rate shall be the rate of interest quoted by the Bank of Canada for prime business loans, as it may change from time to time.

ARTICLE A-9 – CONFLICT OF INTEREST

Add new Article A-9 – Conflict of Interest:

- 9.1 The *Contractor*, all of the *Subcontractors* and *Suppliers* and any of their respective advisors, partners, directors, officers, employees, agents, and volunteers shall not engage in any activity or provide any services where such activity or the provision of such services creates a conflict of interest (actually or potentially, in the sole opinion of the *Owner*) with the provision of the *Work* pursuant to the *Contract*. The *Contractor* acknowledges and agrees that a conflict of interest, as described in this Article A-9, includes, but is not limited to, the use of *Confidential Information* where the *Owner* has not specifically authorized such use.
- 9.2 The *Contractor* shall disclose to the *Owner*, in writing, without delay, any actual or potential situation that may be reasonably interpreted as either a conflict of interest or a potential conflict of interest, including the retention of any *Subcontractor* or *Supplier* that is directly or indirectly affiliated with or related to the *Contractor*.
- 9.3 The *Contractor* covenants and agrees that it will not hire or retain the services of any employee or previous employee of the *Owner* where to do so constitutes a breach by such employee or previous employee of the *Owner's* conflict of interest policy, as it may be amended from time to time, until after completion of the *Work* under the *Contract*.
- 9.4 It is of the essence of the *Contract* that the *Owner* shall not have direct or indirect liability to any *Subcontractor* or *Supplier*, and that the *Owner* relies on the maintenance of an arm's-length relationship between the *Contractor* and its *Subcontractors* and *Suppliers*. Consistent with this fundamental term of the *Contract*, the *Contractor* will not enter into any agreement or understanding with any *Subcontractor* or *Supplier*, whether as part of any contract or any written or oral collateral agreement, pursuant to which the parties thereto agree to cooperate in the presentation of a claim for payment against the *Owner*, directly or through the *Contractor*, where such claim is, in whole or in part, in respect of a disputed claim by the *Subcontractor* or *Supplier* against the *Contractor*, where the payment to the *Subcontractor* or *Supplier* by the *Contractor* is agreed to be conditional or contingent on the ability to recover those amounts or a portion thereof from the *Owner*, failing which the *Contractor* shall be saved harmless from all or a portion of those claims. The *Contractor* acknowledges that any such agreement would undermine the required arm's-length relationship and constitute a conflict of interest. For greater certainty,

the *Contractor* shall only be entitled to advance claims against the *Owner* for amounts pertaining to *Subcontractor* or *Supplier* claims where the *Contractor* has actually paid or unconditionally acknowledged liability for those claims or where those claims are the subject of litigation or binding arbitration between the *Subcontractor* or *Supplier* and the *Contractor* has been found liable for those claims.

- 9.5 Notwithstanding paragraph 7.1.2 of GC 7.1 - OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, SUSPEND THE WORK OR TERMINATE THE CONTRACT, a breach of this Article by the *Contractor*, any of the *Subcontractors*, or any of their respective advisors, partners, directors, officers, employees, agents, and volunteers shall entitle the *Owner* to terminate the *Contract*, in addition to any other rights and remedies that the *Owner* has in the *Contract*, in law, or in equity.

DEFINITIONS

Add the following new definitions:

27. Confidential Information

Confidential Information means all the information or material of the *Owner* that is of a proprietary or confidential nature, whether it is identified as proprietary or confidential or not, including but not limited to information and material of every kind and description (such as drawings and move-lists) which is communicated to or comes into the possession or control of the *Contractor* at any time, but *Confidential Information* shall not include information that:

- 1) is or becomes generally available to the public without fault or breach on the part of the *Contractor*, including without limitation breach of any duty of confidentiality owed by the *Contractor* to the *Owner* or to any third party, but only after that information becomes generally available to the public;
- 2) the *Contractor* can demonstrate to have been rightfully obtained by the *Contractor* from a third party who had the right to transfer or disclose it to the *Contractor* free of any obligation of confidence;
- 3) the *Contractor* can demonstrate to have been rightfully known to or in the possession of the *Contractor* at the time of disclosure, free of any obligation of confidence; or
- 4) is independently developed by the *Contractor* without use of any *Confidential Information*.

28. Construction Schedule

Construction Schedule means the schedule for the performance of the *Work* provided by the *Contractor* pursuant to GC 3.5, including any amendments to the *Construction Schedule* made pursuant to the *Contract Documents*.

29. Force Majeure

Force Majeure means any cause, beyond the *Contractor's* control, other than bankruptcy or insolvency, which prevents the performance by the *Contractor* of any of its obligations under the *Contract* and the event of *Force Majeure* was not caused by the *Contractor's* default or active commission or omission and could not be avoided or mitigated by the exercise of reasonable effort or foresight by the *Contractor*. *Force Majeure* includes *Labour Disputes*, fire, unusual delay by common carriers or unavoidable casualties, civil disturbance, acts, orders, legislation, regulations or directives of any government or other public authority, acts of a public enemy, war, riot, sabotage, blockage, embargo, lightning, earthquake, or acts of God.

30. Install

Install means install and connect. *Install* has this meaning whether or not the first letter is capitalized.

31. Labour Dispute

Labour Dispute means any lawful or unlawful labour problems, work stoppage, labour disruption, strike, job action, slow down, lock-outs, picketing, refusal to work or continue to work, refusal to supply materials, cessation or work or other labour controversy which does, or might, affect the *Work*.

32. Overhead

Overhead means all site and head office operations and facilities, all site and head office administration and supervision; all duties and taxes for permits and licenses required by the authorities having jurisdiction at the *Place of the Work*; all requirements of Division 1, including but not limited to submittals, warranty, quality control, calculations, testing and inspections; meals and accommodations; and, tools, expendables and clean-up costs.

33. Request for Information/RFI

Request for Information or *RFI* means written documentation sent by the *Contractor* to the *Owner* or to the *Owner's* representative or the *Consultant* requesting written clarification(s) and/or interpretation(s) of the *Drawings* and/or *Specifications*, *Contract* requirements and/or other pertinent information required to complete the *Work* of the *Contract* without applying for a change or changes to the *Work*.

16. Amend Definition 16 by adding the following to the end of the Definition:

Provide has this meaning whether or not the first letter is capitalized.

GENERAL CONDITIONS OF THE STIPULATED PRICE CONTRACT

1.0 Where a General Condition or paragraph of the General Conditions of the *Contract* is deleted by these amendments, the numbering of the remaining General Conditions or paragraphs shall remain unchanged, unless stated otherwise herein, and the numbering of the deleted item will be retained, unused.

GC 1.1 CONTRACT DOCUMENTS

1.1.6 Add the following to the end of paragraph 1.1.6:

The *Specifications* are divided into divisions and sections for convenience but shall be read as a whole and neither such division nor anything else contained in the *Contract Documents* will be construed to place responsibility on the *Owner* or the *Consultant* to settle disputes among the *Subcontractors* and *Suppliers* with respect to such divisions. The *Drawings* are, in part, diagrammatic and are intended to convey the scope of the *Work* and indicate general and appropriate locations, arrangements and sizes of fixtures, equipment and outlets. The *Contractor* shall obtain more accurate information about the locations, arrangements and sizes from study and coordination of the *Drawings*, including *Shop Drawings* and shall become familiar with conditions and spaces affecting those matters before proceedings with the *Work*. Where site conditions require reasonable minor changes where the change requires only the additional labour of one half hour or less, the *Contractor* shall make such changes at no additional cost to the *Owner*. Similarly, where known conditions or existing conditions interfere with new installation and require relocation, the *Contractor* shall include such relocation in the *Work*. The *Contractor* shall arrange and install fixtures and equipment in such a way as to conserve as much headroom and space as possible. The schedules are those portions of the *Contact Documents*, wherever located and whenever issued, which compile information of similar content and may consist of drawings, tables and/or lists.

1.1.7 Amend paragraph 1.1.7.1 by adding “Amendments to CCDC 2 – 2008” before “the Agreement between the Owner and the Contractor” and deleting the reference to “Supplementary Conditions”.

Add new paragraphs 1.1.7.5, 1.1.7.6, 1.1.7.7 and 1.1.7.8 as follows:

- .5 noted materials and annotations on the *Drawings* shall govern over the graphic representation of the *Drawings*.
- .6 finishes in the room finish schedules shall govern over those shown on the *Drawings*.

- .7 architectural drawings shall have precedence over structural, plumbing, mechanical, electrical and landscape drawings insofar as outlining, determining and interpreting conflicts over the required design intent of all architectural layouts and architectural elements of construction, it being understood that the integrity and installation of the systems designed by the *Consultant* or its sub-*Consultants* are to remain with each of the applicable drawing disciplines.
- .8 should reference standards contained in the *Specifications* conflict with the *Specifications*, the *Specifications* shall govern. Should reference standards and *Specifications* conflict with each other or if certain requirements of the *Specifications* conflict with other requirements of the *Specifications*, the more stringent requirements shall govern.

1.1.8 Delete paragraph 1.1.8 in its entirety and substitute as follows:

The *Consultant*, on behalf of the *Owner* shall provide the *Contractor* without charge, twelve (12) copies of the *Contract Documents*, exclusive of those required by jurisdictional authorities and the executed *Contract Documents*. Additional copies can be purchased by the *Contractor* at the *Consultant's* cost of reproduction, handling and sales tax.

GC 1.3 RIGHTS AND REMEDIES

1.3.2 Delete the word “No” from the beginning of paragraph 1.3.2 and substitute the words:

“Except with respect to the requirements set out in paragraphs 2.2.13, 6.4.1, 6.5.4, 6.6.1 and 8.2.2, no...”

GC 1.4 ASSIGNMENT

Delete paragraph 1.4.1 in its entirety and replace with the following:

1.4.1 The *Contractor* shall not assign the *Contract*, or any portion thereof, without the prior written consent of the *Owner*. The *Owner* shall be entitled to assign the *Contract* to a corporation, partnership or other entity (the “Assignee”). Upon the assumption by the Assignee of the *Owner's* obligations under the *Contract*, the *Owner* shall be released from its obligations under the *Contract*.

GC 1.5 EXAMINATION OF DOCUMENTS AND SITE

Add new GC 1.5 – EXAMINATION OF DOCUMENTS AND SITE as follows:

- 1.5.1 The *Contractor* declares and represents that in tendering for the *Work*, and in entering into a *Contract* with the *Owner* for the performance of the *Work*, it has investigated for itself the character of the *Work* to be done, based on information generally available from a site visit. The *Contractor* has assumed and does hereby assume all risk of conditions now existing or arising in the course of the *Work* which might or could make the *Work*, or any items thereof more expensive in character, or more onerous to fulfil, than was contemplated or known when the tender was made or the *Contract* signed.
- 1.5.2 The *Contractor* also declares that in tendering for the *Work* and in entering into this *Contract*, the *Contractor* did not and does not rely upon information furnished by the *Owner* or any of its agents or servants respecting the nature or confirmation of the ground at the site of the *Work*, or the location, character, quality or quantity of the materials to be removed or to be employed in the construction of *Work*, or the character of the construction machinery and equipment or facilities needed to perform the *Work*, or the general and local performance of the work under the *Contract* and expressly waives and releases the *Owner* from all claims with respect to the said information with respect to the *Work*.

GC 1.6 TIME IS OF THE ESSENCE OF THE CONTRACT

Add new GC 1.6 - TIME IS OF THE ESSENCE OF THE CONTRACT as follows:

1.6.1 All time limits stated in the *Contract Documents* are of the essence of the *Contract*.

GC 2.2 ROLE OF THE CONSULTANT

2.2.7 Delete the words “Except with respect to GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER” .

2.2.13 Amend paragraph 2.2.13 by the addition of the following to the end of that paragraph:

If, in the opinion of the *Contractor*, the *Supplemental Instruction* involves an adjustment in the *Contract Price* or in the *Contract Time*, it shall, within ten (10) *Working Days* of receipt of a *Supplemental Instruction*, provide the *Consultant* with a notice in writing to that effect. Failure to provide written notification within the time stipulated in this paragraph 2.2.13 shall be deemed an acceptance of the *Supplemental Instruction* by the *Contractor*, without any adjustment in the *Contract Price* or *Contract Time*.

2.2.19 Add new paragraph 2.2.1.9 as follows:

The *Consultant* or the *Owner*, acting reasonably, may from time to time require the *Contractor* to remove from the *Project* any personnel of the *Contractor*, including project managers, superintendents or *Subcontractors*. Such persons shall be replaced by the *Contractor* in a timely fashion to the satisfaction of the *Consultant* or the *Owner*, as the case may be, at no cost to the *Owner*.

GC 2.3 REVIEW AND INSPECTION OF THE WORK

2.3.2 Amend paragraph 2.3.2 by adding the words “and *Owner*” after the words “*Consultant*” in the second and third lines.

2.3.3 Delete paragraph 2.3.3 in its entirety and replace it with the following:

The *Contractor* shall furnish promptly two copies to the *Consultant* and one copy to the *Owner* of all certificates and inspection reports relating to the *Work*.

2.3.4 Insert the word “review” after the word “inspections” in the first line of paragraph 2.3.4.

2.3.5 In the first line after “*Consultant*”, add “or the *Owner*”.

2.3.8 Add a new paragraph 2.3.8 as follows:

The *Consultant* will conduct periodic reviews of the *Work* in progress, to determine general conformance with the requirements of the *Contract Documents*. Such reviews, or lack thereof, shall not give rise to any claims by the *Contractor* in connection with construction means, methods, techniques, sequences and procedures, nor in connection with construction safety at the *Place of Work*, responsibility for which belongs exclusively to the *Contractor*.

GC 2.4 DEFECTIVE WORK

2.4.1 Amend GC 2.4.1 by inserting “, the *Owner* and/or its agent” in the first sentence following “rejected by the *Consultant*”.

Add new paragraphs 2.4.1.1 and 2.4.1.2:

2.4.1.1 The *Contractor* shall rectify, in a manner acceptable to the *Consultant* and to the *Owner through the Consultant* all defective work and deficiencies throughout the *Work*, whether or not they are specifically identified by the *Consultant*.

2.4.1.2 The *Contractor* shall prioritize the correction of any defective work, which, in the sole discretion of the *Owner through the Consultant*, adversely affects the day to day operations of the *Owner* or which, in the sole discretion of the *Consultant*, adversely affects the progress of the *Work*.

2.4.2 Delete paragraph 2.4.2 in its entirety and replace it with the following:

The *Contractor* shall promptly pay the *Owner* for costs incurred by the *Owner*, the *Owner's* own forces or the *Owner's* other contractors, for work destroyed or damaged or any alterations necessitated by the *Contractor's* removal, replacement or re-execution of defective work.

Add new paragraph 2.4.4 as follows:

- 2.4.4 Neither acceptance of the *Work* by the *Consultant* or the *Owner*, nor any failure by the *Consultant* or the *Owner* to identify, observe or warn of defective *Work* or any deficiency in the *Work* shall relieve the *Contractor* from the sole responsibility for rectifying such defect or deficiency at the *Contractor's* sole cost, even where such failure to identify, observe or warn is negligent.

GC 3.1 CONTROL OF THE WORK

3.1.3 Add a new paragraph 3.1.3 as follows:

Prior to commencing individual procurement, fabrication and construction activities, the *Contractor* shall verify at the *Place of the Work*, all relevant measurements and levels necessary for proper and complete fabrication, assembly and installation of the *Work* and shall further carefully compare such field measurements and conditions with the requirements of the *Contract Documents*. Where dimensions are not included or exact locations are not apparent, the *Contractor* shall immediately notify the *Consultant* in writing and obtain written instructions from the *Consultant* before proceedings with any part of the affected *Work*.

3.1.4 Add a new paragraph 3.1.4 as follows:

Notwithstanding the provisions of paragraphs 3.1.1 and 3.1.2, the *Owner* shall have access to the site at all times to monitor all aspects of construction. Such access shall in no circumstances affect the obligations of the *Contractor* to fulfill its contractual obligations.

GC 3.2 CONSTRUCTION BY OWNER OR OTHER CONTRACTORS

3.2.2.1 Delete paragraph 3.2.2.1 in its entirety.

3.2.2.2 Delete paragraph 3.2.2.2 in its entirety.

3.2.2.3 Delete paragraph 3.2.2.3 in its entirety.

3.2.2.4 Delete paragraph 3.2.2.4 in its entirety.

3.2.3.2 Delete paragraph 3.2.3.2 and replace it with the following:

Co-ordinate and schedule the activities and work of other contractors and *Owner's* own forces with the *Work* of the *Contractor* and connect as specified or shown in the *Contract Documents*.

3.2.3.4 Add new paragraph 3.2.3.4 as follows:

Subject to GC 9.4 CONSTRUCTION SAFETY, for the *Owner's* own forces and for other contractors, assume overall responsibility for compliance with all aspects of the applicable health and safety legislation in force at the *Place of the Work*, including all of the responsibilities of the “constructor”, pursuant to the *Occupational Health and Safety Act* (Ontario)..

GC 3.3 TEMPORARY WORK

3.3.2 In paragraph 3.3.2, in the second line after the words “where required by law”, insert “or the *Consultant*”.

GC 3.4 DOCUMENT REVIEW

3.4.1 Delete paragraph 3.4.1 in its entirety and substitute new paragraph 3.4.1:

The *Contractor* shall review the *Contract Documents* and shall report promptly to the *Consultant* any error, inconsistency, or omission the *Contractor* may discover. Such review by the *Contractor* shall be undertaken with the standard of care

described in paragraph 3.14.1 of the *Contract*. Except for its obligation to make such review and report the result, the *Contractor* does not assume any responsibility to the *Owner* or to the *Consultant* for the accuracy of the *Contract Documents*. Provided it has exercised the degree of care and skill described in this paragraph 3.4.1, the *Contractor* shall not be liable for damage or costs resulting from such errors, inconsistencies, or omissions in the *Contract Documents*, which the *Contractor* could not reasonably have discovered through the exercise of the required standard of care.

3.4.2 Add new paragraph 3.4.2. as follows:

If, at any time, the *Contractor* finds errors, inconsistencies, or omissions in the *Contract Documents* or has any doubt as to the meaning or intent of any part thereof, including laying out of the *Work*, the *Contractor* shall immediately notify the *Consultant*, and request instructions, a *Supplemental Instruction*, *Change Order*, or *Change Directive*, as the case may require, and the *Contractor* shall not proceed with the work affected until the *Contractor* has received such instructions, a *Supplemental Instruction*, *Change Order* or *Change Directive*. Neither the *Owner* nor the *Consultant* will be responsible for the consequences of any action of the *Contractor* based on oral instructions.

3.4.3 Add new paragraphs 3.4.3 as follows:

Errors, inconsistencies and/or omissions in the *Drawings* and/or *Specifications* which do not allow completion of the *Work* of the *Contract* shall be brought to the *Consultant's* attention prior to the execution of the *Contract* by means of an *RFI*.

GC 3.5 CONSTRUCTION SCHEDULE

3.5.1 Delete paragraph 3.5.1 in its entirety and replace with the following:

The *Contractor* shall:

.1 within five (5) calendar days of receiving written confirmation of the award of the *Contract*, prepare and submit to the *Owner* and the *Consultant* for their review and acceptance, a construction schedule in the format indicated below that indicates the timing of the activities of the *Work* and provides sufficient detail of the critical events and their inter-relationship to demonstrate the *Work* will be performed in conformity with the *Contract Time* and in accordance with the *Contract Documents*. Such schedule is to include a delivery schedule for *Products* whose delivery is critical to the schedule for the *Work* or are required by the *Contract* to be included in a *Products* delivery schedule. The *Contractor* shall employ construction scheduling software, being the latest version of "Microsoft Project", that permits the progress of the *Work* to be monitored in relation to the critical path established in the schedule. The *Contractor* shall provide the schedule and any successor or revised schedules in both electronic format and hard copy. Once accepted by the *Owner* and the *Consultant*, the construction schedule submitted by the *Contractor* shall become the baseline construction schedule; and,

.2 provide the expertise and resources, such resources including manpower and equipment, as are necessary to maintain progress under the accepted baseline construction schedule or revised schedule accepted by the *Owner* pursuant to GC 3.5 CONSTRUCTION SCHEDULE; and,

.3 monitor the progress of the *Work* on a weekly basis relative to the baseline construction schedule, or any revised schedule accepted by the *Owner* pursuant to GC 3.5 CONSTRUCTION SCHEDULE, update and submit to the *Consultant* and *Owner* the electronic and hard copy schedule on a monthly basis, at a minimum, or as required by the *Consultant* and advise the *Consultant* and the *Owner* weekly in writing of any variation from the baseline or slippage in the schedule; and,

.4 provide overtime work without change to the *Contract Price* if such work is deemed necessary to meet the schedule; and,

.5 ensure that the *Contract Price* shall include all costs required to phase or stage the *Work*.

3.5.2 Add new paragraph 3.5.2 as follows:

If, at any time, it should appear to the *Owner* or the *Consultant* that the actual progress of the *Work* is behind schedule or is likely to become behind schedule, or if the *Contractor* has given notice of such to the *Owner* or the *Consultant* pursuant to subparagraph 3.5.1.3, the *Contractor* shall, either at the request of the *Owner* or the *Consultant*, or following giving notice pursuant to subparagraph 3.5.1.3, take appropriate steps to cause the actual progress of the *Work* to conform to the schedule or minimize the resulting delay. Within five (5) calendar days of the request by the *Owner* or the *Consultant* or the notice

being given pursuant to subparagraph 3.5.1.3, the *Contractor* shall produce and present to the *Owner* and the *Consultant* a plan demonstrating how the *Contractor* will achieve the recovery of the last accepted schedule.

- 3.5.3 The *Contractor* is responsible for performing the *Work* within the *Contract Time*. Any schedule submissions revised from the accepted baseline construction schedule or revised schedule accepted by the *Owner* pursuant to GC 3.5 CONSTRUCTION SCHEDULE, during construction are not deemed to be approved extensions to the *Contract Time*. All extensions to the *Contract Time* must be made in accordance with the *Contract Documents*.

GC 3.6 SUPERVISION

Delete paragraph 3.6.1 in its entirety and replace with the following:

- 3.6.1 The *Contractor* shall employ a competent full-time superintendent, acceptable to the *Owner* and *Consultant*, who shall be in full time attendance at the *Place of Work* while the *Work* is being performed. The superintendent shall not be changed by the *Contractor* without valid reason which shall be provided in writing and shall not be changed without prior consultation with and agreement by the *Owner* and the *Consultant*. The *Contractor* shall replace the superintendent within 7 *Working Days* of the *Owner's* written notification, if the superintendent's performance is not acceptable to the *Owner*. The *Contractor* shall provide the *Owner* and the *Consultant* with the names, addresses and telephone numbers of the superintendent referred to in this paragraph 3.6.1 and other responsible persons who may be contacted for emergency and other reasons during non-working hours.

Delete paragraph 3.6.2 in its entirety and replace with the following:

- 3.6.2 The superintendent, and any project manager appointed by the *Contractor*, shall represent the *Contractor* at the *Place of Work* and shall have full authority to act on written instructions given by the *Consultant* and/or the *Owner*. Instructions given to the superintendent or the project manager shall be deemed to have been given to the *Contractor* and both the superintendent and any project manager shall have full authority to act on behalf of the *Contractor* and bind the *Contractor* in matters related to the *Contract*.
- 3.6.3 Add new paragraph 3.6.3 , 3.6.4, 3.6.5 and 3.6.6 as follows:
- The *Owner* may, at any time during the course of the *Work*, request the replacement of the appointed representative(s). Immediately upon receipt of the request, the *Contractor* shall make arrangements to appoint an acceptable replacement, which is approved by the *Owner*.
- 3.6.4 The supervisory staff assigned to the *Project* shall also be fully competent to implement efficiently all requirements for scheduling, coordination, field engineering, reviews, inspections and submittals defined in the *Specifications*, and have minimum 5 years documented "Superintendent/Project Management" experience.
- 3.6.5 The *Consultant and Owner* shall reserve the right to review the record of experience and credentials of supervisory staff assigned to the *Project* prior to commencement of the *Work*.
- 3.6.6 A superintendent assigned to the *Work* shall be "Gold Seal Certified" as per the Canadian Construction Association; or a superintendent that can demonstrate the requisite experience and success related to the *Project* to the sole satisfaction of the *Owner*.

GC 3.7 SUBCONTRACTORS AND SUPPLIERS

- 3.7.1.1 In paragraph 3.7.1.1 add to the end of the second line "including any warranties and service agreements which extend beyond the term of the *Contract*."
- 3.7.1.2 In subparagraph 3.7.1.2 after the words "the *Contract Documents*" insert the words "including any required surety bonding".

Delete paragraph 3.7.2. in its entirety and replace with the following:

- 3.7.2 Substitution of any *Subcontractor* and/or *Suppliers* after submission of the *Contractor's* bid will not be accepted unless a valid reason is given in writing to and approved by the *Owner*, whose approval may be arbitrarily withheld. The reason for substitution must be provided to the *Owner* and to the original *Subcontractor* and/or *Supplier* and the *Subcontractor* and/or *Supplier* shall be given the opportunity to reply to the *Contractor* and *Owner*. The *Contractor* shall be fully aware of the

capability of each *Subcontractor* and/or *Supplier* included in its bid, including but not limited to technical ability, financial stability and ability to maintain the proposed construction schedule.

Add new paragraphs 3.7.7 and 3.7.8 as follows:

- 3.7.7 Where provided in the *Contract*, the *Owner* may assign to the *Contractor*, and the *Contractor* agrees to accept, any contract procured by the *Owner* for *Work* or services required on the *Project* that has been pre-tendered or pre-negotiated by the *Owner*, and upon such assignment, the *Owner* shall have no further liability to any party for such contract.
- 3.7.8 The *Contractor* covenants that each subcontract or supply contract which the *Contractor* enters into for the purpose of performing the *Work* shall expressly provide for the assignment thereof to the *Owner* (at the option of the *Owner*) and the assumption by the *Owner* of the obligations of the *Contractor* thereunder, upon the termination of the *Contract* and upon written notice by the *Owner* to the other parties to such subcontracts or supply contracts, without the imposition of further terms or conditions; provided, however, that until the *Owner* has given such notice, nothing herein contained shall be deemed to create any contractual or other liability upon the *Owner* for the performance of obligations under such subcontracts or supply contracts and the *Contractor* shall be fully responsible for all of its obligations and liabilities (if any) under such subcontracts and supply contracts.

GC 3.8 LABOUR AND PRODUCTS

- 3.8.2 Delete paragraph 3.8.2 and substitute with the following:

Products provided shall be new and shall conform to all current applicable specifications of the Canadian Standards Association, Canadian Standards Board or General Standards Board, ASTM, National Building Code, provincial and municipal building codes, fire safety standards, and all governmental authorities and regulatory agencies having jurisdiction at the *Place of the Work*, unless otherwise specified. *Products* which are not specified shall be of a quality consistent with those specified and their use acceptable to the *Consultant*. *Products* brought on to the *Place of the Work* by the *Contractor* shall be deemed to be the property of the *Owner*, but the *Owner* shall be under no liability for loss thereof or damage thereto arising from any cause whatsoever. The said *Products* shall be at the sole risk of the *Contractor*. Workmanship shall be, in every respect, first class and the *Work* shall be performed in accordance with the best modern industry practice.

- 3.8.3 Amend paragraph 3.8.3 by adding the words, "... , agents, *Subcontractors* and *Suppliers*..." after the word "employees" in the first line.

Add new paragraphs 3.8.4, 3.8.5, 3.8.6, 3.8.7, 3.8.8 and 3.8.9 as follows:

- 3.8.4 Upon receipt of a written notice from the *Owner*, the *Contractor* shall immediately remove from the *Place of the Work*, tradesmen and labourers whose conduct jeopardizes the safety of the *Owner's* operations. Immediately upon receipt of the request, the **Contractor** shall make arrangements to appoint an acceptable replacement.
- 3.8.5 Upon receipt of written notice from the *Consultant*, the *Contractor* shall remove from the *Place of Work*, tradesmen and labourers whose *Work* is unsatisfactory to the *Consultant* or who are considered by the *Consultant* to be unskilled or otherwise objectionable.
- 3.8.6 The *Contractor* shall cooperate with the *Owner* and its representatives and shall take all reasonable and necessary actions to maintain stable and harmonious labour relations with respect to the *Work* at the *Place of the Work*, including cooperation to attempt to avoid *Work* stoppages, trade union jurisdictional disputes and other *Labour Disputes*. Any costs arising from labour disputes shall be at the sole expense of the *Contractor*.
- 3.8.7 The cost for overtime required beyond the normal *Working Day* to complete individual construction operations of a continuous nature, such as pouring or finishing of concrete or similar work, or *Work* that the *Contractor* elects to perform at overtime rates without the *Owner* requesting it, shall not be chargeable to the *Owner*.
- 3.8.8 All manufactured *Products* which are identified by their proprietary names or by part or catalogue number in the *Specifications* shall be used by the *Contractor*. No substitutes for such specified *Products* shall be used without the written approval of the *Owner* and the *Consultant*. Substitutes will only be considered by the *Consultant* when submitted in sufficient time to permit proper review and investigation. When requesting approval for the use of substitutes, the *Contractor* shall include in its submission any proposed change in the *Contract Price*. The *Contractor* shall use all proprietary *Products* in

strict accordance with the manufacturer's directions. Where there is a choice of proprietary *Products* specified for one use, the *Contractor* may select any one of the *Products* so specified for this use.

- 3.8.9 Materials, appliances, equipment and other *Products* are sometimes specified by reference to brand names, proprietary names, trademarks or symbols. In such cases, the name of a manufacturer, distributor, *Supplier* or dealer is sometimes given to assist the *Contractor* to find a source *Supplier*. This shall not relieve the *Contractor* from its responsibility from finding its own source of supply even if the source names no longer supplies the *Product* specified. If the *Contractor* is unable to obtain the specified *Product*, the *Contractor* shall supply a substitute product equal to or better than the specified *Product*, as approved by the *Consultant* with no extra compensation. Should the *Contractor* be unable to obtain a substitute *Product* equal to or superior to the specified *Product* and the *Owner* accepts a different *Product*, the *Contract Price* shall be adjusted accordingly, as approved by the *Consultant*.

GC 3.9 DOCUMENTS AT THE SITE

- 3.9.1 Delete paragraph 3.9.1 in its entirety and substitute the following:

The *Contractor* shall keep one copy of the current *Contract Documents*, *Supplemental Instructions*, contemplated *Change Orders*, *Change Orders*, *Change Directives*, cash allowance disbursement authorizations, reviewed *Shop Drawings*, submittals, reports and records of meeting at the *Place of the Work*, in good order and available to the *Owner* and *Consultant*.

GC 3.10 SHOP DRAWINGS

- 3.10.1 Delete paragraph 3.10.1 in its entirety and replace with the following:

The *Contractor* shall provide shop drawings as described in the *Contract Documents* and as the *Consultant* may reasonably request.

- 3.10.9 Delete paragraph 3.10.9 in its entirety and substitute the following:

At the time of providing *Shop Drawings*, the *Contractor* shall advise the *Consultant* in writing of any deviations in *Shop Drawings* from the requirements of the *Contract Documents*. The *Consultant* shall indicate the acceptance of such deviation expressly in writing. Where manufacturers' literature is submitted in lieu of scaled drawings, it shall be clearly marked in ink, to indicate the specific items for which review is requested.

Add new paragraphs 3.10.13, 3.10.14, 3.10.15, 3.10.16, 3.10.17 and 3.10.18 as follows:

- 3.10.13 Reviewed *Shop Drawings* shall not authorize a change in the *Contract Price* and/or the *Contract Time*.
- 3.10.14 The *Contractor* shall prepare a *Shop Drawings* schedule acceptable to the *Owner* and the *Consultant* prior to the first application for payment. A draft of the proposed *Shop Drawings* schedule shall be submitted by the *Contractor* to the *Consultant* and the *Owner* for approval. The draft *Shop Drawings* schedule shall clearly indicate the phasing of *Shop Drawings* submissions. The *Contractor* shall periodically re-submit the *Shop Drawings* schedule to correspond to changes in the construction schedule.
- 3.10.15 Except where the parties have agreed to a different *Shop Drawings* schedule pursuant to paragraph 3.10.3, the *Contractor* shall comply with the requirements for *Shop Drawings* submissions stated in the *Specifications*.
- 3.10.16 The *Contractor* shall not use the term "by others" on *Shop Drawings* or other submittals. The related trade, *Subcontractor* or *Supplier* shall be stated.
- 3.10.17 Certain *Specifications* sections require the *Shop Drawings* to bear the seal and signature of a professional engineer. Such professional engineer must be registered in the jurisdiction of the *Place of the Work* and shall have expertise in the area of practice reflected in the *Shop Drawings*.
- 3.10.18 The *Consultant* will review and return *Shop Drawings* and submittals in accordance with the schedule agreed upon in paragraph 3.10.3, The *Contractor* shall allow the *Consultant* a minimum of 10 *Working Days* to review *Shop Drawings* from the date of receipt. If resubmission of *Shop Drawings* is required, a further 10 *Working Day* period is required for the *Consultant's* review.

GC 3.11 USE OF THE WORK

3.11.1 In the second line between the words “permits and “or” add”, by direction of the *Owner* or *Consultant*.

3.11.3 Add new paragraph 3.11.3 as follows:

The *Owner* shall have the right to enter or occupy the *Work* in whole or in part for the purpose of placing fittings and equipment, or for other use before *Substantial Performance of the Work*, if, in the opinion of the *Consultant*, such entry and occupation does not prevent or substantially interfere with the *Contractor* in the performance of the *Contract* within the *Contract Time*. Such entry or occupation shall neither be considered as acceptance of the *Work*, nor in any way relieve the *Contractor* from its responsibility to complete the *Contract*.

GC 3.12 CUTTING AND REMEDIAL WORK

Add new paragraphs 3.12.5 and 3.12.6 as follows:

3.12.5 Unless specifically stated otherwise in the *Specifications*, the *Contractor* shall do all cutting and making good necessary for the proper installation and performance of the *Work*.

3.12.6 To avoid unnecessary cutting, the *Contractor* shall lay out its work and advise the *Subcontractors*, when necessary, where to leave holes for installation of pipes and other work.

GC 3.13 CLEAN UP

3.13.1 At the end of the paragraph 3.13.1, add the following:

Remove accumulated waste and debris at least once a week as a minimum or as required by the nature of the *Work*.

3.13.2 In paragraph 3.13.2, in the fourth line add the word “materials” between the word “tools” and the words “*Construction Equipment*”.

3.13.3 In paragraph 3.13.3, in the first and second lines add the word “materials” between the word “tools” and the words “*Construction Equipment*”.

Add new paragraphs 3.13.4, 3.13.5 and 3.13.6 as follows:

3.13.4 The *Contractor* shall clean up garbage during and after construction, and maintain the site in a neat and orderly condition on a daily basis. Prior to leaving the site at the end of construction, the *Contractor* shall make good all damage to the building and its components caused by the performance of the *Work* or by any *Subcontractor* or *Supplier*. The *Contractor* shall leave the site in a clean and finished state; remove all equipment and materials; remove all paint, stains, labels, dirt, etc. from the *Work*; and touch up all damaged painted areas.

3.13.5 Without limitation to or waiver of the *Owner’s* other rights and remedies, the *Owner* shall have the right to back charge to the *Contractor* the cost of damage to the site caused by transportation in and out of the site by the *Contractor*, *Subcontractors* or *Suppliers*, if not repaired before final payment.

3.13.6 The *Contractor* shall dispose of debris at location and in a manner acceptable to the *Owner*, and authorities having jurisdiction in the area of the *Work* and the disposal area, and cover containers with tarpaulins tied in place to prevent scattering of debris on site and during transport.

GC 3.14 CONTRACTOR STANDARD OF CARE

Add a new General Condition 3.14 – CONTRACTOR STANDARD OF CARE as follows:

3.14.1 In performing its services and obligations under the *Contract*, the *Contractor* shall exercise the standard of care, skill and diligence that would normally be provided by an experienced and prudent contractor supplying similar services for similar projects. The *Contractor* acknowledges and agrees that throughout the *Contract*, the performance of the *Contractor’s* obligations, duties and responsibilities shall be judged against this standard. The *Contractor* shall exercise the same standard of care, skill and diligence in respect of any *Products*, personnel or procedures which it may recommend to the *Owner*.

3.14.2 The *Contractor* further represents, covenants and warrants to the *Owner* that:

- .1 the personnel it assigns to the *Project* are appropriately experienced;
- .2 it has a sufficient staff of qualified and competent personnel to replace any of its appointed representatives, subject to the *Owner's* approval, in the event of death, incapacity, removal or resignation; and
- .3 there are no pending, threatened or anticipated claims, liabilities or contingent liabilities that would have a material effect on the financial ability of the *Contractor* to perform its work under the *Contract*.

GC 3.15 OCCUPANCY OF THE WORK

3.15.1 The *Owner* reserves the right to take possession of and use for any intended purpose any portion or all of the undelivered portion of the *Project* even though the *Work* may not be substantially performed, provided that such taking possession and use will not interfere, in any material way, with the progress of the *Work*. The taking of possession or use of any such portion of the *Project* shall not be deemed to be the *Owner's* acknowledgement or acceptance of the *Work* or the *Project*, nor shall it relieve the *Contractor* of any of its obligations under the *Contract*.

3.15.2 Whether the *Project* contemplates *Work* by way of renovations in buildings which will be in use or be occupied during the course of the *Work* or where the *Project* involves *Work* that is adjacent to a structure which is in use or is occupied, the *Contractor*, without in any way limiting its responsibilities under the *Contract*, shall take all reasonable steps to avoid interference with fire exits, building access and egress, continuity of electric power and all other utilities, to suppress dust and noise and to avoid conditions likely to propagate mould or fungus of any kind and all other steps reasonably necessary to promote and maintain the safety and comfort of the users and occupants of such structures or adjacent structures.

GC 4.1 CASH ALLOWANCES

4.1.1 Delete the second sentence in paragraph 4.1.1

4.1.4 Delete paragraph 4.1.4 in its entirety and substitute the following:

Where the actual cost of the *Work* under any cash allowance exceeds the amount of the allowance, any unexpended amounts from other cash allowances shall be reallocated, at the *Consultant's* direction, to cover the shortfall, and, in that case, there shall be no additional amount added to the *Contract Price* for overhead and profit. Only where the actual cost of the *Work* under all cash allowances exceeds the total amount of all cash allowances shall the *Contractor* be compensated for the excess incurred and substantiated, plus an amount for overhead and profit on the excess only, as set out in the *Contract Documents*.

4.1.5 Delete paragraph 4.1.5 in its entirety and substitute the following:

The net amount of any unexpended cash allowances, after providing for any reallocations as contemplated in paragraph 4.1.4, shall be deducted from the *Contract Price* by *Change Order* without any adjustment for the *Contractor's* overhead and profit on such amount.

Add new paragraphs 4.1.8 and 4.1.9 as follows:

4.1.8 The *Owner* reserves the right to call, or to have the *Contractor* call, for competitive bids for portions of the *Work*, which are to be paid for from cash allowances.

4.1.9 Cash allowances cover the net cost to the *Contractor* of services, *Products*, *Construction Equipment*, freight, unloading, handling, storage, installation, provincial sales tax, and other authorized expenses incurred in performing any *Work* stipulated under the cash allowances but does not include any *Value Added Taxes* payable by the *Owner* and the *Contractor*.

GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

5.1.1 Delete paragraph 5.1.1 in its entirety.

5.1.2 Delete paragraph 5.1.2 in its entirety.

GC 5.2 APPLICATIONS FOR PROGRESS PAYMENT

Delete paragraph 5.2.2 in its entirety and substitute the following:

5.2.2 Applications for payment shall be dated the last day of each payment period, which is the last day of the month or an alternative day of the month agreed in writing by the parties. The amount claimed shall be for the value, proportionate to the amount of the *Contract*, or work performed and *Products* delivered and incorporated into the *Work* at that date. No amount claimed shall include products delivered and incorporated into the work, unless the products are free and clear of all security interests, liens and other claims of third parties.

Each application for payment, except the first, shall include a statutory declaration, in the current CCDC 9A form, up to the date of the application for payment. Each application for payment (including the first the holdback upon Substantial Performance, and final payments), shall also include:

.1 A certificate, issued by an agency or firm providing workers' compensation insurance to the *Contractor*, verifying that coverage is in force at the time of making the application for payment, and that coverage will remain in force for at least sixty (60) days thereafter.

.2 A declaration by the *Contractor* verifying that the performance of the *Work* is in compliance with all applicable regulatory requirements respecting environmental protection, first safety, public safety and occupational health and safety.

.3 A pre-approved schedule of values, supplied by the *Contractor*, for Divisions 1 through 14 of the *Work*, aggregating the total amount of the *Contract Price*.

.4 A separate pre-approved schedule of values, supplied by each *Subcontractor*, for each of Division 15, 16, and 17 of the *Work*, aggregating the total amount of the *Contract Price*.

.5 Invoices to support all claims against the cash allowance.

.6 An acceptable construction schedule pursuant to GC 3.5.

5.2.3 Amend paragraph 5.2.3 by adding the following to the end of that paragraph:

No amount claimed shall include *Products* delivered to the *Place of the Work* unless the *Products* are free and clear of all security interests, liens, and other claims of third parties.

5.2.7 Delete existing paragraph 5.2.7:

Add new paragraphs 5.2.7, and 5.2.8 as follows:

5.2.7 The *Contractor* shall prepare and maintain current as-built drawings which shall consist of the *Drawings* and *Specifications* revised by the *Contractor* during the *Work*, showing changes to the *Drawings* and *Specifications*, which current as-built drawings shall be maintained by the *Contractor* and made available to the *Consultant* for review with each application for progress payment. The *Consultant* shall retain a reasonable amount for the value of the as-built drawings not presented for review.

5.2.8 Prior to each application for payment, the *Contractor* and the *Consultant* shall jointly review the progress of the *Work*.

GC 5.3 PROGRESS PAYMENT

5.3.1.2 In the first sentence amend as follows: After the words "issue to the *Owner*" delete "and copy to the *Contractor*". After the words "after the receipt of the" add "complete".

5.3.1.3 Delete subparagraph 5.3.1.3 in its entirety and substitute as follows:

the *Owner* shall make payment to the *Contractor* on account as provided in Article A-5 of the Agreement – PAYMENT no later than 20 calendar days after the date of a complete certificate of payment is issued by the *Consultant*

Add new paragraphs 5.3.2 and 5.3.3 as follows:

5.3.2 If the *Contractor* fails to provide all documentation as required by GC 5.2 – APPLICATIONS FOR PROGRESS PAYMENT, the *Contractor* or *Owner* shall be entitled to return the application for progress payment to the *Contractor* for completion. The 10 day review period by the *Consultant* and 20 day payment period by the *Owner* will commence upon receipt of a complete application for progress payment.

5.3.3 Payment will be mailed to the *Contractor*. The payment date shall be the date the cheque is mailed. Delay resulting from mail shall not be used in calculating payment date.

GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK

5.4.2 Delete paragraph 5.4.2 in its entirety and substitute the following:

The *Consultant* will review the *Work* to verify the validity of the application and shall promptly, and in any event, no later than 30 calendar days after receipt of the *Contractor's* complete deficiency list and application, the *Consultant* shall:

.1 prepare a final deficiency list incorporating all items to be completed or corrected. Each item is to have an indicated value for correction or completion. Determination of the value is defined in GC 5.10 – DEFICIENCY HOLDBACK. The final deficiency list complete with values is to be included with the *Consultant's* draft verification and shall be reviewed with the *Owner* prior to 5.4.2.2.

.2 having completed 5.4.2.1, the *Consultant* shall:

.1 advise the *Contractor* in writing that the *Work* or the designated portion of the *Work* is not substantially performed and give reasons why, or

.2 state the date of *Substantial Performance of the Work* in a certificate and issue a copy of that certificate to each the *Owner* and the *Contractor*.

5.4.3 Delete paragraph 5.4.3 in its entirety and substitute the following:

Following the issuance of the certificate of *Substantial Performance of the Work*, the following shall apply to completing the *Work*:

.1 *Contractor* is to complete the *Work* within sixty (60) calendar days.

.2 No payments will be processed between *Substantial Performance of the Work* and the completion of the *Work*.

.3 The *Owner* reserves the right to contract out any or all unfinished *Work* if it has not been completed within sixty (60) days of *Substantial Performance of the Work* without prejudice to any other right or remedy and without affecting the warranty period. The cost of completing the *Work* shall be deducted from the *Contract Price*.

Add new paragraphs 5.4.4, 5.4.5 and 5.4.6:

5.4.4 Within the time prescribed by the construction/builder's lien legislation in force at the *Place of the Work*, or where there is no legislation or no time prescribed, within a reasonable time of receiving a copy of the certificate of *Substantial Performance of the Work* signed by the *Consultant*, the *Contractor* shall take whatever steps are required to publish or post a signed copy of the certificate, as is required by such legislation. If the *Contractor* fails to comply with this provision, the *Owner* may take the required steps pursuant to the legislation and charge the *Contractor* for any costs so incurred.

5.4.5 Prior to submitting its written application for *Substantial Performance of the Work*, the *Contractor* shall submit to the *Consultant* all:

.1 guarantees;

.2 warranties;

.3 certificates;

.4 final testing and balancing reports;

.5 distribution system diagrams;

.6 spare parts;

.7 maintenance manuals;

.8 samples;

.9 reports and correspondence from authorities having jurisdiction in the *Place of the Work*;

.10 shop drawings;

- .11 inspection certificates;
- .12 red-lined record drawings from the construction trailer in two copies.

and other materials or documentation required to be submitted under the *Contract*, together with written proof acceptable to the *Owner* and the *Consultant* that the *Work* has been substantially performed in conformance with the requirements of municipal, governmental, and utility authorities having jurisdiction in the *Place of the Work*. The *Consultant* shall refuse to certify *Substantial Performance of the Work* if the submittals referred to in this paragraph 5.4.5 are not provided by the *Contractor*.

- 5.4.6 The *Owner* shall withhold, from amounts otherwise payable to the *Contractor*, an amount not to exceed one (1) percent of the *Contract Price* as security for the obligation of the *Contractor* to deliver two copies of the red-lined record drawings.

GC 5.5 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK

Add new subparagraph 5.5.1.3 as follows

- 5.5.1.3 submit a statement that no written notices of liens have been received by it

- 5.5.2 Amend paragraph 5.5.2 by adding the following sentence to the end of that paragraph:

A reserve fund may be retained by the *Owner* to secure the correction of deficiencies and/or warranty claims. Included in the reserve fund would be all *Consultant* and *Owner* costs related to the correction of deficiencies and/or warranty claims.

- 5.5.3 Delete paragraph 5.5.3 in its entirety.

- 5.5.5 Delete paragraph 5.5.5 in its entirety.

GC 5.6 PROGRESSIVE RELEASE OF HOLDBACK

Delete GC 5.6 in its entirety.

GC 5.7 FINAL PAYMENT

- 5.7.1 Delete paragraph 5.7.1 in its entirety and substitute as follows:

When the *Contractor* considers that the *Work* is completed, as defined in the lien legislation applicable to the *Place of the Work* or if such definition does not exist, in accordance with other applicable legislation, industry practice or provisions which may be agreed to between the parties, the *Contractor* shall submit an application for final payment. The *Contractor's* application for final payment shall be accompanied by any documents or materials not yet delivered pursuant to paragraph 5.4.5, together with complete and final as-built drawings and:

- .1 the *Contractor's* written request for release of the deficiency holdback, including a statement that no written notices of lien have been received by it;
- .2 a Statutory Declaration CCDC 9A-2001.

The *Work* shall be deemed not to be completed until all of the aforementioned documents have been delivered, and the *Owner* may withhold payment in respect of the delivery of any documents in an amount determined by the *Consultant* in accordance with the provisions of GC 5.8 - WITHHOLDING OF PAYMENT.

- 5.7.2 Delete from the first line of paragraph 5.7.2 the words, "calendar days" and substitute the words "*Working Days*".

- 5.7.4 Delete from the second line of paragraph 5.7.4 the words, " 5 calendar days after the issuance" and substitute the words "30 calendar days after receipt of".

GC 5.8 WITHHOLDING OF PAYMENT

Delete paragraph 5.8.1 and replace with the following:

- 5.8.1 If because of conditions reasonably beyond the control of the *Contractor*, there are items of work that cannot be performed, payment in full for that portion of the *Work* which has been performed as certified by the *Consultant* shall not be withheld or delayed by the *Owner* on account thereof, but the *Owner* may withhold, until the remaining portion of the *Work* is finished, only such an amount that the *Consultant* determines is sufficient and reasonable to cover the cost of performing such remaining work.

GC 5.10 DEFICIENCY HOLDBACK

Add a new General Condition 5.10 as follows:

- 5.10.1 Notwithstanding any provisions contained in the *Contract Documents* concerning certification and release of monies to the *Contractor*, the *Owner* reserves the right to establish a deficiency holdback, at the time of the review for *Substantial Performance*, based on a 200% dollar value of the deficiencies listed by the *Consultant*. The value of work outstanding for the calculation of *Substantial Performance of the Work* under the *Construction Lien Act* (Ontario) shall utilize the 100% dollar value. No individual deficiency will be valued at less than two hundred dollars (\$200.00). The *Owner* shall retain the entire deficiency holdback amount until completion of all of the deficiencies listed by the *Consultant* to the satisfaction of the *Consultant*.

GC 6.1 OWNER'S RIGHT TO MAKE CHANGES

Add new paragraphs 6.1.3, 6.1.4, 6.1.5, 6.1.6, 6.1.7 and 6.1.8 as follows:

- 6.1.3 The *Contractor* agrees that changes resulting from construction coordination, including but not limited to, site surface conditions, site coordination, and *Subcontractor and Supplier* coordination are included in the *Contract Price* and the *Contractor* shall be precluded from making any claim for a change in the *Contract Price* as a result of such changes.
- 6.1.4 Labour costs shall be actual, prevailing rates at the *Place of the Work* paid to workers, plus statutory charges on labour including WSIB, unemployment insurance, Canada pension, vacation pay, hospitalization and medical insurance. The *Contractor* shall provide these rates, when requested by the *Consultant*, for review and/or agreement.
- 6.1.5 Quotations for changes to the *Work* shall be accompanied by itemized breakdowns together with detailed, substantiating quotations or cost vouchers from *Subcontractors* and *Suppliers*, submitted in a format acceptable to the *Consultant* and including any costs associated with extensions in *Contract Time*.
- 6.1.6 When both additions and deletions covering related *Work* or substitutions are involved in a change to the *Work*, payment, including *Overhead* and profit, shall be calculated on the basis of the net difference, if any, with respect to that change in the *Work*.
- 6.1.7 No extension to the *Contract Time* shall be granted for changes in the *Work* unless the *Contractor* can clearly demonstrate that such changes significantly alter the overall construction schedule submitted at the commencement of the *Work*. Extensions of *Contract Time* and all associated costs, if approved pursuant to GC 3.4.2, are to be included in the relevant *Change Order*.
- 6.1.8 When a change in the *Work* is proposed or required, the *Contractor* shall within 10 calendar days submit to the *Consultant* for review a claim for a change in *Contract Price* and/or *Contract Time*. Should 10 calendar days be insufficient to prepare the submission, the *Contractor* shall within 5 calendar days, advise the *Consultant* in writing of the proposed date of submission of the claim. Claims submitted after the dates prescribed herein will not be considered.

GC 6.2 CHANGE ORDER

- 6.2.1 Add after the last sentence in the paragraph:

The adjustment in the *Contract Time* and the *Contract Price* shall include an adjustment, if any, for delay or for the impact that the change in the *Work* has on the *Work* of the *Contractor*, and once such adjustment is made, the *Contractor* shall be precluded from making any further claims for delay or impact with respect to the change in the *Work*.

Add new paragraph 6.2.3 as follows:

6.2.3 The value of a change shall be determined in one or more of the following methods as directed by the *Consultant*.

- .1 by estimate and acceptance of a lump sum;
- .2 by negotiated unit prices which include the *Contractor's Overhead* and profit, or;
- .3 by the actual cost to the *Owner*, such costs to be the actual cost after all credits included in the change have been deducted, plus the following ranges of mark-up on such costs:
 - .1 for *Change Orders* with a value of \$0 to \$15,000 the total *Subcontractor/Supplier* mark-up including *Overhead* and profit shall be 10% and the total *Contractor* mark-up including overhead and profit shall be 5%.
 - .2 For *Change Orders* in excess of \$15,000, the total *Subcontractor/Supplier* mark-up including *Overhead* and profit shall be 5% and the total *Contractor* mark-up including *Overhead* and profit shall be 3%.

Add new paragraph 6.2.4 as follows:

6.2.4 All quotations will be submitted in a complete manner listing:

- .1 quantity of each material,
- .2 unit cost of each material,
- .3 man hours involved,
- .4 cost per hour,
- .5 *Subcontractor* quotations submitted listing items 1 to 4 above and item 6 below.
- .6 mark-up

Add new paragraph 6.2.5 as follows:

6.2.5 The *Owner* and the *Consultant* will not be responsible for delays to the *Work* resulting from late, incomplete or inadequately broken down valuations submitted by the *Contractor*.

GC 6.3 CHANGE DIRECTIVE

6.3.6.1 Amend paragraph 6.3.6.1 by deleting the final period and adding as follows:

- .1 Ten percent (10%) for profit plus five percent (5%) for overhead on work by the *Contractor's* own forces up to the value of \$15,000 and five percent (5%) for profit plus three percent (3%) for *Overhead* on work by the *Contractor's* own forces in excess of \$15,000 and,
- .2 Ten percent (10%) fee on amounts paid to *Subcontractors* or *Suppliers* under subparagraph 6.3.7.9 for changes up to the value of \$15,000 and five percent (5%) on changes over \$15,000.

Unless a *Subcontractor's* or *Supplier's* price has been approved by the *Owner*, the *Subcontractor* or *Supplier* shall be entitled to its actual net cost as determined in accordance with paragraph 6.3.7, plus ten percent (10%) for profit and five percent (5%) for *Overhead* on such actual net cost for changes in the *Work*, up to the value of \$15,000 and five percent (5%) for profit and three percent (3%) for overhead on such actual net cost changes in the *Work* in excess of \$15,000.

6.3.6.2 Delete paragraph 6.3.6.2 and replace it with the following:

If a change in the *Work* results in a net decrease in the *Contract Price* in excess of \$15,000 the amount of the credit shall be the net cost, with deduction for *Overhead* and profit. If a change in the *Work* results in a net decrease in the *Contract Price* of \$15,000 or less, the amount of the credit shall be the net cost, without deduction for *Overhead* or profit.

6.3.7.1 In subparagraph 6.3.7.1 insert “while directly engaged in the work attributable to the change” after the words “in the direct employ of the *Contractor*”.

6.3.7 At the end of paragraph 6.3.7 add the following:

All other costs attributable to the change in the *Work* including the costs of all administrative or supervisory personnel are included in *Overhead* and profit calculated in accordance with the provisions of paragraph 6.1.5 of GC6.1 – OWNER’S RIGHT TO MAKE CHANGES.

GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

6.4.1 Delete paragraph 6.4.1 and replace with the following:

6.4.1.1 Prior to the submission of the bid on which the *Contract* was awarded, the *Contractor* confirms that it carefully investigated the *Place of the Work* and carried out such tests as it deemed appropriate and, in doing so, applied to that investigation the degree of care and skill required by paragraph 3.14.1.

6.4.1.2 No claim by the *Contractor* will be considered by the *Owner* or the *Consultant* in connection with conditions which could reasonably have been ascertained by such investigation or other due diligence undertaken prior to the execution of the *Contract*.

6.4.2 Amend paragraph 6.4.2 by adding a new first sentence as follows:

Having regard to paragraph 6.4.1, if the *Contractor* believes that the conditions of the *Place of the Work* differ materially from those reasonably anticipated, differ materially from those indicated in the *Contract Documents* or were concealed from discovery notwithstanding the conduct of the investigation described in paragraph 6.4.1, it shall provide the *Owner* and the *Consultant* with *Notice in Writing* no later than five (5) *Working Days* after the first observation of such conditions.

Amend the existing second sentence of paragraph 6.4.2 in the second line, following the word “materially” by adding the words “or were concealed from discovery notwithstanding the conduct of the investigation described in paragraph 6.4.1,”

6.4.3 Delete paragraph 6.4.3 in its entirety and substitute the following:

If the *Consultant* makes a finding pursuant to paragraph 6.4.2 that no change in the *Contract Price* or the *Contract Time* is justified, the *Consultant* shall report in writing the reasons for this finding to the *Owner* and the *Contractor*.

Add new paragraph 6.4.5 as follows:

6.4.5 No claims for additional compensation or for an extension of *Contract Time* shall be allowed if the *Contractor* fails to give *Notice in Writing* to the *Owner* or *Consultant*, as required by paragraph 6.4.2.

GC 6.5 DELAYS

6.5.1 Delete the words after the word “for” in the fourth line of paragraph 6.5.1, and add the words “...reasonable direct costs directly flowing from the delay, but excluding any consequential, indirect or special damages (including, without limitation, loss of profits, loss of opportunity or loss of productivity).”

6.5.2 Delete the words after the word “for” in the fourth line of paragraph 6.5.2, and add the words “...reasonable direct costs directly flowing from the delay, but excluding any consequential, indirect or special damages (including, without limitation, loss of profits, loss of opportunity or loss of productivity).”

6.5.3 Delete paragraph 6.5.3 in its entirety and replace with the following:

If the *Contractor* is delayed in the performance of the *Work* by *Force Majeure*, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The extension of time shall

not be less than the time lost as a result of the event causing the delay, unless the *Contractor* agrees to a shorter extension. The *Contractor* shall not be entitled to payment for costs incurred by such delays unless such delays result from the actions of the *Owner*.

Delete paragraph 6.5.4 in its entirety and replace with the following:

- 6.5.4 No extension or compensation shall be made for delay or impact on the *Work* unless notice in writing of a claim is given to the *Consultant* not later than ten (10) *Working Days* after the commencement of the delays or impact on the *Work*, provided however, that, in the case of a continuing cause of delay or impact on the *Work*, only one notice of claim shall be necessary.

Add new paragraphs 6.5.6, 6.5.7 and 6.5.8 as follows:

- 6.5.6 If the *Contractor* is delayed in the performance of the *Work* by an act or omission of the *Contractor* or anyone directly or indirectly employed or engaged by the *Contractor*, or by any cause within the *Contractor's* control, then the *Contract Time* may be extended for such reasonable time as the *Owner* may decide in consultation with the *Consultant* and the *Contractor*. The *Owner* shall be reimbursed by the *Contractor* for all reasonable costs incurred by the *Owner* as the result of such delay, including, but not limited to, the cost of all additional services required by the *Owner* from the *Consultant* or any sub-consultants, project managers, or others employed or engaged by the *Owner*, and in particular, the costs of the *Consultant's* services during the period between the date of *Substantial Performance of the Work* stated in Article A-1 herein, as the same may be extended through the provision of these General Conditions, and any later or actual date of *Substantial Performance of the Work* achieved by the *Contractor*.
- 6.5.7 Without limiting the obligations of the *Contractor* described in GC 3.2 – CONSTRUCTION BY OWNER OR OTHER CONTRACTORS or GC 9.4 – CONSTRUCTION SAFETY, the *Owner* or *Consultant* may, by notice in writing, direct the *Contractor* to stop the *Work* where the *Owner* or *Consultant* determines that there is an imminent risk to the safety of persons or property at the *Place of the Work*. In the event that the *Contractor* receives such notice, it shall immediately stop the *Work* and secure the site. The *Contractor* shall not be entitled to an extension of the *Contract Time* or to an increase in the *Contract Price* unless the resulting delay, if any, would entitle the *Contractor* to an extension of the *Contact Time* or the reimbursement of the *Contractor's* costs as provided in paragraphs 6.5.1, 6.5.2 or 6.5.3.
- 6.5.8 No claim for delay shall be made and the *Contract Time* shall not be extended due to climatic conditions or arising from the *Contractor's* efforts to maintain the *Contract* schedule.

GC 6.6 CLAIMS FOR A CHANGE IN THE CONTRACT PRICE

Delete GC 6.6 in its entirety.

GC 7.1 OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT

Revise the heading to read "OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, SUSPEND THE WORK OR TERMINATE THE CONTRACT"

Add a new subparagraph 7.1.3.4 as follows:

- 7.1.3.4 An "acceptable schedule" as referred to in subparagraph 7.1.3.2. means a schedule approved by the *Consultant* and the *Owner* wherein the default can be corrected within the balance of the *Contract Time* and shall not cause delay to any other aspect of the *Work* or the work of other contractors, and in no event shall it be deemed to give a right to extend the *Contract Time*.
- 7.1.4.1 Delete sentence and replace with the following:
- Correct such default and deduct the cost, including *Owner's* expenses, thereof from any payment then or thereafter due the *Contractor*.
- 7.1.5.3 In subparagraph 7.1.5.3 delete the words: "however, if such cost of finishing the *Work* is less than the unpaid balance of the *Contract Price*, the *Owner* shall pay the *Contractor* the difference;"

Delete paragraph 7.1.6 in its entirety and add new paragraphs 7.1.6, 7.1.7, 7.1.8, 7.1.9 and 7.1.10 as follows:

- 7.1.6 In addition to its right to terminate the Contract set out herein, the *Owner* may terminate this *Contract* at any time for any other reason and without cause upon giving the *Contractor* fifteen (15) *Working Days Notice in Writing* to that effect. In such event, the *Contractor* shall be entitled to be paid for all *Work* performed including reasonable profit, for loss sustained upon *Products* and *Construction Equipment*, and such other damages as the *Contractor* may have sustained as a result of the termination of the *Contract*, but in no event shall the *Contractor* be entitled to be compensated for any loss of profit on unperformed portions of the *Work*, or indirect, special, or consequential damages incurred.
- 7.1.7 The *Owner* may suspend *Work* under this *Contract* at any time for any reason and without cause upon giving the *Contractor* *Notice in Writing* to that effect. In such event, the *Contractor* shall be entitled to be paid for all *Work* performed to the date of suspension and be compensated for all actual costs incurred arising from the suspension, including reasonable profit, for loss sustained upon *Products* and *Construction Equipment*, and such other damages as the *Contractor* may have sustained as a result of the suspension of the *Work*, but in no event shall the *Contractor* be entitled to be compensated for any indirect, special, or consequential damages incurred. In the event that the suspension continues for more than thirty (30) calendar days, the *Contract* shall be deemed to be terminated and the provisions of paragraph 7.1.6 shall apply.
- 7.1.8 In the case of either a termination of the *Contract* or a suspension of the *Work* under GC 7.1 - OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, SUSPEND THE WORK, OR TERMINATE THE CONTRACT or GC 7.2 - CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the *Contractor* shall use its best commercial efforts to mitigate the financial consequences to the *Owner* arising out of the termination or suspension, as the case may be.
- 7.1.9 Upon the resumption of the *Work* following a suspension under GC 7.1 - OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, SUSPEND THE WORK OR TERMINATE THE CONTRACT or GC 7.2 - CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the *Contractor* will endeavour to minimize the delay and financial consequences arising out of the suspension.
- 7.1.10 The *Contractor's* obligations under the *Contract* as to quality, correction, and warranty of the *Work* performed by the *Contractor* up to the time of termination or suspension shall continue after such termination of the *Contract* or suspension of the *Work*.

GC 7.2 CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT

7.2.3.1 Delete subparagraph 7.2.3.1 in its entirety.

7.2.3.4 In subparagraph 7.2.3.4, delete the words "except for GC 5.1 - FINANCING INFORMATION REQUIRED OF THE OWNER".

Re-number paragraph 7.2.5 as paragraph 7.2.6. Add a new paragraph 7.2.5 as follows:

- 7.2.5 If the default cannot be corrected within the 5 *Working Days* specified in paragraph 7.2.4, the *Owner* shall be deemed to have cured the default if it:
- .1 commences correction of the default within the specified time;
 - .2 provides the *Contractor* with an acceptable schedule for such correction; and,
 - .3 completes the correction in accordance with such schedule.

Delete paragraph 7.2.6 entirely and replace with the following:

7.2.6 If the *Contractor* terminates the *Contract* under the conditions described in GC 7.2 – CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the *Contractor* shall be entitled to be paid for all *Work* performed to the date of termination, as determined by the *Consultant*. The *Contractor* shall also be entitled to recover the

direct costs associated with termination, including the costs of demobilization and losses sustained on *Products* and *Construction Equipment*. The *Contractor* shall not be entitled to any recovery for any special, indirect or consequential losses, including loss of profit.

Add new paragraphs 7.2.7, 7.2.8 and 7.2.9 as follows

- 7.2.7 The *Contractor* shall not be entitled to give notice of the *Owner's* default or terminate the *Contract* in the event the *Owner* withholds certificates or payment or both in accordance with the *Contract* because of:
- (a) the *Contractor's* failure to pay all legitimate claims promptly, or
 - (b) the failure of the *Contractor* to discharge construction liens which are registered against the title to the *Place of the Work*.
- 7.2.8 The *Contractor's* obligations under the *Contract* as to quality, correction and warranty of the *Work* performed by the *Contractor* up to the effective date of termination shall continue in force and shall survive termination by the *Contractor* in accordance with paragraph 7.2.4.
- 7.2.9 If the *Contractor* suspends the *Work* or terminates the *Contract* as provided for in GC 7.2 – CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the *Contractor* shall ensure the site and the *Work* are left in a safe, secure condition as required by authorities having jurisdiction at the *Place of the Work* and the *Contract Documents*.

GC 8.2 NEGOTIATION, MEDIATION AND ARBITRATION

- 8.2.1 Amend paragraph 8.2.1 by changing part of the second line from “shall appoint a *Project Mediator*” to “may appoint a *Project Mediator*, except that such an appointment shall only be made if both the *Owner* and the *Contractor* agree.”
- 8.2.4 Amend paragraph 8.2.4 by changing part of the second line from “the parties shall request the *Project Mediator*” to “and subject to paragraph 8.2.1 the parties may request the *Project Mediator*”.

Delete paragraphs 8.2.6, 8.2.7 and 8.2.8 in their entirety.

Add new paragraph 8.2.6 as follows:

- 8.2.6 The dispute may be finally resolved by arbitration under the Rules for Arbitration of Construction Disputes as provided in CCDC 40 in effect at the time of bid closing, provided that both the *Contractor* and the *Owner* agree. If the *Contractor* and the *Owner* agree to resolve the dispute by arbitration, the arbitration shall be conducted in the jurisdiction of the *Place of the Work*.

GC 9.1 PROTECTION OF WORK AND PROPERTY

Delete subparagraph 9.1.1.1 in its entirety and substitute the following:

- 9.1.1.1 errors in the *Contract Documents* which the *Contractor* could not have discovered applying the standard of care described in paragraph 3.14.1;

Delete paragraph 9.1.2 in its entirety and substitute as follows:

- 9.1.2 Before commencing any *Work*, the *Contractor* shall determine the locations of all underground or hidden utilities and structures indicated in or inferable from the *Contract Documents*, or that are inferable from an inspection of the *Place of the Work* exercising the degree of care and skill described in paragraph 3.14.1.

Add new paragraph 9.1.5 as follows:

- 9.1.5 With respect to any damage to which paragraphs 9.1.3 or 9.1.4 apply, the *Contractor* shall neither undertake to repair or replace any damage whatsoever to the work of other contractors, or to adjoining property, nor acknowledge that the same was caused or occasioned by the *Contractor*, without first consulting the *Owner* and receiving written instructions as to the course of action to be followed from either the *Owner* or the *Consultant*. Where, however, there is danger to life, the environment, or public safety, the *Contractor* shall take such emergency action as it deems necessary to remove the danger.

GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

Add a new subparagraph 9.2.5.5 as follows:

9.2.5.5 in addition to the steps described in subparagraph 9.2.5.3, take any further steps it deems necessary to mitigate or stabilize any conditions resulting from encountering toxic or hazardous substances or materials.

9.2.6 Add the following to paragraph 9.2.6, after the word “responsible” in the second line:

...or whether any toxic or hazardous substances or materials already at the *Place of the Work* (and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements) were dealt with by the *Contractor* or anyone for whom the *Contractor* is responsible in a manner which does not comply with legal and regulatory requirements, or which threatens human health and safety or the environment, or material damages to the property of the *Owner* or others,...

9.2.8 Add the following to paragraph 9.2.8, after the word “responsible” in the second line:

...or whether any toxic or hazardous substances or materials already at the *Place of the Work* (and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements) were dealt with by the *Contractor* or anyone for whom the *Contractor* is responsible in a manner which does not comply with legal and regulatory requirements, or which threatens human health and safety or the environment, or material damages to the property of the *Owner* or others,...

Add new paragraph 9.2.10 as follows:

9.2.10 The *Contractor*, *Subcontractors* and *Suppliers* shall not bring on to the *Place of the Work* any toxic or hazardous substances and materials except as required in order to perform the *Work*. If such toxic or hazardous substances or materials are required, storage in quantities sufficient to allow work to proceed to the end of any current work week only shall be permitted. All such toxic and hazardous materials and substances shall be handled and disposed of only in accordance with all laws and regulations that are applicable at the *Place of the Work*.

GC 9.4 CONSTRUCTION SAFETY

Delete paragraph 9.4.1 in its entirety and substitute as follows:

9.4.1 The *Contractor* shall be solely responsible for construction safety at the *Place of the Work* and for compliance with the rules, regulations, and practices required by the applicable construction health and safety legislation and shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the *Work*.

Add new paragraphs 9.4.2 to 9.4.10 as follows:

9.4.2 Prior to the commencement of the *Work*, the *Contractor* shall submit to the *Owner*:

- .1 the evidence of workers’ compensation compliance required by GC 10.4.1;
- .2 copies of the *Contractor’s* insurance policies having application to the *Project* or certificates of insurance, at the option of the *Owner*;
- .3 documentation setting out the *Contractor’s* in-house safety programs;
- .4 copies of any documentation or notices to be filed or delivered to the authorities having jurisdiction for the regulation of occupational health and safety at the *Place of the Work*.

9.4.3 The *Contractor* shall indemnify and save harmless the *Owner*, its agents, trustees, officers, directors, employees, consultants, successors, appointees, and assigns from and against the consequences of any and all safety infractions committed by the *Contractor* under the occupational health and safety legislation in force at the *Place of the Work* including the payment of legal fees and disbursements on a substantial indemnity basis.

- 9.4.4 The *Owner* undertakes to include in its contracts with other contractors and in its instructions to its own forces the requirement that the other contractor or its own forces, as the case may be, comply with the policies and procedures of and the directions and instructions from the *Contractor* with respect to occupational health and safety and related matters.
- 9.4.5 If the *Owner* is of the reasonable opinion that the *Contractor* has not taken such precautions as are necessary to ensure compliance with the requirements of paragraph 9.4.1, the *Owner* may take any remedial measures which it deems necessary, including stopping the performance of all or any portion of the *Work*, and the *Owner* may use its employees, the *Contractor*, any *Subcontractor* or any other contractors to perform such remedial measures.
- 9.4.6 The *Contractor* shall file any notices or any similar document required pursuant to the *Contract* or the safety regulations in force at the *Place of the Work*. This duty of the *Contractor* will be considered to be included in the *Work* and no separate payment therefore will be made to the *Contractor*.
- 9.4.7 Unless otherwise provided in the *Contract Documents*, the *Contractor* shall develop, maintain and supervise for the duration of the *Work* a comprehensive safety program that will effectively incorporate and implement all required safety precautions. The program shall, at a minimum, respond fully to the applicable safety regulations and general construction practices for the safety of persons or property, including, without limitation, any general safety rules and regulations of the *Owner* and any workers' compensation or occupational health and safety statutes or regulations in force at the *Place of the Work*.
- 9.4.8 The *Contractor* shall provide a copy of the safety program described in paragraph 9.4.7 hereof to the *Consultant* for delivery to the *Owner* prior to the commencement of the *Work*, and shall, ensure, as far as it is reasonably practical to do so, that every employer and worker performing work in respect of the *Project* complies with such program.
- 9.4.9 The *Contractor* shall arrange regular safety meetings, and shall supply and maintain, at its own expense, at its office or other well-known place at the job site, safety equipment necessary to protect the workers and general public against accident or injury as prescribed by the authorities having jurisdiction at the *Place of the Work*, including, without limitation, articles necessary for administering first-aid to any person and an emergency procedure for the immediate removal of any injured person to a hospital or a doctor's care.
- 9.4.10 The *Contractor* shall promptly report in writing to the *Owner* and the *Consultant* all accidents of any sort arising out of or in connection with the performance of the *Work*, whether on or adjacent to the job site, giving full details and statement of witnesses. If death or serious injuries or damages are caused, the accident shall be promptly reported by the *Contractor* to the *Owner* and the *Consultant* by telephone or messenger in addition to any reporting required under the applicable safety regulations.

GC 10.1 TAXES AND DUTIES

- 10.1.2 Amend paragraph 10.1.2 by adding the following sentence to the end of the paragraph:

For greater certainty, the *Contractor* shall not be entitled to any mark-up for overhead or profit on any increase in such taxes and duties and the *Owner* shall not be entitled to any credit relating to mark-up for overhead or profit on any decrease in such taxes. The *Contractor* shall provide a detailed breakdown of additional taxes if requested by the *Owner* in a form satisfactory to the *Owner*.

Add new paragraph 10.1.3 as follows:

- 10.1.3 Where the *Owner* is entitled to an exemption or a recovery of sales taxes, customs duties, excise taxes or *Value Added Taxes* applicable to the *Contract*, the *Contractor* shall, at the request of the *Owner*, assist with the application for any exemption, recovery or refund of all such taxes and duties and all amounts recovered or exemptions obtained shall be for the sole benefit of the *Owner*. The *Contractor* agrees to endorse over to the *Owner* any cheques received from the federal or provincial governments, or any other taxing authority, as may be required to give effect to this paragraph.

GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

- 10.2.5 Amend paragraph 10.2.5 by addition the words "Subject to paragraph 3.4" at the beginning of the paragraph. Add the following to the end of the second sentence:

...and no further *Work* on the affected components of the *Contract* shall proceed until these directives have been obtained by the *Contractor* from the *Consultant*.

10.2.6 Amend paragraph 10.2.6 by adding the following sentence to the end of the paragraph:

In the event the *Owner* suffers loss or damage as a result of the *Contractor's* failure to comply with paragraph 10.2.5 and notwithstanding any limitations described in paragraph 12.1.1, the *Contractor* agrees to indemnify and to hold harmless the *Owner* and the *Consultant* from and against any claims, demands, losses, costs, damages, actions suits or proceedings resulting from such failure by the *Contractor*.

Add new paragraph 10.2.8 as follows:

10.2.8 The *Contractor* shall furnish all certificates that are required or given by the appropriate governmental authorities as evidence that the *Work* as installed conforms with the laws and regulations of authorities having jurisdiction, including certificates of compliance for the *Owner's* occupancy or partial occupancy. The certificates are to be final certificates giving complete clearance of the *Work*, in the event that such governmental authorities furnish such certificates.

GC 10.4 WORKERS' COMPENSATION

10.4.1 Delete paragraph 10.4.1 and replace with the following:

Prior to commencing the *Work*, and with each and every application for payment thereafter, including the *Contractor's* application for payment of the holdback amount following *Substantial Performance of the Work* and again with the *Contractor's* application for final payment, the *Contractor* shall provide evidence of compliance with workers' compensation legislation in force at the *Place of the Work*, including payments due thereunder.

GC 11.1 INSURANCE

Delete entirety of general condition and CCDC 41 and replace with the following:

11.1 Without restricting the generality of GC 12 – INDEMNIFICATION, the *Contractor* shall provide, maintain, and pay for the insurance coverages specified in GC 11.1 – INSURANCE. Unless otherwise stipulated, the duration of each insurance policy shall be from the date of commencement of the *Work* until the expiration of the warranty periods set out in the *Contract Documents*. Prior to commencement of the *Work* and upon the placement, renewal, amendment, or extension of all or any part of the insurance, the *Contractor* shall promptly provide the *Owner* with confirmation of coverage and, if required, a certified true copy of the policies certified by an authorized representative of the insurer together with copies of any amending endorsements.

.1 General Liability Insurance

General liability insurance shall be in the name of the *Contractor*, with the *Owner* and the *Consultant* named as additional insureds, with limits of not less than \$5,000,000.00 inclusive per occurrence for bodily injury, death, and damage to property, including loss of use thereof, for itself and each of its employees, *Subcontractors* and/or agents. The insurance coverage shall not be less than the insurance required by IBC Form 2100, or its equivalent replacement, provided that IBC Form 2100 shall contain the latest edition of the relevant CCDC endorsement form. To achieve the desired limit, umbrella, or excess liability insurance may be used. All liability coverage shall be maintained for completed operations hazards from the date of *Substantial Performance of the Work*, as set out in the certificate of *Substantial Performance of the Work*, on an ongoing basis for a period of 6 years following *Substantial Performance of the Work*. Where the *Contractor* maintains a single, blanket policy, the addition of the *Owner* and the *Consultant* is limited to liability arising out of the *Project* and all operations necessary or incidental thereto. The policy shall be endorsed to provide the *Owner* with not less than 30 days' notice, in writing, in advance of any cancellation and of change or amendment restricting coverage.

.2 Automobile Liability Insurance

Automobile liability insurance in respect of licensed vehicles shall limits of not less than \$2,000,000.00 inclusive per occurrence for bodily injury, death and damage to property, covering all licensed vehicles *owned* or leased by the *Contractor*,

and endorsed to provide the *Owner* with not less than 30 days' notice, in writing, in advance of any cancellation, change or amendment restricting coverage. Where the policy has been issued pursuant to a government-operated automobile insurance system, the *Contractor* shall provide the *Owner* with confirmation of automobile insurance coverage for all automobiles registered in the name of the *Contractor*.

.3 Aircraft and Watercraft Liability Insurance [NTD: This can come out if N/A]

Where determined necessary by the *Contractor*, acting reasonably, aircraft and watercraft liability insurance will be obtained in accordance with the provisions of paragraph 11.1.3. Aircraft and watercraft liability insurance with respect to owned or non-owned aircraft and watercraft if used directly or indirectly in the performance of the *Work*, including use of additional premises, shall be subject to limits of not less than \$2,000,000.00 inclusive per occurrence for bodily injury, death and damage to property, including loss of use thereof and limits of not less than \$2,000,000.00 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' notice, in writing, in advance of cancellation, change or amendment restricting coverage.

.4 Property and Boiler and Machinery Insurance

(1) Builder's Risk property insurance shall be in the name of the *Contractor* with the *Owner* and the *Consultant* named as additional insureds. The policy shall insure against all risks of direct physical loss or damage to the property insured which shall include all property included in the *Work*, whether owned by the *Contractor* or the owner or owned by others, so long as the property forms part of the *Work*. The property insured also includes all materials and supplies necessary to complete the work, whether installed in the work temporarily or permanently, in storage on the project site, or in transit to the project site, as well as temporary buildings, scaffolding, falsework forms, hoardings, excavation, site preparation and similar work. The insurance shall be for not less than the sum of the amount of the contract price and the full value of products that are specified to be provided by the owner for incorporation into the work, if applicable, with the deductible of \$10,000.00 payable by the contractor. The insurance shall include the foregoing and, otherwise, shall not be less than the insurance required by IBC Form 4042 or its equivalent replacement provided that the IBC Form 4042 shall include the latest addition of the relevant CCDC endorsement form. The coverage shall be based on a completed value form and shall be maintained continuously until ten (10) days after the date of the final certificate of payment.

(2) Boiler and machinery insurance shall be in the name of the *Contractor*, with the *Owner* and the *Consultant* named as additional insureds, for not less than the replacement value of the boilers, pressure vessels and other insurable objects forming part of the *Work*. The insurance provided shall not be less than the insurance provided by the "Comprehensive Boiler and Machinery Form" and shall be maintained continuously from commencement of use or operation of the property insured and until 10 days after the date of the final certificate for payment.

(3) The policies shall allow for partial or total use or occupancy of the *Work*.

(4) The policies shall provide that, in the case 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 the *Owner* 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 the *Contract Time*, relative to the extent of the loss or damage, as determined by the *Owner*, in its sole discretion.

(5) 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 as provided in GC 5.2 – APPLICATIONS FOR PROGRESS PAYMENT and GC 5.3 – PROGRESS PAYMENT. In addition, the *Contractor* shall be entitled to receive from the payments made by the insurer the amount of the *Contractor's* interest in the restoration of the *Work*.

(6) In the case of loss or damage to the *Work* arising from the work of other contractors, or the *Owner's* own forces, the *Owner*, in accordance with the *Owner's* obligations under paragraph 3.2.2.4 of GC 3.2 – CONSTRUCTION BY OWNER OR OTHER CONTRACTORS, shall pay the *Contractor* the cost of restoring the *Work* as the restoration of the *Work* proceeds and as provided in GC 5.2 – APPLICATIONS FOR PROGRESS PAYMENT and GC 5.3 – PROGRESS PAYMENT.

.5 Contractors' Equipment Insurance

“All risks” contractors’ equipment insurance covering construction machinery and equipment used by the *Contractor* for the performance of the *Work*, excluding boiler insurance, 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’ notice, in writing, in advance of cancellation, change or amendment restricting coverage. Subject to satisfactory proof of financial capability by the *Contractor* for self-insurance of his equipment, the *Owner* agrees to waive the equipment insurance requirement.

- 11.1.2 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 GC 9.1 - PROTECTION OF WORK AND PROPERTY and GC 9.2 - DAMAGES AND MUTUAL RESPONSIBILITY.
- 11.1.3 Where the full insurable value of the *Work* is substantially less than the *Contract Price*, the *Owner* may reduce the amount of insurance required to waive the course of construction insurance requirement.
- 11.1.4 If the *Contractor* fails to provide or maintain insurance as required by the *Contract Documents*, then the *Owner* shall have the right to provide and maintain such insurance and provide evidence of same to the *Contractor*. The *Contractor* shall pay the costs thereof to the *Owner* on demand, or the *Owner* may deduct the amount that is due or may become due to the *Contractor*.
- 11.1.5 All required insurance policies shall be with insurers licensed to underwrite insurance in the jurisdiction of the *Place of the Work*.

GC 11.2 CONTRACT SECURITY

- 11.2.2 Delete paragraph after the word “provided” and replace with the following:

Such bonds shall be issued by a duly licensed surety company, which has been approved by the *Owner*, authorized to transact a business of suretyship in the province or territory of the *Place of the Work* and shall be maintained in good standing until the fulfillment of the *Contract*, including all warranty and maintenance periods set out in the *Contract Documents*.

Add new paragraph 11.2.3 as follows:

- 11.2.3 It is the intention of the parties that the performance bond shall be applicable to all of the *Contractor’s* obligations in the *Contract Document* and, wherever a performance bond is provided with language which conflicts with this intention, it shall be deemed to be amended to comply. The *Contractor* represents and warrants to the *Owner* that it has provided its surety with a copy of the *Contract Documents* prior to the issuance of such bonds.

GC 12.1 INDEMNIFICATION

Delete General Condition 12.1 – INDEMNIFICATION in its entirety and substitute as follows:

- 12.1.1 The *Contractor* shall indemnify and hold harmless the *Owner*, its parent, subsidiaries and affiliates, their respective partners, trustees, officers, directors, agents and employees and the *Consultant* from and against any and all claims, liabilities, expenses, demands, losses, damages, actions, costs, suits, or proceedings (hereinafter called “claims”), whether in respect of claims suffered by the *Owner* or in respect of claims by third parties, that directly or indirectly arise out of, or are attributable to, the acts or omissions of the *Contractor*, its employees, agents, *Subcontractors*, *Suppliers* or any other persons for whom it is in law responsible (including, without limitation, claims that directly or indirectly arise out of, or are attributable to, loss of use or damage to the *Work*, the *Owner’s* property or equipment, the *Contractor’s* property or equipment or equipment or property adjacent to the *Place of the Work* or death or injury to the *Contractor’s* personnel).
- 12.1.2 The provisions of GC 12.1 - INDEMNIFICATION shall survive the termination of the *Contract*, howsoever caused and no payment or partial payment, no issuance of a final certificate of payment and no occupancy in whole or in part of the *Work* shall constitute a waiver or release of any of the provisions of GC 12.1.

GC 12.2 WAIVER OF CLAIMS

- 12.2.1 In the fourth line, add the words “claims for delay pursuant to GC 6.5 DELAYS” after the word “limitation”. Add the words “(collectively “Claims”)” after “*Substantial Performance of the Work*” in the sixth line.
- 12.2.1.1 Change the word “claims” to “Claims” and change the word “claim” to “Claim”.
- 12.2.1.2 Change the word “claims” to “Claims”.
- 12.2.1.3 Delete paragraph in its entirety.
- 12.2.1.4 Change the word “claims” to “Claims”.
- 12.2.2 Change the words “in paragraphs 12.2.1.2 and 12.2.1.3” to “in paragraph 12.2.1.2”. Change the word “claims” to “Claims” in both instances and change the word “claim” to “Claim”.
- 12.2.3 Delete paragraph in its entirety.
- 12.2.4 Delete paragraph in its entirety.
- 12.2.5 Delete paragraph in its entirety.
- 12.2.6 Change the word “claim” to “Claim” in all instances in the paragraph.
- 12.2.7 Change “The party” to “The *Contractor*”. Change the word “claim” to “Claim” in all instances in the paragraph.
- 12.2.8 Change “under paragraphs 12.2.1 or 12.2.3” to “under paragraph 12.2.1”. Change both instances of the words “the party” to “the *Contractor*”. Change the word “claim” to “Claim” in all instances in the paragraph.
- 12.2.9 Delete paragraph 12.2.9 in its entirety.
- 12.2.10 Delete paragraph 12.2.10 in its entirety.

GC 12.3 WARRANTY

- 12.3.2 Delete from the first line of paragraph 12.3.2 the word, “The” and substitute the words “Subject to paragraph 3.4.1, the...”
- Add new paragraphs 12.3.7 to 12.3.12 as follows:
- 12.3.7 Where required by the *Contract Documents*, the *Contractor* shall provide a maintenance bond as security for the performance of the *Contractor’s* obligations as set out in GC 12.3 WARRANTY.
- 12.3.8 The *Contractor* shall provide fully and properly completed and signed copies of all warranties and guarantees required by the *Contract Documents*, containing:
- .1 the proper name of the *Owner*;
 - .2 the proper name and address of the *Project*;
 - .3 the date the warranty commences, which shall be at the “date of *Substantial Performance of the Work*” unless otherwise agreed upon by the *Consultant* in writing.
 - .4 a clear definition of what is being warranted and/or guaranteed as required by the *Contract Documents*; and
 - .5 the signature and seal (if required by the governing law of the *Contract*) of the company issuing the warranty, countersigned by the *Contractor*.
- 12.3.9 Should any *Work* be repaired or replaced during the time period for which it is covered by the specified warranty, a new warranty shall be provided under the same conditions and for the same period as specified herein before. The new warranty shall commence at the completion of the repair or replacement.
- 12.3.10 The *Contractor* shall ensure that its *Subcontractors* are bound to the requirements of GC 12.3 – WARRANTY for the *Subcontractor’s* portion of the *Work*.

- 12.3.11 The *Contractor* shall ensure that all warranties, guarantees or other obligations for *Work*, services or *Products* performed or supplied by any *Subcontractor*, *Supplier* or other person in connection with the *Work* are obtained and available for the direct benefit of the *Owner*. In the alternative, the *Contractor* shall assign to the *Owner* all warranties, guarantees or other obligations for *Work*, services or *Products* performed or supplied by any *Subcontractor*, *Supplier* or other person in connection with the *Work* and such assignment shall be with the consent of the assigning party, where required by law, or by the terms of that party's contract. Such assignment shall be in addition to, and shall in no way limit, the warranty rights of the *Owner* under the *Contract Documents*.
- 12.3.12 The *Contractor* shall commence or correct any deficiency within 2 Working Days after receiving a notice from the *Owner* or the *Consultant*, and shall complete the *Work* as expeditiously as possible, except in the case where the deficiency prevents maintaining security or where basic systems essential to the ongoing business of the *Owner* and/or its tenants cannot be maintained operational as designed. In those circumstances all necessary corrections and/or installations of temporary replacements shall be carried out immediately as an emergency service. Should the *Contractor* fail to provide this emergency service within 8 hours of a request being made during the normal business hours of the *Contractor*, the *Owner* is authorized, notwithstanding GC 3.1, to carry out all necessary repairs or replacements at the *Contractor's* expense.

PART 13 OTHER PROVISIONS

Add new Part 13 OTHER PROVISIONS as follows:

GC 13.1 OWNERSHIP OF MATERIALS

- 13.1.1 Unless otherwise specified, all materials existing at the *Place of the Work* at the time of execution of the *Contract* shall remain the property of the *Owner*. All *Work* and *Products* delivered to the *Place of the Work* by the *Contractor* shall be the property of the *Owner*. The *Contractor* shall remove all surplus or rejected materials as its property when notified in writing to do so by the *Consultant*.

GC 13.2 CONSTRUCTION LIENS

- 13.2.1 In the event that a claim for lien is registered against the *Project* by a *Subcontractor*, *Sub-subcontractor* or *Supplier*, and provided the *Owner* has paid all amounts properly owing under the *Contract*, the *Contractor* shall, at its own expense:
- .1 within 10 calendar days, ensure that any and all claims for lien and certificates of action are discharged, released, or vacated by the posting of security or otherwise; and
 - .2 in the case of written notices of lien, ensure that such notices are withdrawn, in writing.
- 13.2.2 In the event that the *Contractor* fails to conform with the requirements of paragraph 13.2.1, the *Owner* may fulfil those requirements without *Notice in Writing* to the *Contractor* and set off and deduct from any amount owing to the *Contractor*, all costs and associated expenses, including the costs of posting security and all legal fees and disbursements associated with discharging or vacating the claim for lien or certificate of action and defending the action. If there is no amount owing by the *Owner* to the *Contractor*, then the *Contractor* shall reimburse the *Owner* for all of the said costs and associated expenses.
- 13.2.3 Notwithstanding any other provision in the *Contract*, the *Consultant* shall not be obligated to issue a certificate and the *Owner* shall not be obligated to make payment to the *Contractor* if, at the time such certificate or payment was otherwise due:
- .1 a claim for lien has been registered against the *Project* lands, or
 - .2 if the *Owner* or mortgagee of the *Project* lands has received written notice of a lien.. or
 - .3 the *Owner* or *Consultant* reasonably believe that any party has purported to retain title to *Products* or materials in respect of which an application for payment has been made.
- 13.2.4 Without limiting the foregoing, the *Contractor* shall, if requested by the *Owner*, defend, indemnify and save the *Owner* harmless from the amount of all such claims and the costs of defending any and all actions commenced against the *Owner* pursuant to the construction/builder's lien legislation in force at the *Place of the Work*, including the legal costs of the *Owner*,

unless the lien was a direct result of a breach of the *Contract* by the *Owner* or the non-payment by the *Owner* of a valid charge or claim under the *Contract*.

13.2.5 GC 13.2 – CONSTRUCTION LIENS does not apply to construction/builder’s liens claimed by the *Contractor*.

END OF AMENDMENTS TO CCDC 2 - 2008

PART 1 - GENERAL**1.1 Scope of Work**

- .1 Provide all materials and equipment, labour and tools, contract administration, supervision, co-ordination, inspection and every other item necessary for the proper and complete execution of the work of this Contract as shown in or described by or reasonably inferable from the Contract Documents.
- .2 The responsibility as to which trade provides required labour or materials rests solely with the General Contractor. The scope of work described in any particular section of these specifications is for convenience only, and all work indicated by drawings, or properly required and customarily covered by the trade concerned must be provided by that trade unless explicitly excluded or covered by another section of these specifications. The drawings are intended to show the general arrangement, design and extent of the work and are partly diagrammatic. They are not intended to be scaled for roughing in measurements not to serve as shop drawings. Extras will not be considered based on grounds of difference in the interpretation which trade should provide certain equipment, materials or labour.
- .3 Coordination of Owner directed sub-consultants such as Geotechnical etc.
- .4 Cutting and patching for Mechanical, Electrical and Ventilation work, with the exception of openings in exterior walls and the roof, shall be the responsibility of each of these trades and shall be included in the Tender Price.

1.2 Project Coordination

- .1 Make application for, obtain and pay for all fees in connection with all permits and licenses, also all inspections and inspection certificates to comply with all local and provincial laws, ordinances and regulations.
- .2 Coordinate progress of the Work, progress schedules, and submittals, use of site, temporary utilities, construction facilities and controls.
- .3 General Contractor shall familiarize himself with the specifications of all trades and acquaint himself with the coordination required for complete cooperation.
- .4 If the Contractor should neglect to complete the work properly or fail to perform any provision of this contract, the Owner, after seven (7) days written notice to the contractor, may without prejudice to any other remedy have, make good any deficiencies and may deduct the cost thereof from the payment then or thereafter due to the contractor.
- .5 Materials or products specified by name of manufacturer, brand, trade name or catalogue reference shall be on the basis of the bid and furnished under the contract unless changed by mutual agreement. When two or more materials are named, the choice of these shall be optional with the Contractor. Should the Contractor wish to use any materials or products other than those specified, he shall so state in writing on a separate Form naming the proposed substitutions and what differences, if any, will be made in the contract price for such substitution, should it be accepted.

1.3 Cutting and Patching

- .1 Employ skilled and experienced installer to perform cutting and patching
- .2 Approvals
 - .1 Submit written request in advance of cutting or alteration which affects:
 - .1 Structural integrity of any element of Project.
 - .2 Integrity of weather-exposed or moisture-resistant elements,

-
- .3 Efficiency, maintenance or safety of any operational element.
 - .4 Visual qualities of sight-exposed elements.
 - .5 Work of Owner or separate contractor.
 - .2 Submit a written request including the following:
 - .1 Identification of Project
 - .2 Location and Description of affected Work
 - .3 Statement on the necessity for cutting or alteration
 - .4 Description of Proposed Work and products to be used
 - .5 Alternatives to cutting and patching
 - .6 Effect on Work of Owner or other contractors
 - .7 Written permission of affected other contractor
 - .8 Date and time work will be executed
 - .3 Inspection Examination
 - .1 Inspect existing conditions, including elements subject to damage or movement during cutting and patching.
 - .2 After uncovering, inspect conditions affecting performance of work.
 - .3 Work beginning of cutting or patching means acceptance of existing conditions.
 - .4 The Contractor and all Subcontractors shall examine all drawings, specifications and site for information affecting their work. If clarification is required, Contractor and Subcontractor are to contact via a "Request for Interpretation" form.
 - .5 Examine location of work and become familiar with all features and characteristics affecting the work.
 - .6 Claims for extra payments due to difficulties encountered, which could have been foreseen during examination, will not be considered.
 - .7 Report any unsatisfactory conditions which may adversely affect the proper completion of the work.
 - .8 The Contractor and Subcontractor shall examine the site pertaining to this work and report any inconsistencies with actual conditions prior to commencing work. Commencement of work shall imply acceptance of site conditions and the Contractor shall therefore be fully responsible for executing the work in accordance with the contract documents.
 - .4 Execution
 - .1 Refer to drawings for general overview of demolition work.
 - .2 Perform cutting, fitting, and patching including excavation and fill, to complete the work and to:
 - .1 Fit several parts together, to integrate with other Work
 - .2 Uncover Work to install or correct ill-timed Work
 - .3 Remove samples of installed Work for testing
 - .4 Remove and replace defective and non-conforming work.

- .5 Provide openings in non-structural elements of Work for penetrations of mechanical and electrical work.
- .3 Execute work by methods which will avoid damage to other Work and provide proper surfaces to receive patching and finishing.
- .4 Restore Work with new products in accordance with the requirements of Contract Documents.
- .5 Maintain integrity of wall, ceiling, or floor construction; completely seal voids.
- .6 Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for an assembly, refinish entire unit.
- .7 Prepare proper surfaces to receive patching and finishing.
- .8 Employ original installer to perform cutting and patching for weather-exposed and moisture-resistant elements, and sight-exposed surfaces
- .9 Cut rigid materials using power saw or core drill. Pneumatic or impact tools not allowed.
- .10 Fit work airtight to pipes, sleeves, ducts, conduit and other penetration through surfaces.
- .11 At penetration of fire-rated wall, ceiling, or floor construction, completely seal voids with fire-rated fire-resistant material, specified in Section 07 84 00, full thickness of construction element.

1.4 Field Engineering

- .1 Employ a registered Land Surveyor as acceptable to the Owner.
 - .1 Qualifications of Surveyor
 - .1 Qualified registered land surveyor, acceptable to Owner.
- .2 Survey Requirements
 - .1 Locate, confirm and protect control points prior to starting site work. Preserve permanent reference points during construction.
 - .2 Establish two permanent benchmarks on site, referenced to established benchmarks by survey control points. Record locations, with horizontal and vertical data in Project Record Documents.
 - .3 Establish lines and levels, locate and lay out, by instrumentation.
 - .4 Control datum for survey is that established by the Owner provided survey.
- .3 Records
 - .1 Maintain a complete, accurate log of control and survey work as it progresses.
- .4 Subsurface Conditions
 - .1 Promptly notify consultant in writing if subsurface conditions at Place of the Work differ materially from those indicated in Contract Documents, or reasonable assumption of probable conditions based thereon.
 - .2 After prompt investigation, should Consultant determine that conditions do differ materially; instructions will be issued for changes in the Work as provided in GC 6 - Changes in the Work.
- .5 Setting Out of Work

- .1 The Contractor shall provide The Consultant and Owner's Representative with a 48 hour notice verbally and then followed up in writing upon commencement of work.
- .6 Submit a copy of registered site drawing and certificate signed by the Land Surveyor that the elevations and locations of the Work are in conformance with the Contract Documents.

1.5 Submittals

.1 Project Correspondence

- .2 **All project correspondence, including all submittals shall be performed via the Architect's online "Newforma Info Exchange" project site. The contractor is responsible to receive training from the Architect and incorporate this method of communication through out the duration of the project.**

.3 Administrative

- .1 Submit to Consultant submittals listed for review. Submit with reasonable promptness and in an orderly sequence so as to not cause delay in the Work.
- .2 Work affected by submittal shall not proceed until review is complete.
- .3 Review submittals prior to submission to Consultant. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinate with requirements of the Work and Contract Documents.
- .4 Verify field measurements and affected adjacent Work to be coordinated.

.4 Shop Drawings and Product Data

- .1 Refer to GC 3.10.
- .2 Refer to Section 01 33 00 Submittal Procedures.
- .3 "Shop Drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data, which are to be provided by Contractor to illustrate details of portion of the Work.
- .4 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connection, explanatory notes and other information necessary for completion of Work.
- .5 Adjustments made on shop drawings by Consultant are not intended to change Contract Price.
- .6 Make changes in shop drawings as consultant may require.
- .7 Submit copies as per Section 01 33 00.
- .8 Approval must be obtained from the Consultant by means of stamped approval before ordering or fabrication of such materials can begin.
- .9 Shop drawings must first be reviewed by the General Contractor & stamped prior to submission to Consultant. Drawings which are not reviewed will be returned to General Contractor.

.5 Samples

- .1 Refer to Section 01 33 00.

- .2 Submit for review, samples in duplicate as requested in respective specification Sections.
 - .3 Deliver samples prepaid to Consultant's business address.
 - .6 Operating Maintenance Manuals
 - .1 Two weeks prior to Substantial Performance of the Work, submit to Consultant two (2) hard copies & 1 CD of operating and maintenance manuals.
 - .2 Manuals to contain operational information on equipment, cleaning and lubrication schedules, filters, overhaul and adjustment schedules and similar maintenance information.
- Bind contents in a three-ring-hard covered, plastic jacketed binder. Organize contents into applicable categories of work, parallel to specifications Sections
- .7 Record Drawings
 - .1 After award of Contract, Consultant will provide a set of drawings for purpose of maintaining record drawings. Accurately and neatly record deviations from Contract Documents caused by site conditions and changes ordered by Consultant.
 - .2 Record locations of concealed components of mechanical and electrical services.
 - .3 Identify drawings as "Project Record Copy". Maintain in new condition and make available for inspection on site by Consultant as indicated in Section 01 78 00.
 - .4 On completion of Work and prior to final inspection, submit record documents to Consultant. Record drawings are to be submitted in digital Revit format. May need allowance for outsourcing drafting
 - .8 Miscellaneous Turnovers: To be turned over within ten (10) days of owner occupancy.
 - .1 Keys
 - .2 Mechanical Accessories
 - .3 Hydro Certificate
 - .4 Copy of Building Permit
 - .5 Guarantees & Warrantees
 - .6 Directories in electrical panels
 - .7 Spare material as specified
 - .9 Insurance's
 - .1 General Liability insurance & Builders Risk Insurance.

1.6 Quality Control

- .1 Inspection
 - .1 Owner and Consultant shall have access to the Work.
 - .2 Give timely notice requesting inspection if work is designated for special tests, inspections or approvals by Consultant instructions, or laws of Place of the Work.
 - .3 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.
- .2 Reports

- .1 Submit one (1) digital copy of inspection and test reports promptly to Consultant.
- .2 Provide copies to Subcontractor of work being inspected/tested.

1.7 Construction Facilities and Temporary Controls

- .1 Refer to 01 50 00

1.8 Material and Equipment

- .1 Product and Material Quality
 - .1 Products, materials, equipment and articles (referred to as Products throughout specifications) incorporated in Work shall be new, not damaged or defective, and of best quality (compatible with specification) for purpose intended. If request, furnish evidence as to type, source and quality of products provided.
 - .2 Defective Products will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
 - .3 Should any dispute arise as to quality or fitness of Products, decision rests strictly with Consultant based upon requirements of Contract Documents.
- .2 Storage, Handling and Protection
 - .1 Handle and store Products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
 - .2 Store packaged or bundled Products in original and undamaged condition with manufacturer's seals and labels intact.
 - .3 Store products subject to damage from weather in weatherproof enclosures.
- .3 Manufacturer's Instructions
 - .1 Unless otherwise indicated in specifications, install or erect Products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with Products. Obtain written instructions directly from manufacturers.
 - .2 Notify Consultant in writing of conflicts between specifications and manufacturer's instructions, so that Consultant may establish course of action.
 - .3 Improper installation of erection of Products, due to failure in complying with these requirements, authorizes Consultant to require removal and reinstallation at no increase in Contract Price.
- .4 Workmanship
 - .1 Workmanship shall be best quality, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify Consultant if required Work is such as take it impractical to produce required results.
 - .2 Do not employ an unfit person or anyone unskilled in their required duties.
 - .3 Decisions as to quality or fitness of workmanship in cases of dispute rest solely with Consultant, whose decision is final.
- .5 Concealment
 - .1 In finished areas, conceal pipes, ducts and wiring in floors, walls and ceiling, except where indicated otherwise.

- .2 Before installation, inform Consultant if there is a contradictory situation. Install as directed by Consultant.
- .6 Fire Protection
 - .1 All necessary precautions must be taken to eliminate any possible fire hazards. Provide sufficient and adequate fire fighting equipment, in first class order, to protect against any fire emergency in area of works proceeding.
 - .2 Under no circumstances will the burning of materials on the site be permitted.
 - .3 Free access must be maintained at all times to any fire hydrants or fire equipment.
 - .4 Provide fire protection as required by the Insurance Authorities, Chapter 166, of the Fire Marshals Act, and Ontario Regulations 67/87, of the Ontario Fire Code, dated: February, 1987 and the National Fire Code of Canada at no extra cost to the owner.
- .7 Access
 - .1 The Contractor shall provide convenient, safe and adequate access for materials and supplies for all trades, including for the use of ambulance service, fire department and other similar facilities.
 - .2 Existing exits from adjacent buildings shall be kept free from obstruction at all times. Where exits must be restricted, alternate exits shall be provided only upon approval of the Owner's Representative.

1.9 Codes and Applicable Standards

- .1 Throughout the Contract Documents, reference is made to Codes and Standards which establish qualities and types of workmanship and materials, and which establish methods for testing and reporting on the pertinent characteristics.
- .2 Where material or workmanship are required by these Contract Documents to meet or exceed the specifically named Code or Standard, it is the Contractor's responsibility to provide materials and workmanship, which meet or exceed the specifically named Code or Standard.
- .3 It is also the Contractor's responsibility, when so required by the Contract Documents or by written request from the Consultant, to deliver to the Consultant all required proof that the materials or workmanship, or both, meet or exceed the requirements of the specially named Code or Standard. Such proof shall be in the form requesting in writing by the Consultant, and generally will be required to be copies of a certified report of tests, conducted by a testing agency and approved for that purpose by the Consultant.

1.10 Quality Assurance

- .1 Familiarity with Pertinent Codes and Standards
 - .1 In procuring all items used in this work, it is the Contractor's responsibility to verify the detailed requirements of the specifically named Codes and Standards, and to verify that the items procured for use in this work meet or exceed the specified requirements.
- .2 Rejection of Non-Complying Items
 - .1 The Consultant reserves the right to reject items incorporated into the work, which fail to meet the specified minimum requirements. The Consultant further reserves the right, and without prejudice to other recourse the Consultant may take, to accept non-complying items, subject to an adjustment in the Contract. Amount as approved by the Consultant and the Owner.

1.11 Work within an Occupied Building

SCCDSB
St. Joseph Catholic School
Asphalt Resurfacing
43 St. Street, Tilbury, ON N0P 2L0

Architecttura Inc. Architects
Project No: 2044
May 14, 2020

- .1 The facility will be occupied during the entire duration of this project. Public access to the library will need to be safely maintained during all opening hours and during special events. Any work within the occupied space of the library will need to be coordinated with library staff. After such work the space is to be thoroughly cleaned and readied for public occupancy
- .2 Mechanical, Electrical, Life Safety systems will need to be maintained operational. Any shut-downs must be scheduled with the library in advance.
- .3 Exterior and interior hoarding will need to be maintained at all times. Depending on the staging of the project, the position of such hoarding may change.
- .4 Dust and fume control measures must be in place at all times to protect the hoarded and occupied areas of the library from contamination.

1.12 Project Closeout

- .1 Refer to section 01 77 00 Closeout Procedures

1.13 Contractor Access to Parking

- .1 Designated parking will not be provided for contractor use.

END OF SECTION 00 72 13

PART 1 - GENERAL**1.1 General Instructions**

- .1 The contents of this Division will form as an integral part of each Division specified within the tender specification document and as well as the tender working drawings.
- .2 The General Contractor will be responsible to make aware **to his Subcontractors/Subtrade** and suppliers (be it the wholesale distributor or the manufacturer) the contents and requirements of this Division.

1.2 Scope of Work

- .1 Mention herein or indication on the drawings of articles, materials, operations or methods requires that the General Contractor provide (unless requested otherwise, by the Owner's Representative) each item mentioned or indicated; perform each operation prescribed; and provide therefore all labour, materials, equipment and services necessary to complete the work to the satisfaction of the Owner's Representative.
- .2 Each Subcontractor for the trades involved shall be held responsible to the General Contractor to create a safe work place, as well as, providing requested documentation for all work bearing upon their trade, inclusive of whatever miscellaneous materials and/or safety equipment is required to protect/or create the installations.

1.3 Requirements Included

- .1 **CONSTRUCTION SAFETY MEASURES**
Observe and enforce construction safety measures required by the National Building Code (1990) Part 8; the Provincial Government; Workers' Compensation Board; and Municipal authorities.
- .2 In particular, the Occupational Health and Safety Act (Ont. Reg. 213/91 or latest edition), the Ontario Construction Safety Act, the regulations of the Ontario Ministry of Labour and Ontario Hydro Safety Requirements shall be strictly enforced.
- .3 **In particular, Health and Safety/Ministry of Labour-Labour.gov.on.ca: Construction site health and safety during Covid-19.**
<https://www.ontario.ca/page/construction-site-health-and-safety-during-covid-19>
- .4 General Contractor shall ensure that copies of all applicable construction safety regulations, codes and standards are available on the job-site throughout the period of construction. All workers including the Consultant and the Owner are to be informed that these documents are available for reference at any time. **COVID-19 - Standardized Protocols for All Canadian Construction Sites version 4, April 16, 2020 to be part of these standards.** <https://www.cca-acc.com>
- .5 General Contractor shall ensure that all supervisory personnel on the job-site are fully aware of the contents of the Occupational Health and Safety Act (Ontario Regulation 213/91 - Construction Projects), as amended, and the Workers' Compensation Act and, that they comply with all requirements and procedures prescribed therein. These documents include, but are not limited to, the following construction safety requirements:
 - .1 General Contractor to register with the Director of the Occupational Health and Safety Division before or within thirty (30) days of the commencement of the project, (Ont. Reg. 213/91, Sec.5).

- .2 File a notice of project with a Director indicating the date of commencement of the project, (Ont. Reg. 213/91, Sec. 6).
 - .3 Notification prior to trenching deeper than 1.2m, (Ont. Reg.213/91, Sec.7).
 - .4 Accident Notices and Reports, (Ont. Reg. 213/91, Sec. 8 through Sec.12).
 - .5 General Safety Requirements, (Ont. Reg. 213/91, Sec. 13 through Sec.19).
 - .6 General Construction Requirements, eg., protective clothing, hygiene practices, housekeeping, temporary heat, fire safety, access to the job site, machine and equipment guarding and coverings, scaffolds and platforms, electrical hazards, roofing, mental, (Ont. Reg. 213/91, Sec. 20 through Sec. 221).
 - .7 Establish a Joint Health and Safety Committee where more than 19 workers are employed for more than three (3) months, (RSO, S.8).
 - .8 Establish a Worker Trades Committee for all projects employing more than 49 workers for more than three (3) months, (RSO, S. 8a and 8b).
 - .9 Ensure that all activities arising out of (.7) and (.8) above are recorded and that minutes are available to an inspector of the Ontario Ministry of Labour and the Owner's Representative.
 - .10 Prior to commencement of work. Submit Health & Safety program of General Contractors **including Jobsite Measures to Protect against COVID-19.**
- .6 In the event of a conflict between any of the provisions of the above authorities the most stringent provisions are to be applied.
 - .7 The General Contractor shall be considered as the "Constructor" in consideration of the rights and responsibilities for all construction safety requirements, procedures, facilities and inspection of all work performed by the General Contractor, Subcontractors/Subtrades and all other Contractors engaged on this project.

1.4 Material Safety Data Sheets

- .1 Material Safety Data Sheets (MSDS) must be available at the job-site for any product listed on the Hazardous Ingredients List prior to being used, installed or applied inside of the building.
- .2 A Material Safety Data Sheet is to be submitted to the Owner's Representative for any product which is known to create, or suspected of creating, a health hazard or discomfort during construction or upon commissioning of the project including, but not limited to, the following:
 - .1 adhesives
 - .2 solvents
 - .3 sealants, (calking, vapour seals, etc.)
 - .4 sprayed-on fireproofing
 - .5 resilient flooring

-
- .6 carpet, paint, varnish or other coatings
 - .7 exposed membrane waterproofing
 - .8 special coatings, (terrazzo sealants, chafing coatings, etc.)
 - .9 solder, brazing and welding and other filler metal
 - .10 other products whose particles or vapours may become air borne after installation.

NOTE: All correspondence, enquiries, instructions, etc., in connection with the project shall be made through the offices of the Consultant.

END OF SECTION 00 73 19

PART 1 - GENERAL**1.1 RELATED DOCUMENTS**

- .1 Drawings, electronic data and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- .1 This Section specifies administrative and procedural requirements for handling and processing Contract modifications.
- .2 Related Sections include the following:
 - .1 Division 1 Section "Allowances" for procedural requirements for handling and processing allowances.
 - .2 Division 1 Section "Unit Prices" for administrative requirements for using unit prices.
 - .3 Division 1 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

1.3 SUBMITTALS

- .1 Prepare and maintain logs of communications and changes. Update on the electronic Project Management System on a real time basis. Log number, brief description and status. Keep log current for real time access by all members of project design team. At a minimum, logs to be maintained include:
 - .1 Supplemental Instructions log.
 - .2 Requests for Interpretation log.
 - .3 Deviation Requests log.
 - .4 Contemplated Change Notice log.
 - .5 Change Orders log.
 - .6 Change Directives log.
- .2 Revisions to schedules and submittals:
 - .1 Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Price.
 - .2 Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of Work affected by the change, and resubmit.
 - .3 Promptly enter changes in Project record documents.
- .3 Submit name of the individual authorized to receive communications and change documents, and be responsible for informing others in Contractor's employ of communications and changes to the Work.
- .4 Training for electronic forms: Notify the Consultant in writing if the Contractor needs help accessing and using electronic forms.

1.4 MINOR CHANGES IN THE WORK (SUPPLEMENTAL INSTRUCTIONS)

- .1 Consultant will issue Supplemental Instructions authorizing minor changes in the Work, not involving adjustment to the Contract Price or the Contract Time, on Consultant's form.

1.5 REQUESTS FOR INTERPRETATION (RFI)

- .1 Definition: A request for interpretation is prepared by the Contractor, and submitted to the Consultant, to request clarifications or interpretations of the intent of the Contract Documents, or to notify the Consultant of potential conflicts in Contract Documents or between the Contract Documents and field conditions.
 - .1 The Consultant's response is an interpretation or clarification of the Contract Documents. Such request does not authorize changes in the Work that impact Contract Price or Contract Time.
- .2 When possible, request such clarification either verbally or in writing at the next scheduled Project meeting. When the RFI is answered at the Project meeting, number the RFI and enter the response into the meeting minutes.
 - .1 When the urgency of the need, or the complexity of the item makes clarification at the next scheduled Project meeting impractical, prepare and submit a formal written RFI to the Consultant without delay.
- .3 Submit RFI within a reasonable time frame so as not to impede the progress of the Work.
 - .1 When an answer to an RFI has an effect on cost or time, notify the Consultant in accordance with the Contract Documents. Do not perform such Work until a Change Order has been reviewed by the Consultant and approved by the Owner.
 - .2 When relevant, when submitting an RFI, indicate the time available for the Consultant to respond without causing an impact to the Contract Time. If no time frame for response is indicated, request will be considered non-critical.
 - .3 When the number and frequency of RFIs submitted becomes excessive for the Consultant to respond in a timely manner, the Consultant and Contractor shall work together to reduce the number of RFI's and to allow Consultant additional time for response where needed.
- .4 When a Request for Interpretation involves clarification of coordination issues (Example: pipe and duct routing, clearances, specific locations of work shown diagrammatically), lay out Contractor's suggested solutions using scaled sketches, and submit with the request. If the request is such that a choice of several logical solutions are apparent to the Contractor, include the logical solutions on the form.
- .5 RFI may be returned with a stamp or notation "Not Reviewed", if, in the opinion of the Consultant:
 - .1 The interpretation requested is ambiguous or unclear to the Consultant.
 - .2 The answer is obvious and clear by researching the Contract Documents. The Consultant will not be unreasonable in assisting the Contractor in determining where to find information in the Contract Documents.
 - .3 The Contractor has not reviewed the request prior to submittal to the Consultant.
 - .4 The Contractor has not offered potential solutions to answer coordination issues or offered logical solutions.
- .6 Allow a minimum of 7 days for review and response time, after receipt by the Consultant. Consultant will use reasonable efforts to return the RFI in the 7 day time period. It is the responsibility of the Contractor to verify receipt by the Consultant. The response time may

be increased if:

- .1 More information is required.
 - .2 The RFI is submitted out of sequence.
 - .3 In the opinion of the Consultant, more time is needed to answer the RFI.
- .7 Do not use RFI for the following purposes:
- .1 To request review of submittals.
 - .2 To request review of substitutions.
 - .3 To request changes to the Contract Documents and to confirm action taken by the Contractor for requested changes or substitutions to the Contract Documents.
- .8 If the Contractor believes that a clarification by the Consultant may result in a change in Contract Price, the Contractor shall not proceed with the work indicated by the request until a Change Order is reviewed by the Consultant and approved by the Owner.
- .1 If the Contractor believes that a clarification by the Consultant results in additional cost, identify the basis of the Contractor's bid in the RFI.
 - .2 Answered RFI shall not be construed as an authorization to perform extra work.
- .9 Form: Submit Requests for Interpretation on Consultant's form.

1.6 DEVIATION REQUESTS

- .1 Definition: Deviation requests are prepared by the Contractor, and submitted to the Consultant, to request the Consultant's acceptance of a minor variation from the Contract Documents, which will still satisfy the intent of the Contract Documents, but will not impact the Contract Price or Contract Time.
- .1 Attach completed Substitution Request form if product substitutions are required.
- .2 Form: Submit Deviation Request on Consultant's form.

1.7 CONTEMPLATED CHANGE NOTICE

- .1 Contemplated Change Notice (CCN): Consultant will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Price or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
- .1 Contemplated Change Notices issued by Consultant are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
 - .2 Within time specified in Contemplated Change Notice after receipt of Contemplated Change Notice, submit a quotation estimating cost adjustments to the Contract Price and to the extent possible, the Contract Time necessary to execute the change. If it is not possible to determine the impact on the schedule within the time specified in the CCN, the Contractor shall indicate on its estimate and the date such information will be provided.
 - .1 Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.

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- .2 Indicate applicable taxes, delivery charges, equipment rental, and amounts of Contractor discounts.
 - .3 Include costs of labour and supervision directly attributable to the change.
 - .4 To the extent possible, include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time. Indicate if impact on Construction Schedule can not be determined at time of submittal of CCN, and provide information as soon as practicable.
- .3 If latent or unforeseen conditions or other conditions outside the control of the Contractor require modifications to the Contract, Contractor may propose changes by submitting information to the Consultant and requesting that the Consultant issue a CCN.
- .1 Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Price and the Contract Time.
 - .2 Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - .3 Indicate applicable taxes, delivery charges, equipment rental, and amounts of Contractor discounts.
 - .4 Include costs of labour and supervision directly attributable to the change.
 - .5 Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - .6 Comply with requirements in Division 1 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.
- .2 Contemplated Change Notice Form: For Contemplated Change Notice proposals use Consultant's form.

1.8 ALLOWANCES

- .1 Allowance Adjustment: To adjust allowance amounts, base each Change Order proposal on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
 - .1 Include installation costs in purchase amount only where indicated as part of the allowance.
 - .2 If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
- .2 Submit claims for increased costs because of a change in scope or nature of the

allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labour, installation, overhead, and profit. Submit claims within 21 days of receipt of the Change Order or Change Directive authorizing work to proceed. Owner will reject claims submitted later than 21 days after such authorization.

- .1 Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
- .2 No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

1.9 CHANGE ORDER PROCEDURES

- .1 On Owner's approval of a Contemplated Change Notice, Consultant will issue a Change Order for signatures of Owner and Contractor on Consultant's form.

1.10 CHANGE DIRECTIVE

- .1 Change Directive: Consultant may issue a Change Directive on Consultant's form. Sample form included at the end of this Section. Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - .1 Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Price or the Contract Time.
 - .2 Documentation: Maintain detailed records on a time and material basis of work required by the Change Directive.
 - .1 After completion of change, submit an itemized account and supporting data necessary to substantiate price and time adjustments to the Contract.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 00 93 00

PART 1 – GENERAL

1.1 Related Documents

- .1 Drawings, electronic data and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 Summary

- .1 This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- .2 Related Sections include the following:
 - .1 Division 1 Section "Allowances" for procedural requirements governing handling and processing of allowances.
 - .2 Division 1 Section "Unit Prices" for administrative requirements governing use of unit prices.
 - .3 Division 1 Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
 - .4 Division 1 Section "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule and Submittals Schedule.

1.3 Schedule of Values

- .1 Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
 - .1 Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
 - .1 Application for Payment forms with Continuation Sheets.
 - .2 Submittals Schedule.
 - .2 Submit the Schedule of Values to Consultant within 10 days of contract execution.
- .2 Format and Content: Use the Specification table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.
 - .1 Identification: Include the following Project identification on the Schedule of Values:
 - .1 Project name and location.
 - .2 Name of Owner.
 - .3 Name of Consultant.
 - .4 Consultant's Project number.
 - .5 Contractor's name and address.

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- .6 Date of submittal.
 - .2 Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
 - .1 Related Specification Section or Division.
 - .2 Description of the Work.
 - .3 Name of subcontractor.
 - .4 Name of manufacturer or fabricator.
 - .5 Name of supplier.
 - .6 Change Orders (numbers) that affect value.
 - .7 Dollar value.
 - .1 Percentage of the Contract Price to nearest one-hundredth percent, adjusted to total 100 percent.
 - .3 Provide a breakdown of the Contract Price in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Specification table of contents. Provide several line items for principal subcontract amounts, where appropriate.
 - .4 Round amounts to nearest whole dollar; total shall equal the Contract Price.
 - .5 Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - .1 Differentiate between items stored on-site and items stored off-site. Include evidence of insurance or bonded warehousing if required.
 - .6 Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
 - .7 Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - .1 Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.
 - .8 Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Change Directives result in a change in the Contract Price.

1.4 Applications for Payment

- .1 Each Application for Payment shall be consistent with previous applications and payments as certified by Consultant and paid for by Owner.
 - .1 Initial Application for Payment, Application for Payment at time of Substantial Performance of the Work, and final Application for Payment involve additional requirements.
- .2 Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction Work covered by

- each Application for Payment is the period indicated in the Agreement.
- .3 Application Preparation: Complete every entry on form by a person authorized to sign legal documents on behalf of Contractor and submit with a Statutory Declaration sworn before a Commissioner of Oaths. Consultant will return incomplete applications without action.
 - .1 Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 - .2 Include amounts of Change Orders and Change Directives issued before last day of construction period covered by application.
 - .4 Transmittal: Submit 3 signed and executed original copies of each Application for Payment to Consultant by a method ensuring receipt within 24 hours. One copy shall include waivers of lien, WSIB Clearance Certificate and similar attachments if required.
 - .1 Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
 - .5 Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following as applicable:
 - .1 List of Subcontractors.
 - .2 Schedule of Values.
 - .3 Contractor's Construction Schedule (preliminary if not final).
 - .4 Products list.
 - .5 Schedule of unit prices (if applicable).
 - .6 Submittals Schedule (preliminary if not final).
 - .7 List of Contractor's staff assignments.
 - .8 List of Contractor's principal consultants.
 - .9 Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 - .10 Initial progress report.
 - .11 Report of preconstruction conference.
 - .12 Certificates of insurance and insurance policies.
 - .13 Performance and payment bonds.
 - .14 Data needed to acquire Owner's insurance.
 - .15 Initial settlement survey and damage report if required.
 - .16 WSIB Clearance Certificates for Contractor and Subcontractors.
 - .6 Application for Payment at Substantial Performance of the Work: Submit a written request for inspection for Substantial Performance of the Work. On receipt of request, Consultant will either proceed with inspection or notify Contractor of unfulfilled requirements. Consultant will prepare the Certificate of Substantial Performance of the Work after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Consultant, that must be completed or corrected before certificate will be issued.
 - .1 Include documentation supporting claim that the Work is substantially performed and a statement showing an accounting of changes to the Contract Price.

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- .2 Upon review of the Work and the Certificate of Substantial Performance of the Work, the Consultant will certify Substantial Performance by signing Certificate. The Consultant will not unreasonably withhold signature on the Certificate of Substantial Performance. Contractor shall publish executed Certificate once in a construction trade newspaper in conformance with the Construction Lien Act.
 - .7 Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
 - .1 Evidence of completion of Project closeout requirements.
 - .2 Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 - .3 Updated final statement, accounting for final changes to the Contract Price.
 - .4 Evidence that claims have been settled. Itemize any unsettled claims and except from requested payment amount.
 - .5 Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Performance of the Work or when Owner took possession of and assumed responsibility for corresponding elements of the Work.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 29 00

Part 1 GENERAL**1.1 Section Includes**

- .1 Coordination Work with other contractors and work by Owner under administration of Consultant.
- .2 Scheduled progress and Pre-installation meetings.

1.2 Related Sections

- .1 Section 01 32 00 - Construction Progress Documentation.
- .2 Section 01 33 00 - Submittal Procedures.
- .3 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.3 Coordination

- .1 Perform coordination of progress schedules, submittals, use of site, temporary utilities, construction facilities and construction Work, with progress of Work of others, under instructions of Consultant.

1.4 Project Meetings

- .1 Schedule and administer bi-weekly project meetings throughout progress of Work.
- .2 Schedule and administer pre-installation meetings when specified in sections and when required to coordinate related or affected Work.
- .3 Prepare agenda for meetings.
- .4 Distribute written notice of each meeting four (4) working days in advance of meeting date to Consultant.
- .5 Provide physical space and make arrangements for meetings.
- .6 Preside at meetings.
- .7 Record minutes. Include significant proceedings and decisions. Identify action by parties.
- .8 Reproduce and distribute copies of minutes within three (3) days working after each meeting and transmit to meeting participants.

1.5 Construction Organization and Start-Up

- .1 Within fifteen (15) working days after award of Contract, request a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.
- .2 Consultant, Senior representatives of the Owner, Contractor, major Subcontractors, field inspectors and supervisors are to be in attendance.
- .3 Establish time and location of meeting and notify parties concerned minimum five (5) working days before meeting.
- .4 Incorporate mutually agreed variations to Contract Documents into Agreement, prior to signing.

- .5 Agenda to include following:
 - .1 Appointment of official representative of participants in Work.
 - .2 Schedule of Work, progress scheduling as specified in Section 01 32 00.
 - .3 Schedule of submission of shop drawings, samples, colour chips as specified in Section 01 33 00.
 - .4 Requirements for temporary facilities, site sign, offices, storage sheds, utilities, fences as specified in Section 01 50 00.
 - .5 Delivery schedule of specified equipment as specified in Section 01 32 00.
 - .6 Site safety, security as specified in Section 01 35 29.
 - .7 Proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, and administrative requirements.
 - .8 Owner-furnished Products.
 - .9 Record drawings as specified in Section 01 78 39.
 - .10 Maintenance material and data as specified in Section 01 78 39.
 - .11 Take-over procedures, acceptance, and warranties as specified Section 01 78 39.
 - .12 Monthly progress claims, administrative procedures, photographs, and holdbacks.
 - .13 Appointment of inspection and testing agencies or firms as specified in Section 01 40 00.
 - .14 Insurances and transcript of policies.
- .6 Comply with Consultant's allocation of mobilization areas of site; for field offices and sheds, access, traffic, and parking facilities.
- .7 During construction, coordinate use of site and facilities through Consultant's procedures for intra-project communications: Submittals, reports and records, schedules, coordination of drawings, recommendations, and resolution of ambiguities and conflicts.
- .8 Comply with instructions of Consultant for use of temporary utilities and construction facilities.
- .9 Coordinate field engineering and layout work with Consultant.

1.6 On-Site Documents

- .1 Maintain at job site, one copy each of the following:
 - .1 Contract drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Reviewed shop drawings.
 - .5 Change orders.
 - .6 Other modifications to Contract.
 - .7 Field test reports.
 - .8 Copy of approved Work schedule.
 - .9 Manufacturers' installation and application instructions.

- .10 Labour conditions and wage schedules.
- .11 Applicable current editions of municipal regulations and by-laws. Current building codes, complete with addenda bulletins applicable to the Place of the Work.

1.7 Schedules

- .1 Submit preliminary construction progress schedule as specified in Section 01 32 00 to Consultant coordinated with Consultant's project schedule.
- .2 After review, revise and resubmit schedule to comply with revised project schedule.
- .3 During progress of Work revise and resubmit as directed by Consultant.

1.8 Construction Progress Meetings

- .1 During course of Work schedule progress meetings bi-weekly.
- .2 Contractor, major subcontractors involved in Work, Owner and Consultant are to be in attendance.
- .3 Notify parties minimum five (5) working days prior to meetings.
- .4 Record minutes of meetings and circulate to attending parties and affected parties not in attendance within three (3) working days after meeting.
- .5 Agenda to include following:
 - .1 Review, approval of minutes of previous meeting.
 - .2 Review of Work progress since previous meeting.
 - .3 Field observations, problems, conflicts.
 - .4 Problems which impede construction schedule.
 - .5 Review of off-site fabrication delivery schedules.
 - .6 Corrective measures and procedures to regain projected schedule.
 - .7 Revision to construction schedule.
 - .8 Progress schedule, during succeeding work period.
 - .9 Review submittal schedules: expedite as required.
 - .10 Maintenance of quality standards.
 - .11 Review proposed changes for affect on construction schedule and on completion date.
 - .12 Review site safety and security issues.
 - .13 Other business.

1.9 Submittals

- .1 Prepare and issue submittals to Consultant for review.
- .2 Submit preliminary Shop Drawings, product data and samples as specified in Section 01 33 00 for review for compliance with Contract Documents; for field dimensions and clearances, for relation to available space, and for relation to Work of other contracts. After review, revise and resubmit for transmittal to Consultant.
- .3 Submit requests for payment for review, and for transmittal to Consultant.

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- .4 Submit requests for interpretation of Contract Documents, and obtain instructions through Consultant.
 - .5 Process substitutions through Consultant.
 - .6 Process change orders through Consultant.
 - .7 Deliver closeout submittals for review and preliminary inspections, for transmittal to Consultant.

1.10 Coordination Drawings

- .1 Provide information required by Consultant for preparation of coordination Drawings.
- .2 Review and approve revised Drawings for submittal to Consultant.

1.11 Closeout Procedures

- .1 Notify Consultant when Work is considered ready for Substantial Performance.
- .2 Accompany Consultant on preliminary inspection to determine items listed for completion or correction.
- .3 Comply with Consultant's instructions for correction of items of Work listed in executed certificate of Substantial Performance and for access to Owner-occupied areas.
- .4 Notify Consultant of instructions for completion of items of Work determined in Consultant's final inspection.

END OF SECTION 01 31 00

PART 1 - GENERAL

1.1 Related Documents

- .1 Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 Summary

- .1 This Section includes administrative and procedural requirements for the following:
 - .1 Pre-demolition and Pre-construction digital photographs or video capable of single frame printing of images.
 - .2 Periodic demolition/construction digital photographs.
 - .3 Final Completion construction digital photographs.
 - .4 Demonstration and training videotapes.
- .2 Related Sections include the following:
 - .1 Division 1 Section "Submittal Procedures" for submitting construction photographs.
 - .2 Division 1 Section "Closeout Procedures" for submitting photographic digital files as Project Record Documents at Project closeout.

1.3 Submittals

- .1 Construction Photographs: Submit digital electronic data files of each photographic view within 7 days of taking photographs.
 - .1 Digital Images: Submit 1 complete set of digital image electronic files as a Project Record Document on CD-ROM. Identify electronic media with date photographs were taken. Submit images that have the same aspect ratio as the sensor, uncropped.

1.4 Coordination

- .1 Auxiliary Services: Cooperate with photographer and provide auxiliary services requested, including access to Project site and use of temporary facilities including temporary lighting.
- .2 Coordinate with and accommodate Owner's photographer during construction.

PART 2 - PRODUCTS

2.1 Photographic Media

- .1 Digital Images: Provide images in JPEG format, with minimum sensor size of 3.2 megapixels.

PART 3 - EXECUTION

3.1 Photographs, General

- .1 Photographer: Project Superintendent or assigned personnel.
- .2 Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.

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- .1 Date and Time: Include date and time in filename for each image.
 - .2 Field Office Images: Maintain one set of images in electronic file in the field office at Project site, available at all times for reference. Identify images same as for those submitted to Consultant.

3.2 Demolition/Construction Photographs

- .1 Pre-demolition/construction Photographs: Before starting demolition/construction, take colour images of Project site and surrounding properties from different vantage points, as directed by Consultant.
 - .1 Take images to show existing conditions adjacent to the property before starting the Work.
 - .2 Take images of existing buildings either on or adjoining the property to accurately record the physical conditions at the start of construction.
- .2 Periodic Demolition/Construction Photographs: Take images on an ongoing to record demolition/construction activity and significant events and conditions. Select vantage points to best show status of construction and progress since the last photographs were taken.
- .3 Take images of key construction issues which affect code compliance and typical installation process for each trade and any components which can not be clearly reviewed once items are covered up.

END OF SECTION 01 32 33

PART 1 - GENERAL**1.1 Related Documents**

- .1 Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 Summary

- .1 This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other miscellaneous submittals, both electronically and physically. Intent is for as much of the submittal process as possible be handled electronically.
- .2 Related Sections include the following:
 - .1 Division 1 Section "Payment Procedures" for submitting Applications for Payment.
 - .2 Division 1 Section "Project Management and Coordination" for submitting Coordination Drawings.
 - .3 Division 1 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule.
 - .4 Division 1 Section "Photographic Documentation" for submitting periodic construction photographs.
 - .5 Division 1 Section "Quality Requirements" for submitting test and inspection reports and Delegated-Design Submittals and for erecting mock-ups.
 - .6 Division 1 Section "Closeout Procedures" for submitting warranties.
 - .7 Division 1 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.

1.3 Definitions

- .1 Action Submittals: Written and graphic information that requires Consultant's and Contractor's responsive action.
- .2 Informational Submittals: Written information that does not require Consultant's and Contractor's approval. Submittals may be rejected for not complying with requirements.
- .3 Master Project Scope Document: Written and graphic information summarizing all Subcontractor packages and including descriptions of the scope of work in each Subcontractor package and the division of work between Subcontractors.

1.4 Submittal Procedures

- .1 General: Electronic copies of scaleable CAD Drawings of the Contract Drawings will be provided by Consultant for Contractor's use in preparing submittals.
- .2 Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - .1 Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - .2 Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

- .1 Consultant reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- .3 Submittals Schedule: Comply with requirements in Division 1 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.
- .4 Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Consultant's receipt of submittal.
 - .1 Initial Review: Allow 15 calendar days for initial review of each submittal. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. Consultant will advise Contractor when a submittal being processed must be delayed for coordination.
 - .2 Concurrent Review: Where concurrent review of submittals by Consultant's consultants, Owner, or other parties is required, allow 15 calendar days for initial review of each submittal.
 - .3 Direct Transmittal to Consultant: Where the Contract Documents indicate that submittals may be transmitted directly to Consultant's consultants, provide duplicate copy of transmittal to Consultant. Submittal will be returned to Consultant before being returned to Contractor.
 - .4 If intermediate submittal is necessary, process it in same manner as initial submittal.
 - .5 Allow 15 calendar days for processing each resubmittal.
 - .6 No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing. Calendar days shall begin to be counted from the date received by the Consultant.
- .5 Identification: For submittals submitted electronically, follow and complete procedures established for submittals on electronic Project management site. For submittals submitted physically, place a permanent label or title block on each submittal for identification.
 - .1 Indicate name of firm or entity that prepared each submittal on label or title block.
 - .2 Provide separate title sheet for each submittal, or provide a space approximately 4 by 5 inches (100 by 125 mm) on label or beside title block of each submittal to record Contractor's review and approval markings and action taken by Consultant and Contractor.
 - .3 Include the following information on label for processing and recording action taken:
 - .1 Project name.
 - .2 Date.
 - .3 Name and address of Consultant.
 - .4 Name and address of Contractor.
 - .5 Name and address of subcontractor.
 - .6 Name and address of supplier.
 - .7 Name of manufacturer.
 - .8 Identifying number or code, including revision number, coordinated

- with attached Submittal Transmittal Form.
- .9 Number and title of appropriate Specification Section.
 - .10 Drawing number and detail references, as appropriate.
 - .11 Other necessary identification.
- .6 Deviations: Highlight, encircle, or otherwise identify deviations from the Contract Documents on submittals.
 - .7 Additional Copies: Unless Consultant observes noncompliance with provisions of the Contract Documents, initial submittal may serve as final submittal.
 - .1 Submit one copy of submittal to concurrent reviewer in addition to Consultant.
 - .8 Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Consultant will return submittals, without review, received from sources other than Contractor.
 - .1 On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Consultant on previous submittals, and deviations from requirements of the Contract Documents, including minor variations and limitations. Include the same label information as the related submittal.
 - .2 Include Contractor's certification stating that information submitted complies with requirements of the Contract Documents.
 - .3 Transmittal Form: Use attached sample Submittal Transmittal Form, or Contractor's standard form, as approved by Consultant and Owner.
 - .9 Distribution: Furnish copies of final submittals to manufacturers, Subcontractors, Suppliers, fabricators, installers, and authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
 - .10 Use for Construction: Use only final submittals with mark indicating action taken by Consultant in connection with construction.

PART 2 - PRODUCTS

2.1 Action Submittals

- .1 General: Prepare and submit Action Submittals required by individual Specification Sections.
 - .1 Submit electronic submittals directly to Contractor's extranet specifically established for Project.
- .2 Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 - .1 If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - .2 Mark each copy of each submittal to show which Products and options are applicable.
 - .3 Include the following information, as applicable:
 - .1 Manufacturer's written recommendations.
 - .2 Manufacturer's Product specifications.

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- .3 Manufacturer's installation instructions.
 - .4 Standard colour charts.
 - .5 Manufacturer's catalog cuts.
 - .6 Wiring diagrams showing factory-installed wiring.
 - .7 Printed performance curves.
 - .8 Operational range diagrams.
 - .9 Mill reports.
 - .10 Standard Product operating and maintenance manuals.
 - .11 Compliance with recognized trade association standards.
 - .12 Compliance with recognized testing agency standards.
 - .13 Application of testing agency labels and seals.
 - .14 Notation of coordination requirements.
- .3 Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base shop drawings on reproductions of the Contract Documents or standard printed data.
- .1 Preparation: Include the following information, as applicable:
 - .1 Dimensions.
 - .2 Identification of Products.
 - .3 Fabrication and installation drawings.
 - .4 Roughing-in and setting diagrams.
 - .5 Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - .6 Shop work manufacturing instructions.
 - .7 Templates and patterns.
 - .8 Schedules.
 - .9 Design calculations.
 - .10 Compliance with specified standards.
 - .11 Notation of coordination requirements.
 - .12 Notation of dimensions established by field measurement.
 - .2 Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
 - .3 Sheet Size: Except for templates, patterns, and similar full-size drawings, submit shop drawings on sheets at least 8-1/2 by 11 inches but no larger than 36 by 42 inches.
 - .4 Number of Copies: Submit copies of each non-electronic submittal, as follows:
 - .1 Initial Submittal: Submit one (1) electronic PDF file. Consultant will return an electronic file.
 - .2 Final Submittal: Submit one (1) electronic PDF file, with prints that are required for operation and maintenance manuals. Photocopy additional prints where prints are required for operation and maintenance manuals. Retain returned file as a Project Record

Drawing.

- .4 Samples: Prepare physical units of materials or Products, including the following:
- .1 Comply with requirements in Division 1 Section "Quality Requirements" for mockups.
 - .2 Samples for Initial Selection: Submit manufacturer's colour charts consisting of units or sections of units showing the full range of colours, textures, and patterns available.
 - .1 Samples for Verification: Submit full-size units or samples of size indicated, prepared from the same material to be used for the Work, cured and finished in manner specified, and physically identical with the Product proposed for use, and that show full range of colour and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing colour, texture, and pattern; colour range sets; and components used for independent testing and inspection.
 - .3 Preparation: Mount, display, or package samples in manner specified to facilitate review of qualities indicated. Prepare samples to match Consultant's sample where so indicated. Attach label on unexposed side that includes the following:
 - .1 Generic description of sample.
 - .2 Product name or name of manufacturer.
 - .3 Sample source.
 - .4 Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, provide the following:
 - .1 Size limitations.
 - .2 Compliance with recognized standards.
 - .3 Availability.
 - .4 Delivery time.
 - .5 Submit samples for review of kind, colour, pattern, and texture for a final check of these characteristics with other elements and for a comparison of these characteristics between final submittal and actual component as delivered and installed.
 - .1 If variation in colour, pattern, texture, or other characteristic is inherent in the Product represented by a sample, submit at least three sets of paired units that show approximate limits of the variations.
 - .2 Refer to individual specification Sections for requirements for samples that illustrate workmanship, fabrication techniques, and details of assembly, connections, operation, and similar construction characteristics.
 - .6 Number of samples for Initial Selection: Submit 2 full sets of available choices where colour, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Consultant will return submittal other than samples with options selected.
 - .7 Number of samples for Verification: Submit 3 sets of Samples. Consultant will retain 2 sample sets; remainder will be returned. Mark up and retain 1 returned

sample set as a Project Record Sample.

- .1 Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
- .8 Disposition: Maintain sets of approved samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - .1 Samples that may be incorporated into the Work are indicated in individual specification Sections. Such samples must be in an undamaged condition at time of use.
 - .2 Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
- .5 Product Schedule or List: Prepare a written summary indicating types of Products required for the Work and their intended location. Include the following information in tabular form:
 - .1 Type of product. Include unique identifier for each product.
 - .2 Number and name of room or space.
 - .3 Location within room or space.
- .6 Contractor's Construction Schedule: Comply with requirements in Division 1 Section "Construction Progress Documentation" for Construction Manager's action.
- .7 Submittals Schedule: Comply with requirements in Division 1 Section "Construction Progress Documentation."
- .8 Application for Payment: Comply with requirements in Division 1 Section "Payment Procedures."
- .9 Schedule of Values: Comply with requirements in Division 1 Section "Payment Procedures."
- .10 Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 - .1 Name, address, e-mail address and telephone number of entity performing subcontract or supplying Products.
 - .2 Number and title of related specification Section(s) covered by subcontract.
 - .3 Drawing number and detail references, as appropriate, covered by Subcontract.

2.2 Informational Submittals

- .1 General: Prepare and submit Informational Submittals required by other specification Sections.
 - .1 Number of Copies: Submit 1 copy of each submittal, unless otherwise indicated. Consultant will not necessarily return copies.
 - .2 Certificates and Certifications: Provide a Commissionaire of Oaths statement that includes signature of Contractor, testing agency, or design professional responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of the company.
 - .3 Test and Inspection Reports: Comply with requirements in Division 1 Section

"Quality Requirements."

- .2 Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.
- .3 Field Test Reports: When not provided as an Owner provided field test report, prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests required by individual specification sections performed either during installation of Product or after Product is installed in its final location, for compliance with requirements.
- .4 Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of Products and equipment. Comply with requirements in Division 1 Section "Closeout Procedures."
- .5 Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- .6 Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a Product or equipment. Include name of Product and name, address, and telephone number of manufacturer. Include the following, as applicable:
 - .1 Preparation of substrates.
 - .2 Required substrate tolerances.
 - .3 Sequence of installation or erection.
 - .4 Required installation tolerances.
 - .5 Required adjustments.
 - .6 Recommendations for cleaning and protection.
- .7 Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
 - .1 Name, address, and telephone number of factory-authorized service representative making report.
 - .2 Statement on condition of substrates and their acceptability for installation of Product.
 - .3 Statement that products at Project site comply with requirements.
 - .4 Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 - .5 Results of operational and other tests and a statement of whether observed performance complies with requirements.
 - .6 Statement whether conditions, Products, and installation will affect warranty.
 - .7 Other required items indicated in individual Specification Sections.

PART 3 - EXECUTION

3.1 Contractor's Review

- .1 Review each submittal and check for compliance with the Contract Documents. Note

corrections and field dimensions. Mark with approval stamp before submitting to Consultant.

- .2 Review Stamp: Stamp each submittal with a uniform, review stamp. Include Project name and location, submittal number, specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and complies with the Contract Documents.

3.2 Consultant's Action

- .1 General: Consultant will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- .2 Action Submittals: Consultant will review each submittal, make marks to indicate corrections or modifications required, and return it. Consultant will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken:
 - .1 No Exception Taken: Work covered by the submittal may proceed provided it complies with the Contract Documents. Final acceptance will depend on that compliance.
 - .2 Make Corrections Noted: Work covered by the submittal may proceed provided it complies both with the Consultant's notations and corrections on the submittal and the Contract Documents. Final acceptance will depend on that compliance. Submit corrected document for record purposes.
 - .3 Revise and Resubmit: In the Consultant's opinion, submittal does not comply with the Contract Requirements. Proceed with Work covered by the submittal, including purchasing, fabrication, delivery, or other activity for the products submitted wholly at the Contractor's risk. Revise or prepare a new submittal according to the Consultant's notations and corrections.
 - .4 Rejected: In the Consultant's opinion, the Work covered by the submittal does not comply with the Contract Requirements. Prepare a new submittal for a product that complies with the Contract Documents.
 - .5 Submit Specified Items: In the Consultant's opinion, submittal does not comply with the Contract Requirements. Prepare additional information requested, or required by the Contract Documents, that indicates compliance with requirements.
 - .6 Not Reviewed: Submittal was not reviewed and is returned with no action taken.
- .3 Informational Submittals: Consultant will review each submittal and will not return it, or will reject and return it if it does not comply with requirements. Consultant will forward each submittal to appropriate party.
- .4 Submittals not required by the Contract Documents will not be reviewed and may be discarded.

END OF SECTION 01 33 00

PART 1 - GENERAL

1.1 Related Documents

- .1 Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 Summary

- .1 This Section includes administrative and procedural requirements for quality assurance and quality control.
- .2 Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - .1 Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard Products.
 - .2 Specified tests, inspections, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with the Contract Document requirements.
 - .3 Requirements for Contractor to provide quality-control services required by Consultant, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- .3 Related Sections include the following:
 - .1 Division 1 Section "Construction Progress Documentation" for developing a schedule of required tests and inspections.
 - .2 Division 1 Section "Cutting and Patching" for repair and restoration of construction disturbed by testing and inspecting activities.
 - .3 Divisions 2 through 26 Sections for specific test and inspection requirements.

1.3 Definitions

- .1 Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.
- .2 Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction complies with requirements. Services do not include contract enforcement activities performed by Consultant.
- .3 Mockups: Full-size, physical example assemblies as required in individual specification Sections to illustrate finishes and materials. Mockups are used to verify selections made under Sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not samples. Mockups establish the standard by which the Work will be judged.
- .4 Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

1.4 Delegated Design

- .1 Performance and Design Criteria: Where professional design services or certifications by

a design professional are specifically required of Contractor by the Contract Documents, provide Products and systems complying with specific performance and design criteria indicated.

- .1 If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Consultant. Failure to request interpretation of existing criteria or to request additional criteria or clarification shall not relieve the Contractor of the obligation to provide complete, functional systems that meet the design intent, performance criteria and acceptance of the Consultant.
- .2 Where referred to in the specifications as design-build, or where engineering services and certification are specifically required, all the costs of the systems that meet the design intent and respond to the performance requirements shall be included in the base bid. The Contractor shall not be entitled to any additional sums for the design, approval, fabrication, shipping and installation of such systems. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, who's signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop drawings and other submittals prepared by said professional. The Owner and Consultant shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals. It shall be the responsibility of the Contractor along with said professional design services to design the designated systems or portions of the Work in compliance with all applicable codes, standards and rulings as well as in conformance with performance and design criteria indicated in the Contract Documents.

1.5 Regulatory Requirements

- .1 Copies of Regulations: Obtain copies of the following regulations and retain at Project site to be available for reference by parties who have a reasonable need:
 - .1 Provincial and local building codes or other regulatory agencies.
 - .2 Occupational Health and Safety Regulations.

1.6 Submittals

- .1 Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- .2 Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - .1 Specification Section number and title.
 - .2 Description of test and inspection.
 - .3 Identification of applicable standards.
 - .4 Identification of test and inspection methods.
 - .5 Number of tests and inspections required.
 - .6 Time schedule or time span for tests and inspections.
 - .7 Entity responsible for performing tests and inspections.
 - .8 Requirements for obtaining samples.
 - .9 Unique characteristics of each quality-control service.
- .3 Reports: Prepare and submit certified written reports that include the following:
 - .1 Date of issue.

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- .2 Project title and number.
 - .3 Name, address, and telephone number of testing agency.
 - .4 Dates and locations of samples and tests or inspections.
 - .5 Names of individuals making tests and inspections.
 - .6 Description of the Work and test and inspection method.
 - .7 Identification of Product and specification Section.
 - .8 Complete test or inspection data.
 - .9 Test and inspection results and an interpretation of test results.
 - .10 Ambient conditions at time of sample taking and testing and inspecting.
 - .11 Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - .12 Name and signature of laboratory inspector.
 - .13 Recommendations on retesting and re-inspecting.
- .4 Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.7 Quality Assurance

- .1 Fabricator Qualifications: A firm experienced in producing Products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- .2 Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's Products that are similar in material, design, and extent to those indicated for this Project.
- .3 Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
 - .1 For work requiring special warranty, a firm or individual licensed by or trained and approved by manufacturer, or manufacturer's own forces.
- .4 Manufacturer Qualifications: A firm experienced in manufacturing Products or systems similar to those indicated for this Project and with a record of successful in-service performance.
- .5 Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or Product that are similar to those indicated for this Project in material, design, and extent.
- .6 Specialists: Certain sections of the specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.

- .1 Requirement for specialists shall not supersede building codes and similar regulations governing the Work, nor interfere with local trade-union jurisdictional settlements and similar conventions.
- .7 Preconstruction Testing: Testing agency shall perform preconstruction testing for compliance with specified requirements for performance and test methods.
 - .1 Contractor responsibilities include the following:
 - .1 Provide test specimens and assemblies representative of proposed materials and construction. Provide sizes and configurations of assemblies to adequately demonstrate capability of Product to comply with performance requirements.
 - .2 Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - .3 Fabricate and install test assemblies using installers who will perform the same tasks for Project.
 - .4 When testing is complete, remove assemblies; do not reuse materials on Project.
 - .2 Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Consultant, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
- .8 Mockups: Before installing portions of the Work requiring mockups as required in individual specification Sections, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
 - .1 Build mockups in location and of size indicated or, if not indicated, as directed by Consultant.
 - .2 Notify Consultant 7 days in advance of dates and times when mockups will be constructed.
 - .3 Demonstrate the proposed range of aesthetic effects and workmanship.
 - .4 Obtain Consultant's approval of mockups before starting work, fabrication, or construction.
 - .5 Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 - .6 Demolish and remove mockups when directed, unless otherwise indicated.

1.8 Quality Control

- .1 Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 - .1 Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of the types of testing and inspecting they are engaged to perform.
 - .2 Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Price will be adjusted by Change Order.
- .2 Special Tests and Inspections: Owner will engage a testing agency to conduct special

- tests and inspections required by authorities having jurisdiction as the responsibility of Owner.
- .1 Testing agency will notify Consultant and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 - .2 Testing agency will submit a certified written report of each test, inspection, and similar quality-control service to Consultant with copy to Contractor and to authorities having jurisdiction.
 - .3 Testing agency will submit a final report of special tests and inspections at Substantial Performance of the Work, which includes a list of unresolved deficiencies.
 - .4 Testing agency will interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 - .5 Testing agency will retest and re-inspect corrected work.
- .3 Contractor Responsibilities: Unless otherwise indicated, provide quality-control services specified and required by authorities having jurisdiction.
- .1 Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - .1 Contractor shall not employ the same entity engaged by Owner, unless agreed to in writing by Owner.
 - .2 Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 - .3 Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 - .4 Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 - .5 Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- .4 Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing.
- .5 Re-testing/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that revised or replaced Work that failed to comply with requirements established by the Contract Documents.
- .6 Testing Agency Responsibilities: Cooperate with Consultant and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
- .1 Notify Consultant and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 - .2 Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 - .3 Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 - .4 Do not release, revoke, alter, or increase requirements of the Contract

- Documents or approve or accept any portion of the Work.
- .5 Do not perform any duties of Contractor.
 - .7 Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
 - .1 Access to the Project site.
 - .2 Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 - .3 Preliminary design mix proposed for use for material mixes that require control by testing agency.
 - .4 Security and protection for samples at Project site.
 - .8 Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - .1 Schedule times for tests, inspections, obtaining samples, and similar activities.
 - .9 Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by individual specification sections of the Contract Documents. Submit schedule within 30 days of date established for commencement of the Work.
 - .1 Distribution: Distribute schedule to Owner, Consultant, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 Repair And Protection

- .1 General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - .1 Comply with the Contract Document requirements for Division 1 Section "Cutting and Patching."
- .2 Protect construction exposed by or for quality-control service activities.
- .3 Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services unless damages are caused by Owner's inspection and testing company.

END OF SECTION 01 40 00

PART 1 - GENERAL

1.1 Related Documents

- .1 Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 Summary

- .1 This Section includes requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection facilities.
- .2 Related Sections include the following:
 - .1 Division 1 Section "Submittal Procedures" for procedures for submitting copies of implementation and termination schedule and utility reports.
 - .2 Division 1 Section "Special Procedures for Historic Treatment".
 - .3 Division 1 Section "Execution Requirements" for progress cleaning requirements.
 - .4 Division 2 Section "Dewatering" for disposal of ground water at Project site.
 - .5 Divisions 2 through 32 for temporary heat, ventilation, and humidity requirements for products in those Sections.

1.3 Definitions

- .1 Temporary Enclosure: Temporary enclosure is defined as when permanent or temporary roofing is complete, insulated, and weathertight; exterior walls are complete, insulated and weathertight with permanent or substantial temporary construction; and all openings are closed and weathertight with permanent construction or substantial temporary closures.

1.4 Use Charges

- .1 General: Cost or use charges for temporary facilities shall be by the Contractor. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Consultant, testing agencies, and authorities having jurisdiction.
- .2 Sewer Service: Connect to new sewer connections and allow use by all parties engaged in construction, at Project site.
- .3 No Board Phone or Computer use allowed.

1.5 Submittals

- .1 Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

1.6 Quality Assurance

- .1 Standards: Comply with CSA.
 - .1 Trade Jurisdictions: Assigned responsibilities for installation and operation of temporary utilities are not intended to interfere with trade regulations and union jurisdictions.
 - .2 Electric Service: Comply with CSA and ULC standards and regulations for temporary electric service. Install service to comply with CSA.

- .2 Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.7 Project Conditions

- .1 Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2- PRODUCTS

2.1 Temporary Construction Materials

- .1 General: Provide new materials. Undamaged, previously used materials in serviceable condition may be used if approved by Consultant. Provide materials suitable for use intended.
- .2 Chain-Link Fencing: Minimum 2-inch, 0.148-inch- thick, galvanized steel, chain-link fabric fencing; minimum 6 feet high with galvanized steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch- OD top rails. Other alternatives shall be approved by the Owner and Architect.
- .3 Lumber and Plywood: Comply with requirements in Division 6 Section "Rough Carpentry."
- .4 Gypsum Board: Minimum 1/2 inch thick by 48 inches wide by maximum available lengths; regular-type panels with tapered edges. Comply with ASTM C 36.
- .5 Interior Insulation: Unfaced mineral-fibre blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indices of 25 and 50, respectively.
- .6 Paint: Comply with requirements in Division 9, Painting.
- .7 Tarpaulins: Fire-resistive labelled with flame-spread rating of 15 or less.
- .8 Water: Potable.

2.2 Equipment

- .1 General: Provide equipment suitable for use intended.
- .2 Field Offices: Prefabricated Mobile units with lockable entrances, operable windows, and serviceable finishes; heated and air conditioned; on foundations adequate for normal loading.
- .3 Fire Extinguishers: Hand carried, portable, ULC rated. Provide class and extinguishing agent as indicated or a combination of extinguishers of NFPA-recommended classes for exposures.
- .1 Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.
- .4 Self-Contained Toilet Units: Single-occupant units of chemical, aerated recirculation or combustion type; vented; fully enclosed with a glass-fibre-reinforced polyester shell or similar non-absorbent material.
- .5 Drinking Water Fixtures: Containerized, tap-dispenser, bottled-water drinking-water units, including paper cup supply.
- .1 Where power is accessible, provide electric water coolers to maintain dispensed water temperature at 45°F to 55°F.
- .6 Heating Equipment: For areas of new construction, provide self-contained heaters with

individual space thermostatic control.

- .1 Heating system, type of fuel and quality of environmental controls shall be subject to Owner approval.
- .2 Do not use liquid propane or fuel-oil heaters unless their use is approved by Owner.
- .3 Heating Units: Listed and labelled, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use for type of fuel being consumed.
- .7 Electrical Outlets: Properly configured, CSA approved polarized outlets to prevent insertion of 110- to 120-V plugs into higher-voltage outlets; equipped with ground-fault circuit interrupters, reset button, and pilot light.
- .8 Power Distribution System Circuits: Where permitted and overhead and exposed for surveillance, wiring circuits, not exceeding 125-V ac, 20-A rating, and lighting circuits may be non-metallic sheathed cable.

PART 3 - EXECUTION

3.1 Installation, General

- .1 Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- .2 Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 Temporary Utility Installation

- .3 Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel at new construction floors. Where possible and agreed to by Owner, use of existing sanitary facilities by Contractor's personnel will be allowed. Comply with authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
 - .1 Toilets: Install self-contained toilet units. Shield toilets to ensure privacy. Provide separate facilities for male and female personnel.
 - .2 Restore existing facilities to pre-construction conditions at end of construction activities.
- .4 Heating: At areas of new construction, provide temporary heating required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment from that specified that will not have a harmful effect on completed installations or elements being installed, and as approved by Owner.
 - .1 Maintain a minimum temperature of 45°F in permanently enclosed portions of building for normal construction activities, and 60°F for finishing activities and areas where finished Work has been installed, unless required otherwise by specific construction activities.
- .5 Ventilation and Humidity Control: Provide temporary ventilation of new construction required by construction activities for curing or drying of completed installations or for protecting installed construction and existing spaces from adverse effects of high humidity. Select equipment from that specified that will not have a harmful effect on

- completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
- .6 Lighting: Provide temporary lighting at areas of new construction with local switching that provides adequate illumination for construction operations and traffic conditions.
 - .1 Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
 - .2 Install lighting for Project identification sign.
 - .7 Telephone Service: Provide temporary telephone service throughout construction period for common-use facilities used by all personnel engaged in construction activities. Install separate telephone line for each field office and first-aid station.
 - .1 At each telephone, post a list of important telephone numbers.
 - .1 Police and fire departments.
 - .2 Ambulance service.
 - .3 Contractor's home office.
 - .4 Consultant's office.
 - .5 Engineers' offices.
 - .6 Owner's office.
 - .7 Principal Subcontractors' field and home offices.
 - .2 Provide superintendent with cellular telephone or portable two-way radio for use when away from field office.
 - .8 Electronic Communication Service: Provide temporary electronic communication service with internet access, in common-use facilities. Use of Owner's existing service will be permitted.

3.3 Support Facilities Installation

- .1 General: Comply with the following:
 - .1 Maintain support facilities until near Substantial Performance of the Work. Remove before Substantial Performance of the Work. Personnel remaining after Substantial Performance of the Work will be permitted to use permanent facilities, under conditions acceptable to Owner.
- .2 Traffic Controls: Provide temporary traffic controls at junction of temporary roads with public roads. Include warning signs for public traffic and "STOP" signs for entrance onto public roads. Comply with requirements of authorities having jurisdiction.
- .3 Dewatering Facilities and Drains: Comply with requirements in applicable Division 2 Sections for temporary drainage and dewatering facilities and operations not directly associated with construction activities included in individual Sections. Where feasible, use same facilities. Maintain Project site, excavations, and construction free of water.
 - .1 Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining property nor endanger permanent Work or temporary facilities.
 - .2 Before connection and operation of permanent drainage piping system, provide temporary drainage where roofing or similar waterproof deck construction is completed.
 - .3 Remove snow and ice in construction areas as required to minimize accumulations.

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- .4 Project Identification and Temporary Signs: Prepare Project identification and other signs in sizes indicated. Install signs where indicated to inform public and persons seeking entrance to Project. Do not permit installation of unauthorized signs.
 - .1 Engage an experienced sign painter to apply graphics for Project identification signs. Comply with details indicated.
 - .2 Prepare temporary signs to provide directional information to construction personnel and visitors.
 - .3 Construct signs of exterior-type Grade B-B high-density concrete form overlay plywood in sizes and thicknesses indicated. Support on posts or framing of preservative-treated wood or steel.
 - .4 Paint sign panel and applied graphics with exterior-grade alkyd gloss enamel over exterior primer.
 - .5 Common-Use Field Office: Of sufficient size to accommodate needs of construction personnel. Keep office clean and orderly. Furnish and equip offices as follows:
 - .1 Furniture required for Project-site documents including file cabinets, plan tables, plan racks, and bookcases.
 - .2 Room of sufficient size to accommodate meetings of 10 - 15 individuals. Provide electrical power service and 120-V ac duplex receptacles. Furnish room with conference table, chairs, and 4-foot x 8 foot white board.
 - .3 Drinking water.
 - .4 Heating and cooling equipment necessary to maintain a reasonable uniform indoor temperature.
 - .5 Lighting fixtures capable of maintaining average illumination of 20 fc at desk height.
 - .6 Provide toilet facilities for construction period.
 - .6 Lifts and Hoists: Provide facilities for hoisting materials and personnel. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
 - .7 Temporary Elevator Usage: Do not use new elevators for construction activity without specific written permission of Owner.
 - .8 Temporary Use of New Stairs: Cover finished permanent stairs with protective covering of plywood or similar material so finishes will be undamaged at time of acceptance.

3.4 Security and Protection Facilities Installation

- .1 Environmental Protection: Provide protection of new construction, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution.
 - .1 Comply with requirements of Owner/Contractor Agreement for protection measures for existing construction and spaces.
 - .2 Comply with work restrictions specified in Division 1 Section "Summary."
- .2 Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to adjacent properties and walkways, according to requirements of authorities having jurisdiction.
 - .1 Inspect, repair, and maintain erosion- and sedimentation-control measures

- during construction until permanent vegetation has been established.
- .3 Stormwater Control: Provide barriers in and around excavations and subgrade construction, sufficient to prevent flooding by runoff of stormwater from heavy rains.
 - .4 Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from construction damage. Protect tree root systems from damage, flooding, and erosion.
 - .5 Site Enclosure Fence: Before construction operations begin, install chain-link enclosure fence with lockable entrance gates.
 - .1 Set fence posts in compacted mixture of gravel and earth.
 - .2 Provide gates in sizes and at locations necessary to accommodate delivery vehicles and other construction operations.
 - .3 Maintain security by limiting number of keys and restricting distribution to authorized personnel. Provide Owner with 1 set of keys.
 - .6 Security Enclosure and Lockup: Install substantial temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
 - .7 Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erecting structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and public of possible hazard. Where appropriate and needed, provide lighting, including flashing red or amber lights.
 - .8 Covered Walkway: Erect a structurally adequate, protective, covered walkway for passage of persons along adjacent existing building. Coordinate with entrance gates, other facilities, and obstructions. Comply with regulations of authorities having jurisdiction.
 - .1 Construct covered walkways using scaffold or shoring framing.
 - .2 Provide wood-plank overhead decking, protective plywood enclosure walls, handrails, barricades, warning signs, lights, safe and well-drained walkways, and similar provisions for protection and safe passage.
 - .9 Temporary Enclosures: As required and approved by Owner, provide temporary enclosures for protection of new and existing construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
 - .1 Where heating or cooling is needed and permanent enclosure is not complete, provide insulated temporary enclosures. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.

3.5 Operation, Termination, and Removal

- .1 Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- .2 Maintenance: Maintain facilities in good operating condition until removal.
 - .1 Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
 - .2 Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.
- .3 Operate Project-identification-sign lighting daily from dusk until 12:00 midnight.

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- .4 Temporary Facility Changeover: Except for using permanent fire protection as soon as available, do not change over from using temporary security and protection facilities to permanent facilities until Substantial Performance of the Work.
 - .5 Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Performance of the Work. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - .1 Materials and facilities that constitute temporary facilities are the property of Contractor. Owner reserves right to take possession of Project identification signs.
 - .2 At Substantial Performance of the Work, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements in Division 1 Section "Closeout Procedures."

END OF SECTION 01 50 00

PART 1 - GENERAL

1.1 Related Documents

- .1 Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 Summary

- .1 This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - .1 Field engineering and surveying for construction layout and record purposes.
 - .2 General installation of Products.
 - .3 Coordination of Owner-installed Products.
 - .4 Progress cleaning.
 - .5 Starting and adjusting.
 - .6 Protection of installed construction.
 - .7 Correction of the Work.
- .2 Related Sections include the following:
 - .1 Division 1 Section "Project Management and Coordination" for procedures for coordinating field engineering with other construction activities.
 - .2 Division 1 Section "Submittal Procedures" for submitting surveys.
 - .3 Division 1 Section "Cutting and Patching" for procedural requirements for cutting and patching necessary for the installation or performance of other components of the Work.
 - .4 Division 1 Section "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

1.3 Submittals

- .1 Qualification Data: For land surveyor to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of consultants and owners, and other information specified.
- .2 Certificates: Submit certificate signed by land surveyor certifying that location and elevation of improvements comply with requirements.
- .3 Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.
- .4 Certified Surveys: Submit 2 copies signed by land surveyor.
- .5 Final Property Survey: Submit 10 copies showing the Work performed and record survey data.

1.4 Quality Assurance

- .1 Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.

PART 2 - PRODUCTS (NOT USED)**PART 3 - EXECUTION****3.1 Examination**

- .1 Existing Conditions and Utilities: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of utilities, mechanical and electrical systems and other construction affecting the Work.
 - .1 Before construction, have utility companies verify the location and points of connection of utility services.
 - .2 To as large of extent as practicable, visually locate existing mechanical and electrical system components in existing construction prior to demolition, cutting or other work.
- .2 Acceptance of Conditions: Examine substrates, areas, and conditions, with installer or applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - .1 Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - .1 Description of the Work.
 - .2 List of detrimental conditions, including substrates.
 - .3 List of unacceptable installation tolerances.
 - .4 Recommended corrections.
 - .2 Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - .3 Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - .4 Examine walls, floors, and roofs for suitable conditions where Products and systems are to be installed.
 - .5 Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 Preparation

- .1 Existing Utility Information: Furnish information to local utility and Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- .2 Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each Product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- .3 Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

- .4 Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Consultant. Include a detailed description of problem encountered, together with any recommendations for changing the Contract Documents the Contractor may have.

3.3 Construction Layout

- .1 Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Consultant promptly.
- .2 General: Engage a land surveyor to lay out the Work using accepted surveying practices.
 - .1 Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
 - .2 Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 - .3 Inform installers of lines and levels to which they must comply.
 - .4 Notify Consultant when deviations from required lines and levels exceed allowable tolerances.
 - .5 Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- .3 Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.
- .4 Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from 2 or more locations.
- .5 Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Consultant.

3.4 Field Engineering

- .1 Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
 - .1 Do not change or relocate existing benchmarks or control points without prior written approval of Consultant. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Consultant before proceeding.
 - .2 Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- .2 Benchmarks: Establish and maintain a minimum of three permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
 - .1 Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
 - .2 Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.

- .3 Remove temporary reference points when no longer needed. Restore marked construction to its original condition.
- .3 Certified Survey: On completion of foundation walls, caissons, grade beams, other structural elements, major sitework improvements, and other work requiring field-engineering lay-out services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.
- .4 Final Property Survey: At time of Substantial Performance of the Work, prepare a final property survey showing significant features (real property) for Project. Include on the survey a certification, signed by land surveyor, that principal metes, bounds, lines, and levels of Project are accurately positioned as shown on the survey.
 - .1 Show boundary lines, monuments, streets, site improvements and utilities, existing improvements and significant vegetation, adjoining properties, acreage, grade contours, and the distance and bearing from a site corner to a legal point.
 - .2 Recording: At Substantial Performance of the Work, have the final property survey recorded by or with authorities having jurisdiction as the official "property survey."

3.5 Installation

- .1 General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - .1 Make vertical work plumb and make horizontal work level. Make curved or irregular work conform to location tolerances indicated in 3D files.
 - .2 Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - .3 Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
 - .4 Maintain minimum headroom clearance of 8 feet in spaces without a suspended ceiling, unless indicated otherwise.
- .2 Comply with manufacturer's written instructions and recommendations for installing Products in applications indicated.
- .3 Install Products at the time and under conditions that will ensure the best possible results. Maintain conditions required for Product performance until Substantial Performance of the Work.
- .4 Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- .5 Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- .6 Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 - .1 Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Consultant.
 - .2 Allow for building movement, including thermal expansion and contraction.
- .7 Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- .8 Hazardous Materials: Use Products, cleaners, and installation materials that are not considered hazardous.

3.6 Owner-Installed Products

- .1 Site Access: Provide access to Project site for Owner's construction forces.
- .2 Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction forces.
 - .1 Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
 - .2 Preinstallation Conferences: Include Owner's construction forces at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction forces if portions of the Work depend on Owner's construction.
- .3 Contractor is not responsible for directing or supervising Owner's forces, or for work of Owner's forces. Owner shall be responsible for all damage to and repair of the Work, and any delay of Work caused by its own forces.

3.7 Starting And Adjusting

- .1 Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- .2 Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
- .3 Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- .4 Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 1 Section "Quality Requirements."

3.8 Protection Of Installed Construction

- .1 Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Performance of the Work.
- .2 Comply with manufacturer's written instructions for temperature and relative humidity.

3.9 Correction Of The Work

- .1 Repair or remove and replace defective construction. Restore damaged substrates and finishes.
 - .1 Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- .2 Restore permanent facilities used during construction to their specified condition.
- .3 Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- .4 Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- .5 Remove and replace chipped, scratched, and broken glass or reflective surfaces.

- .6 Repair and restore any damaged paving and site to be restored to condition prior to construction.

END OF SECTION 01 70 00

PART 1 - GENERAL

1.1 Related Documents

- .1 Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 specification Sections, apply to this Section.

1.2 Summary

- .1 This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - .1 Inspection procedures.
 - .2 Project Record Documents.
 - .3 Operation and maintenance manuals.
 - .4 Warranties.
 - .5 Instruction of Owner's personnel.
 - .6 Final cleaning.
- .2 Related Sections include the following:
 - .1 Division 1 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
 - .2 Division 1 Section "Execution Requirements" for progress cleaning of Project site.
 - .3 Division 1 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 - .4 Divisions 2 through 32 Sections for specific closeout and special cleaning requirements for products of those Sections.

1.3 Substantial Performance of The Work

- .1 Preliminary Procedures: Before requesting inspection for determining date of Substantial Performance of the Work, complete the following. List items below that are incomplete in request.
 - .1 Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - .2 Advise Owner of pending insurance changeover requirements.
 - .3 Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - .4 Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - .5 Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, property surveys, and similar final record information.
 - .6 Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.

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- .7 Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 - .8 Complete startup testing of systems.
 - .9 Submit test/adjust/balance records.
 - .10 Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - .11 Advise Owner of changeover in heat and other utilities.
 - .12 Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
 - .13 Complete final cleaning requirements, including touchup painting.
 - .14 Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- .2 Inspection: Submit a written request for inspection for Substantial Performance of the Work. On receipt of request, Consultant will either proceed with inspection or notify Contractor of unfulfilled requirements. Consultant will prepare the Certificate of Substantial Performance of the Work after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Consultant, that must be completed or corrected before certificate will be issued.
- .1 Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 - .2 Results of completed inspection will form the basis of requirements for Final Performance of the Work.

1.4 Final Completion

- .1 Preliminary Procedures: Before requesting final inspection for determining date of Final Performance of the Work, complete the following:
 - .1 Submit a final Application for Payment according to Division 1 Section "Payment Procedures."
 - .2 Submit certified copy of Consultant's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Consultant. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 - .3 Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 - .4 Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training videotapes.
- .2 Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Consultant and Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Consultant will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
 - .1 Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.5 List of Incomplete Items (Punch List)

- .1 Preparation: Submit 3 copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
 - .1 Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
 - .2 Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 - .3 Include the following information at the top of each page:
 - .1 Project name.
 - .2 Date.
 - .3 Name of Consultant.
 - .4 Name of Contractor.
 - .5 Page number.

1.6 Operation And Maintenance Manuals

- .1 Assemble one (1) complete hard copy and one (1) complete USB/memory stick's divided as follows (volume one-Warranty certificates and Architectural, volume two – Mechanical and volume three – Electrical) in final form together with holdback invoice. One (1) hard copy and one (1) USB/memory stick of the Operating and Maintenance Manuals along with As-Builts to be provided. Individual specification Sections and as follows:
 - .1 Operation Data:
 - .1 Emergency instructions and procedures.
 - .2 Final approved shop drawings for each item of Product data in O & M manuals.
 - .3 System, subsystem, and equipment descriptions, including operating standards.
 - .4 Operating procedures, including startup, shutdown, seasonal, and weekend operations.
 - .5 Description of controls and sequence of operations.
 - .6 Piping diagrams.
 - .2 Maintenance Data:
 - .1 Manufacturer's information, including list of spare parts.
 - .2 Name, address, and telephone number of installer or Supplier.
 - .3 Maintenance procedures.
 - .4 Maintenance and service schedules for preventive and routine maintenance.
 - .5 Maintenance record forms.
 - .6 Sources of spare parts and maintenance materials.
 - .7 Copies of maintenance service agreements.

- .8 Copies of warranties and bonds.
- .3 Material & Finishes:
 - .1 10% of all materials used to be turned over to the Owner.
 - .2 List of all finish materials to include product numbers and colours such as flooring, walls, etc.
 - .3 Sheet with colour swatches of all paint finishes
- .2 Organize operation and maintenance manuals into suitable sets of manageable size. Bind and index data in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, with pocket inside the covers to receive folded oversized sheets. Identify each binder on front and spine with the printed title "OPERATION AND MAINTENANCE MANUAL," Project name, and subject matter of contents.

1.7 Warranties

- .1 Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 - .1 Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 - .2 Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the Product or installation. Provide a typed description of the Product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - .3 Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- .2 Provide copies of each warranty for inclusion in operation and maintenance manuals.

1.8 Record Documents – “As –Built Drawings”

- .1 Submit the following in the final PDF form within four weeks for review:
 - .1 One (1) hard copy of all drawings covering all trades with one (1) copy of drawings covering all trades in PDF format on USB/memory stick.

PART 2 - PRODUCTS

2.1 Materials

- .1 Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 Demonstration And Training

- .1 Instruction: Instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
 - .1 Provide instructors experienced in operation and maintenance procedures.

- .2 Provide instruction at mutually agreed-on times. For equipment that requires seasonal operation, provide similar instruction at the start of each season.
- .3 Schedule training with Owner, through Consultant, with at least 7 days' advance notice.
- .4 Coordinate instructors, including providing notification of dates, times, length of instruction, and course content.
- .2 Program Structure: Develop an instruction program that includes individual training modules for each system and equipment not part of a system, as required by individual Specification Sections. For each training module, develop a learning objective and teaching outline. Include instruction for the following:
 - .1 System design and operational philosophy.
 - .2 Review of documentation.
 - .3 Operations.
 - .4 Adjustments.
 - .5 Troubleshooting.
 - .6 Maintenance.
 - .7 Repair.

3.2 Final Cleaning

- .1 General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- .2 Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - .1 Complete the following cleaning operations before requesting inspection for certification of Substantial Performance of the Work for entire Project or for a portion of Project:
 - .1 Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - .2 Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - .3 Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - .4 Remove tools, construction equipment, machinery, and surplus material from Project site.
 - .5 Remove snow and ice to provide safe access to building.
 - .6 Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - .7 Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.

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- .8 Sweep concrete floors broom clean in unoccupied spaces.
 - .9 Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
 - .10 Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - .11 Remove labels that are not permanent.
 - .12 Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - .1 Do not paint over "ULC" and similar labels, including mechanical and electrical nameplates.
 - .13 Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - .14 Replace parts subject to unusual operating conditions.
 - .15 Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - .16 Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - .17 Clean ducts, blowers, and coils if units were operated without filters during construction.
 - .18 Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapour fixtures to comply with requirements for new fixtures.
 - .19 Leave Project clean and ready for occupancy.
- .3 Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 01 77 00

PART 1 - GENERAL**1.1 Scope of Work**

- .1 Excavation and grading shall include the furnishing of all labour, materials and equipment to perform the work as indicated on the drawings and briefly described as follows:
 - .1 Protection and maintenance of existing services and property adjacent to the site.
 - .2 Removal of existing asphalt, curbs, fill, topsoil, softened or disturbed material sand, gravel, brick, concrete, etc., storing clean topsoil and regrading as required by the project. Reuse of top soil must be approved by Geotech consultant. Construction for Topsoil shall conform to OPSS 802. Any excess/unapproved material not required in final grading to be removed from the site and disposed of by this Section. **Note: Contractor is to excavate to design grade elevation and have the existing subgrade reviewed by the Geotechnical Consultant prior to additional excavation or backfill.**
 - .3 All necessary excavation for foundations, footings, stepped footings, thickened slab, loading and disposal of material, as required by the project.
 - .4 Proof-rolling of exposed sub-grade for all building areas before granular sub-base or base is placed using non-vibratory steel wheel roller.
 - .5 Placing and compacting of granular fill for interior and exterior building areas.
 - .6 Placing and compacting fill of excavated areas around completed work to finish grades as indicated on drawings.
 - .7 Stripping, placing and compacting of granular fill to finish sub base grades for asphalt paving and base course that is specified under Section 2B.
 - .8 Placing and compacting of granular fill at exterior areas as specified and required under slabs on grade, walks, etc.
 - .9 Design and installation of shoring, sheeting and bracing of soil prior to excavation and removal after backfilling.
- .2 Unless noted otherwise all OPSS standards referenced in this specification shall be municipal-oriented specifications (OPSS. MUNI). When there is not a corresponding municipal-oriented specification, there references shall be considered to be OPSS listed.

1.2 Protection

- .1 The Contractor shall protect existing buildings and adjacent property from any damage caused by this operation.

1.3 Coordination

- .1 Prior to the commencement of construction, the Site Contractor shall review all site plans from different disciplines of the project to coordinate all site elements.

1.4 Existing Utilities

- .1 Prior to commencing any excavation work, the Contractor shall establish as near as possible the location and state of use of all buried utilities or services as shown on drawings or known to be in existence. The locations shall be clearly and unmistakably marked to prevent accidental disturbance during the work.

1.5 Soil Investigation

- .1 A copy of a detailed geotechnical investigation report is included herein.
- .
- .2 This information is made available solely as a guide and no responsibility is accepted by the Consultant or Owner for its correctness, nor shall its accuracy or otherwise affect the provisions of the contract

1.6 Shoring and Bracing

- .1 Provide approved shoring and bracing as required to prevent settlement, caving of banks, protection of existing District Energy Services, protection of existing hydro duck banks, etc. Shoring and other temporary work shall be so placed so as to not interfere with permanent work remaining in place until backfilling is done and removed in sections.
- .2 This Contractor shall be responsible for any damage resulting from improper or inadequate protection, and all excavations must conform to all governing codes and regulations.
- .3 Comply with: Construction Safety Act, Trench Excavator's Section for Shoring Requirements and the Ontario Building Code.

1.7 Protection from Weathering

- .1 Protect excavated banks, floors, etc. against freezing. In cases where bearing earth is allowed to freeze, it shall be removed and replaced with approved fill.
- .2 Keep excavations free from water and frost by providing and operating pumps to remove water a sufficient distance away to keep excavations dry. Do not allow water to wash freshly laid concrete or masonry.

1.8 Cooperation

- .1 This Contractor shall make himself familiar with the work of other Contractors working in conjunction with his work and shall assist in such work as must be done together.

1.9 Lines

- .1 All lines and levels for the excavation will be furnished by the General Contractor.

1.10 Unit Prices

- .1 Provide unit prices as per the Instructions to bidders.

PART 2 - PRODUCTS

2.1 Granular Fill Material

- .1 Type "A" shall be granular "A" material that meets Ontario Specifications 1010 for granular "A" material.
- .2 Type "B" shall be granular "B," Type I or Type 2 as indicated on the drawings and shall meet Ontario Specifications 1010 for granular "B" material. Recycled material is not allowed.

PART 3 - EXECUTION

3.1 Examination of Site

- .1 Contractor shall visit the site to ascertain special conditions, which affect his work.

3.2 Stripping

- .1 Strip building site to remove the existing topsoil and fill materials down to adequate sub-grade, as indicated on the bore holes/drawings. Topsoil shall be removed carefully in the work areas and shall not be mixed with subsoil or other materials. Stripping of top soil shall be according to OPSS 206.
- .2 Stockpile required quantity of reusable topsoil for redistribution and dispose of excess material. Stockpiling of top soil shall be according to OPSS 802. The reuse of top soil must be approved by a Geo technical Consultant.
- .3 When the site has been stripped, the Contractor shall have the area inspected by the retained third party testing and inspection Consultant before proceeding with excavation for footings and foundations.
- .4 In addition, the Contractor shall proof roll with non-vibratory steel wheel roller exposed subgrade below floor slabs under the direction of the third party testing and inspection Consultant.

3.3 Excavation

- .1 Excavation shall be made to elevations indicated on drawings and all dimensions indicated or required by the work plus sufficient space to permit erection of forms, shoring and inspection of foundations.
- .2 All lines and levels for excavations will be furnished by the General Contractor.
 - .1 Excavating shall be done in a manner that will prevent any settlement or movement of banks.
 - .2 Excavate for footings, foundations, etc., and as noted on drawings.
- .3 Footings to be placed on stiff undisturbed approved earth. Excavations for all footings and foundations shall be carried to solid bottoms. If satisfactory load bearing solid is not reached at depths indicated, the excavations shall be extended deeper as directed by the Owner's Representative and the additional work will be paid for in accordance with prices given in contract, but price per cubic yard must be agreed upon before the work is done.

3.4 Shoring and Sheeting

- .1 Design, coordinate and submit shoring and sheeting drawings as required to prevent settlement, caving of banks, support and protection of existing District Energy Services, support and protection of existing hydro duct banks, etc. Be responsible for any damage resulting from improper, inadequate protection. The design shall include welded ties or other means necessary for the connection of formwork where necessary.
- .2 The Contractor shall retain a professional engineer to design and prepare drawings complete with design loads and other design criteria for the design or shoring and sheeting required for the project where noted on the drawings. All materials and methods for installing the shoring and sheeting shall be indicated. Submit drawings stamped by a professional engineer licensed in the Province of Ontario for the design of the shoring and sheeting required for the project.
- .3 Wales, struts, shoring, timers, steel and other items used in the construction of the shoring or sheeting where required to complete excavation work for this project shall be entirely satisfactory for the project and removed from the site at the completion of the work.
- .4 The bracing and shoring strutting shall be as required by the job conditions and the requirements of the Ontario Building Code and Construction Safety Act. Trench Excavator's

Act Section for Shoring Requirements and other legislation governing work carried out in excavations and cofferdams.

- .5 Shoring and other temporary work shall be so placed that it will not interfere with new permanent work.
- .6 Leave shoring in place until backfilling of lean concrete, granular material, etc. is done and then remove it in sections in approved engineering principles.
- .7 Make good any damaged resulting from failure of supports or lack of making necessary provisions to prevent settlement, caving or other damage. Any damage done to existing utilities shall be repaired at the contractor's expense.

3.5 Removal of Obstructions

- .1 The Contractor shall remove all existing obstructions as required for new construction and all other obstructions of whatever nature encountered, (e.g. existing roots, boulders, etc.) in the course of excavation.

3.6 Unauthorized Excavation

- .1 Excavation to a greater than required depth shall be correct by the Contractor at his own expense by use of concrete or by other means as directed by the Consultants after an inspection of the conditions.

3.7 Placing and Compaction of Fill

- .1 All exposed soil shall be compacted using heavy vibratory steel drum roller to the satisfaction of the retained testing and inspection consultant. The inspector shall conduct random Quality Assurance (QA) grade checks as per OPSS 206.
- .2 All interior wall side backfill, under floor slabs, etc. to be backfilled with a sub-base of Granular 'B' Type 1 or Type 2 Material compacted to 98% of its Standard Proctor maximum dry density and a top layer of 10" minimum well compacted granular Type "A" material, all to O.P.S.S. 1010 compressed to 100% of its Standard Proctor maximum dry density.
- .3 Exterior side foundation wall back fill under concrete walks, etc. other than paved areas to be backfilled with Granular "B" Type 1 compacted to 98% of its Standard Proctor maximum dry density and have top 6" below slabs backfilled with Granular "A" material, compacted to 100% Standard Proctor maximum density.
- .4 Backfill under interior floor slab shall consist of:
 - .1 Granular 'A' material right under the floor slab, compacted to 100% of its SPMDD depth as indicated on drawings.
 - .2 Granular 'B' type 1 or type 2 from U/S of Granular 'A' down to bottom of excavation compacted to 98% of its SPMDD depth as indicated on drawings.
- .5 All interior and exterior backfill of granular material shall be laid in 250mm layers compressed at 98% for sub-base and 100% for base fill of their Standard Proctor maximum dry density as indicated in (a) proceeding. Earth fill in landscaped areas to be 93% of optimum standard proctor density.
- .6 Tamp all fillings in thin layers and take special care to tamp and puddle filling outside of enclosing walls and around edges of foundation mats and other foundations.
- .7 Where any excavation is necessary (by this Contractor, Mechanical or Electrical), in close proximity to and below any footings, the Contractor shall backfill with 10 MPa concrete to the level of the top of the adjacent footing.

3.8 Inspection and Testing

- .1 A Proctor Test by an independent testing company approved by the Consultant shall be taken on all interior fill at the rate of one for every 50 square meters of floor area. Areas that fail shall be re-compacted and re-tested until a successful proctor test is achieved.
- .2 Results of all tests must be forwarded to the Consultant for approval before construction can proceed in the compacted areas.
- .3 All stripped areas for building areas to be inspected by a Testing and Inspection Consultant during the proof-rolling process.
- .4 All footing excavations shall be inspected by the Testing and Inspection Consultant a prior to any placement of concrete in excavated areas.
- .5 This Contractor shall make all arrangements with Owner appointed testing company for tests and inspections.
- .6 The first retest (after the remedial work is completed) in any failed areas is covered under testing allowance. However, any subsequent retests (when the contractor failed to complete remedial work up to the satisfaction) shall be paid by the contractor

END OF SECTION 31 00 00

PART 1 - GENERAL**1.1 Scope of Work**

- .1 Excavation, backfill and grading shall include the furnishing of all labour, materials and equipment to perform the work as indicated on the drawings and briefly described as follows:
 - .1 Protection and maintenance of existing services and property adjacent to the site.
 - .2 Stripping of asphalt paving, top soil, sub surface as required by the work.
 - .3 Excavating, loading, redistribution and/or disposal of all materials as required by the work.
 - .4 All necessary excavation for foundations, footings, etc., loading and disposal of material, as required by work.
 - .5 Proof-rolling of all exposed sub-grade for road before granular sub-base or base is placed using non-vibratory steel wheel roller.
 - .6 Removal of existing items and fill with Granular "A" (O.P.S.S. 1010) compacted to 98% of its Standard Proctor maximum dry density to the designed elevations.
 - .7 All necessary excavation for sewers, structures, utilities, etc., loading, and disposal of material, as required by work. Site preparation for sewer pipelines, utilities and associated structures shall be according to OPSS 490.
 - .8 Placing and compacting of granular fill. Compaction shall conform to OPSS 501.
 - .9 Placing and compacting fill of excavated areas around completed work to finish grades as indicated on drawings.
 - .10 Placing and compacting of granular fill at exterior areas as specified and required under sidewalks, curbs, new asphalt, etc.
 - .11 Exterior grading, as indicated on drawings, redistribution of clean earth fill and topsoil (new and existing) to new finish grades as indicated on drawings.
 - .12 Coordinate Inspection and testing with Owner appointed agency.
 - .13 Stripping, placing and compacting of all granular fill to finish grades for asphalt paving that is specified under Section 31 23 00.
 - .14 All rough grading to levels, profiles and contours for surface treatments and drainage.
 - .15 Sawcut existing asphalt paving for patching along all new to existing pavements.
 - .16 Storm sewer lines including connecting new catch basins, cleanouts, and accessories to connect to the existing storm sewer.
 - .17 Removal of existing obstructions (e.g. trees, stumps etc.).
 - .18 Installation of non-woven geotextile on sub-grade before the placement of granular material.
- .2 Unless noted otherwise all OPSS standards referenced in this specification shall be municipal-oriented specifications (OPSS. MUNI). When a corresponding municipal-oriented specification is not available, there references shall be considered to be OPSS. PROV listed.

1.2 Related Work

- .1 Section 02 41 00 – Selective Demolition

SCCDSB
St. Joseph Catholic School
Asphalt Resurfacing
43 St. Street, Tilbury, ON N0P 2L0

Architectura Inc. Architects
Project No: 2044
May 14, 2020

.2 Division 32 – Exterior Improvements

1.3 Protection

.1 The Contractor shall protect existing buildings and adjacent property from any damage caused by his operation.

1.4 Existing Utilities, Etc.

.1 Prior to commencing any excavation work, the Contractor shall establish as near as possible the location and state of use of all buried utilities or services as shown on drawings or know to be in existence. The locations shall be clearly and unmistakably marked to prevent accidental disturbance during the work.

1.5 Shoring and Bracing

.1 Provide approved shoring and bracing as required to prevent settlement, caving of banks, etc. Shoring and other temporary work shall be so placed so as to not interfere with new permanent work remaining in place until backfilling is done and removed in sections. This Contractor shall be responsible for any damage resulting from improper or inadequate protection, and all excavations must conform to all governing codes and regulations. Refer to Section 31 00 00.

.2 Construction Safety Act, Trench Excavator's Section for Shoring Requirements and the Ontario Building Code.

1.6 Protection from Weathering

.1 Protect excavated banks, floors, etc. against freezing. In cases where bearing earth is allowed to freeze, it shall be removed and replaced with approved fill.

.2 Keep excavations free from water providing and operating pumps to conduct water a sufficient distance away to keep excavations dry. Do not allow water to wash freshly laid concrete or masonry.

1.7 Co-Operation

.1 This Contractor shall make himself familiar with the work of other Contractors working in conjunction with his work and shall assist in such work as must be done together.

1.8 Lines

.1 The Construction Manager will engage the services of an Ontario Land Surveyor to provide and stake the property, building location and establish bench marks to the site for reference of the Site work Contractor.

.2 The Site Work Contractor shall then be responsible for all lines and levels relating to his scope of work.

PART 2 - PRODUCTS**2.1 Granular Fill Material**

- .1 Type 'A' shall be granular 'A' material that meets Ontario Specifications 1010 for granular 'A' material.
- .2 Type 'B' shall be granular 'B' material that meets Ontario Specifications 1010 for granular 'B', Type 1 & Type 2 material as specified.

2.2 Non-Woven Geotextile

- .1 Non-woven geotextile to be installed on the sub-grade of all asphalt paved area's shall be by Terrafix Geosynthetics Inc. model 270R. Material Shall conform to OPSS 1860.

2.3 Sewer Pipes Non-Pressure Applications

- .1 Sewer pipe to sizes indicated on drawings. Pipe Material shall conform to OPSS 1841.
 - .1 P.V.C. Sewer Pipe and fittings, meeting C.S.A. Standards B182.2 06, PSM TYPE. Pipe Diameters and SDR shall be as indicated in Civil notes and Civil Drawings.
 - .2 When Horizontal Directional Drilling (HDD) is used the PVC pipe shall be Approved Equivalent CR Restrained Joint PVC pipe (CIOD) by Approved Equivalent.
- .2 All pipe and fittings shall be in accordance with A.S.T.M. Standard Specifications.

2.4 Sewer Pipes Pressure Applications (As required)

- .1 All Water Pipes between 4" [100 mm] to 12" [300 mm] dia to be PVC class 150 DR-18 (Pressure rated 235 Psi). Shall conform to CSA B137.3, AWWA C-900; capped at factory blue in color
 - .1 When Horizontal Directional Drilling (HDD) is used the PVC pipe shall be Approved Equivalent CR Restrained Joint PVC pipe (CIOD) by IPEX.
- .2 All water PVC bends, tees, reducers and crossers shall conform to PVC AWWA C-907 Class 150, CSA B137.2, UL listed and FM approved.

2.5 Drain Tile (As required)

- .1 Shall be perforated, corrugated plastic sub-drains with geotextile cover, Big-O drain tile with filter sock or equivalent. Drain shall be to size indicated on drawings and shall be assembled complete with manufacturer's couplings and fittings including corners.

2.6 Catch Basins (As required)

- .1 Catch basins shall be precast concrete catch basins with standard cast iron frame and cover and sub drains and all necessary drainage fittings.
- .2 All catch basins to be provided with grade ring adjustment units.
- .3 Catch basins shall conform to OPSS Standards (OPSS 1351, 1850).

2.7 Manholes (As required)

- .1 Manholes shall be made of precast concrete manhole sections in accordance with OPSS 1351. Manhole to be complete with precast concrete base and standard cast iron cover and frame (OPSS 1850) and 19mm aluminum rung steps on inside face as detailed.
- .2 Manholes to be provided with precast concrete grade adjustment units.
- .3 The manufacturer producing precast reinforced concrete components for maintenance holes, catch basins shall possess a current prequalification Certificate issued under the Plant Prequalification program as outlined in the publication Prequalification requirements for precast concrete drainage products

PART 3 - EXECUTION

3.1 Examination of Site

- .1 Contractor shall visit the site to ascertain special conditions which affect his work.

3.2 Stripping

- .1 Strip site to remove the existing asphalt concrete paving, gravel, clay with organics or silty clay as indicated. The entire site is to be stripped as required and all material removed from site.
- .2 When the site has been stripped, the Contractor shall have the area inspected by Geotechnical Engineer before proceeding with excavation for footings and foundations.
- .3 Proof-roll exposed sub-grade for all building and areas to be paved using a non-vibratory steel smooth drum roller in the presence of the Geotechnical Engineer. Give adequate notice to testing company prior to proof-rolling. Any softened areas encountered shall be removed under the direction of the Testing and Inspection Consultant and the Consultant shall be notified. Do additional work as extras to contract based on unit prices.
- .4 The subgrade for paved areas to be sloped to the catch basin locations as indicated on drawings.
- .5 In order to protect the integrity of the foundation soils, which are susceptible to disturbance and contact with water and if excavations are not completed as dry, the excavation shall be protected with a 50mm lean concrete mud mat.

3.3 Excavation

- .1 Excavation shall be made to elevations and dimensions indicated or required by the work plus sufficient space to permit erection of forms, shoring and inspection of foundations, drains, pads, etc.
- .2 All excavation shall be carried out with a smooth edge bucket.
- .3 All lines and levels for excavations will be furnished by the General Contractor.
- .4 Note:
 - .1 Proof-roll sub grade under areas with non-vibratory steel roller.
 - .2 Excavating shall be done in a manner that will prevent any settlement or movement of banks.
 - .3 Excavate for exterior sewers, catch basin, curbs, all concrete platforms, footings, foundations, etc. and as noted on drawings.

3.4 Removal of Obstructions

- .1 The Contractor shall remove all existing obstructions as required for new construction and all other obstructions of whatever nature encountered (e.g.: trees, bush, existing roots, boulders, etc. in the course of excavation).

3.5 Unauthorized Excavation

- .1 Excavation to a greater than required depth shall be corrected by the Contractor at his own expense by use of concrete or by other means as directed by the Engineer after an inspection of the conditions.

3.6 Notification of Authorities

- .1 The Contractor shall notify the Engineer, Building Inspector and any other agency having jurisdiction that the excavation for foundations is ready for inspection. All approvals must be obtained before placing foundations.
- .2 Notify local Utilities Commission in advance of watermain work.

3.7 Installation of Non-Woven Geotextile

- .1 Install Approved Equivalent model 270R on the proof rolled and approved sub-grade of all asphalt paved areas. Material shall conform to OPSS 1860.

3.8 Placing and Compaction of Fill

- .1 Exterior side foundation wall backfill under concrete walks, platforms, etc. other than paved areas to be backfilled with Granular 'A', compacted to 100% of its standard Proctor modified dry density.
- .2 All exterior concrete pavement shall be placed on a granular 'A' meeting Ontario Provincial Specification 1010. The granular 'A' base for concrete paving shall be 300mm thick minimum.
- .3 Backfilling under areas to be landscaped to be backfilled with clean earth fill, (after being stripped) and 150mm minimum top soil distributed over the areas to be seeded or sodded.
- .4 All exterior backfill of granular material shall be laid in 250mm loose lifts and layers compressed to 100% of optimum standard proctor density, except earth fill in landscaped areas to be 93% of optimum standard proctor maximum dry density.
- .5 After all stripping, excavation, proof-rolling, under areas to be paved, this Contractor shall backfill to the level of the underside of the finish asphalt paving with granular material to Ontario Provincial Standard Specifications 1010. All granular material to be compacted to 100% of its maximum Standard Proctor density.
- .6 Tamp all fillings in thin layers and take special care to tamp and puddle filling outside of enclosing walls and around edges of foundations mats and other foundations.
- .7 Excavating for trenches for electrical and other pipe lines will be done by the Contractor whose work requires it, but this Contractor shall supervise the work so that concrete slabs on the ground will have proper foundations.

3.9 Grading

- .1 Elevations of floor and grade lines marked on the drawings indicate the heights in relation to data given on plans or at site. Finished grade elevations given are to top of finished gravel surfaces, landscaping or asphalt.
- .2 If fill or granular material is required to bring existing grades to finish grades, this Contractor shall supply all additional fill required.
- .3 Rough grade to levels, profiles and contours allowing for surface treatment indicated.

3.10 Inspection and Testing

- .1 A proctor test by an independent testing company approved by the owner shall be taken on all exterior fill areas under pavings at a rate of one test for every 100 square meters. Areas that fail shall be re-compacted and re-tested until a successful proctor test is achieved.
- .2 Results of all tests must be forwarded to the Consultant and the Construction Manager for approval before construction can proceed on compacted areas.
- .3 All stripped areas for building areas to be inspected by a Geotechnical Engineer during the proof-rolling process.
- .4 All footing excavations shall be inspected by the project Engineer prior to any placement of concrete in excavated areas. Work in conjunction with the Construction Manager and the concrete contractor.
- .5 This Contractor shall make all arrangements with testing company appointed by owner for tests and inspections.

3.11 Excess Material

- .1 All excess topsoil material not required for backfilling or grading shall be removed from the property.
- .2 Existing parking lot paving and roads, damaged by this operation shall be repaired and paid for by the Contractor. Permits, if required by local authority, shall be obtained by the Contractor.

3.12 Sewers

- .1 Provide and install sewers to size as indicated on drawings. Construction shall generally conform to Division 4 of OPSS (OPSS 401, 402, 405, 410, 411, 490 and 492).
- .2 Storm, Sanitary and Water tie-ins shall be provided at approximately 5' [1.525 m] from the building for Mechanical Contractor to tie-in. Relocate catch basins, terminate and connect to existing sewer lines as indicated on drawings.
- .3 All work to be done in accordance with the Construction Safety Act, Trench Excavator's Section and municipal standards and regulations.
- .4 Check existing elevations and invert of existing sewers before any new sewer work is installed. Any variance in actual existing locations and inverts are to be reported to Consultant for his approval before work can start.
- .5 Installation for sewers shall be made in strict accordance with municipal regulations and this Contractor shall obtain and pay for all necessary permits before proceeding with the work and do all the required restoration work to municipal roads and property required due to construction.
 - .1 Note: When sewers are installed using Horizontal Directional Drilling (HDD) all the construction shall conform to OPSS 450. The Contractor shall submit design documents, as applicable per section 450.04 of OPSS 450, prior to construction. The documents submitted shall include but not limited to a work plan, drilling fluid management plan, safety plan.
- .6 M.T.C. Form 406 shall apply and govern all supply and placement of sewer pipes to sizes and locations as indicated on drawings.
- .7 All pipe shall be laid at a uniform grade on a compacted sand bed on solid bed of undisturbed earth or granular 'A' fill compacted to 98% modified proctor, dry density cutout at the couplings and fittings so that each piece is supported throughout its entire length. All

sewers (sanitary and storm) under paving, walks, slabs, etc. to be backfilled with compacted granular 'A' and granular 'B' material to O.P.S.S. 1010.

- .8 Construction of sewers shall conform to OPSS 410, 441. When the invert of a pipe sewer is raised or lowered by 150 MM or less shall not constitute a change in the work and no adjustment shall be made to the payment. Trenching, backfilling and Compacting shall conform to OPSS 401.
- .9 All work to be done in accordance with the Construction Safety Act, Trench Excavator's Section.
- .10 Complete sewer installation must be approved by the Municipality and installed in accordance to its governing rules and regulations.
- .11 Post installation all sewers shall be cleaned and flushed. The cleaning and flushing of pipe sewers, catch basins, maintenance holes and oil-grit separators shall conform to OPSS 411.

3.13 Catch Basins

- .1 This Contractor shall install precast concrete catch basins and do all excavating, backfilling and connecting sub drains and sewers to catch basins and install approved cast iron frames and covers as indicated on drawings.
- .2 Installation shall conform to OPSS 407.

3.14 Manhole

- .1 Install precast concrete manholes as indicated on drawings including all excavations, backfilling, concrete base and connecting sub drains and sewers to manhole and install standard cast iron frame and cover.
- .2 Manhole shall be constructed in accordance with OPSD-701.01 and OPSD-701.03.

3.15 Exterior Drains

- .1 Provide and install all 150mm diameter sub-drains at catch basins as indicated on drawings.
- .2 OPSS 405 shall apply and govern this work except as amended herein.
- .3 Where shown on the drawing, the Contractor shall supply and install perforated corrugated plastic subdrains with geotextile cover and connect to catch basins as indicated on drawings. The subdrains will be bedded in 20mm clear stone.
- .4 All work shall be done in accordance with manufacturer's recommended installation procedures using all necessary fittings and accessories.

3.16 Cleaning

- .1 Contractor shall be responsible for good housekeeping during the work of this section. All refuse must be removed from the site at least on a monthly basis.
- .2 At completion, the entire site shall be cleaned of rubbish and debris and all earth areas shall be raked clean to the Architect's satisfaction.

END OF SECTION 31 23 00

PART 1 - GENERAL**1.1 Work Included**

- .1 Excavate trenches for utilities from outside building to municipal utilities.
- .2 Compacted bedding under and fill over utilities to subgrade elevations.
- .3 Backfilling and compaction.

1.2 Related Work

- .1 Section 01 40 00 – Quality control.
- .2 Section 03 00 00 – Concrete.
- .3 Section 31 23 00 – Excavation, Backfill & Grading

1.3 References

- .1 ASTM C136 - Method for Sieve Analysis of Fine and Coarse Aggregates.
- .2 ASTM D698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb (2.49 kg) Rammer and 12 inch (304.8 mm) Drop.

1.4 Submittals

- .1 Submit under provisions of Section 01 33 00.
- .2 Samples:
 - .1 Submit 4.5 kg sample of each type of fill to testing laboratory, in air-tight containers.

1.5 Field Measurements

- .1 Verify that survey bench mark and intended elevations for the Work are as shown on Drawings.

PART 2 - PRODUCTS**2.1 Fill Materials**

- .1 Type A material as specified in Section 31 23 00.

PART 3 - EXECUTION**3.1 Examination**

- .1 Verify fill materials to be reused, are acceptable.

3.2 Preparation

- .1 Identify required lines, levels, contours, and datum.

3.3 Excavation

- .1 Excavate subsoil required for storm sewer, sanitary sewer, water and gas piping to municipal utilities.
- .2 Cut trenches sufficiently wide to enable installation of utilities and allow inspection.
- .3 Excavation shall not interfere with normal 45 degree bearing splay of foundation.
- .4 Hand trim excavation. Hand trim for bell and spigot pipe joints. Remove loose matter.
- .5 Remove lumped subsoil, boulders, and rock.

- .6 Correct unauthorized excavation at no cost to Owner.
- .7 Stockpile excavated material in area designated on site and remove excess material not being used, from site.

3.4 Bedding

- .1 .1 Support pipe and conduit during placement and compaction of bedding fill.

3.5 Backfilling

- .1 Backfill trenches to contours and elevations with unfrozen materials.
- .2 Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen or spongy subgrade surfaces.
- .3 Granular Fill: Place and compact materials in continuous layers not exceeding 150 mm (6") compacted depth.
- .4 Employ a placement method that does not disturb or damage foundation perimeter drainage, conduit and ducts in trench.
- .5 Maintain optimum moisture content of backfill materials to attain required compaction density.
- .6 Remove surplus backfill materials from site.
- .7 Leave fill material stockpile areas completely free excess fill materials.

3.6 Tolerances

- .1 Top Surface of Backfilling: Plus or minus 25 mm (1") from required elevations.

3.7 Field Quality Control

- .1 Field inspection and testing will be performed under provisions of Section 01 40 00.
- .2 Tests and analysis of fill material will be performed in accordance with ASTM D698 and with Section 01 40 00.
- .3 Compaction testing will be performed in accordance with ASTM D698 and with Section 01 40 00.
- .4 If tests indicate Work does not meet specified requirements, remove Work, replace and retest at no cost to Owner.

3.8 Protection of Finished Work

- .1 Protect finished Work.
- .2 Re-compact fills subjected to vehicular traffic.

3.9 Schedule

- .1 Trenches:
- .2 Bedding Fill: Type A, 200 mm (8") thick, compacted to 100%.
- .3 Cover with Type A fill, in 200 mm (8") lifts, compacted to 100%.
- .4 In areas where heavy loading is anticipated, compact to 100 % Standard Proctor Maximum Dry Density.

END OF SECTION 31 23 16.13

PART 1 - GENERAL**1.1 Work Included**

- .1 Site filling and backfilling.
- .2 Fill under paving.
- .3 Consolidation and compaction.

1.2 Related Work

- .1 Section 00 72 13 - General Requirements: Quality control.
- .2 Section 31 13 16 – Asphalt Concrete Pavement

1.3 References

- .1 ASTM C136 - Method for Sieve Analysis of Fine and Coarse Aggregates.
- .2 ASTM D698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, using 5.5 lb. (2.49 kg) Rammer and 12 inch (304.8 mm) Drop.

1.4 Samples

- .1 Submit samples to requirements of Section 00 72 13.
- .2 Submit 4.5 kg sample of each type of fill to testing laboratory, in airtight containers.

PART 2 - PRODUCTS**2.1 Fill Materials**

- .1 Type A - Granular A or equivalent; free of shale, clay, friable material, mud, sand, debris and other deleterious matter.

PART 3 - EXECUTION**3.1 Examination**

Verify foundation perimeter drainage installation has been inspected.

3.2 Preparation

- .1 Generally, compact sub-grade to density requirements for subsequent backfill materials.
- .2 Cut out soft areas of sub-grade not capable of insite compaction. Backfill with Type C fill and compact to density equal to or greater than requirements for subsequent backfill material.

- .3 Prior to placement of aggregate base course material at paved areas, compact subsoil to 95 % of its maximum dry density in accordance with ASTM D698.

3.3 Backfilling

- .1 Backfill areas to contours and elevations with unfrozen materials.
- .2 Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen or spongy sub-grade surfaces.
- .3 Granular Fill: Place and compact materials in continuous layers not exceeding 6" compacted depth.
- .4 Employ a placement method that does not disturb or damage foundation perimeter drainage, foundation waterproofing and protective cover and utilities in trenches.
- .5 Maintain optimum moisture content of backfill materials to attain required compaction density.
- .6 Make grade changes gradual. Blend slope into level areas.
- .7 Remove surplus backfill materials from site.
- .8 Leave fill material stockpile areas completely free of excess fill materials.

3.4 Tolerances

Top Surface of Backfilling: Plus or minus 1" from required elevations.

3.5 Field Quality Control

- .1 Field inspection and testing will be performed under provisions of Section 01400.
- .2 Tests and analysis of fill will be performed in accordance with ASTM D698 and with Section 01400.
- .3 Compaction testing will be performed in accordance with ASTM D698 and with Section 01400.
- .4 If tests indicate Work does not meet specified requirements, remove Work, replace and retest at no cost to Owner.
- .5 Proof roll compacted fill surfaces under paving.
- .6 Make good any damage caused by poorly compacted backfill.

3.6 Protection of Finished Work

- .1 Protect finished Work under provisions of Division 1.
- .2 Re-compact fill materials subjected to vehicular traffic.

END OF SECTION 31 23 23

PART 1 - GENERAL**1.1 Scope of Work**

- .1 The work under this section of the specifications shall include all labour, equipment and materials in the forming, handling, furnishing, placement and protection of all concrete work as indicated on the drawings and briefly described as follows:
 - .1 All concrete pavement, sidewalks, etc indicated on drawings.
 - .2 Formwork for concrete.
 - .3 All reinforcing steel, wire mesh, including ties, chairs, supports, spacers, stirrups, rebar, deformed tie bars, smooth load transfer bars and all require accessories.
 - .4 Expansion strips, pre molded expansion joints, saw cut control joints, etc.
 - .5 Finishing of all concrete pavement.
 - .6 Tactile Walking Surface Indicators (TWSI)

1.2 Related Work

- .1 Section 31 23 00 – Excavation, Backfill & Grading.
- .2 Section 10 28 00 – Misc. Accessories.

1.3 Standard Specifications

- .1 Materials and methods of construction shall conform to CSA A23.1-09/A23.2-09, and by-laws of the local municipality. Work shall be supervised at all times and shall be performed by skilled and experienced workers.
- .2 Wherever in these specifications methods of tests or standards are inferred to or implied and not otherwise specified, the latest A.S.T.M. dealing with such subjects shall be used.
- .3 All work to be performed in compliance with Occupational Health & Safety Act Ont. Reg. 213/91.

1.4 Cold Weather Requirements

- .1 When air temperature is at or below 5 degrees C. or there is a probability of it falling to that limit during the placing or curing period, cold weather requirements shall be applicable and shall be governed by CSA A23.1-09.
- .2 Provide heating equipment and enclosures to maintain humidified air within the enclosures to keep the concrete above freezing temperature for seven days. Heating equipment inducing carbon monoxide gas in the building is not acceptable. Also concrete shall be protected from alternately freezing and thawing for a period of 14 days after placement.
- .3 When placed, concrete shall have a temperature of not less than 5 degrees C. and not more than 27 degrees C. Accelerators or so called anti-freeze compounds shall not be permitted unless approved in writing by the Architect. All protective coverings shall be kept clear of the concrete and form surfaces to permit free circulation of air and shall be maintained intact for at least 24 hours after artificial heat is discontinued.
- .4 Form must be clean of ice and snow. Use compressed air or other means to remove foreign matter.

1.5 Hot Weather Requirements

- .1 Hot weather protection shall meet the requirements of CSA A23.1-09.

- .2 When the air temperature exceeds 27 degrees C. hot weather requirements shall be applicable. The time of initial mixing to complete discharge shall not exceed one hour and fifteen minutes. Temperature of concrete as placed shall not exceed 27 degrees C.
- .3 Concrete forming surfaces and reinforcing steel shall be sprinkled with cool water just prior to placing concrete but no standing water or puddles will be allowed.
- .4 Slabs shall be kept damp continuously for 24 hours followed by normal curing procedures.
- .5 Slabs may be cured by the application of a clear pigmented curing compound applied immediately after finishing of slab but before evaporation of surface moisture. The use of water reducing agents must be approved by the Architect when hot weather conditions prevail.

1.6 Mixing and Delivery

- .1 Concrete shall be mixed in a mechanical batch mixer or a type approved by the Consultant and meeting the requirements of CSA A23.1-09.
- .2 Mixing time shall conform to CSA A23.1-09. Mixers shall be rotated at the rate recommended by the manufacturer of the equipment.
- .3 Concrete from the mechanical batch mixer shall be transported to the project site in agitating or non-agitating equipment conforming to CSA A23.1-09.
- .4 Ready mixed or transit mixed concrete shall be batched, mixed and transported in accordance with CSA A23.1-09.
- .5 Each load of ready mixed or transit mixed concrete delivered to the project site shall be accompanied by duplicate delivery slips providing all information pertaining to each batch of concrete and/or as the Owner's Representative may require.

1.7 Strength and Consistency

- .1 Concrete materials shall be proportioned to provide a workable mix that can be handled, placed and worked into angles and corners of forms and around reinforcing steel and inserts. The mix proportion shall not be such that the concrete will easily segregate or cause excessive water to collect on the surface.
- .2 The strength of concrete shall be considered to be its strength at 28 days.

1.8 Submittals

- .1 Submit under provisions of Section 01 33 00.
- .2 Concrete Mix Designs.
- .3 Shop Drawings: Reinforcing Steel and Formwork.
 - .1 Prepare, check and submit for review checked shop drawings including bar lists, bending and erection diagrams of all reinforced steel.

1.9 Inspection and Testing

- .1 Concrete testing will be by a third part testing and inspection agency. The contractor is responsible to notify the Engineer of concrete pours 24 hours in advance so that testing can be coordinated. Concrete testing will consist of the following:
 - .1 Cylinder moulds, sample the concrete, make and cure test cylinders and perform compressive strength tests in accordance with current CSA-A23.2-09 Standards.

- .2 Slump tests and air content tests as required in accordance with current CSA-A23.2-09.
- .3 Measure and record concrete temperature.
- .4 A concrete test shall consist of four (4) cylinders properly labeled showing mix, location and date of pouring. Cylinders shall be cured under laboratory conditions. Contractor shall make provisions for initial curing of all cylinders a minimum of 24 hours.
 - .1 Provide facilities for storing specimens at the required temperature and in a location free from vibration or injury.
 - .2 Test one (1) cylinder at seven (7) days and two cylinders at 28 days. Should the 7 or 28 day test fail to meet the design strength, test the fourth (4th) cylinder at 90 to verify results.
- .5 See architectural drawings for additional information and requirements.

1.10 Delivery and Storage

- .1 Reinforcing steel, welded wire, fabric accessories and other materials shall be delivered, handled and stored in such a manner which prevents contamination from bond reducing or foreign matter and damage to its fabricated form.

PART 2 - PRODUCTS

2.1 Form Materials

- .1 Form materials for concrete surfaces which will be exposed to view or which required smooth and uniform surfaces for applied finished or other purposes shall consist of square edged smooth panels of plywood, metal or plastic. The panels shall be square and made in a true, plain, clean, free of holes, surface markings and defects.
- .2 The quality and strength of formwork materials shall comply with the requirements set forth in this specification and CAN/CSA A23.1-94 and CAN/CSA-S269.2-M92.

2.2 Reinforcing Steel

- .1 Fabricate reinforcing to CSA A23.1-09. Reinforcing steel unless otherwise noted on drawings shall be deformed bars of hard grade new billet steel ($F_y = 400$ MPa), conforming to the CAN/CSA G30.18-92. Bars welded to structural members shall be new hard grade billet weldable steel in accordance with CAN/CSA G30.18-92 ($FY = 400$ MPa-W).
- .2 Fabrication and detailing of reinforcing steel shall be in accordance with the requirements of the latest edition of ACI 315 and to "Reinforcing Steel Manual for Standard Practice" by Reinforcing Steel Institute of Canada, latest edition unless otherwise detailed.
- .3 All hard grade reinforcing bars shall be bent cold reinforcing bars.
- .4 Reinforcing bars shall not be re-straightened or re-bent.
- .5 Tie wires shall be 152 x 152 MW 18.7 x MW 18.7 or heavier annealed wire or a patented system approved by the Consultant.
- .6 Reinforcing steel supports shall conform to ACI Standard 315 unless otherwise approved by the Consultant.
- .7 Chairs, bolsters, bar supports, spacers shall be adequate for strength and support of reinforcing construction conditions.

- .8 Obtain Consultant's approval for location of reinforcement splices other than shown on steel placing drawings.
- .9 Ship bundles of bar reinforcement, clearly identified in accordance with bar list.
- .10 Supply all reinforcing bars for grouted masonry block walls where shown and detailed on the drawings.

2.3 Welded Wire Fabric

- .1 Welded wire fabric shall conform to the current CSA Standard G30.5M-1983 (R1991). For slabs on grade and suspended slabs 152 x 152 MW 18.7 x MW 18.7 (6" x 6" #6/6).
- .2 Welded wire fabric in the floor slab-on-grade must be supported on chairs. Lifting of the welded wire fabric during the concrete pour is not permitted.

2.4 Expansion Joint Strips

- .1 Expansion joint strips shall be 12.7 mm (½") thick fibre expansion joint filler to ASTM D994.

2.5 Cement

- .1 Cement shall conform to CSA Standard CAN/CSA-A5/A8/A369-93 Type 10 as scheduled under Strength of Concrete unless otherwise noted.

2.6 Aggregates

- .1 Aggregate shall conform to CSA A23.1-09.

2.7 Water

- .1 Water shall be clean and free from injurious amounts of oil, alkali, organic matter or other deleterious material.

2.8 Admixtures

- .1 Admixtures shall not be used unless prior written approval is obtained from the Consultant. All admixtures shall conform to the appropriate A.S.T.M. and CSA Standards. Air entraining admixtures and chemical admixtures shall conform to the requirements of the latest issue of CSA-A266.1-M78.
- .2 For slabs on grade, mid-range water-reducing admixture, conforming to the requirements of the latest issue of CSA-266.6-M85 and ASTM-C494, Type A.
 - .1 Acceptable Product: Approved Equivalent, Polyheed at a mixing rate of 10 fl. oz./cwt. cement.
- .3 No other admixture shall be used, without the permission of the consultant.

2.9 Curing Compounds

- .1 Curing compounds shall conform to the requirements of the latest issue of A.S.T.M. Standard C-309-72, Type 11 1220.
- .2 For exterior concrete slab work curing compound shall be W.R. Meadows Sealtite white pigmented curing compound Conchem Promulsion 200, CPD White Cure (Water Emulsion) or Consultant's approved equivalent. Concrete curing treatment must be applied in strict accordance to manufacturer's labeled instructions.

2.10 Strength of Concrete

- .1 Proportion normal density concrete to CSA A23.1-09 except as specified otherwise.

- .2 Unless otherwise noted compressive strength of concrete at 28 days shall be as follows:
 - .1 Concrete pavement & sidewalks, 32 MPa
- .3 All exterior concrete shall have 5% to 8% air entrainment.
- .4 Maximum Water/Cementing Materials Ratio:
 - .1 Exterior concrete 0.45.
- .5 Exterior concrete with maximum water/cementing materials ratio 0.45, see General Notes on drawings.
- .6 All concrete shall develop 75% of ultimate strength at 7 days.

- .7 Slump for concrete 80 mm before the addition of any water reducing admixtures or concrete specified without admixture. Slump tolerance \pm 30 mm.

2.11 Tactile Walking Surface Indicator (TWSI) – Cast in Place

- .1 Kinesik Engineered Products. “Access Tile” Tactile System. Or approved equivalent.
- .2 All locations indicated on Drawing A101. Note due to slope of concrete, configuration may need to be installed in multiple tiles. Colour: To be verified.

PART 3 - EXECUTION

3.1 General Requirements

- .1 Construction shall generally conform to OPSS 351.

3.2 Placement of Reinforcement

- .1 Reinforcement of the size and shapes shown on the drawings shall be accurately placed in accordance with the approved placement drawings, the structural drawings and the requirements of CSA A23.1-09.
- .2 Reinforcement including wire mesh shall be adequately supported by metal chairs, spacers or hangers and secured against displacement within the tolerances permitted and in accordance with the latest A.C.I. Standard 315. Lifting of wire mesh during the pouring of the floor slab on grade is not permitted.
- .3 Mechanical splices subject to the approval of the Consultant.
- .4 Obtain Consultant’s approval of reinforcing steel and placing before placing concrete.

3.3 Placement of Concrete

- .1 Place concrete in accordance with CSA A23.1-09. Ensure reinforcement and inserts are not disturbed during concrete placement.
- .2 Notify the Consultant and the independent testing agency at least 24 hours before any concreting operation is to proceed.
- .3 Before beginning a run of concrete, hardened concrete and foreign materials shall be removed from the inner surface of the conveying equipment.
- .4 Before depositing concrete, debris shall be removed from the space to be occupied by the concrete, reinforcing steel and forms accurately placed and secured in position. Clean reinforcing before placing concrete.

- .5 When pouring concrete against previously poured work, the surface shall be thoroughly cleaned and roughened removing all latency and scum and coated with a paste of neat cement and water not more than 15 minutes in advance of depositing the new concrete.
- .6 Colored concrete bands shall be dowelled to adjacent concrete paving with 15M epoxy coated rebar x 600mm long spaced at 300mm o.c. at mid-depth of slab.
- .7 Concrete shall be conveyed to the place of final deposit by methods that will prevent segregation or loss of material keeping concrete sufficiently plastic to ensure proper bonding of successive layers or panels. Free fall of concrete shall not exceed 900 mm.
- .8 During placement, concrete shall be consolidated thoroughly and uniformly by means of tamping, hand tools, vibrators or finishing machines to secure dense, homogeneous structure, close bond with reinforcement and smooth formed surfaces. Extreme care shall be taken to ensure that internal type vibrators do not disturb the reinforcing steel or the forms.
- .9 Maintain accurate records of concrete pours to indicate date, location of pour, quality, air temperature and test samples taken.
- .10 Footings to be poured within the same day as exposure or a 50mm lean concrete mud mat shall be provided.

3.4 Curing and Protection

- .1 Freshly placed concrete shall be protected from the effects of direct sunshine, drying winds, cold excessive heat and running water by the use of clear resin-based curing compound or adequate tarpaulins or other suitable material until the end of the curing period.
- .2 All exposed non-formed surfaces shall be kept continuously moist for a minimum of seven consecutive days after placement of the concrete. Water shall be clean and free of any material that will cause staining or discoloration.
- .3 Apply curing and sealing compound to all exterior concrete floors in strict accordance with manufacturer's labeled instructions.

3.5 Construction Joints

- .1 The location and detail of all construction joints not detailed on drawings shall be approved by the Engineer. Where fresh concrete is to be placed against concrete which has set or partially set concrete shall be roughened, cleaned of all latency and thoroughly soaked with water prior to the placement of fresh concrete.

3.6 Defective Concrete

- .1 Concrete not meeting the requirements of the specifications and the drawings will be considered defective concrete and shall be modified or replaced at the Contractor's expense and to the satisfaction of the Consultant.
- .2 Excessive honeycombing or other defects in critical areas of stress shall be repaired or replaced at the Contractor's expense to the satisfaction of the Consultant.
- .3 Concrete of insufficient strength or improper consistency shall be as required by the Architect subject to one or more of the following, all at the Contractor's expense and at no extra cost to the Owner.
 - .1 Changes in mix proportion for the remainder of the work.
 - .2 Cores drilled and tested from the areas in question as directed by the Consultant and in accordance with C.S.A. Standard CSA A23.1-09 test method A23.2-14C. The test results shall be indicative of the strength of the in-place concrete.

- .3 Load testing of the structural elements in accordance with CSA-123.3-M84.
- .4 Concrete failing to meet the strength requirements of this specification shall be strengthened or replaced at the Contractor's expense to the satisfaction of the Consultant.

3.7 Reinforced Slabs

- .1 Make all concrete slabs of thickness with reinforcing as noted on drawings.
- .2 Set all reinforcing steel as shown or directed. Pitch slabs as noted on drawings.
- .3 Build in all anchors, sleeves, inserts, floor drains and other items furnished by this Contractor or others.

3.8 Premoulded Expansion Strips

- .1 Provide pre-moulded expansion strips as specified under concrete materials in the following locations:
 - .1 between edges of all concrete floor slabs and all vertical surfaces
- .2 Expansion strips shall be 12.7 mm (½") thick and shall extend from bottom of slab to within 12.7 mm of top of slabs and platforms then insert raw oakum or polytape bond breaker and fill joint with polysulphide sealant as manufactured by Sternson "Load Flex" or approved equivalent where exposed. Alternatively provide saw cut exterior slabs, except joint between curb and walks and walks and building shall have expansion joints installed.

3.9 Sidewalks and Platforms

- .1 Provide sidewalks and platforms to thicknesses as shown on drawings reinforced with 152 x 152 MW 11.1 x MW 11.1 (6" x 6" #9/9) welded wire fabric for all sidewalks and platforms. Sidewalks and platforms shall be struck off and left with broom finish. Unless otherwise indicated, provide dummy joints as indicated on drawings. Paving's shall be pitched uniformly away from the building or crowned as directed.

3.10 Concrete Finish Schedule

- .1 The following finishes shall be applied to concrete surfaces.
 - .1 Exterior walks and platforms. Float and broom finish.
 - .2 Rub exposed sharp edges from concrete to product ¼" radius edge.

3.11 Cleaning

- .1 Contractor shall be responsible for good housekeeping during the work of this Section.
- .2 Remove all debris and flammable rubbish from the site daily.
- .3 Do not bury any waste concrete on the project site.

END OF SECTION 32 13 13

PART 1 - GENERAL**1.1 Scope of Work**

- .1 The work under this section of the specifications shall include all labour, equipment and material in the forming, handling, furnishing, placement and protection of all asphalt work as indicated on drawings and briefly described as follows:
 - .1 Patching and matching existing asphalt and new asphalt due to new work as shown on Drawings.
 - .2 Granular base for all paved areas.
 - .3 Fine grading of placed granular 'A' base for all paved areas.
 - .4 Painted lines, arrows, etc. as shown on drawings and specified

1.2 Work by Others

- .1 Refer to Section 31 23 00 – Excavation, Backfill and Grading for stripping, excavation, proof-roll sub-surfaces and sub-base for asphalt surfaces, catch basins, sewers and saw cutting of existing asphalt curbs.
- .2 Refer to Section 03 00 00 – Concrete
- .3 Refer to Section 32 13 13 – Concrete Paving and Sidewalks
- .4 Refer to Section 10 28 00 – Misc. Accessories

1.3 Protection

- .1 The Contractor shall protect adjacent property from any damage caused by his operations.

1.4 Asphalt Cement (Ac) Escalation/De-Escalation

- .1 A credit or extra will apply for the difference in the price of asphalt cement, based on the monthly Ministry of Transportation AC Price Index, from the month prior to the projects tendered opening to the month of actual paving. If the AC index has not changed by more than 5% up or down, no credit or extra will apply. The credit or extra will be calculated based on the tendered hot mix quantity and its corresponding asphalt cement content required by the job mix formula except for mixes which contain reclaimed asphalt pavement. Calculation of the credit or extra shall also be based on the MTO document "Payment adjustment for changes in the ministry of transportation performance grade asphalt cement price index special provision No. 103S20", dated May 2009.

PART 2 - PRODUCTS**2.1 Sub-Base Fill**

- .1 Sub-base fill to be supplied and installed under Section 31 23 00 – Excavation, Backfill and Grading (to underside of asphalt paving base course) shall be granular 'A' material to Ontario Provincial Standard Specifications 1010. Sub-base fill is only necessary pending a specific site condition.

2.2 Granular Base for Asphalt

- .1 Granular base material shall be granular 'A' material to Ontario Provincial Standard Specifications 1010 and 1003. The minimum thickness of granular base shall be 450mm.

2.3 Asphalt

- .1 All asphalt shall be HL3 and HL4, mixed and applied according to latest M.T.C. SPECIFICATIONS and O.P.S.S. 1150. Refer to pavement legend on the Civil drawing for

the specified asphalt thickness. Performance Graded Asphalt Cement shall conform to OPSS 1101.

2.4 Painting

- .1 Painting of lines as indicated on plan to be one coat of water borne traffic paint.

PART 3 - EXECUTION

3.1 General Requirements and Submissions

- .1 Prior to commencement of construction the contractor shall submit Job Mix Formula design sheets for Asphalt. The design shall be stamped by a P. Eng. Licensed in the province of Ontario.
- .2 The construction shall conform to OPSS 310. Testing by an independent testing agency shall be conducted for different items listed on C 100. All testing reports shall be stamped by a P. Eng. Licensed in the province of Ontario.
- .3 The acceptance of Hot Mix Asphalt shall be according to OPSS 313. Payment Modification Factors may be invoked as required.

3.2 Examination of Site

- .1 Contractor shall visit the site to ascertain special conditions which affect his work.

3.3 Backfill and Grading

- .1 The General Contractor shall strip existing asphalt and concrete surfaces as required for new work and all subsurface material shall be removed from the areas to be paved.
- .2 Sub-base backfill to be installed to a height below the finished surface of the asphalt paving to allow for the various pavement base course thickness specified below and graded to suit the drainage as outlined on the drawings. All sub-base material to be granular 'B' type 2 to O.P.S.S. 1010 Standards. Refer to Section 31 23 00 – Excavation and Grading.

3.4 Granular Base Course

- .1 This Contractor shall fine grade sub-base and supply and install a base course of compacted granular 'A' material. All granular 'A' base material to Ontario Provincial Standard Specification 1010 and shall be compacted to 100% of its maximum standard proctor dry density.

3.5 Surfacing

- .1 Asphalt surfacing shall consist of a base layer and a top layer and applied according to the latest M.T.C. specifications and O.P.S.S. 1150. Where applicable. Refer pavement legend.
- .2 All asphalt shall be placed to finished thicknesses specified under 2.3 for all paved areas.
- .3 No patented type or other pavement shall be accepted as an alternative.
- .4 Maximum allowable surface tolerance shall be ¼" in 10 feet.
- .5 Laying of asphalt pavement shall be in strict accordance with the Municipality and Ontario Provincial Standards. Equipment used such as spreading equipment and compaction equipment shall be in accordance with the relevant standards.

3.6 Drainage of Paving

- .1 All paved areas shall be uniformly pitched towards new catch basins or to edge of new pavement as indicated on Drawings. Slopes shall be of such grade necessary so as not to

allow any water to remain in pools on paved areas where the new paving meets the existing paving. This Contractor will be held responsible for the re-paving of any areas that retain water in pools on their surfaces.

3.7 Painting

- .1 Layout parking areas and markings as shown on the drawings and paint with one coat of traffic paint as previously specified. Width of lines to be 4".

3.8 Cleaning

- .1 Contractor shall be responsible for good housekeeping during the work of this section.

END OF SECTION 32 13 16

PART 1 - GENERAL**1.1 Scope of Work**

.1 The work under this section of the specifications shall include all labour, equipment and material in the forming, handling, furnishing, placement and protection of all asphalt work as indicated on drawings and briefly described as follows:

.1 Concrete formed curbs.

1.2 Work by Others

.1 Refer to Section 31 23 00 – Excavation, Backfill and Grading for stripping, excavation, proof-roll sub-surfaces and sub-base for asphalt surfaces, catch basins, sewers and saw cutting of existing asphalt curbs.

.2 Refer to Section 03 00 00 – Cast in Place Concrete

.3 Refer to Section 32 13 13 Concrete Paving and Sidewalks

1.3 Protection

.1 The Contractor shall protect adjacent property from any damage caused by his operations.

PART 2 - PRODUCTS**2.1 Concrete Curbs**

.1 Concrete Placement

.1 The concrete shall be placed either by an approved form/extrusion machine, by the formed method, or combination of these methods. The construction shall generally conform to OPSS 353.

.2 Curb profiles as indicated on drawings.

.3 Form handicap drop curbs in locations indicated.

.4 Concrete curbs shall be in accordance with Municipality Standards as applicable.

.2 Machine Placement

.1 The slipform/extrusion machine approved shall be so designed as to place, spread, consolidate, screed and finish the concrete in one complete pass in such a manner that a minimum of hand finishing will be necessary to provide a dense and homogeneous concrete section. The machine shall shape, vibrate and/or extrude the concrete section being placed. It shall be operated with as nearly a continuous forward movement as possible. All operations of mixing, delivery and spreading concrete shall be so coordinated as to provide uniform progress with stopping and starting of the machine held to a minimum.

.3 Form Materials

.1 Form materials for concrete surfaces which will be exposed to view or which require smooth and uniform surfaces for applied finishes or other purposes shall consist of square edged smooth panels of plywood, metal or plastic. The panels shall be square and made in a true plain, clean, free of holes, surface markings and defects.

.2 The quality and strength of formwork materials shall comply with the requirements set forth in this specification and C.S.A. Standard A23.1.

- .4 Expansion Joint Strips & Saw Cuts
 - .1 Expansion joint strips shall be ½” thick fibre expansion joint filler as manufactured by Meadows or Engineer’s approved equal. Shall conform to OPSS 1308
 - .2 Refer to typical curb details for spacing of expansion joints.
- .5 Cement
 - .1 Cement shall conform to C.S.A. Standard A-5 type as scheduled under “Strength of Concrete”.
- .6 Aggregates
 - .1 Aggregates shall conform to C.S.A. Standard A23.1, Part 5.
- .7 Water
 - .1 Water shall be clean and free from injurious amounts of oil, alkali, organic matter or other deleterious material.
- .8 Admixtures
 - .1 Admixtures shall not be used unless prior written approval is obtained from the Architect. All admixtures shall conform to the appropriate A.S.T.M. and C.S.A. Standards. Air entraining admixtures shall conform to the requirements of the latest issue of A.S.T.M. Standard C260.
- .9 Curing Compounds
 - .1 Curing compounds shall conform to the requirements of the latest issue of A.S.T.M. Standard C309.
- .10 Strength of Concrete
 - .1 Unless otherwise noted all exterior concrete shall be Type 1 Portland Cement having a minimum compression strength of 32 MPa at 28 days and have a minimum 5% to 8% entrainment and maximum 0.45 water/cementing materials ratio. Concrete shall meet Municipality Standards for concrete curbs.
- .11 Concrete Admixtures
 - .1 For all exterior exposed concrete an air entraining admixture, Master Builder’s Company Limited, W.R. Meadows Sealtight AEA, Sternsen Construction Products N.V.R., or approved equivalent shall be placed in the concrete mix in quantity required to produce an air content of 6% (more or less 1%) by volume as measured with an air meter.
 - .2 No other admixture shall be used without the written permission of the Architect.
- .12 Concrete Curing and Sealers
 - .1 Concrete sealers shall be applied to all concrete.
 - .2 Exterior concrete curbs W.R. Meadows Sealtight 1215 White pigmented curing compound.
 - .3 Concrete curing and sealing treatments must be applied in strict accordance with manufacturer’s labeled instructions. Two coats must be applied.

PART 3 - EXECUTION

3.1 Examination of Site

SCCDSB
St. Joseph Catholic School
Asphalt Resurfacing
43 St. Street, Tilbury, ON N0P 2L0

Architectura Inc. Architects
Project No: 2044
May 14, 2020

- .1 Contractor shall visit the site to ascertain special conditions which affect his work.

3.2 Concrete Curbs

- .1 This contractor shall construct curbs around paved drives and parking areas as indicated and distributed on drawings by either an approved form/extrusion machine, by the form method or a combination of these methods.

3.3 Cleaning

- .1 Contractor shall be responsible for good housekeeping during the work of this section.

END OF SECTION 32 16 13

PART 1 - GENERAL**1.1 Description**

- .1 Supply and plant all plant material shown and listed on the planting plan, Sheet LA 1 true to botanical name and legibly tagged. The work includes:
 - .1 Soil Preparation
 - .2 Planting Mixes
 - .3 Planting of Trees and Shrubs
 - .4 Mulch and Planting Accessories
 - .5 Maintenance of planting areas.

1.2 Related Work

- .1 Section 32 92 19 - Seeding
- .2 Section 32 92 23 - Sodding

1.3 Acceptance

- .1 At the completion of the planting, request an inspection of all the work. Final inspection will be granted only if all of the plant material has been planted and is in good condition. Plant material shall be accepted by Landscape Architect 90 days after planting operations are complete, provided the plants are free of disease, insects and fungal organism etc.

1.4 Guarantee

- .1 Guarantee all plant material for a period of one full year following the date of Final Acceptance.
- .2 Extend the guarantee period on any replaced plant material for a period equal to the original guarantee period.
- .3 Replace any plants not found to be thriving satisfactory or which have lost their natural shape due to die back during the guarantee as originally specified, except in the case of damage caused by neglect or vandalism on the part of others, of fires or acts of nature, as determined by the Project Manager. The Contractor will do such work at his own expense not later than thirty (30) days after written notice is issued.
- .4 All work in this section must be done by a Contractor who is fully experienced in this type of work and can provide appropriate examples of similar work.

PART 2 - PRODUCTS**2.1 Plants**

- .1 Plant material is to be planted in early spring (April- May) while dormant before buds have broken, or fall (October - November) unless container grown, balled and burlapped, tree spade material, or wire basket stock is available from holding area. All stock must be dug while dormant. Plants noted on the planting list for spring only must be moved while dormant. If project requirements require planting at other times, plants must be sprayed with anti-desiccant prior to planting operations.
 - .1 Use only plants nursery grown in Canada, or the North Eastern United States and that are hardy in the Canadian Plant Hardiness Zone 7A. **PLANTS ILLEGALLY COLLECTED FROM WILD OR NATURAL SOURCES WILL NOT BE ACCEPTED.**

- .2 All plants must conform to the species and varieties named botanically on the drawings, and / or in the plant list. No substitutions will be accepted unless approved by the Project Manager in writing prior to tender close.
- .3 All plant material must meet the minimum standards of Landscaping/Paysage Canada Guide Specification for Nursery Stock.
- .4 All plants must be structurally sound. Trees should have straight single trunks (unless otherwise specified); with well branched and balanced heads typical of the species. All plants shall have strong, fibrous root systems and also be moist and show active green cambium when cut.
- .5 All plants must be free of mechanical and biotic damage i.e. broken branches, abrasions to the crown, trunk, branches, and roots, and disease infection or insect infestation.
- .6 Measurement: For standard shade trees, the relationship between the caliper, overall height, minimum number of branches in the head, and minimum root spread as indicated in Table 1. For each caliper size specified, the allowed variation in height is indicated in Table 1 beside the caliper size. Caliper takes precedence over height. Caliper is not measured less than 15cm. above the ground, or bud union (graft) for trees up to 100mm. and 30cm. above ground level for trees larger than 100mm. in caliper. Trees and shrubs furnished shall meet or exceed the minimum size indicated on the plant list.

TABLE NO.1

Minimum Sizes for Standard Shade Trees

Specified cal. (mm)	Overall Height (m)	Min. No. Branches in Head	Min. Branching Height (m)	Min. Ball Diameter (cm)	Min. Ball Depth (cm)
40	3.00-3.50	8	1.75	60	45
45	3.25-3.75	9	1.75	65	45
50	3.50-4.00	10	1.75	70	50
60	3.75-4.25	11	2.0	75	50
70	4.00-4.50	13	2.0	80	50
80	4.25-5.00	14	2.0	90	55
90	4.50-5.00	15	2.0	95	55
100	5.00-6.00	15	2.00	100	60

Root ball sizes must be increased if necessary in order that at least 75% of the fibrous root system can be contained within the root ball.

TABLE NO.2

Table of Minimum Sizes for Coniferous Evergreen Trees

Height (m)	Min. Base Width (cm)	Min. Root Ball Diameter (cm)

1.00-1.25	40	45
1.25-1.50	50	50
1.50-1.75	60	60
1.75-2.00	70	70
2.00-2.25	80	80
2.25-2.50	90	85
2.50-2.75	100	90
2.75-3.00	120	95

- .7 Root Balls: Burlap all root balls less than 450mm. in diameter with 7 oz. Hessian or Jute burlap or approved equal. Double burlap balls from 450mm – 600mm in diameter. Drum lace root balls 600mm and up with 1/4" biodegradable rope at 200mm spacing.
- .8 Inform the Project Manager of origin and holding areas for plant material. The Project Manager has the right to inspect the plant material at any time. The Contractor will assist in arranging inspections if the Project Manager so desires.
- .9 Any plant material not meeting any of the above conditions is unacceptable.

2.2 Fertilizer

- .1 Organic, phosphorus-free rooting fertilizer applied as per the manufacturer's direction.

2.3 Mulch

- .1 Canada Red Mulch or 1-3" 'small' beach stone as specified.

2.4 Accessories

- .1 Stakes: 50mm (2x2) wood stakes, minimum height of 8'.
- .2 Staking Hose: Use approved horticultural rubber webbing.
- .3 Deciduous Tree Trunk Wrap: The tree wrap shall consist of perforated plastic spiral tree wrap or 2 layers of water-proofed, crepe, kraft paper, 2-1/2" in width, and weighing not less than 30 pounds per ream.
- .4 Planting Soil: A well-blended mixture of 1/3 topsoil, 1/3 peat moss and soil excavated from planting pit.
- .5 Rodent Guard: 150MM (6) corrugated plastic pipe 30" in length.
- .6 Winter wrapping of Evergreens: Wrap coniferous evergreens for their first winter, with a double layer of burlap.
- .7 Anti-desiccant: Wax-like emulsion to provide a film over plant surfaces reducing evaporation but permeable enough to permit transpiration.
- .8 Water: Portable and free of minerals that may be detrimental to plant growth. Supply all water required.
- .9 Bed Edging: 6" high heavy-duty commercial grade plastic bed edging with a "full round" top and preformed "hook" at the bottom.

2.5 Topsoil

- .1 .1 A loose, friable loam, obtained from the top 8" of fertile soil, free of subsoil, refuse, and other harmful materials with not less than 4% nor more than 25% organic matter and have an acidity range (pH) of 6.0-7.5 . It must be free of clay lumps, stones, weeds, and roots or other material over 1" diameter and other extraneous matter.

PART 3 - EXECUTION

3.1 Handling and Storage of Plants

- .1 Transport plants with care taken to prevent shock or damage. Carefully tie branches in such a manner so as not to break or damage trunks. Pad points of contact with equipment. Cover plants transported in open vehicles with a protective covering to prevent windburn.
- .2 Move plants specified B&B (ball and burlap), S.B. (string ball), and W.B. (wire basket) on the plant list with the root system as solid units and with root balls firmly wrapped with burlap. No plant will be accepted when the ball of earth surrounding its roots has been cracked or broken preparatory to or during planting. Keep the root system moist at all times prior to planting. Heel in plant material kept in storage longer than 48 using good loam soil. The Contractor is responsible for all necessary watering and maintenance to preserve the stock in good condition.

3.2 Planting

- .1 The Contractor is responsible for verifying the locations of all utilities and for and damage to them, resulting from their own operation.
- .2 Plant only under conditions that are conducive to the health and physical condition of all plants.
- .3 Planting pits for deciduous and coniferous trees must be excavated to a depth of 40cm (16") for a diameter of 200 cm (80"). And must be large enough to permit the placing of a minimum of a minimum of 6" of planting soil below and 12" around the plant roots. If any detrimental conditions are discovered during the digging of the planting pits, they should immediately be reported to the Project Manager for decision.
- .4 Planting must follow as soon after hole digging as possible, preferably on the same day, so as to control the moisture content of the planting hole. Holes may be excavated earlier than on the day they are to be planted, provided they are immediately backfilled with planting soil.
- .5 Loosen bottom of planting hole to a depth of 6"-8" prior to placing 6" minimum planting soil in the bottom of the planting pit and tamp to prevent settlement. Place plants vertically in the planting pit at the same relation to grade level as it was originally grown, and faced to give the best appearance. Bare root plants must be placed so that their roots lie in their natural position. Cut all broken or frayed roots before installing planting mixture. Fertilize with non-phosphorus natural fertilizer. Backfill with planting soil in 8" layers, firmly tamping each layer maintaining the tree in vertical position

3.3 Pruning

- .1 Limit pruning at planting to the minimum necessary to remove minor dead or injured branches. Prune in such a manner as to preserve the natural character of the plants. Do not remove leaders. Use only clean, sharp tools. Make cuts that are clean and not through the branch bark ridge area (leave a small stub). Trace cuts, bruises or scars on the bark back to living tissue and remove dead tissue. Shape the affected areas so as not to retain water. Do not paint treated areas unless approved by the Project Manager.

3.4 Staking

- .1 Stake or guy all deciduous and coniferous trees as specified using materials and methods shown in the Standard Planting Drawings.

3.5 Installing Tree Wrap

- .1 Wrap the main stem of deciduous trees with tree wrap applied in an overlapping spiral manner, each time starting at grade level and extending up to just above the lower branches. It should be cemented together with asphalt, and secured in place with two wound spirally downward in opposite direction and secured in at least 5 places. Alternately, plastic tree guards may be used.

3.6 Installing Bark Mulch

- .1 Install mulch inside root saucers to a depth of 3".
- .2 Install mulch in planting beds to a depth of 3". Keep mulch 1/2" below adjacent surfaces.

3.7 Maintenance/ Training

- .1 Instruct Board Staff and maintain all plant material in a healthy viable condition from the time each plant is planted until the end of the guarantee period. Maintenance consists of:
 - .1 Ensure adequate moisture.
 - .2 Biweekly watering any plants not covered by automatic system.
 - .3 .Removal of weeds and debris from planting beds.
 - .4 .Fertilizing all plants in the spring season following planting.
 - .5 Replacing any plants that fail or present a poor appearance.

3.8 Install Bed Edging

- .1 Form a slit in the soil along the edge of all planting beds. Insert bed edging and secure with steel stakes (6 per 20 ft. length of edging).
- .2 Backfill along both sides of edging.
- .3 Ensure that edging is smoothly aligned both vertically and horizontally.
- .4 Install bed edging in all areas where the planting beds meet turf.

END OF SECTION 32 90 00

PART 1 - GENERAL**1.1 Scope of work**

- .1 Protection of adjacent property and work of others.
- .2 Topsoil testing analysis and necessary amendments to the topsoil.
- .3 Supply of topsoil.
- .4 Preparation of the site.
- .5 Placement of the topsoil.

1.2 References

- .1 This specification refers to the following standards, specifications, or publications:
 - .1 OPSS 802 Construction Specification for Topsoil
 - .2 OPSS.MUNI 206 Grading

1.3 Protection

- .1 This Contractor shall protect adjacent property from damage caused by his operations and the work of others.

PART 2 - PRODUCTS**2.1 Topsoil**

- .1 Topsoil shall be a fertile loam screened and free from:
 - .1 Debris and stones over 25mm in size
 - .2 Roots, coarse vegetative material occupying more than 2% of soil volume, in size that cannot be covered by the depth of topsoil specified in the Contract Documents.
 - .3 Imported topsoil shall not have contaminants that adversely affect plant growth.

2.2 QUALITY CONTROL

- .1 The Contractor is responsible for topsoil testing analysis and to identify requirements for amendments to topsoil as specified for sod/seed areas and planting areas within the contract documents. Owner shall review and approve the topsoil source and the soil test report from a qualified testing lab with recommendations for use on lawns or trees and shrubs prior to topsoil deliveries. This testing shall be the responsibility of the Contractor.
- .2 Topsoil shall be tested as per the requirements listed in Table 1 and Table 2. Soil contaminated with calcium chloride, heavy metal contaminants, petroleum products and other toxic materials shall not be accepted as top soil and shall not be allowed to be transported on site.

Table 1: Topsoil Chemical Test Requirements	
Criteria	Requirement
pH Level	5.5 to 7.5
Organic matter, % *	4 to 15%
Phosphorus (Olsen P), ppm	10 to 60

Salts, (mmhos/cm)	<1.5
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**Note: To reach required percentage, organic amendment may be required. The Contractor shall be responsible for selecting industry acceptable organic matter sources which shall be free from any pathogen that have potential concerns to the public health & safety.*

Criteria	Mean Metal Content in Uncontaminated Soil (ppm)	Requirement – MOE Maximum Permissible Metal Content (ppm)
Arsenic (ppm)	7	14
Cadmium (ppm)	0.8	1.6
Chromium (ppm)	15	120
Cobalt (ppm)	5	20
Copper (ppm)	25	100
Lead (ppm)	15	60
Mercury (ppm)	0.1	0.5
Molybdenum (ppm)	2	4
Nickel (ppm)	16	32
Selenium (ppm)	0.4	1.6
Zinc (ppm)	55	220

- .3 The results of the testing shall be presented in writing by the testing laboratory, clearly depicting the results of each defined tested category, along with a statement verifying its suitability for use or the remedial action required.
- .4 The Owner reserves the right to test the material after delivery. If the material is determined to be out of specification as a result of this testing, the material shall be corrected or removed from the site at the Contractor's cost.

PART 3 - EXECUTION

3.1 Stockpiling Topsoil

- .1 Topsoil shall be removed, stockpiled, and managed according to the Contract Documents. If allowed to be piled on site, stockpiles shall be constructed neatly with uniform surfaces. When required, the top surface shall be dished. Shall conform to OPSS 802

3.2 Preparation for Topsoil

- .1 Areas where topsoil is to be placed shall be fine graded to a uniform surface according to OPSS 206 and Contract Documents. The graded surface shall be free of all debris, roots, branches, and stones in excess of 25mm diameter and other deleterious materials. Any soil contaminated with calcium chloride, toxic materials, petroleum products and other toxic materials shall be removed and disposed of legally off-site at sole costs of the Contractor.
- .2 The surface shall be loosened to a depth of at least 50mm prior to placing the topsoil. Shall conform to OPSS 802.

3.3 Inspection

- .1 Prior to placing the topsoil, the site shall be reviewed by the Owner, the General Contractor, and Landscaping Sub-contractor. The consequence of omitting the review step shall be fully borne by the Contractor.

3.4 Placement of Topsoil

- .1 The topsoil shall be spread on unfrozen sub-grade, free of standing water, uniformly to a depth of 100mm or as per Contract Documents in the case of sodding or seeding. The imported topsoil may be feathered to meet existing grade. If the area of imported soil is used as beds for shrubs or perennial plants, the depth of placement shall be 500mm.
- .2 Topsoil shall be rolled with a mechanical roller of a minimum weight of 220kg, minimum width of 760mm roller, to consolidate it in areas to be seeded or sodded, leaving the surface smooth, uniform, firm against deep foot printing, and to the satisfaction of the Owner. Shall conform to OPSS 802.

3.5 Cleaning

- .1 The Contractor shall be responsible for good housekeeping during the work of this section.

END OF SECTION 32 92 23

PART 1 - GENERAL**1.1 Scope of work**

- .1 Protection of adjacent property and work of others.
- .2 Levelling, tilling or otherwise preparing of topsoil.
- .3 Spreading of fertilizer.
- .4 Apply seed by an acceptable method.
- .5 Watering
- .6 Maintenance for 60 days
- .7 Unless otherwise specified, the prices quoted in the contract documents shall include the furnishing of all materials, supplies, equipment, and labour necessary to complete the work required under the contract documents.

1.2 Work Not Included

- .1 The spreading and grading of top soil. Refer to Section 32 90 00.

1.3 References

- .1 This specification refers to the following standards, specifications, or publications:
 - .1 Section 32 90 00 - Topsoil
 - .2 OPSS 802 Construction Specification for Topsoil
 - .3 OPSS 804 Construction Specification for Seed
 - .4 OPSS.MUNI 206 Grading

1.4 Protection

- .1 This Contractor shall protect adjacent property from damage caused by his operations and the work of others.

PART 2 - PRODUCTS**2.1 Grass Seed**

- .1 As indicated on site plan.
- .2 Grass Seed: Certified Canada No. 1 Grade to Government of Canada Seeds Regulations and having a minimum germination of 75% and minimum purity of 97%. Deliver seed in original container showing:
 - .1 Seed mix analysis
 - .2 Percentage of pure seed
 - .3 Year of production
 - .4 Weight
 - .5 Percentage of germination
 - .6 Name and address of producer and/or distributor
 - .7 SeedMixture:40% Kentucky Bluegrass, 40% Creeping Red Fescue, 20% Elf Perennial Ryegrass, or approved similar blend

2.2 Fertilizer

SCCDSB
St. Joseph Catholic School
Asphalt Resurfacing
43 St. Street, Tilbury, ON N0P 2L0

Architecttura Inc. Architects
Project No: 2044
May 14, 2020

- .1 Fertilizer shall be applied as per OPSS 804.
- .2 Fertilizer: Organic, phosphorus free rooting fertilizer applied as per the manufacturer's direction.

PART 3 - EXECUTION

3.1 Examination of Site

- .1 Seeding shall not commence until the surface preparation has been approved in writing by the Owner. Seeding shall commence within 7 Days of surface preparation. The Contractor shall maintain the surface and control erosion until the seed is in place.
- .2 Seed shall not be placed when in a frozen condition, under adverse field conditions such as high wind, frozen soil, or soil covered with snow, ice, or standing water.
- .3 Contractor shall visit the site to ascertain special conditions which affect this work.

3.2 Surface Preparation

- .1 The grading shall be carried out as per OPSS.MUNI 206 and in such a manner as to provide positive drainage for all walkways, sidewalks, and driveways. Steps shall be taken to ensure that all existing drainage patterns are maintained and improved if possible and that the right-of-way has positive drainage over roadside curbs or to an appropriate drainage inlet structure. Any correction required to obtain the above noted shall be at the expense of the Contractor.
- .2 Areas to be seeded shall be fine graded to a uniform surface and cleared of all vegetation, debris and stones.
- .3 Fertilizer shall be applied to all surfaces, which are to be seeded, and shall be incorporated into the surface by ranking, dicing or harrowing. Fertilizer shall be applied not more than 48 hours before seed is placed.

3.3 Establishment

- .1 Water, on a continual basis to ensure germination and continued growth. Watering will be the responsibility of the contractor for a period of 60 days from substantial completion for all seeded areas. The Owner is to be notified when the Contractor or Subcontractor is watering on site.
- .2 Water with fine spray, avoiding washing out of seed. Apply enough water to ensure minimum penetration of 2".
- .3 Re seed any areas that fail to establish.
- .4 Cut the grass when it reaches a height of 60 mm down to a height of 40mm. Remove clippings which will smother grass as directed by the Owner.
- .5 Fertilize seeded areas after the first cutting with an organic fertilizer such as Turf Revolution Green Acres 5-1-5 or approved equal.
- .6 Maintain grass areas free of pests and diseases.
- .7 Eliminate weeds by mechanical or organic chemical means.

3.4 Placing Seed

- .1 The placement of the seed shall be as per OPSS 804.
- .2 The finishing grade shall match existing grade exactly and uniformly, blending with the existing surfaces to make a seamless transition.

- .3 Sow half of required amount of seed in one direction and the remainder at right angles.

3.5 Maintenance

- .1 This Contractor shall instruct the Owner and be responsible for the care of all completed seeding for a period of 60 days. Water shall be applied in a manner that the newly seeded surfaces shall not be eroded or damaged in any way.

3.6 Quality Control

- .1 The Owner shall take steps to record the acceptability of the seeded areas by the use of photos, videotaping or other means deemed necessary at the end of the 60 consecutive days of maintenance period. The Owner reserves the right of extending the maintenance period if the installed seed were not deemed acceptable.

3.7 Cleaning

- .1 The Contractor shall be responsible for good housekeeping during the work of this section.

END OF SECTION 32 92 23

PART 1 - GENERAL**1.1 Scope of work**

- .1 Protection of adjacent property and work of others.
- .2 Levelling, tilling or otherwise preparing of topsoil.
- .3 Spreading of fertilizer.
- .4 Laying of sod.
- .5 Watering
- .6 Maintenance for 60 days
- .7 Provide 3 cubical limestone boulders approximately 1000lbs each and small beach stone on weed control barrier as indicated on the site plan.
- .8 Unless otherwise specified, the prices quoted in the contract documents shall include the furnishing of all materials, supplies, equipment, and labour necessary to complete the work required under the contract documents.

1.2 Work Not Included

- .1 The spreading and grading of top soil. Refer to Section 32 90 00.

1.3 References

- .1 This specification refers to the following standards, specifications, or publications:
 - .1 Section 32 90 00 - Topsoil
 - .2 OPSS 802 Construction Specification for Topsoil
 - .3 OPSS 803 Construction Specification for Sodding
 - .4 OPSS.MUNI 206 Grading

1.4 Protection

- .1 This Contractor shall protect adjacent property from damage caused by his operations and the work of others.

PART 2 - PRODUCTS**2.1 Nursery Sod**

- .1 As indicated on site plan.
- .2 Sod shall be of such a size and condition that each may be lifted and handled without breaking or tearing and without loss of soil. Sod must not be allowed to dry out. Any sod permitted by the Contractor to dry out shall be rejected whenever in the judgment of the Owner, its survival after placing shall have been rendered doubtful.

2.2 Fertilizer

- .1 Fertilizer shall be applied as per OPSS 803.
- .2 Fertilizer: Organic, phosphorus free rooting fertilizer applied as per the manufacturer's direction.

PART 3 - EXECUTION**3.1 Examination of Site**

- .1 Sodding shall not commence until the surface preparation has been approved in writing by the Owner. Sodding shall commence within 7 Days of surface preparation. The Contractor shall maintain the surface and control erosion until the sod is in place.
- .2 Sod shall not be placed when in a frozen condition, under adverse field conditions such as high wind, frozen soil, or soil covered with snow, ice, or standing water.
- .3 Contractor shall visit the site to ascertain special conditions which affect this work.

3.2 Surface Preparation

- .1 The grading shall be carried out as per OPSS.MUNI 206 and in such a manner as to provide positive drainage for all walkways, sidewalks, and driveways. Steps shall be taken to ensure that all existing drainage patterns are maintained and improved if possible and that the right-of-way has positive drainage over roadside curbs or to an appropriate drainage inlet structure. Any correction required to obtain the above noted shall be at the expense of the Contractor.
- .2 Areas to be sodded shall be fine graded to a uniform surface and cleared of all vegetation, debris and stones.
- .3 Fertilizer shall be applied to all surfaces, which are to be sodded, and shall be incorporated into the surface by ranking, dicing or harrowing. Fertilizer shall be applied not more than 48 hours before sod is placed.

3.3 Establishment

- .1 Water, sod areas on a continual basis to ensure germination and continued growth of the turf. Watering will be the responsibility of the contractor for a period of 60 days from substantial completion for all sodded areas. The Owner is to be notified when the Contractor or Subcontractor is watering on site.
- .2 Re sod any areas or single pieces of sod that fail to establish.
- .3 Cut the grass when it reaches a height of 60 mm down to a height of 40 mm. Remove clippings which will smother grass as directed by the Owner.

3.4 Placing Sod

- .1 The placement of the sod shall be as per OPSS 803.
- .2 The existing areas shall be neatly trimmed by the use of a sod cutter. The finishing grade shall match existing grade exactly and uniformly, blending with the existing surfaces to make a seamless transition.
- .3 Care shall be taken to place all sod slightly below all sidewalks, lead walks, and driveways to ensure water runoff.
- .4 Sod shall be laid lengthwise with ends close together. Joints in adjacent rows shall be staggered. The entire work shall be done in a thorough, workmanlike manner so that the appearance on completion shall be as nearly as possible to that of a good natural growth in place.

3.5 Maintenance

-
- .1 This Contractor shall instruct the Owner and be responsible for the care of all completed sodding for a period of 60 days. Water shall be applied in a manner that the newly sodded surfaces shall not be eroded or damaged in any way. During this period, any break due to slippage shall be repaired and any sod which is dead shall be replaced.

3.6 Quality Control

- .1 The Owner shall take steps to record the acceptability of the sodded areas by the use of photos, videotaping or other means deemed necessary at the end of the 60 consecutive days of maintenance period. The Owner reserves the right of extending the maintenance period if the installed sod were not deemed acceptable.

3.7 Cleaning

- .1 The Contractor shall be responsible for good housekeeping during the work of this section.

END OF SECTION 32 92 23

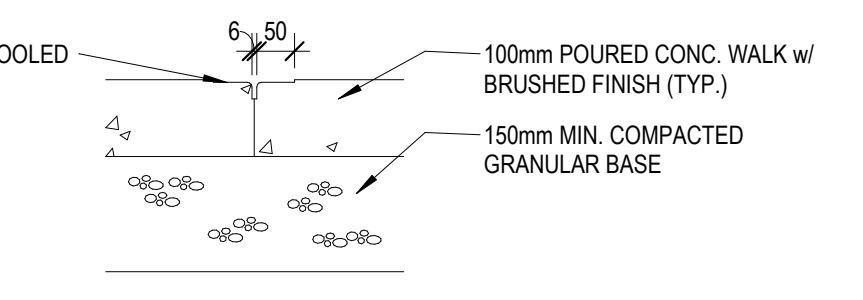
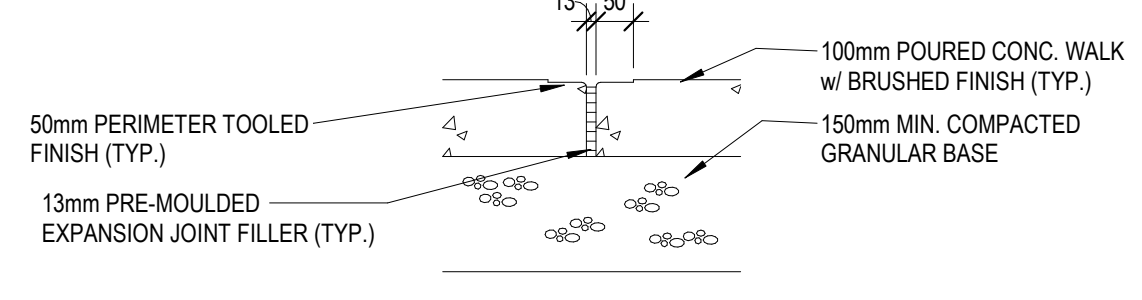
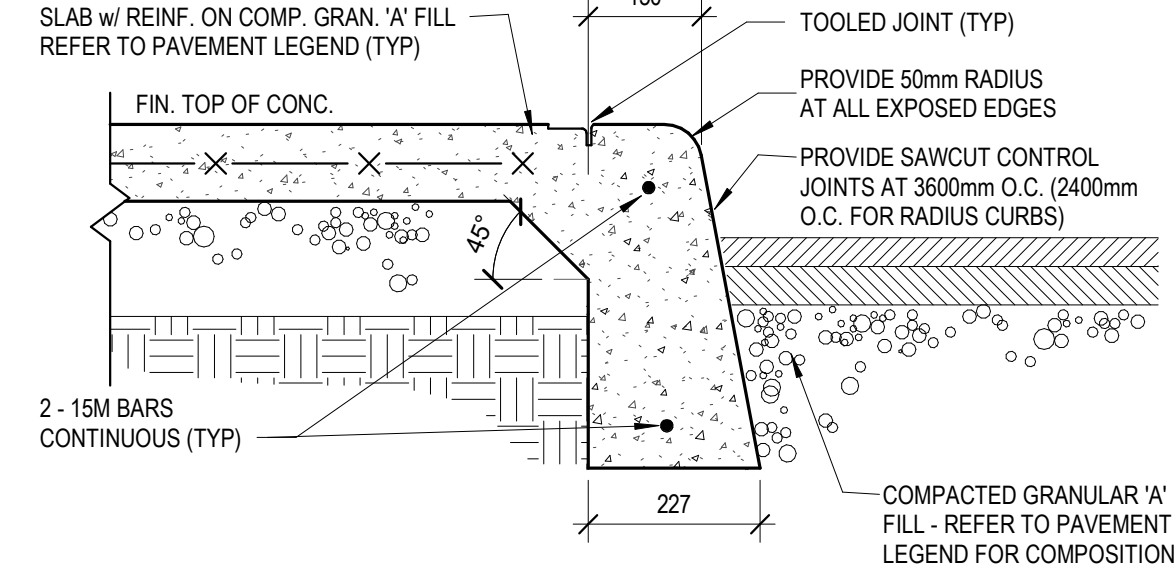
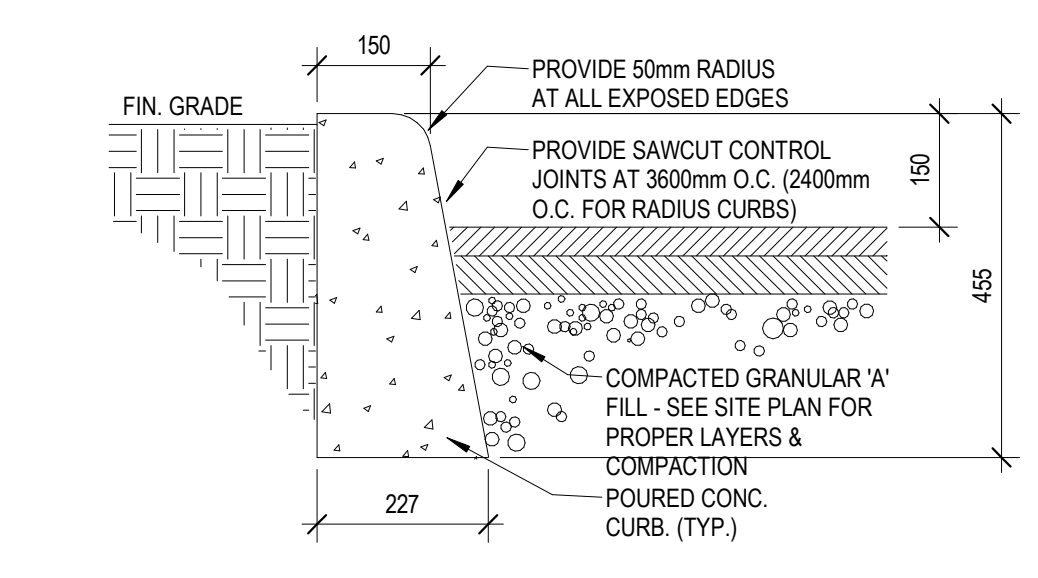
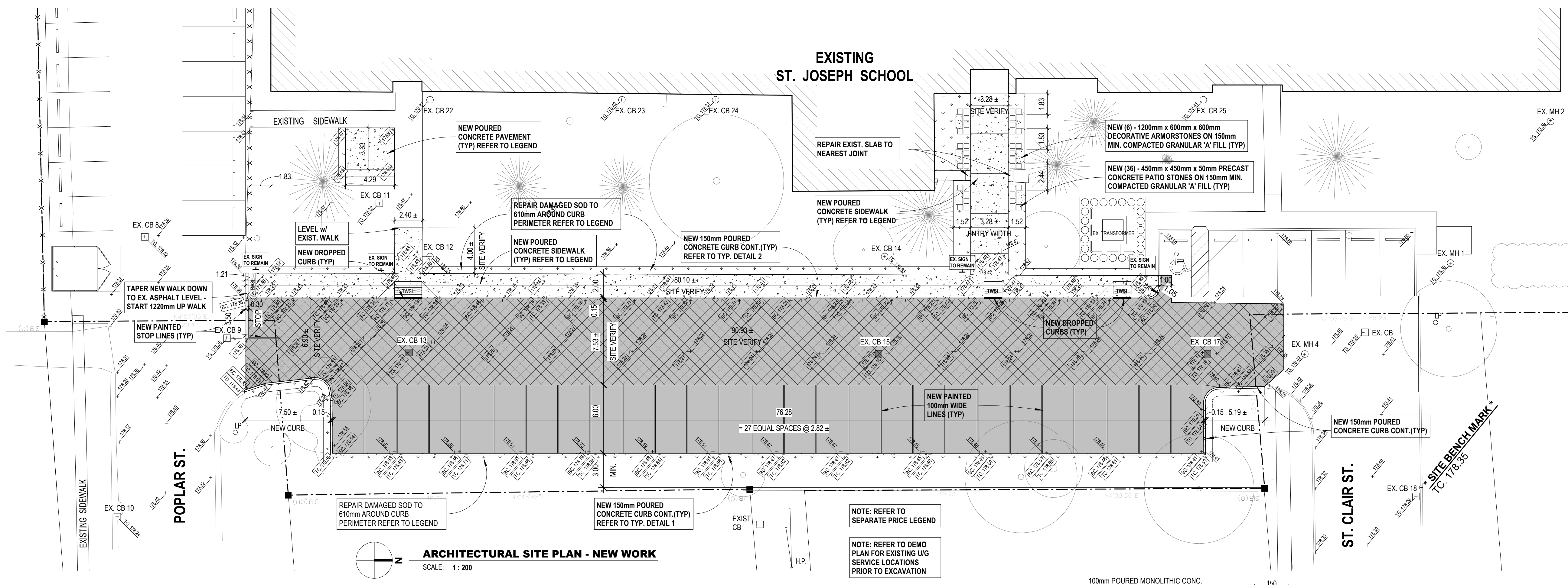
PAVEMENT LEGEND

- 40mm - HL3 SURFACE COURSE ASPHALT ON 65mm - HL4 BASE COURSE ASPHALT ON 150mm - GRANULAR 'A' BASE COMPACTED TO 100% SPMD ON 300mm - GRANULAR 'B' TYPE 2 COMPACTED TO 97% SPMD ON PROOF ROLLED AND APPROVED SUBGRADE
- 40mm - HL3 SURFACE COURSE ASPHALT ON 65mm - HL4 BASE COURSE ASPHALT ON 150mm - GRANULAR 'A' BASE COMPACTED TO 100% SPMD ON 300mm - GRANULAR 'B' TYPE 2 COMPACTED TO 97% SPMD ON TERRAFIX 2415 WOVEN GEOTEXTILE ON PROOF ROLLED AND APPROVED SUBGRADE
- EXTERIOR CONCRETE PAVEMENT & SIDEWALKS:**
 100mm CONCRETE (32 MPa w/ 6% TO 8% AIR ENTRAINMENT) w/ 15X152 MW18.7 X MW18.7 AT MID-DEPTH ON 150mm MIN. GRANULAR 'A' BASE COMPACTED TO 100% SPMD ON GRANULAR 'B' TYPE 1 AS REQ'D TO UNDERSIDE OF TOPSOIL ON COMPACTED AND APPROVED SUBGRADE
- EXISTING ASPHALT TO REMAIN
- SAWCUT EXISTING ASPHALT, REMOVE AND DISPOSE
- REMOVE EXISTING GRASS & SOIL TO 12" BELOW GRADE MIN.
- EXISTING SOD ON SCHOOL SIDE OF PARKING LOT TO BE REPAIRED WITH NEW SOD ON 150mm MIN. TOPSOIL (TYPE 1) TO 610mm (MIN) FROM PAVEMENT. EXISTING SOD ON RESIDENTIAL SIDE OF PARKING LOT TO BE REPAIRED WITH HYDROSEEDING ON 150mm MIN. TOPSOIL (TYPE 1) TO 610mm (MIN) FROM CURB.
- EXISTING GRADES
- NEW GRADES - MATCH EXISTING
- TOP OF CURB - MATCH EXISTING
- BOTTOM OF CURB - MATCH EXISTING
- TOP OF GRATE - MATCH EXISTING
- DROPPED CURB
- NEW CAST IN PLACE (TWS) - TACTILE WALKING SURFACE INDICATOR BY KINESIC ENG. PRODUCTS OR APPROVED EQUAL

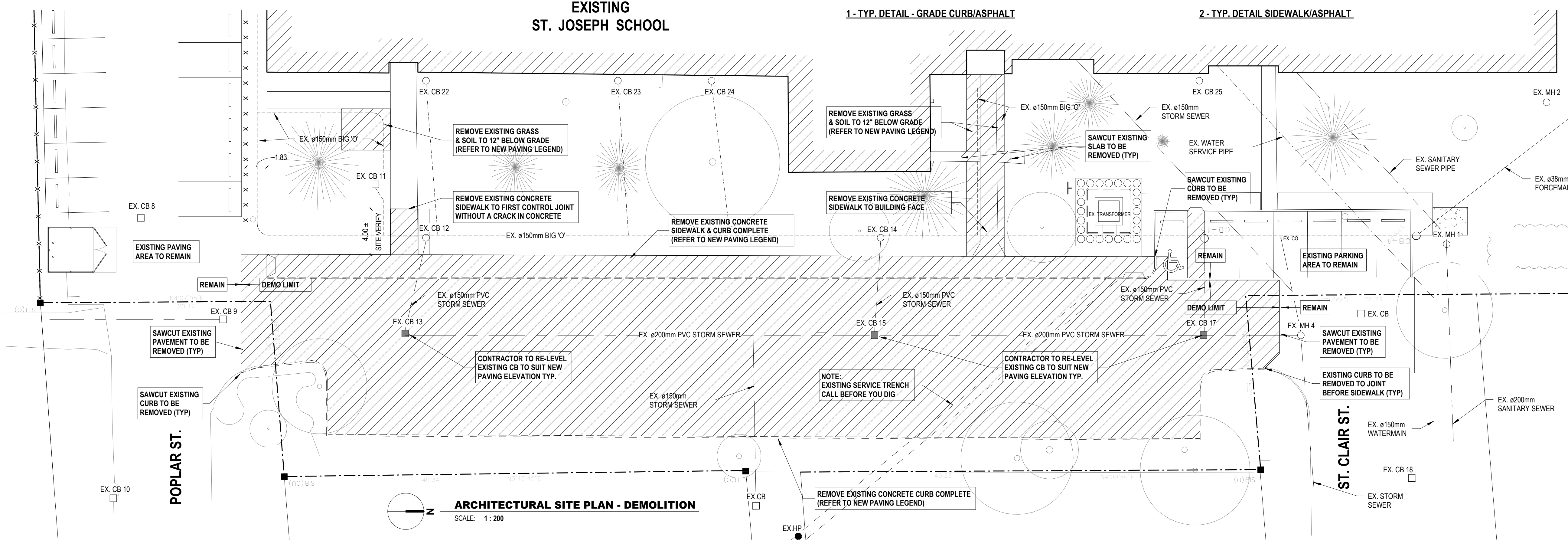
SEPARATE PRICE LEGEND

- NOTE:** CONTRACTOR IS TO CARRY THE SERVICES OF AN INDEPENDANT CONTRACTOR WITH THE CAPACITY TO PROVIDE A CAMERA INVESTIGATION OF THE EXISTING STORM SEWER PIPES AND THE CATCH BASINS TO RECORD AN "AS EXISTING CONDITION" PRIOR TO ANY EXCAVATION WORK. THIS WILL BE USED TO ACCESS IF THE SEPARATE PRICE FOR THE REPLACEMENT OF THE EXISTING STORM PIPES AND CATCH BASINS WILL BE CONSIDERED.
- SEPARATE PRICE NO. 1**
- REMOVE & REPLACE EXISTING ø200mm PVC STORM SEWER (PER LINM) BETWEEN EACH CATCH BASINS CB13, CB15, CB17 & CB4.
 - DISCONNECT & RECONNECT EXISTING ø150mm STORM SEWER (PER LINM) THAT CONNECT TO THE SEWER BEING REPLACED.
- SEPARATE PRICE NO. 2**
- REMOVE & REPLACE EXISTING CATCH BASINS CB13, CB15, CB17 & CB4.
 - PRICE PER CATCH BASIN THAT REQUIRES REPLACEMENT.
 - DISCONNECT & RECONNECT EXISTING ø150mm ALL STORM SEWERS THAT CONNECT TO THE SEWER BEING REPLACED.

EXISTING ST. JOSEPH SCHOOL



EXISTING ST. JOSEPH SCHOOL



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