ISSUED FOR CONSTRUCTION DOCUMENTS FOR

WATERLOO CATHOLIC DISTRICT SCHOOL BOARD

OUR LADY OF FATIMA CES RENOVATIONS WCDSB

WCDSB Project # RFT 2024-04

Architect: **L360 ARCHITECTURE**1490 Richmond Street, Suite 305
London, ON N6G 0J4

L360 Project No.: 23-035



Date: February 14, 2024

ISSUED FOR CONSTRUCTION DOCUMENTS FOR

OUR LADY OF FATIMA CES RENOVATIONS WCDSB

55 Hammet Street Cambridge, ON N3C 2H5

Project # 23-035

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1.1 INVITATION

.1 Bid Call

.1 REGISTERED SUPPLIERS/BIDDERS

- All Bidders shall have a Bidding System Vendor account and be registered as a Plan Taker for this Bid opportunity, which will enable the Bidder to download the Bid Call Document, to receive Addenda email notifications and download all documents without the watermark "preview" on them.
- To ensure receipt of the latest information and updates via email regarding this bid, or if a Bidder has obtained this Bid Document from a third party, the onus is on the Bidder to create a Bidding System Vendor account and be register as a Plan Taker for the bid opportunity.

.2

ELECTRONIC BID SUBMISSIONS ONLY, shall be received by the Bidding System. Hardcopy submissions are not permitted.

Bidders are cautioned that the timing of their Bid Submission is based on when the Bid is RECEIVED by the Bidding System, not when a Bid is submitted, as Bid transmission can be delayed due to file transfer size, transmission speed, etc.

For the above reasons, it is recommended that sufficient time to complete your Bid Submission and to resolve any issues that may arise. The closing time and date shall be determined by the Bidding System's web clock.

Bidders should contact bids&tenders support listed below, at least twenty-four (24) hours prior to the closing time and date, if they encounter any problems. The Bidding System will send a confirmation email to the Bidder advising that their bid was submitted successfully. If you do not receive a confirmation email, contact bids&tenders support at support@bidsandtenders.ca.

Late Bids are not permitted by the Bidding System.

To ensure receipt of the latest information and updates via email regarding this bid, or if a Bidder has obtained this Bid Document from a third party, the onus is on the Bidder to create a Bidding System Vendor account and register as a Plan Taker for the bid opportunity.

Supplementary Form of Tender to be emailed to: Stephen.butterworth@wcdsb.ca

- .3 Submissions to the bidding system will be on or before 2:00:00 pm, Wednesday, February 28, 2024, local time and Followed by the Supplementary Form of Tender emailed to Stephen.butterworth@wcdsb.ca at 4:00:00 pm, Wednesday, February 28, 2024 local time
- .4 Instructions for tendering must be followed implicitly. Any Tender which does not comply with the *CCDC 2-2020 Stipulated Price Contract, Supplementary Conditions, as attached,* and the Instructions to Bidders may be declared informal and may not be considered.

- .5 Stipulated sum tenders, submitted on the Form of Tender supplied, on the Work described in the following specifications and/or shown on the accompanying drawings, including all Addenda issued prior to the closing of Tender.
- .6 ALL BLANKS IN THE FORM OF TENDER, INCLUDING SUPPLEMENTAL FORM OF TENDER, SHALL BE FULLY COMPLETED OR THE TENDER MAY BE INVALIDATED. TENDERS NOT COMPLETED IN FULL, MAY, AT THE DISCRETION OF THE BOARD, BE REJECTED. IF A BLANK IS DEEMED TO BE NOT REQUIRED BY THE BIDDER, COMPLETE WITH A "NOT APPLICABLE (N/A)", "OWN FORCES", ETC.
- .7 Tenders shall be valid for sixty (60) Calendar Days from the date of closing above.
- .8 Tenders must note, and include, on a separate form, any "Separate Prices" requested by the Consultant; any "Alternate Prices to the Base Bid" requested by the Consultant; any "Supplementary Alternate Prices" proposed by the Bidder; as well as all Unit Prices indicated on the Supplementary Form of Tender. Tender award to be based on low bid as specified.
- .9 Tender award will be determined based on low Bid as specified.

1.2 INTENT

.1 Intent of this Bid call is to obtain an offer to perform work to complete the construction of **Our Lady of Fatima CES** located at **55 Hammet Street, Cambridge, ON N3C 2H5** for a Stipulated Price contract, in accordance with Contract Documents.

1.3 CONTRACT/BID DOCUMENTS

- .1 Agreement Form
- .2 Definitions
 - .1 Contract Documents: Defined in the *CCDC 2-2020* Stipulated Price Contract, Definitions.
 - .2 Bid Documents: Contract Documents supplemented with Instructions to Bidders, Project Information, Soils Investigation Data, Form of Tender, and Supplementary Form of Tender identified herein.
 - .3 Bid, Offer, or Bidding: Act of submitting an offer under seal or signed under witness.
 - .4 Bid Price: Monetary sum identified in Bid Form as an offer to perform work.
- .3 Availability

To obtain documents online please visit https://wcdsb.bidsandtenders.ca/. You can preview the bid documents with a Preview Watermark prior to registering for the opportunity.

- .1 Documents are not provided in any other manner.
- .2 Documents are made available only for purpose of obtaining offers for this project. Their use does not confer license or grant for other purposes.
- .3 A copy of soils investigation report may be found in Bid Documents
- .4 Examination
 - .1 Upon receipt of Bid Documents verify that documents are complete.

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.2 Immediately notify, through the bidding system "Submit a Question", upon finding discrepancies or omissions in Bid Documents.

.5 Queries/Questions

.1 Questions related to this bid are to be submitted to the Purchasing representative through the Bidding System only by clicking on the "Submit a Question" button for this specific bid opportunity.

Purchasing Representative

Stephen Butterworth
Purchasing Officer
Waterloo Catholic District School Board

Email: Stephen.Butterworth@wcdsb.ca

Neither the Board nor the Board contact will be responsible for any verbal instructions or clarifications given during the Bidding process. As a result, verbal recollections of discussions, meetings, or telephone conversations will not be considered valid.

.6 Addendums

.1 Bidders shall acknowledge receipt of any addenda through the Bidding System by checking the box for each addenda and any applicable attachment.

It is the responsibility of the Bidder to have received all Addenda that are issued. Bidders should check online at https://wcdsb.bidsandtenders.ca/ prior to submitting their Bid and up until Bid closing time and date in the event additional addenda are issued.

If a Bidder submits their bid prior to the Bid closing time and date and addenda have been issued, the Bidding System shall WITHDRAW the Bid submission and the bid status will change to an INCOMPLETE STATUS and Withdraw the Bid. The Bidder can view this status change in the "MY BIDS" section of the Bidding System.

The Bidder is solely responsible to:

- make any required adjustments to their Bid; and
- acknowledge the addenda; and
- Ensure the re-submitted Bid is RECEIVED by the Bidding System no later than the stated bid closing time and date.
- .2 Clarifications requested by bidders must be received by the bidding system, not less than nine (9) days before date set for receipt of Bids. Reply will be in form of an addendum, a copy of which will be forwarded to known bidders no later than seven (7) working days before receipt of Bids

.7 Product/System Options

.1 There are two opportunities for a Bidder to identify Alternates in the Bidder's Tender. The first method is to identify Alternates at the time of the Tender submission on the Supplementary Form of Tender to be attached to the Form of Tender. This document is to be entitled ALTERNATE PRICES TO BASE BID:

- .1 Wherever possible or practical, the specifications are written on a "Base Bid" principle. When "Base Bid" product or service is identified, a number of "alternates" have been listed. The Bidder must tender on the "Base Bid" and indicate, on a separate sheet, Alternates and a credit to the Contract if one of the specified alternate supplier/manufacturer/installer or material/method of construction is being proposed by the Bidder. Only those identified Alternates in the Specification may be listed on the Supplementary Form of Tender. If the Specification identifies a "Base Bid" with a number of Alternates and the Bidder does not identify on the Supplementary Form of Tender any of the indicated Alternates with a credit, then the Contractor shall provide, in all instances, the "Base Bid" supplier/manufacturer/installer or material/method of construction.
- .2 The Contractor shall accept full responsibility that a proposed Alternate will not exceed space requirements as indicated on the drawings and that coordination of the Contractor's own and related work and cost of installation is included in the Contractor's work. Approved alternate products or assemblies shall comply with all technical and design requirements specified in the "Base Bid". (E.g. materials, gauge, finish, colour, size, fit, mounting, strength, durability, operation and warranty.) If any additional design fee, either Architectural or Engineering, is required due to a change or substitution requested by the Contractor, the cost of such fee must be paid by the Contractor.
- .2 The second method is to identify alternates on the *Supplementary Form of Tender* and submitted, as requested by the Consultant, at the time of Tender. This document is to be entitled. SUPPLEMENTARY ALTERNATE PRICES:
 - .1 Mechanical and Electrical Alternates may be submitted on the Supplementary Form of Tender.
 - .2 If proposals for alternates (not already identified as alternates in the specification) are submitted by the Contractor to the Consultant during the tender period in sufficient time to allow for analysis and the issuance of an Addendum to include the proposals, then such proposal may be included in the Form of Tender under *Separate Prices*.
 - .3 Proposed alternates which are not covered by an Addendum and listed in the Form of Tender under *Separate Prices*, may be considered if the proposed entitled *Supplementary Alternate Prices* accompanies the Supplementary Form of Tender as a separate document on which the Alternate is completely specified and described, and on which is given the reason for substitution.
 - .4 Any proposed alternates or in lieu of prices will not necessarily be accepted.
 - .5 The Contractor shall accept full responsibility that a proposed Alternate will not exceed space requirements as indicated on the drawings and that coordination of his own and related work and cost of installation is included in his work. Approved alternate products or assemblies shall comply with all technical and design requirements specified in the "Base Bid". (E.g. materials, gauge, finish, colour, size, fit, mounting, strength, durability, operation and warranty.) If any additional design fee, either Architectural or Engineering, is required due to a change or substitution

requested by the Contractor, the cost of such fee must be paid by the Contractor.

.6 Unless substitutions are submitted in this manner and subsequently accepted, provide products as specified.

1.4 OWNER

.1 The Owner of the Project is:

WATERLOO CATHOLIC DISTRICT SCHOOL BOARD 35 Weber Street West, Unit A Kitchener, Ontario N2H 3Z1 Phone: (519) 578-3660

1.5 CONSULTANT

.1 The Architect on this Project is:

L360 ARCHITECTURE Suite 305 – 1490 Richmond Street London, ON. N6G 0J4 Phone: (519) 473-6641 Fax: (519) 473-4707

1.6 SUB CONSULTANTS

.1 N/A

1.7 PREQUALIFIED GENERAL CONTRACTORS AND SPECIFIC TRADES

.1 The following General Contractors and Specific Trades have been prequalified by the Board to bid on the work included in this Tender as per the WCDSB – 2019-24 Mechanical, Electrical, and General Contractors.

NOTE: This Tender can be tendered by **prequalified General Contractors and Specific Trades ONLY**. Tenders received from non-prequalified General Contractors and Specific Trades will not be considered.

NOTE: Contractors have set limits on dollar value and this section must be adjusted to allow only the contractors that fit the tender dollar threshold.

GENERAL CONTRACTORS

CRD Construction	Nith Valley Construction
Gateman Milloy	Norlon Builders
Reid and Deleye	Golden Gate Contracting
Pre Eng Contractors	Brook Restoration
STM Construction	Harrington Construction
Melloul Blamey	Genpro Contracting
Gordner Construction	J.R. Certus
Dakon Construction	Harbridge and Cross
Elgin Contracting	Ritestart Ltd
TRP Construction	M J Dixon Construction
PM Contracting	AEC Developments
Devlan Construction	Renokrew
Tambro Construction	Zehr Levesque Inc.
Sax Construction	Aviero
Percon Construction	Hall Construction
Everstrong Construction	S.G. Cunningham
Spec Construction	3

MECHANICAL TRADES

Aim Industrial Inc.	L.J. Barton Mechanical
Dependable Mechanical Sys.	Chamberlain Building Serv.
Arcadian Projects	Soan Mechanical
Jay Stewart Mechanical	Linde Mechanical
Conestoga Mechanical	JMR Electric
JTS Mechanical	Velocity Mechanical
Roberts Onsite	Brenner Mechanical
Dean Lane	Kittel Mechanical
CEC Mechanical	Superior Boiler Works

ELECTRICAL TRADES

Kraun Electric Inc.	Group L.J. Barton Mechanical
Aim Industrial Inc.	Energy Network Services
Powerserve Inc.	Superior Boiler Works
PHE Contractor	Chamberlain Building Serv.
Roberts Onsite	RBT Electrical
T. Lloyd Electric	CEC Services Ltd.
Juno Electric	JMR Electric
Comtrade Ltd	B Safe Electric Ltd
MJM Electric	Arcadian Projects
Trade Service Group	Millers Electric
JM Electrical Contracting	

1.8 SITE ASSESSMENT

- .1 Site Examination
 - .1 Visit project site and surrounding area before submitting Bid.

- .2 Notwithstanding the responsibility, a Site Visit to project site has been arranged for General Contractors and their sub-trades as follows:
- .3 Our Lady of Fatima CES Renovations located at 55 Hammet Street, Cambridge, ON N3C 2H5 on February 20, 2024, at 4:00pm.
- .4 Meet outside of Front Entrance.
- .5 Before tendering, the Bidder shall examine the site, and the Reports prepared by separately engaged Consultants, bound into the Specifications for reference only, and shall ascertain the extent and nature of the materials it may be necessary, and shall be sure that the Bidder's determinations are made in accordance with the drawings and specifications and the Reports.
- .6 Proposals shall include the cost imposed by existing conditions and limitations of site and the accepted proposal shall be held to have included such costs. NO ALLOWANCE WILL BE MADE FOR FAILURE TO EXAMINE THE EXISTING SITE.
- .7 The information shown on the drawings are furnished in good faith for the guidance of the Contractor, but shall in no way relieve the Contractor of the responsibility of ascertaining to the Contractor's own satisfaction the nature of all conditions at the site.

1.9 BID ENCLOSURES/REQUIREMENTS

- .1 Security Deposit
 - .1 Each tender shall be accompanied by a Bid Bond and Agreement to Bond in the most recent form approved by the Canadian Construction Association from a Surety Company, acceptable to the Board. The Bid Bond shall be in the amount of [...10% of Base Bid...], together with an Agreement to Bond. The Bid Bond must be valid for a minimum of sixty (60) Calendar Days from the closing date. Tenders not accompanied by a Bid Bond and Agreement to Bond will be declared informal.
 - .2 This Bid Bond shall be forfeited if the bidder declines to enter into a formal contract in the amount tendered, or as adjusted according to the separate prices included in the tender, and/or to furnish, when called upon to do so, a Performance Bond. This Bid Bond shall be accompanied by an Agreement from the Surety Company that a 50 % Performance Bond and a 50 % Labour and Material Payment Bond will be issued to the Bidder if the Bidder is awarded the contract. The cost of the Bonds shall be included in the amount of the Tender. Refer to the CCDC 2-2020 Stipulated Price Contract and the Supplementary Conditions, as attached, for further information.
 - .3 Retention and use of the Bid Bond, as outlined above, shall not be deemed a penalty, but a consideration to the Board for inviting and considering the Tender and as part payment for sustained damages and costs incurred by the Board, which shall be deemed to be the difference between the bid price of this Bidder and the bid price of the next lowest Bidder acceptable to the Board.
 - .4 A Performance Bond, equal to 50 % of the contract price, shall be furnished through a Surety Company or Insurance Company approved by the Consultant and the Board according to terms and conditions acceptable to the Board and the Consultant.
 - .5 On completion of the work, the Performance Bond shall remain in force as a MAINTENANCE BOND for a period of one (1) year from the date of

acceptance of the building by the Board. It shall form a guarantee of workmanship and materials for the one (1) year period.

.6 Use latest edition CCDC approved bond forms.

.2 Performance Assurance

- .1 The Bidder to whom the contract is awarded must properly sign the contract and furnish a satisfactory Performance Bond, Labour and Material Payment Bond, Insurance Certificate and Workers' Compensation Board Certificate within ten (10) Working Days of acceptance of the tender by the Board, or forfeit the Bid Bond.
- .2 Labour and Material Payment Bond, equal to 50 % of contract, to be provided within ten (10) Working Days, stating that the Board will not be held responsible if payment to subcontractors, as certified due by the Consultant, is not made by the General Contractor when due.
- .3 Tenders must include all costs involved in having the contract "Fit for Legal Occupancy and Substantial Performance" by **August 16, 2024** and having the entire building Totally Completed by **August 30, 2024**.
- .4 Persons or firms submitting tender proposals shall be actually engaged as their recognized business in the lines of work required by the specifications, and shall be able to refer to work of a similar character which has been satisfactorily performed by them.

.3 Fees for Changes in Work

- .1 It must be clearly understood that the Board cannot accept any price variation in the supply or installation of products or labour or materials from those submitted and carried by the Contractor at the time of tender. During the contract period, the Board will not be responsible for, or entertain any price increase in the cost of materials or labour carried in the tender amount.
- .2 The tender amount shall not include Harmonized Sales Taxes but shall include all other applicable excise taxes, custom duties, freight, exchange and all other charges in effect and known to come into effect during the construction work described in this Contract.
- .3 Unit Prices are exclusive of Harmonized Sales Taxes.
- .4 The successful Bidder must provide the Bidder's H.S.T. (Tax) Registration Number and each request for payment must show this number and the amount of H.S.T.(Tax) payable.
- .5 At the time of tender submission, include Separate Prices listed in the Supplemental Form of Tender for the identified items. Express each In Lieu of Price as a Credit or an Extra to the amount tendered. Contract Amount will be adjusted consistent with their acceptance or rejection by the Board. Separate Prices DO NOT include H.S.T.

.4 Unit Prices

- .1 UNIT PRICES FOR ADDITIONAL WORK SHALL NOT EXCEED UNIT PRICES FOR DEDUCTED WORK BY MORE THAN 20%.
- .2 Unit prices must be submitted at time of Tender.
- .3 The Board reserves the right to accept or reject any or all of the unit prices prior to entering into a contract.

- .4 The Board reserves the right to negotiate any or all of the unit prices with the low Bid Contractor prior to signing a contract
- .5 Refer to CCDC 2-2020 Part 6 CHANGES IN THE WORK regarding valuation of changes not covered by Unit Prices.

.5 Subcontractors

- .1 Bidders are required to submit the list of subcontractors. The list is to be submitted with tender, on the *Supplemental Form of Tender* included in the Contract Documents. The Bidder shall name in these lists the subcontractors proposed to perform the work under the contract. No substitutions to these lists shall be made without the written approval of the Consultants.
- .2 The selection of Subcontractors must be acceptable to the Board and to the Consultants. If the required substitution of a Subcontractor affects the subtender price, an adjustment will be made in the amount of the General Contract by the amount only of the difference in sub-tenders, without additional overhead or profit to the Contractor.
- .3 If the Bidder proposes to do work with persons directly employed by the Bidder and not subcontract, then the Bidder shall insert the words "Own Forces" provided the Bidder can submit proof that the Bidder's forces have had previous experience in this field.
- .4 Subcontractors shall be actually engaged as their own recognized business, in the line of work required by the specifications and shall carry out themselves the work which they are awarded by subcontract. They shall not be permitted to re-subcontract their work or portions thereof, to other contractors.

.6 Fair Wage and Labour

.1 Rate of wages, hours and conditions of work shall be in accordance with Provincial Codes and as generally recognized and accepted in the locality. Building mechanics and labourers resident in the district are to be employed where suitable.

.7 Discrepancies and Omissions

- .1 Bidders, including subcontractors, finding specified items unavailable, finding discrepancies in, or omissions from, the drawings or specifications or other contract documents, or having any doubt as to the intent or meaning of any part thereof, shall at once notify the Consultant in writing, who will issue an Addendum to all bidders in explanation of the inquiry if necessary.
- .2 All definitions, explanations, corrections or additional information will be issued by the Consultant during the time of bidding in the form of typewritten addenda and such addenda will be available to all Bidders. These shall become part of the contract documents and **must** be shown on the Form of Tender as having been received.
- .3 NO ORAL INSTRUCTIONS WILL BE VALID.

.8 Bidding Assumptions

.1 All bids submitted, are assumed to be based upon the complete set of Bid Documents.

.9 Errors in Tender

.1 The Board shall not entertain requests for gratuitous payments arising from errors alleged to have been made in a tender which the Board has accepted

.10 Building Permit

- .1 Building Permit has been applied for by the Consultant and shall be paid for by the Board.
- .2 The Contractor must, however, pay all other necessary fees, deposits and charges related to Municipal, Provincial and Federal Requirements. The General Contractor is responsible for determining the amounts of these permits, fees, etc.

.11 Contract Documents

- .1 The Contract shall be subject to the Requirements of the *CCDC 2-2020* Stipulated Price Contract and the Supplementary Conditions, as attached. The successful Bidder must sign the *CCDC 2-2020* Stipulated Price Contract as amended by the Supplementary Conditions using this document and these specifications and drawings, within ten (10) Working Days of notification of award. Failure to do so may result in termination of the award. The Contractor shall not be entitled to any payment until this document is signed.
- .2 All Contractors will be held to have examined and made themselves familiar with the various articles of these Standard Documents and shall be as binding for all sections of the following specifications as though written in full therein.

1.10 OFFER ACCEPTANCE/ REJECTION

- .1 Privilege and Waiver of Non-Compliance
 - .1 Notwithstanding anything elsewhere herein set out, the lowest or any proposal will not necessarily be accepted by the Board, and the Board reserves the right in its sole discretion to reject any and all proposals at any time or to accept any proposal which is considered advantageous by the Board. Proposals which are non-compliant with the requirements of this Tender, or which contain qualifying conditions, may be disqualified or the Board may waive any non-compliance with the Tender documents, and in its sole discretion, retain for consideration proposals which are non-conforming or non-compliant.

.2 Acceptance of Offer

.1 It must be clearly understood that the final acceptance of this contract is subject to approvals of the Board and other bodies and these may delay final approval. There will be no adjustments in the tendered price for a period of sixty (60) Calendar Days from receipt of Tenders due to delays resulting from obtaining necessary approvals.

.3 No Change in Pricing

- .1 It must be clearly understood that the Board cannot accept any price variation in the supply or installation of products or labour or materials from those submitted and carried by the Contractor at the time of tender. During the contract period, the Board will not be responsible for, or entertain any price increase, in the cost of materials or labour carried in the tender amount for any reason, including acts of war or world events.
- .4 Withdrawl of Bids.
 - .1 Bidders may edit or withdraw their Bid Submission prior to the closing time and date. However, the Bidder is solely responsible to ensure the re-submitted

bid is received by the Bidding System no later than the stated closing time and date.

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

1.11 SPECIFICATION MANUAL AND INSPECTIONS

- .1 The Bidder must be aware that the Board has instructed the Consultant to prepare a painting specification based upon the *Painting Architectural Specification Manual* prepared by the Ontario Painting Contractors' Association, 211 Consumers Road, Suite 305, Willowdale, ON, M2J 4G8
- .2 The Specification consists of three main components
 - .1 Evaluation and Choice of Systems Surface Preparation
 - .2 Approved Product/Manufacture Listing Specification Guide
 - .3 Inspection and Guarantee Program
 - .4 Refer to the specifications for the first two components listed above. The Inspection Procedure will be complied with in every respect by the successful General Contractor and the Painting Contractor as follows:
 - .1 Upon issuance of a subcontract to the Painting Contractor, the General Contractor shall fill out our "Request for Assignment of an Inspector" Form. The Inspection fee, which is a percentage charge of the painting subcontract price, will be paid from the Allowances identified in the General Instructions. Provide a copy of the properly executed Inspector Form to the Consultant and confirm the accuracy of the subcontractor's painting bid.
 - .5 The Form will contain the following information:
 - .1 Name of Contractor
 - .2 Name and Description of Project
 - .3 Name and Address of the Architect
 - .4 Job Location
 - .5 Project starting date
 - .6 Contract Price
 - .7 Commencement Date of painting.
 - .6 The Association will assign an Inspector to the project.
- .3 The Painting Contractor must advise the Association office of the actual starting date of painting. Painting shall not commence until the Association has been notified and the Inspector makes the initial site visit.
- .4 The Painting Contractor must supply the Inspector with a schedule of materials intended for use on the job at the commencement of the painting.
- During the painting application the frequency of inspections will be sufficient to ensure adequate Quality Control procedures in accordance with the Painting *Architectural Specification Manual* and the Specifications.
- The Inspector will use Interim Inspection Reports during the Project. One copy of each of these reports will be given to the Painting Contractor, one copy to the General Contractor, and two copies to the Association office, one of which will be forwarded to the Consultant. On completion of the job, the final Inspection Report will be made and routed as noted.

- .7 The Inspector will be required to check for proper preparation of surfaces, specified number of coats, as specified in the Specifications and drawings.
- .8 Any deficiencies must be corrected before the Guarantee is issued and final payment for painting made by the Board.
- .9 The Guarantee must cover making good any defects in painting and decorating due to faulty workmanship or defective materials supplied by the Painting and Decorating Subcontractor which appear during a two year period, following "substantial" completion of the Contract or the date of "Fit for Occupancy", whichever occurs first.

END OF SECTION

Section 00 41 00 FORM OF TENDER Page 1 of 6

1.1 TENDER INFORMATION

NAME OF BIDDER:	

TENDER CLOSE: February 28, 2024] at 2:00.00 p.m.

SUPPLEMENTAL TENDER FORM CLOSE:

February 28, 2024] at 4:00.00 p.m.

NAME OF PROJECT: Our Lady of Fatima CES Renovation

PROJECT NUMBER: RFT 2024-04

ELECTRONIC BID SUBMISSIONS ONLY, shall be received by the Bidding System.

Supplementary Form of Tender to be emailed to Stephen.butterworth@wcdsb.ca

1.2 ACKNOWLEDGEMENT RE EXAMINATION OF TENDER DOCUMENTS

Having carefully examined all of the drawings (Architectural, Structural, Mechanical, Electrical, Site Servicing and Landscape) and having carefully examined the Instructions to Bidders, the requirements of the CCDC 2-2020 Stipulated Price Contract, as amended by the Supplementary Conditions, as attached, and all of the attached Specifications; (Architectural, Structural, Mechanical, Electrical, Site Servicing and Landscape) including Addenda numbered as follows:

Addenda #	to/and including Addenda
#	

and, having visited the sites, investigated and examined all conditions affecting the Work, including soil reports and surveys, and other reports as included in the Tender Documents, the undersigned Bidder makes the offers set out below.

1.3 CASH ALLOWANCES

.1 All allowances specified under Section **01 21 00** only amended as provided hereunder.

The Tender Amount includes the total Cash Allowance of **\$65,000.00** not including Harmonized Sales Tax (HST). (HST on Cash Allowance is not to be included in the Tender Amount)

Section 00 41 00 FORM OF TENDER Page 2 of 6

1.4 TENDER AMOUNT

.1	The undersigned Bidder hereby offers to furnish all materials, labour, plant and equipment and to perform all duties and services called for by the ENTIRE WORK INCLUDING ALL TRADES for the Project named above for the stipulated sum of:		
	(Written Value)		
	\$(Numeric Value)		
	in lawful money of Canada, excluding Harmonized Sales Tax, but <u>including</u> all other applicable Excise Taxes, Custom Duties, Insurance's, Freight, Exchange and all other charges.		

1.5 TENDER VALIDITY

.1 The undersigned Bidder is hereby submitting a valid Tender and will enter into the CCDC 2-2020 Stipulated Price Contract, as amended by the Supplementary Conditions, as attached, if we are notified in writing of our Tender acceptance by THE BOARD within sixty (60) calendar days from the closing of the Tender.

1.6 BONDING

- .1 The undersigned Bidder encloses a Bid Bond in the amount of [10]% made out in the name of WATERLOO CATHOLIC DISTRICT SCHOOL BOARD.
- .2 It is a condition of this Agreement that if the above mentioned Tender is accepted, application for a 50% Performance Bond and a 50% Labour and Material Payment Bond must be completed with undersigned within ten (10) days of acceptance of the tender related thereto, otherwise this Agreement shall be null and void.

1.7 CONSTRUCTION SCHEDULE

- .1 The undersigned Bidder solemnly undertakes, as an integral part of our proposal and tender to:
 - (a) Have the buildings "Fit for Occupancy" by August 16, 2024,
 - (b) Have all buildings and site work completed by August 23, 2024 and
 - (c) Have the Contract completed in its entirety by August 30, 2024.
- .2 The undersigned Bidder confirms that all appropriate costs, such as but not limited to winter heat, inclement weather protection and all overtime costs for all

- trades to meet the aforementioned schedule, have been included in our tender price to achieve this date.
- .3 The Bidder acknowledges and agrees that so long as a building permit is obtained and the Bidder is directed to commence Work within the **sixty (60)** calendar days following the Closing Date, even if such direction does not occur until the **fifty-ninth (59**th) day following the Closing Date, the Bidder shall not be entitled to a delay claim.
- .4 The undersigned Bidder acknowledges and agrees to comply with the terms and conditions of the Project Occupancy Requirements as outlined in the Supplementary Conditions, attached hereto

1.8 REQUIRED DOCUMENTS

.1 If notified of the acceptance of this Tender via a Letter of Intent issued by the Board, the undersigned Bidder agrees to provide the prerequisite documentation within ten (10) days.

1.9 FEES FOR CHANGES IN THE WORK

.1 The undersigned Bidder acknowledges and agrees that the fees referred to in CCDC 2-2020 Stipulated Price Contract, as amended by the Supplementary Conditions, as attached, will apply to changes in the Contract not covered by Unit Prices.

1.10 SUPPLEMENTARY FORM OF TENDER

- .1 The undersigned Bidder agrees to submit the *SUPPLEMENTARY FORM OF TENDER*, as attached, at Tender close, which shall including the following:
 - BID AND COST BREAKDOWN
 - LIST OF SUBCONTRACTORS / SUPPLIERS / INSTALLERS
 - SEPARATE PRICES REQUESTED BY CONSULTANTS
 - UNIT PRICES
 - ITEMIZED PRICES REQUESTED BY CONSULTANTS
 - ALTERNATE PRICES TO BASE BID
 - LIST OF ALTERNATIVE BIDS SUBMITTED FOR CONSIDERATION

1.11 DECLARATION OF NO CONFLICT

.1 The undersigned Bidder hereby declares that this Tender submission is made in good faith and without any connection, knowledge, comparison of figures, or arrangements with any other company, firm, or person making a Tender for the same work and is, in all respects, fair and without collusion with any other bidder for this Contract, and without fraud. The undersigned also represents and warrants that, to the best of the undersigned's knowledge and belief, no actual or potential conflict of interest exists with respect to the submission of the Tender or performance of the Contract other than those disclosed hereunder. The undersigned confirms that, where the Board discovers that the undersigned has failed to disclose all actual or potential conflicts of interest, the Board may

- disqualify the undersigned or terminate any Contract awarded to the undersigned pursuant to this Tender process. The undersigned understands that, for the purposes hereof, "conflict of interest" also includes:
- (a) in relation to the Tender process, the undersigned has an unfair advantage or engages in conduct, directly or indirectly, that may give the undersigned an unfair advantage, including:
 - (i) having or having access to information in the preparation of the undersigned's proposal that is confidential to the Board and not available to other bidders; communicating with any person with a view to influencing preferred treatment in the Tender process; or, engaging in conduct that compromises or could be seen to compromise the integrity of the open and competitive process and render that process non-competitive and unfair; or,
- (b) in relation to the performance of its contractual obligations in a Board contract, the undersigned's other commitments, relationships or financial interests:
 - (i) could or could not be perceived to exercise an improper influence over the objective, unbiased and impartial exercise of the Board's independent judgment; or,
 - (ii) could or could not be perceived to compromise, impair or be incompatible with the effective performance of the undersigned's contractual obligations.

1.12 MUNICIPAL FREEDOM OF INFORMATION AND PROTECTION OF PRIVACY ACT

.1 This Tender and supporting documentation shall become the property of the Board. Information in a Tender is subject to potential disclosure to third parties after the award, in accordance with the provisions of the Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990 ("MFOIPOP"). The Bidder acknowledges that any personal or confidential information which Bidders provide is being collected and will be used exclusively for the purposes of analyzing, evaluating and assessing Tenders submitted. Any information a Bidder wishes to identify as proprietary and have maintained as confidential, excluding unit pricing information as well as the total dollar value of the Tender. must be clearly identified as such, and any proposed restrictions on disclosure specified. For the purposes of a report to the Trustees of the Board, pricing information as well as the total dollar value of the Tender may be reported in a public report and will not be considered confidential. In addition, the Board may be ordered by the Information & Privacy Commissioner under the provisions of MFOIPOP to disclose additional information identified by a Bidder as proprietary and confidential.

1.13 LIMITATION OF LIABILITY

.1 By submitting a Tender, the undersigned Bidder acknowledges and agrees that the Board will have no liability or obligation to any Tender except only that of the

Section 00 41 00 FORM OF TENDER Page 5 of 6

successful Bidder, if any, awarded the Contract by the Board, in its sole discretion. The Bidder also agrees that if the undersigned is not awarded the Contract, the Board shall be fully and forever released and discharged of all liability and obligations relating to this Request for Tender and all its submission procedures. All Bidders responding to this Request for Tender shall accept the decision of the Board as final and binding.

Section 00 41 00 FORM OF TENDER Page 6 of 6

1.14 SIGNING OF TENDER

The undersigned Bidder is hereby su Corporate Seal or witnessed by an Ir	bmitting this Stipulated Sum Tender under a dividual.
PRINT COMPANY NAME:	
PRINT ADDRESS OF COMPANY:	
PRINT NAME OF CONTACT PERSON REGARDING THIS TENDER:	
CONTACT PERSON'S EMAIL:	
PHONE NUMBER OF COMPANY:	
SIGNATURE OF SIGNING OFFICER:	
DATE:	
PRINT NAME OF SIGNING OFFICER:	
PRINT TITLE OF SIGNING OFFICER:	
SIGNATURE OF WITNESS:	
PRINT NAME OF WITNESS:	
AFFIX CORPORATE SEAL (If no individ	ual Witness):

END OF SECTION

Section 00 71 00 SUPPLEMENTARY FORM OF TENDER Page 1 of 11

Submit this Supplementary Form of Tender at the close of General Tenders.

1.1 TENDER INFORMATION

TENDER CLOSE: February 28, 2024 at Time 2:00:00 p.m.

SUPPLEMENTAL TENDER FORM CLOSE: February 28, 2024 at Time 4:00:00 p.m

NAME OF PROJECT: Our Lady of Fatima CES Renovation

PROJECT NUMBER: RFT 2024-04

Submission Email Address: stephen.butterworth@wcdsb.ca

1.2 SUPPLEMENTARY LIST OF SUBCONTRACTORS

.1 I/We, the undersigned, propose to use the following Subcontractors and/or suppliers to perform work of this Contract, and I/we confirm that all have been investigated to confirm their reliability and competence to carry out the Work in accordance with the Contract Documents; and I/we agree that no changes from this may be made without the express written approval of the Board.

Extra costs to the Contract will not be considered for a Subcontractor/supplier substitution, regardless of the reason, except where a substitution is requested by the Owner.

Site Services	
Masonry	
Metal Fabrications	
Sprayed Fireproofing	
Roofing	
Glazing	
Gypsum Board and Acoustical Ceilings	
Ceramic Tile	
Resilient Flooring	
Painting	
Electrical	
Mechanical	

Section 00 71 00 SUPPLEMENTARY FORM OF TENDER Page 2 of 11

1.3 **SEPARATE PRICES**

1.4

.1

- Separate Price items do NOT replace or substitute items already in the Bid .1 Accepted Separate Prices are to be in accordance with Section 002100 (Instructions to Bidders) excluding HST:
 - V

	REMOVE AND DISPOSE OF EXISTING VCT TILE AND ALL ASSOCIATED WORK IN AREAS IDENTIFIED AND REPLACE WITH NEW IQ OPTIMA HOMOGENEOUS SHEET AND TILE FLOORING AS MANUFACTURED BY - TARKET (OR APPROVED ALTERNATE).		
	\$		
Ν	NDATORY REQUIREMENT		
	oofing Contractors		
	Provide address and name of similar size or larger Tremco Multi-Ply built-up asphalt roofing systems 20-year labour and material warranty per section 07 51 13.		
	roject address:		
	roject name:		
	LECTRICAL UNIT PRICES:		
	We enclose herewith Unit Prices, exclusive of applicable taxes, which are an tegral part of the Bid. Unit prices are, in effect, for the duration of this Project's		

1.5

- .1 construction period, unit prices are exclusive of applicable taxes.
- .2 The following unit costs will apply to all additional or deleted work from the Contract and should include their proportionate share of all labour equipment. materials, accessories, profits, overhead and taxes for a job completely installed. Applications of unit prices will be to the net difference of quantities of individual products and materials in each Proposed Change or Change Order.
- .3 The unit prices will be used for additions and deletions. Credit rate for deletions shall be at 80% of original rates listed under sections 1.4, 1.5, 1.6, 1.7, 1.8, 1.9.
- .4 Conduit and Cable:

Supply and install the following conduit and cables including fastenings, clips, connectors, coupling boxes, etc. as required based on length as shown.

		MORE WORK
.1	25MM EC/3500mm Length	\$
.2	2 #12-12mm C/3500mm Length	\$
.3	3 #12-12mm C/3500mm Length	\$

Section 00 71 00 SUPPLEMENTARY FORM OF TENDER Page 3 of 11

MORE WORK

	.4	2 #10-19mm C/3500mm Length	\$
	.5	3 #10-19mm C/3500mm Length	\$
	.6	3 #8- 19mm C/3500mm Length	\$
.5		Receptacles:	
		Supply and installation of one duplex receptacle, shall incover plate, 5000mm of conduit and wiring, including	
		receptacle and/or outlet box.	MORE WORK
	.1	Supply and installation of one duplex receptacle	\$
.6		Light Switches	
		Supply and installation of light switch shall include the conduit, wiring and connection to box containing the lighting	
	.1	Supply and installation of one 347 volt light switch.	\$
.7		Fire Alarm System:	MORE WORK
	.1	Supply and installation of one fire alarm pull station, including conduits, wiring and connections to the nearest fire alarm pull station. (Base conduit and wiring on 1500mm length).	<u>MORE WORK</u>
	.2	Supply and installation of one fire alarm cone speaker including conduit, wiring and connections to nearest fire alarm cone speaker. (Base conduit and wiring on 1500mm length).	\$
.8		Lighting Fixtures:	
		Supply and installation of the following lighting fixtures. The of lighting fixtures shall include the fixtures, flexible conducton earest outlet box containing 347 and/or 120 volt circumstallation of the lamps. (Base conduit and wiring on 450)	it, wiring and connection cuits and the supply and

.1 Supply and installation of one type

Section 00 71 00 SUPPLEMENTARY FORM OF TENDER Page 4 of 11

		'A' fixture	\$	
	.2	Supply and installation of one type 'B' fixture	\$	
	.3	Supply and installation of one type 'C' fixture	\$	
1.6	.4 L .	Supply and installation of one type 'E' fixture ABOUR RATES	\$	
	rates are	close herewith Labour Rates which are an integening in effect for the duration of this Project's construct to accept Labour rates indicated.		
	.1 M	lechanical <u>Labour Rates</u>		
	w be	abour at the following rates should be applied fork not covered by unit prices. The prices consist enefits. The rate quoted represents the net cost verhead and profit and applicable taxes.	of salary, all agree	d local union
	.1	Plumbing & Drainage Tradesmen	\$	_Per Hour
	.2	HVAC Piping Tradesman	\$	_Per Hour
	.3	Insulation Tradesmen	\$	_Per Hour
	.4	Sheet Metal Tradesmen		
	.1	Shop	\$	_Per Hour
	.2	. Field	\$	_Per Hour
	.5	(Other)	\$	_Per Hour
	.6	Sprinkler Pipefitter & Installer	\$	_Per Hour
	.7	Sprinkler Work Office/Engineer	\$	Per Hour

SPRINKLER SUB-CONTRACTOR CASA MEMBERSHIP **1.7**

Sprinkler Contractor shall be a paid member, and in good standing at time of Tender, of the Canadian Automatic Sprinkler Association. Attach membership certificate to this Supplementary Form of Tender.

1.8

Section 00 71 00 SUPPLEMENTARY FORM OF TENDER Page 5 of 11

.1	work not covered by uniunion benefits. The rate	rates shall be applied for act to prices. The prices consist equoted represents the nearly applicable tax	t of salary, all ag cost to the Cont	reed local	
.1	Journeyman		\$	Per Hour	
.2	Foreman		\$	Per Hour	
	MECHANICAL MANUF	ACTURERS AND SUPPL	IERS:		
Service select f on the alter th I/We, t	es which is an integral patrom any substitutes that very equipment/manufacturers e indicated equipment/mathe undersigned, have in	Manufacturers and Supplicant of the Tender. We here we have offered in our Tender indicated hereunder and vanufacturers unless specificated below proposed se	eby agree that the der. Our Tender ve hereby agree to cally authorized b	ne Owner may Price is based that we will not by the Owner.	
	's consideration. gree that:				
.1	all prices submitted take into consideration and allow for changes and adjustments in other work as may be necessary to provide a finished and				
.2	alternative prices are for Form of Tender but which	specifically indicated other work which is not included the may be substituted by the shall mean no change in control of the shall mean and change in control of the shall mean and the	d in the Tender p ne Owner for wor		
.3	and that the Board reser	rves the right to accept or r	•	orices	
.4	proposed hereunder; prices listed hereunder of	do not include HST			
	Product/Equipment Specified	Proposed <u>Substitution</u>		Reduction in Contract Price	
.1					
.2	-		<u> </u>		
.3	-		<u> </u>		
.4			\$		

Attach additional sheets and supporting documentation, if necessary.

1.9 STANDARDS OF MECHANICAL MATERIALS

BASE BID ITEM	ACCEPTABLE BASIS OF DESIGN	ALTERNATE
Pipe Hangers	Grinnell	Crane, Flamco, Unistrut
Mechanical Grooved Joints	Victaulic	Coupco, Gruvlok
Unions	Crane	Grinnell, Dart
Expansion Joints	Flexonics	Amtrol, Hydroflex Tube Turn
Gate, Globe & Ball Valve	Crane	Jenkins, Toyo/R+W Kitz
Check Valves	Crane	Jenkins, Toyo/R+W Kitz
Plug Valves	DeZurick	NEO
Circuit Balancing Valves	Tour and Andersson	
Butterfly Valves	Crane	Jenkins, Centerline, Kitz,Toyo
Thermal Insulation	Fiberglas Canada	Manson, Knauf Johns-Manville
Pumps & Circulators (Except as noted)	S.A. Armstrong	ITT Fluids
Extended Shaft Coupling VIL Pumps	S.A. Armstrong	ITT Fluids
Strainers	Sarco	Crane, McAvity, Morrison Brass, Braukmann
Suction Guides	S.A. Armstrong	ITT Fluids, Victualic
Automatic Air Vents	Sarco	Amtrol, Braukmann S.A. Armstrong Trerice
BASE BID	ACCEPTABLE	

Section 00 71 00 SUPPLEMENTARY FORM OF TENDER Page 7 of 11

ITEM	BASIS OF DESIGN	ALTERNATE
Backflow Preventors	Watts	Braukmann, Zurn-Wilkins
Make-Up Assemblies	Watts	S.A. Armstrong, Bell & Gossett, Mueller, Singer
Gauges, Thermometers	Trerice	Ashrcroft, Weiss Weksler, Winters, Wika
Finned Tube Radiation and Convectors	Sigma	Dunham-Bush, Trane Engineered Air
Hot Water Unit Heaters and Cabinet Heaters	Sigma	Dunham-Bush, McQuay, Trane, Engineered Air
Steam Humidifiers	Engineered Air	Dri Steem
Hot Water Boilers	Boderus	
Prefabricated Chimneys	Van-Packer	Metal-Fab, Selkirk, ICC
Water Treatment	Aqurian	Alchem, Mogul, Culligan, Finnan
Fire Dampers	Controlled Air	Air Balance, Canadian Advanced Air, Ruskin
Louvre Insulated Blank-off Panels	Construction Specialties	
Air Terminal Devices (Diffusers, Registers, Grilles By-Pass Boxes)	E.H. Price	Nailor, Kruger, Carnes, Titus Tuttle & Bailey
Air Handling Unit	Engineered Air	McQuay, Trane, Haakon

BASE BID ITEM	ACCEPTABLE BASIS OF DESIGN	ALTERNATE
Heat Recovery Unit	Engineered Air	McQuay, Trane, Haakon
Fan Coil Units	Enviro-Tech	Trane, York
Misc. Fans	Cook	Carnes, Greenheck, ACME, Jenn-Air
Air Filters	Farr	Cambridge, Airguard, Vibron, A.A.F.
Filter Gauges	Dwyer	Airflow Developments (Canada) Ltd.
Dampers (Except low leakage)	Tamco	Johnson, Powers, Kerr Hunt, Honeywell, Barber-Coleman
Low Leakage Dampers	Tamco Series 9000	
ElectricalStarters, Disconnects, MCC's, Alternator Panels	Square 'D'	Allen-Bradley, Klockner-Moeller
Noise and Vibration Control	Vibron	Korfund-Sampson, Vibro-Acoustics, Coolbreeze J.P. Environmental
Electric Pipe Tracing	Raychem	Serge-Baril
Trap Primers	PPP	
Plumbing Fixtures	American Standard	Crane, Kohler, Eljer
Floor Drains, Roof Drains, Cleanouts, Drainage Specialties	Zurn	Ancon J.R. Smith Mifab
Plumbing Trim	Chicago Faucets, Symmons	American Standard, Crane, Cambridge Brass

BASE BID ITEM	ACCEPTABLE BASIS OF DESIGN	ALTERNATE
Toilet Seats	Centoco	Beneke, Moldex, Olsonite
Domestic Water Heaters	Bradford-White	A.O. Smith, John Wood
Fire Extinguishers & Cabinets	National Fire Equipment	Wilson & Cousins
Washfountains	Bradley, Acorn	
S.S. Sinks	Aristaline	Kindred, Architectural Metal
Drinking Fountains	Haws	Sunroc
Emergency Eyewash	Haws	Bradley, Speakman
Mixing Valves	Symmons	Powers
Alarm Valves And Trim	Grinnell, Central	Reliable, Viking, Automatic, Victaulic
Siamese Connections	National Fire Equipment	Wilson & Cousins, Stelpro
Sprinkler Heads	Grinnell, Central	Reliable, Viking, Automatic, Victaulic
Equipment Cabinets	National Fire Equipment	Wilson & Cousins, Stelpro
Excess Pressure Pump	Albany	

Section 00 71 00 SUPPLEMENTARY FORM OF TENDER Page 10 of 11

1.10 ITEMIZED PRICES

These Itemized Prices will be used to identify the cost of components within the total Bid Sum required for the Owner's own internal auditing, exclusive of HST.

Supply and installation of Fire Alarm System complete with associated components, conduit and wiring as shown on drawing and described in specification.	
Dollars (\$)
Supply and installation of Dimming System complete with associated components, conduit and wiring as shown on drawing and described in specification.	
Dollars (\$)
Supply and installation of Security System complete with associated components, conduit and wiring as shown on drawing and described in specification.	
Dollars (\$)

1.11

Section 00 71 00 SUPPLEMENTARY FORM OF TENDER Page 11 of 11

SIGNING OF SUPPLEMENTARY FOR	M OF TENDER
PRINT COMPANY NAME:	
PRINT NAME OF CONTACT PERSON REGARDING THIS TENDER:	
PRINT ADDRESS OF COMPANY:	
PHONE NUMBER OF COMPANY:	
PRINT NAME OF CONTACT PERSON REGARDING THIS TENDER:	
CONTACT PERSON'S EMAIL:	
EMAIL ADDRESS SIGNING OFFICER:	
SIGNATURE OF SIGNING OFFICER:	
DATE:	
PRINT NAME OF SIGNING OFFICER:	
PRINT TITLE OF SIGNING OFFICER:	
SIGNATURE OF WITNESS:	
PRINT NAME OF WITNESS:	
AFFIX CORPORATE SEAL (If no individua	Il Witness):

END OF SECTION

Section 00 72 00 GENERAL CONDITIONS OF THE CONTRACT

Page 1 of 1

The CCDC 2-2020 Stipulated Price Contract (Section 00 80 00) issued by the Canadian Construction Documents Committee shall govern this contract. All Articles, Definitions, and General Conditions outlined in Parts 1 to Part 12, as amended by Supplementary General Conditions (Section 00 81 00), WCDSB Instructions herein included, form an integral part of the Contract.

END OF TABLE



SUPPLEMENTARY CONDITIONS

AMENDMENTS TO CCDC 2 – 2020 STIPULATED PRICE CONTRACT (Version May 2022)

_ 1 .



SUPPLEMENTARY CONDITIONS & AMENDMENTS TO STANDARD CONSTRUCTION DOCUMENT CCDC2 -2020 STIPULATED PRICE CONTRACT

(the "Supplementary Conditions")

AGREEMENT, DEFINITIONS, AND GENERAL CONDITIONS

Waterloo Catholic District School Board

SUPPLEMENTARY CONDITIONS

AMENDMENTS TO CCDC 2 - 2020

STIPULATED PRICE CONTRACT (Version May 2022)

- 2 -

The Standard Construction Document CCDC 2 2020 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 13 inclusive, governing same, together with the changes with the new *Construction Act* is hereby made part of these *Contract Documents*, with the following amendments, additions and modifications:

AGREEMENT BETWEEN OWNER AND CONTRACTOR

SC1 ARTICLE A-1 – THE WORK

SC1.1	A-1.3	Amend Article A-1.3 by deleting all of the words after "Contract Documents" and replace them with the following"	1
		"attain	l
		 .1 Substantial Performance of the Work by the 30th day of August in the year 2024. .2 (if applicable) Occupancy by the 16th day of August in the year 2024, and .3 Ready-for-Takeover by the 30th day of September in the year 2024." 	

SC2 ARTICLE A-3 – CONTRACT DOCUMENTS

SC2.1	A-3.1	Add the following documents to the list of Contract Documents in Article A-3.1:
		 Waterloo Catholic District School Board's Supplementary Conditions & Amendments to Standard Construction Document CCDC2-2020 Stipulated Price Subcontract, May 2022 Version, including any Special Supplementary Conditions listed in Appendix 2 thereto
		• Drawings
		Specifications
		Performance Bond (Form 32 -Performance Bond under Section 85.1 of the Act)
		Labour and Material Payment Bond (Form 31 – Labour and Material Payment Bond under Section 85.1 of the <i>Act</i>)

SC3 ARTICLE A-4 – CONTRACT PRICE

SC3.1	A-4.4	Delete Article A-4.4 and replace it with the following:
		"4.4 The Contract Price shall remain fixed for the duration of the Contract Time, subject only to adjustments as provided for in the Contract Documents. For certainty, and without limiting the general application of the preceding sentence, the Contractor assumes all risks in connection with cost increases for overhead, Products, Labour, and Construction Equipment prescribed by the Contract Documents for the performance of the Work, and the Contractor assumes all responsibility for liabilities and additional costs that may arise as a result of the Contractor's inclusion of any Product, Construction Equipment, Supplier, or Subcontractor in its calculation of the Contract Price."

SC4 ARTICLE A-5 - PAYMENT

SC4.1	A-5.1	Delete Article A- 5.1 in its entirety including all subparagraphs and replace it with the following:

SUPPLEMENTARY CONDITIONS

AMENDMENTS TO CCDC 2 – 2020

STIPULATED PRICE CONTRACT (Version May 2022)

- 3 -

		"5.1 Subject to the provisions of the <i>Contract Documents</i> and the <i>Construction Act</i> , the <i>Owner</i> shall:
		.1 make progress payments to the Contractor on account of the Contract Price when due together with such Value Added Taxes as may be applicable to such payments,
		upon Substantial Performance of the Work as certified by the Consultant, and on the 61 st day after the publication of the certificate of Substantial Performance of the Work, in accordance with the Construction Act, there being no claims for lien registered against the title to the Place of the Work and no written notices of lien delivered to the Owner, pay the Contractor the unpaid balance of the holdback, together with such Value Added Taxes as may be applicable to such payment, less any amount stated in the Owner's Notice of Non-Payment.
		.3 after Ready-for-Takeover has been achieved in accordance with the Contract Documents and the Work is complete, there being no claims for lien registered against the title to the Place of the Work and no written notices of lien delivered to the Owner, pay the Contractor any unpaid balance of the Contract Price in accordance with GC 5.5 – FINAL PAYMENT, together with such Value Added Taxes as may be applicable to such payment."
SC 4.2	A-5.2.1	<u>Delete</u> subparagraph 5.2.1 in its entirety and <u>replace</u> it with the following:
		".1 Should either party fail to make payments as they become due under the terms of the <i>Contract</i> or in an award by arbitration or court, interest shall also become due and payable on such unpaid amounts at the prejudgment interest rate prescribed by the <i>Courts of Justice Act</i> (Ontario), as it may change from time to time."

SC5 *NEW* ARTICLE A-9 – CONFLICT OF INTEREST

SC5	5.1	A-9	Add new A	ARTICLE A-9 CONFLICT OF INTEREST as follows:
			"ARTICLE	A-9 CONFLICT OF INTEREST
			pi ai se C ae in	the Contractor, Subcontractors and Suppliers and any of their respective advisors, artners, directors, officers, employees, agents, and volunteers shall not engage in my activity or provide any services where such activity or the provision of such ervices 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 cknowledges and agrees that a conflict of interest, as described in this Article A-9, actudes, but is not limited to, the use of Confidential Information where the Owner has not specifically authorized such use.
			po a	he <i>Contractor</i> shall disclose to the <i>Owner</i> , in writing, without delay, any actual or otential situation that may be reasonably interpreted as either a conflict of interest or potential conflict of interest, including the retention of any <i>Subcontractor</i> or <i>Supplier</i> nat is directly or indirectly affiliated with or related to the <i>Contractor</i> .
			ei si m	the Contractor covenants and agrees that it will not hire or retain the services of any imployee or previous employee of the Owner where to do so constitutes a breach by uch 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.
			lia	is of the essence of the <i>Contract</i> that the <i>Owner</i> shall not have direct or indirect ability to any <i>Subcontractor</i> or <i>Supplier</i> , and that the <i>Owner</i> relies on the naintenance of an arm's-length relationship between the <i>Contractor</i> and its

SUPPLEMENTARY CONDITIONS

AMENDMENTS TO CCDC 2 – 2020

STIPULATED PRICE CONTRACT (Version May 2022)

- 4 -

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.
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, OR TERMINATE THE CONTRACT, a breach of this Article A-9 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."

SC6 *NEW* ARTICLE A-10 TIME OF THE ESSENCE

9.5

SC6.1	Article A-10	Add the following new Article A-10 as follows:
		"ARTICLE A-10 TIME OF THE ESSENCE
		10.1 It is agreed that one of the reasons the <i>Contractor</i> was selected by the <i>Owner</i> for this <i>Contract</i> is the <i>Contractor's</i> representation and covenant that it will attain <i>Substantial Performance, Occupancy</i> (if applicable), and <i>Ready-for-Takeover</i> within the <i>Contract Time</i> stated in Article A-1 of this <i>Contract</i> .
		10.2 The Contractor acknowledges and agrees that it is responsible to marshal its resources and those of its Subcontractors and Suppliers in a manner which will permit timely attainment of Substantial Performance, Occupancy (if applicable), and Readyfor-Takeover. The Contractor agrees that time is of the essence of this Contract."

SC7 DEFINITIONS

Revisio	ns to Existing Definitions	
SC7.1	Consultant	Amend the definition of "Consultant" by adding the following to the end of the definition:
		"For the purposes of the <i>Contract</i> , the terms " <i>Consultant</i> ", " <i>Architect</i> " and " <i>Engineer</i> " shall be considered synonymous."



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SC7.2	Payment Legislation/Construction Act	<u>Delete</u> the Definition of <i>Payment Legislation</i> and replace it with "Construction Act" as follows:
	Act	"Construction Act
		Construction Act means the Construction Act, R.S.O. 1990, c. C.30, as amended, including all regulations passed under it that are enforceable as of the date of execution of this Contract. For certainty, the first procurement process for the Project (i.e., the "improvement" as that term is defined in the Construction Act) was commenced on or after October 1, 2019."
SC7.3	Ready-for-Takeover	Amend the Definition of Ready-for-Takeover by deleting all the words after "as verified" and replacing them with "and approved by the Owner."
New De	finitions	
SC7.4	Adjudication	Add the following definition:
		"Adjudication
		Adjudication means construction dispute interim adjudication as defined under the Construction Act."
SC7.5	Close-Out	Add the following new definition:
	Documentation	"Close-Out Documentation Close-Out Documentation has the meaning given to it under GC 5.4.2."
SC7.6	Confidential Information	Add the following definition:
		"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 <i>Contractor</i> , including without limitation breach of any duty of confidentiality owed by the <i>Contractor</i> to the <i>Owner</i> or to any third party, but only after that information becomes generally available to the public;
		.2 the <i>Contractor</i> can demonstrate to have been rightfully obtained by the <i>Contractor</i> from a third party who had the right to transfer or disclose it to the <i>Contractor</i> 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."
SC7.7	Construction Schedule	Add the following definition:
		"Construction Schedule Construction Schedule means the schedule for the performance of the Work provided by the Contractor, and approved by the Owner, pursuant to GC 3.4.1, including any amendments to the Construction Schedule made pursuant to the Contract Documents."



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SC7.8	Construction Schedule Update	Add the following definition:
	Opuale	"Construction Schedule Update
		Construction Schedule Update means an update to the Construction Schedule by the Contractor using Microsoft Project (or other approved scheduling software) that accurately depicts the progress of the Work relative to the critical path established in the Construction Schedule approved in GC 3.5.1 (or any approved successor Construction Schedule), aligns with the currently approved date for Substantial Performance of the Work, shows up-to-date projected major activity sequences and durations, and shows any changes or delays in anticipated completion dates of major activities in the Work relative to the last Construction Schedule Update, and includes the following minimum deliverables:
		(a) a record version of the updated Construction Schedule in .pdf format;
		(b) an editable copy of the updated original digital file of the Construction Schedule (e.g., .mpp format files for Microsoft Project)."
SC7.9	Direct Costs	Add the following definition:
007.9	Direct Costs	"Direct Costs
		Direct Costs are the reasonable costs of performing the contract or subcontract including costs related to the additional supply of services or materials (including equipment rentals), insurance and surety bond premiums, and costs resulting from seasonal conditions, that would not have been incurred, but do not include indirect damages suffered, such as loss of profit, productivity or opportunity, or any head office overhead costs."
SC7.10	EFT	Add the following definition:
		"EFT
		EFT has the definition given to it under GC 5.3.2."
SC7.11	Excess Soil	Add the following definition:
		"Excess Soil Excess Soil means "excess soil" as that term is defined under section 3 of the Excess Soil Regulation."
SC7.12	Excess Soil Regulation	Add the following Definition:
		"Excess Soil Regulation Excess Soil Regulation means O. Reg. 406/19: On-Site and Excess Soil Management to the Environmental Protection Act, R.S.O. 1990, c. E.19."
SC7.13	Final Pre-Invoice	Add the following ne definition:
	Submission Meeting	"Final Pre-Invoice Submission Meeting Final Pre-Invoice Submission Meeting has the meaning given to it in GC 5.5.1."



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SC7.14	Force Majeure	- / - Add the following definition:
		"Force Majeure
		Force Majeure means any cause, unknown at the effective date of the Contract and beyond either party's control, other than financial difficulties, bankruptcy or insolvency, which prevents the performance by a party, or both, of any of their respective obligations under the Contract and the event of Force Majeure did not arise from a party's default and could not be avoided or mitigated by the exercise of reasonable effort or foresight. Force Majeure includes Labour Disputes; fire; unusual delay by common carriers or unavoidable casualties; delays in obtaining third-party licences, permits, agreements, or approvals (excluding approvals of any Subcontractors or Suppliers of any tier); civil disturbance; emergency 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; adverse weather conditions but only if substantially beyond the weather norms of the Place of the Work; acts of God; or declared epidemic or pandemic outbreak or other public health emergency (e.g. SARS, COVID-19)."
SC7.15	Install	Add the following definition:
		"Install
		Install means install and connect. Install has this meaning whether or not the first letter is capitalized."
SC7.16	Labour Dispute	Add the following definition:
		"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."
SC7.17	Notice of Non-Payment	Add the following definition:
		"Notice of Non-Payment
		Notice of Non-Payment means a notice of non-payment of holdback (Form 6) or a notice of non-payment (Form 1.1) under the Act, as applicable to the circumstances."
SC7.18	OHSA	Add the following definition:
		"OHSA
		OHSA means the Occupational Health and Safety Act, R.S.O. 1990, c. O.1, as amended, including all regulations thereto."
SC7.19	Overhead	Add the following definition:
		"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 <i>Place of the Work</i> ; 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."



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007.00	December 1 Decit 1	Add the fellowing definitions
SC7.20	Payment Period	Add the following definition:
		"Payment Period
		Payment Period has the definition given to it under GC 5.2.1."
SC7.21	Pre-Invoice Submission Meeting	Add the following definition:
	Weeting	"Pre-Invoice Submission Meeting
		Pre-Invoice Submission Meeting has the definition given to it under GC 5.2.1."
SC7.22	Proper Invoice	Add the following definition:
		"Proper Invoice
		Proper Invoice means a "proper invoice" as that term is defined in Section 6.1 of the Act, including the minimum requirements set out in Appendix "1" of the Supplementary Conditions."
SC7.23	Proper Invoice Submission Date	Add the following definition:
	Submission Date	"Proper Invoice Submission Date
		Proper Invoice Submission Date has the definition given to it under GC 5.2.2.1."
SC7.24	Request for Information (RFI)	Add the following definition:
	(13.1)	"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."
SC7.25	Restricted Period	Add the following definition:
		"Restricted Period
		Restricted Period means the (inclusive) period of time between December 1 to January 8 and August 15 to September 15 of any given year throughout the duration of the Contract."

GENERAL CONDITIONS OF THE STIPULATED PRICE CONTRACT

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.

PART 1 GENERAL PROVISIONS

SC8 GC 1.1 CONTRACT DOCUMENTS

SC8.1	1.1.3	<u>Delete</u> GC 1.1.3 in its entirety and <u>replace</u> it with the following:
		"1.1.3 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 GC 3.13.1. Except for its obligation to make such review and report the result, the



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SC8.2	1.1.4	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 GC 1.1.3, 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." Delete GC 1.1.4 in its entirety and replace it with the following: "1.1.4 Except for the obligation to complete the review prescribed in GC 1.1.3, and report the results as set out in this GC 1.1.4, the Contractor is not responsible for errors, omissions or inconsistencies in the Contract Documents. If there are errors, omissions or inconsistencies discovered by or made known to the Contractor as part of its review under GC 1.1.3 or at any time during the performance 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 shall not proceed with the Work affected until the Contractor has received corrected or additional information from the Consultant. The Contractor
		shall not be liable for damage or costs resulting from such errors, inconsistencies, or omissions in the <i>Contract Documents</i> , which the <i>Contractor</i> could not reasonably have discovered through the exercise of care and skill described in GC 3.13."
SC8.3	1.1.5.1	Delete GC 1.1.5.1 and replace with the following:
		".1 the order of priority of documents, from highest to lowest, shall be:
		.1 Supplementary Conditions;
		.2 the Agreement between the Owner and the Contractor;
		.3 the Definitions;
		.4 the General Conditions;
		.5 Division 01 of the Specifications
		.6 technical Specifications;
		.7 material and finishing schedules; and
		.8 the <i>Drawings</i> .
SC8.4	1.1.5.5	Delete GC 1.1.5.5 and replace with the following:
		".5 Noted materials and annotations on the <i>Drawings</i> shall govern over the graphic representation of the <i>Drawings</i> ."
SC8.5	1.1.5.6	Add the following new GC 1.1.5.6 to 1.1.5.8 as follows:
	to 1.1.5.8	".6 Finishes in the room finish schedules shall govern over those shown on the <i>Drawings</i> .
		.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 <i>Consultant</i> , or its sub- <i>Consultants</i> are to remain with each of the applicable drawing disciplines.
		.8 Should reference standards contained in the <i>Specifications</i> conflict with the <i>Specifications</i> , the <i>Specifications</i> shall govern. Should reference standards and <i>Specifications</i> conflict with each other or if certain requirements of the <i>Specifications</i> conflict with other requirements of the <i>Specifications</i> , the more stringent requirements shall govern."



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SC8.6	1.1.9	Add the following to the end of GC 1.1.9: "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, outlets and other elements. 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 proceeding with the Work. Where site conditions require reasonable minor changes where the change requires only the additional labour two hours 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 Contract Documents, wherever located and whenever issued, which compile information of similar content and may consist of drawings, tables and/or lists."
SC8.7	1.1.13	Add new paragraph 1.1.13 as follows: 1.1.13 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."

SC9 GC 1.3 RIGHTS AND REMEDIES

SC9.1	1.3.2	In paragraph 1.3.2 <u>delete</u> the word "No" from the beginning of the paragraph and <u>replace</u> it with the words:
		"Except with respect to the requirements set out in paragraphs 6.4.1, 6.5.4, 6.6.1 and 8.3.2, no"

SC10 *NEW* GC 1.5 EXAMINATION OF DOCUMENTS AND SITE

SC10.1	1.5	Add new GC 1.5 – EXAMINATION OF DOCUMENTS AND SITE as follows:
		"GC 1.5 EXAMINATION OF DOCUMENTS AND SITE
		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 visit to the Place of the Work and to the standard set out under GC 3.14.1 and further represents and warrants and acknowledges that it considered and took into account in the Contract Price all reasonably known impacts and restrictions arising from the COVID-19 pandemic, including without limitation corresponding legislative changes that may impact performance of the Project, various weather conditions that may affect the Work, the availability of supplies and labour or other conditions or risks that the Contractor knew about or reasonably ought to have known about prior to the date of the Contract. The Contractor has assumed and does hereby assume all risk of known conditions now existing or arising in the course of the Work which might or could make the Work, or any items

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	thereof more expensive in character, or more onerous to fulfil, than was contemplated or known when the tender was made or the <i>Contract</i> signed.
1.5.2	The Contractor also declares that prior to commencement of the Work, where in tendering for the Work and in entering into this Contract, the Contractor relied 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, the Contractor shall review to the standard specified in GC 3.14.1, the accuracy of the information furnished by the Owner. If a condition is materially different than what is stated in the information furnished by the Owner, the Contractor shall, no later than five (5) Working Days after the first observation of such condition(s), deliver to the Owner and to the Consultant a Notice in Writing specifying the materially different condition and the Contractor shall not proceed with the affected part of the Work until receiving written direction from the Owner or the Consultant. Where the Contractor fails to provide prompt Notice in Writing in accordance with this GC 1.5.2, the Contractor expressly waives and releases the Owner from all claims with respect to the said information with respect to the Work.

PART 2 ADMINISTRATION OF THE CONTRACT

SC11 GC 2.2 ROLE OF THE CONSULTANT

SC11.1 2.2.5 Delete paragraph 2.2.4 and replace it with the following: "2.2.4 Upon receipt of an application for payment that satisfies the requirement of a <i>Proper Invoice</i> , based on the <i>Consultant's</i> observations and evaluation of the <i>Contractor's</i> application for payment, the <i>Consultant</i> will determine the amounts owing to the <i>Contractor</i> under the <i>Contract</i> and will issue certificates for payment as provided in Article A-5 - PAYMENT, GC 5.3 - PAYMENT, GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK, and GC 5.5 - FINAL PAYMENT. If the <i>Consultant</i> determines that the amount payable to the <i>Contractor</i> differs from the amount stated in a <i>Proper Invoice</i> , the <i>Consultant</i> shall notify the <i>Owner</i> as provided in GC 5.3.1.2 and prepare a draft of the applicable <i>Notice of Non-Payment</i> for the amount in dispute." SC11.2 2.2.6 In the first sentence of paragraph 2.2.6, delete the words "Except with respect to GC 5.1 - FINANCING INFORMATION REQUIRED OF THE OWNER". SC11.3 2.2.12 At paragraph 2.2.12, insert the following at end of that paragraph: "If, in the opinion of the <i>Contractor</i> , the <i>Supplemental Instruction</i> involves an adjustment in the <i>Contract Price</i> or in the <i>Consultant</i> with a notice in writing to that effect. Failure to provide written notification within the time stipulated in this paragraph 2.2.12 shall be deemed an acceptance of the <i>Supplemental Instruction</i> by the <i>Contractor</i> , without any adjustment in the <i>Contract Price</i> or <i>Contract Time</i> ."			
Invoice, based on the Consultant's observations and evaluation of the Contractor's application for payment, the Consultant will determine the amounts owing to the Contractor under the Contract and will issue certificates for payment as provided in Article A-5 - PAYMENT, GC 5.3 - PAYMENT, GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK, and GC 5.5 - FINAL PAYMENT. If the Consultant determines that the amount payable to the Contractor differs from the amount stated in a Proper Invoice, the Consultant shall notify the Owner as provided in GC 5.3.1.2 and prepare a draft of the applicable Notice of Non-Payment for the amount in dispute." SC11.2 2.2.6 In the first sentence of paragraph 2.2.6, delete the words "Except with respect to GC 5.1 - FINANCING INFORMATION REQUIRED OF THE OWNER". SC11.3 2.2.12 At paragraph 2.2.12, insert the following at 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 2.2.12 shall be deemed an acceptance of the Supplemental Instruction by the Contractor, without any	SC11.1	2.2.5	Delete paragraph 2.2.4 and replace it with the following:
FINANCING INFORMATION REQUIRED OF THE OWNER". SC11.3 2.2.12 At paragraph 2.2.12, insert the following at 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 2.2.12 shall be deemed an acceptance of the Supplemental Instruction by the Contractor, without any			Invoice, based on the Consultant's observations and evaluation of the Contractor's application for payment, the Consultant will determine the amounts owing to the Contractor under the Contract and will issue certificates for payment as provided in Article A-5 - PAYMENT, GC 5.3 - PAYMENT, GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK, and GC 5.5 - FINAL PAYMENT. If the Consultant determines that the amount payable to the Contractor differs from the amount stated in a Proper Invoice, the Consultant shall notify the Owner as provided in GC 5.3.1.2 and prepare a draft of the applicable
"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 2.2.12 shall be deemed an acceptance of the Supplemental Instruction by the Contractor, without any	SC11.2	2.2.6	
asjacanica in a constant in a	SC11.3	2.2.12	"If, in the opinion of the <i>Contractor</i> , the <i>Supplemental Instruction</i> involves an adjustment in the <i>Contract Price</i> or in the <i>Contract Time</i> , it shall, within ten (10) <i>Working Days</i> of receipt of a <i>Supplemental Instruction</i> , provide the <i>Consultant</i> with a notice in writing to that effect. Failure to provide written notification within the time stipulated in this paragraph 2.2.12 shall be deemed an acceptance of the <i>Supplemental Instruction</i> by the <i>Contractor</i> , without any
			adjustment in the contract most of contract mile.

SC12 GC 2.3 REVIEW AND INSPECTION OF THE WORK

SC12.1	2.3.2	Amend paragraph 2.3.2 by adding the words "and Owner" after the words "Consultant" in the second and third lines.
SC12.2	2.3.3	Delete paragraph 2.3.3 in its entirety and replace it with the following:
		"2.3.3 The <i>Contractor</i> shall furnish promptly two copies to the <i>Consultant</i> and one copy to the <i>Owner</i> of all certificates and inspection reports relating to the <i>Work</i> ."

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SC12.3	2.3.4	In paragraph 2.3.4 <u>add</u> the word "review" after the word "inspections" in the first and second lines of paragraph 2.3.4.
SC12.4	2.3.5	In paragraph 2.3.5 in the first line after the word "Consultant", add "or the Owner".
SC12.5	2.3.8	Add a new paragraph 2.3.8 as follows: "2.3.8 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."

SC13 GC 2.4 DEFECTIVE WORK

SC13.1	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".
SC13.2	2.4.1.1 to	Add new paragraphs 2.4.1.1 and 2.4.1.2 as follows:
	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."
SC13.3	2.4.2	Delete paragraph 2.4.2 in its entirety and replace it with the following:
		"2.4.2 The <i>Contractor</i> shall promptly pay the <i>Owner</i> for costs incurred by the <i>Owner</i> , the <i>Owner</i> 's own forces or the <i>Owner</i> 's other contractors, for work destroyed or damaged or any alterations necessitated by the <i>Contractor</i> 's removal, replacement or re-execution of defective work."
SC13.4	2.4.4	Add new paragraph 2.4.4 as follows:
		"2.4.4 Neither acceptance of the <i>Work</i> by the <i>Consultant</i> or the <i>Owner</i> , nor any failure by the <i>Consultant</i> or the <i>Owner</i> to identify, observe or warn of defective <i>Work</i> or any deficiency in the <i>Work</i> shall relieve the <i>Contractor</i> from the sole responsibility for rectifying such defect or deficiency at the <i>Contractor</i> 's sole cost, even where such failure to identify, observe or warn is negligent."

PART 3 EXECUTION OF THE WORK

SC14 GC 3.1 CONTROL OF THE WORK

SC14.1	3.1.2	Amend paragraph 3.1.2 by <u>inserting</u> the words "Construction Schedule" after the word "sequences".
SC14.2	3.1.3 & 3.1.4	Add new paragraphs 3.1.3 and 3.1.4 as follows:
	0.1.1	"3.1.3 Prior to commencing individual procurement, fabrication and construction activities, the <i>Contractor</i> shall verify at the <i>Place of the Work</i> , all relevant measurements and

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	levels necessary for proper and complete fabrication, assembly and installation of the <i>Work</i> and shall further carefully compare such field measurements and conditions with the requirements of the <i>Contract Documents</i> . Where dimensions are not included or exact locations are not apparent, the <i>Contractor</i> shall immediately notify the <i>Consultant</i> in writing and obtain written instructions from the <i>Consultant</i> before proceedings with any part of the affected <i>Work</i> .
3.1.4	Notwithstanding the provisions of paragraphs 3.1.1 and 3.1.2, the <i>Owner</i> 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 <i>Contractor</i> to fulfill its contractual obligations."

SC15 GC 3.2 CONSTRUCTION BY OWNER OR OTHER CONTRACTORS

SC15.1	3.2.2.1	Delete subparagraph 3.2.2.1 and replace it with "[Intentionally left blank]".
SC15.2	3.2.3.2	Delete subparagraph 3.2.3.2 and replace it with the following:
		".2 co-ordinate and schedule the activities and work of other contractors and the Owner's own forces, including where other contractors or the Owner's own forces are used after the Owner and the Contractor cannot reach agreement on the value of a change, with the Work of the Contractor and connect as specified or shown in the Contract Documents."
SC15.3	3.2.3.4	Delete the period at the end of subparagraph 3.2.3.4 and replace it with a semi-colon.
SC15.4	3.2.3.5	Add new subparagraph 3.2.3.5 as follows:
		".5 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 OHSA."

SC16 GC 3.3 TEMPORARY WORK

SC16.1	3.3.2	In paragraph 3.3.2, in the second line after the words "where required by law", insert "or by the Consultant".

SC17 GC 3.4 CONSTRUCTION SCHEDULE

SC17.1	3.4.1	Delete GC 3.4.1 in its entirety and replace it with the following:
		"3.4.1 The Contractor shall:
		within five (5) calendar days of receiving written confirmation of the award of the <i>Contract</i> , prepare and submit to the <i>Owner</i> and the <i>Consultant</i> for their review and approval, a construction schedule in the format indicated below that indicates the timing of the activities of the <i>Work</i> and provides sufficient detail of the critical events and their inter-relationship to demonstrate the <i>Work</i> will be performed in conformity with the <i>Contract Time</i> and in accordance with the <i>Contract Documents</i> . Such schedule is to include a delivery schedule for <i>Products</i> whose delivery is critical to the schedule for the <i>Work</i> or are required by the <i>Contract</i> to be included in a <i>Products</i> delivery schedule. The <i>Contractor</i> shall employ construction scheduling software, being the latest version of "Microsoft Project", that permits the progress of the <i>Work</i> to be monitored in relation to the critical path established in the schedule. The <i>Contractor</i> shall provide such schedule and any successor or revised schedules in

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			both original digital file format (e.g., .mpp format for Microsoft Project), portable data file (PDF) format, and hard copy. Once accepted by the <i>Owner</i> and the <i>Consultant</i> , the construction schedule submitted by the <i>Contractor</i> shall become the baseline "Construction Schedule";
		.2	provide the expertise and resources, such resources including manpower and equipment, as are necessary on a best efforts basis to maintain progress under the accepted baseline <i>Construction Schedule</i> or revised construction schedule accepted by the <i>Owner</i> pursuant to GC 3.4 CONSTRUCTION SCHEDULE, which includes without limitation, the <i>Contractor's</i> use of all possible and, if necessary, extraordinary measures, to bring the progress of the <i>Work</i> into compliance with the <i>Construction Schedule</i> , such as (i) increasing the presence of its own forces at the <i>Place of the Work</i> ; (ii) directing any <i>Subcontractors</i> or <i>Suppliers</i> to increase their labour forces and equipment; (iii) working overtime and extra shifts; and (iv) providing any additional supervision and coordination of the <i>Project</i> , all at the <i>Contractor's</i> own cost and expense save and except where GC 6.5.1, 6.5.2, or 6.5.3 apply; and,
		.3	monitor the progress of the <i>Work</i> on a weekly basis relative to the baseline <i>Construction Schedule</i> , or any revised <i>Construction Schedule</i> accepted by the <i>Owner</i> pursuant to GC 3.4 CONSTRUCTION SCHEDULE, deliver a <i>Construction Schedule Update</i> to the <i>Consultant</i> and <i>Owner</i> with each application for payment, at a minimum, or as may be reasonably required by the <i>Consultant</i> and advise the <i>Consultant</i> and the <i>Owner</i> weekly in writing of any variation from the baseline or slippage in the schedule; and,
		.4	if after applying the expertise and resources required under paragraph 3.4.1.2, the <i>Contractor</i> forms the opinion that the slippage in schedule reported in paragraph 3.4.1.3 cannot be recovered by the <i>Contractor</i> , it shall, in the same notice provided under paragraph 3.4.1.3, indicate to the <i>Consultant</i> if the <i>Contractor</i> intends to apply for an extension of <i>Contract Time</i> as provided in PART 6 —CHANGES IN THE WORK; and,
		.5	ensure that the Contract Price shall include all costs required to phase or stage the Work."
SC17.2	3.4.2	Add new GC	3.4.2 and GC 3.4.3 as follows:
		the <i>V</i> giver shall pursi confo requi the	any time, it should appear to the <i>Owner</i> or the <i>Consultant</i> that the actual progress of <i>Work</i> is behind schedule or is likely to become behind schedule, or if the <i>Contractor</i> has a notice of such to the <i>Owner</i> or the <i>Consultant</i> pursuant to GC 3.4.1.3, the <i>Contractor</i> either at the request of the <i>Owner</i> or the <i>Consultant</i> , or following giving notice that to GC 3.4.1.3, take appropriate steps to cause the actual progress of the <i>Work</i> to form to the schedule or minimize the resulting delay. Within 5 calendar days of the test by the <i>Owner</i> or the <i>Consultant</i> or the notice being given pursuant to GC 3.4.1.3, <i>Contractor</i> shall produce and present to the <i>Owner</i> and the <i>Consultant</i> a plan constraining how the <i>Contractor</i> will recover the performance of the <i>Work</i> to align with currently approved <i>Construction Schedule</i> .
		of the be de revis	Contractor shall not amend the Construction Schedule without the prior written consent to Owner Any revisions to the Construction Schedule approved by the Owner shall not be eemed to be an extension of the Contract Time. All requests by the Contractor for a ion to the Construction Schedule that include an extension to the Contract Time must opproved by the Owner through an executed Change Order."

SC18 GC 3.5 SUPERVISION

SC18.1	3.5.1	Delete GC 3.5.1 and replace it with the following:

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		"3.5.1 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 the 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 GC 3.5.1 and other responsible persons who may be contacted for emergency and other reasons during non-working hours. "
SC18.2	3.5.2	Delete GC 3.5.2 and replace it with the following:
		"3.5.2 The superintendent, and any project manager appointed by the <i>Contractor</i> , shall represent the <i>Contractor</i> at the <i>Place of the Work</i> and shall have full authority to act on written instructions given by the <i>Consultant</i> and/or the <i>Owner</i> . Instructions given to the superintendent or the project manager shall be deemed to have been given to the <i>Contractor</i> and both the superintendent and any project manager shall have full authority to act on behalf of the <i>Contractor</i> and bind the <i>Contractor</i> in matters related to the <i>Contract</i> ."
SC18.3	3.5.3 to 3.5.6	<u>Add</u> new GC 3.5.3, 3.5.4, 3.5.5 and 3.5.6 as follows:
	3.3.6	"3.5.3 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.
		3.5.4 The supervisory staff assigned to the <i>Project</i> shall also be fully competent to implement efficiently all requirements for scheduling, coordination, field engineering, reviews, inspections and submittals defined in the <i>Specifications</i> , and have a minimum 5 years documented "Superintendent/Project Management" experience.
		3.5.5 The Consultant and Owner shall reserve the right to review the record of experience and credentials of supervisory staff assigned to the <i>Project</i> prior to commencement of the <i>Work</i> .
		3.5.6 A superintendent assigned to the <i>Work</i> 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 <i>Project</i> to the sole satisfaction of the <i>Owner</i> ."

SC19 GC 3.6 SUBCONTRACTORS AND SUPPLIERS

SC19.1	3.6.1.1	In paragraph 3.6.1.1 <u>add</u> to the end of the second line the words "including any warranties and service agreements which extend beyond the term of the <i>Contract</i> ."		
SC19.2	3.6.1.2	In subparagraph 3.6.1.2 after the words "the <i>Contract Documents</i> " add the words "including any required surety bonding".		
SC19.3	3.6.2	 Delete paragraph 3.6.2. in its entirety and replace it with the following: "3.6.2 The 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 		



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			to the <i>Contractor</i> and <i>Owner</i> . The <i>Contractor</i> shall be fully aware of the capability of each <i>Subcontractor</i> and/or <i>Supplier</i> included in its bid, including but not limited to technical ability, financial stability and ability to maintain the proposed construction schedule."
SC19.4	3.6.7,	Add nev	w paragraphs 3.6.7, 3.6.8, 3.6.9, and 3.6.10 as follows:
	3.6.8, 3.6.9 & 3.6.10	"3.6.7	The <i>Contractor</i> represents and warrants that it has confirmed the availability of its <i>Subcontractors</i> for the <i>Project</i> and, in particular, for the performance of their respective portions of the <i>Work</i> to ensure completion of the <i>Project</i> within the <i>Contract Price</i> and the <i>Contract Time</i> .
		3.6.8	The <i>Consultant</i> or the <i>Owner</i> , acting reasonably, may from time to time require the <i>Contractor</i> to remove from the <i>Project</i> any personnel of the <i>Contractor</i> , including project managers, superintendents or <i>Subcontractors</i> . Such persons shall be replaced by the <i>Contractor</i> in a timely fashion to the satisfaction of the <i>Consultant</i> or the <i>Owner</i> , as the case may be, at no cost to the <i>Owner</i> .
		3.6.9	Where provided in the <i>Contract</i> , the <i>Owner</i> may assign to the <i>Contractor</i> , and the <i>Contractor</i> agrees to accept, any contract procured by the <i>Owner</i> for <i>Work</i> or services required on the <i>Project</i> that has been pre-tendered or pre-negotiated by the <i>Owner</i> , and upon such assignment, the <i>Owner</i> shall have no further liability to any party for such contract.
		3.6.10	The <i>Contractor</i> covenants that each subcontract or supply contract which the <i>Contractor</i> enters into for the purpose of performing the <i>Work</i> shall expressly provide for the assignment thereof to the <i>Owner</i> (at the option of the <i>Owner</i>) and the assumption by the <i>Owner</i> of the obligations of the <i>Contractor</i> thereunder, upon the termination of the <i>Contract</i> and upon written notice by the <i>Owner</i> to the other parties to such subcontracts or supply contracts, without the imposition of further terms or conditions; provided, however, that until the <i>Owner</i> has given such notice, nothing herein contained shall be deemed to create any contractual or other liability upon the <i>Owner</i> for the performance of obligations under such subcontracts or supply contracts and the <i>Contractor</i> shall be fully responsible for all of its obligations and liabilities (if any) under such subcontracts and supply contracts."

SC20 GC 3.7 LABOUR AND PRODUCTS

SC20.1	3.7.1	Amend paragraph 3.7.1 by adding the words, ", agents, Subcontractors and Suppliers" after the word "employees" in the first line.		
SC20.2	3.7.2	"3.7.2 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."		
SC20.3	3.7.4 to 3.7.8	Add new paragraphs 3.7.4, 3.7.5, 3.7.6, 3.7.7, and 3.7.8 as follows:		

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	"3.7.4	Upon receipt of a <i>Notice in Writing</i> from the <i>Owner</i> , the <i>Contractor</i> shall immediately remove from the <i>Place of the Work</i> , tradesmen and labourers or anyone whose conduct jeopardizes the safety of the <i>Owner's</i> operations or who are considered by the <i>Owner</i> or the <i>Consultant</i> to be unskilled or otherwise objectionable. Immediately upon receipt of the request, the <i>Contractor</i> shall make arrangements to appoint an acceptable replacement.
	3.7.5	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.
	3.7.6	The cost for overtime required beyond the normal <i>Working Day</i> to complete individual construction operations of a continuous nature, such as pouring or finishing of concrete or similar work, or <i>Work</i> that the <i>Contractor</i> elects to perform at overtime rates without the <i>Owner</i> requesting it, shall not be chargeable to the <i>Owner</i> .
	3.7.7	All manufactured <i>Products</i> which are identified by their proprietary names or by part or catalogue number in the <i>Specifications</i> shall be used by the <i>Contractor</i> . No substitutes for such specified <i>Products</i> shall be used without the written approval of the <i>Owner</i> and the <i>Consultant</i> . Substitutes will only be considered by the <i>Consultant</i> when submitted in sufficient time to permit proper review and investigation. When requesting approval for the use of substitutes, the <i>Contractor</i> shall include in its submission any proposed change in the <i>Contract Price</i> . The <i>Contractor</i> shall use all proprietary <i>Products</i> in strict accordance with the manufacturer's directions. Where there is a choice of proprietary <i>Products</i> specified for one use, the <i>Contractor</i> may select any one of the <i>Products</i> so specified for this use.
	3.7.8	Materials, appliances, equipment and other <i>Products</i> are sometimes specified by reference to brand names, proprietary names, trademarks or symbols. In such cases, the name of a manufacturer, distributor, <i>Supplier</i> or dealer is sometimes given to assist the <i>Contractor</i> to find a source <i>Supplier</i> . This shall not relieve the <i>Contractor</i> from its responsibility from finding its own source of supply even if the source names no longer supplies the <i>Product</i> specified. If the <i>Contractor</i> is unable to obtain the specified <i>Product</i> , the <i>Contractor</i> shall supply a substitute product equal to or better than the specified <i>Product</i> , as approved by the <i>Consultant</i> with no extra compensation. Should the <i>Contractor</i> be unable to obtain a substitute <i>Product</i> equal to or superior to the specified <i>Product</i> and the <i>Owner</i> accepts a different Product, the <i>Contract Price</i> shall be adjusted accordingly, as approved by the <i>Consultant</i> ."
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SC21 GC 3.8 SHOP DRAWINGS

SC21.1	3.8.1	<u>Delete</u> paragraph 3.8.1 in its entirety and <u>replace</u> with the following:		
		"3.8.1 The Contractor shall provide shop drawings as described in the Contract Documents and as the Consultant may reasonably request."		
SC21.2	3.8.3	Delete paragraph 3.8.3 and replace it with the following:		
		"3.8.3 The <i>Contractor</i> shall prepare a <i>Shop Drawings</i> schedule acceptable to the <i>Owner</i> and the <i>Consultant</i> prior to the first application for payment. A draft of the proposed <i>Shop Drawings</i> schedule shall be submitted by the <i>Contractor</i> to the <i>Consultant</i> and the <i>Owner</i> for approval. The draft <i>Shop Drawings</i> schedule shall clearly indicate the phasing of <i>Shop Drawings</i> submissions. The <i>Contractor</i> shall		



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		periodically re-submit the <i>Shop Drawings</i> schedule to correspond to changes in the <i>Construction Schedule.</i> "
SC21.3	3.8.5	Delete paragraph 3.8.5 in its entirety and substitute the following:
		"3.8.5 At the time of providing <i>Shop Drawings</i> , the <i>Contractor</i> shall advise the <i>Consultant</i> in writing of any deviations in <i>Shop Drawings</i> from the requirements of the <i>Contract Documents</i> . The <i>Consultant</i> 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."
SC21.4	3.8.8 to 3.8.12	Add new paragraphs 3.8.8, 3.8.9, 3.8.10, 3.8.11, and 3.8.12 as follows:
	3.6.12	"3.8.8 Reviewed <i>Shop Drawings</i> shall not authorize a change in the <i>Contract Price</i> and/or the <i>Contract Time</i> .
		3.8.9 Except where the parties have agreed to a different <i>Shop Drawings</i> schedule pursuant to paragraph 3.10.3, the <i>Contractor</i> shall comply with the requirements for <i>Shop Drawings</i> submissions stated in the <i>Specifications</i> .
		3.8.10 The <i>Contractor</i> shall not use the term "by others" on <i>Shop Drawings</i> or other submittals. The related trade, <i>Subcontractor</i> or <i>Supplier</i> shall be stated.
		3.8.11 Certain <i>Specifications</i> sections require the <i>Shop Drawings</i> to bear the seal and signature of a professional engineer. Such professional engineer must be registered in the jurisdiction of the <i>Place of the Work</i> and shall have expertise in the area of practice reflected in the <i>Shop Drawings</i> .
		3.8.12 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."

SC22 *NEW* GC 3.9 USE OF THE WORK

SC22.1	GC 3.9	Add new	Add new GC 3.9 – USE OF THE WORK as follows:		
		"GC 3.9	"GC 3.9 USE OF THE WORK		
		3.9.1	The Contractor shall confine Construction Equipment, Temporary Work, storage of Products, waste products and debris, and operations of employees and Subcontractors to limits indicated by laws, ordinances, permits, by the direction of the Owner or the Consultant, or the Contract Documents and shall not unreasonably encumber the Place of the Work.		
		3.9.2	The <i>Contractor</i> shall not load or permit to be loaded any part of the <i>Work</i> with a weight or force that will endanger the safety of the <i>Work</i> .		
		3.9.3	The Owner shall have the right to enter or occupy the Place of 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 or in any way relieves the Contractor from its responsibility to complete the Contract."		

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SC23 *NEW* GC 3.10 CUTTING AND REMEDIAL WORK

SC23.1	GC 3.10	Add ne	Add new GC 3.10 – CUTTING AND REMEDIAL WORK as follows:		
		"GC 3.10 CUTTING AND REMEDIAL WORK			
		3.10.1	The <i>Contractor</i> shall perform the cutting and remedial work required to make the affected parts of the <i>Work</i> come together properly. Such cutting and remedial work shall be performed by specialists familiar with the <i>Product</i> s affected and shall be performed in a manner to neither damage nor endanger the <i>Work</i> .		
		3.10.2	The <i>Contractor</i> shall coordinate the <i>Work</i> to ensure all cutting and remedial work required is kept to a minimum.		
		3.10.3	Unless specifically stated otherwise in the <i>Specifications</i> , the <i>Contractor</i> shall do all cutting and making good necessary for the proper installation and performance of the <i>Work</i> .		
		3.10.4	To avoid unnecessary cutting, the <i>Contractor</i> shall lay out its work and advise the <i>Subcontractors</i> , when necessary, where to leave holes for installation of pipes and other work."		

SC24 *NEW* GC 3.11 CLEAN UP

SC24.1	3.11.1,	Add nev	w paragraphs 3.11.1, 3.11.2, 3.11.3, 3.11.4, 3.11.5, and 3.11.6 as follows:
	3.11.2, 3.11.3, 3.11.4, 3.11.5 & 3.11.6	"3.11.1	The <i>Contractor</i> shall maintain the <i>Work</i> in a safe and tidy condition and free rom the accumulation of waste products and debris, other than that caused by the <i>Owner</i> , other contractors or their employees. The <i>Contractor</i> shall remove accumulated waste and debris at least once a week as a minimum or as required by the nature of the <i>Work</i> .
		3.11.2	Before applying for Substantial Performance of the Work, the Contractor shall remove waste products and debris, other than that resulting from the work of the Owner, other contractors or their employees, and shall leave the Place of the Work clean and suitable for use or occupancy by the Owner. The Contractor shall remove products, tools, materials, Construction Equipment, and Temporary Work not required for the performance of the remaining work.
		3.11.3	As a condition precedent to submitting its application for final payment, the <i>Contractor</i> shall remove any remaining products, tools, materials, <i>Construction Equipment</i> , <i>Temporary Work</i> , and waste products and debris, other than those resulting from the work of the <i>Owner</i> , other contractors or their employees.
		3.11.4	The Contractor shall clean up garbage during and after construction and maintain the Place of the Work in a neat and orderly condition on a daily basis. Prior to leaving the Place of the Work and following completion of the Work, 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 Place of the Work in a clean and finished state; remove all Construction Equipment and materials; remove all paint, stains, labels, dirt, etc. from the Place of the Work; and touch up all damaged painted areas (if applicable). The Contractor shall be responsible for restoring those areas of the Place of the Work, impacted by the Work, to their original condition."

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3	3.11.5	Without limitation to or waiver of the <i>Owner's</i> other rights and remedies, the <i>Owner</i> shall have the right to back charge to the <i>Contractor</i> the cost of damage to the site caused by transportation in and out of the <i>Place of the Work</i> by the <i>Contractor</i> , <i>Subcontractors</i> or <i>Suppliers</i> , if not repaired before final payment.
3	3.11.6	The <i>Contractor</i> shall dispose of debris at a location and in a manner acceptable to the <i>Owner</i> (and to the authorities having jurisdiction at the <i>Place of the Work</i> and at the disposal area) and the <i>Contractor</i> shall cover containers with tarpaulins."

SC25 *NEW* GC 3.12 EXCESS SOIL MANAGEMENT

SC25.1	GC 3.12	Add new	GC 3.12 – EXCESS SOIL MANAGEMENT as follows:
		"GC 3.12	EXCESS SOIL MANAGEMENT
		3.12.1	The Contractor shall be solely responsible for the proper management of all Excess Soil at the Place of the Work and for performance of the Work in compliance with the rules, regulations and practices required by the Excess Soil Regulation until such time as Ready-for-Takeover is achieved. Without restricting the generality of the previous sentence, the Contractor's responsibility under this GC 3.12 includes the designation, transportation, tracking, temporary and/or final placement, record keeping, and reporting of all Excess Soil in connection with the Work all in compliance with the Excess Soil Regulation.
		3.12.3	The <i>Contractor</i> shall indemnify and save harmless the <i>Owner</i> , their agents, officers, directors, administrators, employees, consultants, successors and assigns from and against the consequences of any and all health and safety infractions committed directly by the <i>Contractor</i> , or those for whom it is responsible at law, under the <i>Excess Soil Regulation</i> , or any environmental protection legislation, including the payment of legal fees and disbursements on a substantial indemnity basis. Such indemnity shall apply to the extent to which the <i>Owner</i> is not covered by insurance."

SC26 *NEW* GC 3.13 CONTRACTOR STANDARD OF CARE

SC26.1	3.13	Add a new GC 3.13 – CONTRACTOR STANDARD OF CARE as follows:
		"GC 3.13 CONTRACTOR STANDARD OF CARE
		"3.13.1 In performing its services and obligations under the <i>Contract</i> , the <i>Contractor</i> 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 <i>Contractor</i> acknowledges and agrees that throughout the <i>Contract</i> , the performance of the <i>Contractor</i> 's obligations, duties and responsibilities shall be interpreted in accordance with this standard. The <i>Contractor</i> shall exercise the same standard of care, skill and diligence in respect of any <i>Products</i> , personnel or procedures which it may recommend to the <i>Owner</i> or employ on the <i>Project</i> .
		3.13.2 The <i>Contractor</i> further represents, covenants and warrants to the <i>Owner</i> that:
		.1 the personnel it assigns to the <i>Project</i> are appropriately experienced;
		it has a sufficient staff of qualified and competent personnel to replace any of its appointed representatives, subject to the <i>Owner's</i> approval, in the event of death, incapacity, removal or resignation; and

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	.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 <i>Contractor</i> to perform its work under the <i>Contract.</i> "
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PART 4 ALLOWANCES

SC27 GC 4.1 CASH ALLOWANCES

SC27.1	4.1.3	In GC 4.1.3 delete the words "through the Consultant" and replace them with "in writing."		
SC27.2	4.1.4	Delete GC 4.1.4 in its entirety and replace it with the following: "4.1.4 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, by the Consultant at the Owner'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."		
SC27.3	4.1.7	Delete GC 4.1.7 in its entirety and replace it with the following: "4.1.7 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."		
SC27.4	4.1.8 and 4.1.9	 Add new GC 4.1.8 and 4.1.9 as follows: "4.1.8 The <i>Owner</i> reserves the right to call, or to have the <i>Contractor</i> call, for competitive bids for portions of the <i>Work</i> to be paid for from cash allowances. 4.1.9 Cash allowances cover the net cost to the <i>Contractor</i> of services, <i>Products</i>, <i>Construction Equipment</i>, freight, unloading, handling, storage, installation, provincial sales tax, and other authorized expenses incurred in performing any <i>Work</i> stipulated under the cash allowances but does not include any <i>Value Added Taxes</i> payable by the <i>Owner</i> and the <i>Contractor</i>." 		

PART 5 PAYMENT

SC28 GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

SC28.1	5.1	Delete GC 5.1 - FINANCING INFORMATION REQUIRED OF THE OWNER and all
		paragraphs thereunder, including any reference to GC 5.1 throughout the Contract.

SC29 GC 5.2 APPLICATIONS FOR PAYMENT

SC29.1	5.2.1	<u>Delete</u> GC 5.2.1 and <u>replace</u> it with the following:	
		"5.2.1 Upon execution of the <i>Contract</i> , and in any event prior to the <i>Contractor</i> submitting its first application for payment, the <i>Owner</i> shall issue a purchase order to the <i>Contractor</i> for the performance of the <i>Contract</i> . The number indicated on such purchase order must be clearly identifiable on all applications for payment.	



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		Applications for payment shall be dated the last day of each month or an alternative day of each month agreed to in writing by the parties, with each month representing one payment period under the <i>Contract</i> (each a "Payment Period"). Within 3 calendar days of the end of each <i>Payment Period</i> , the <i>Contractor</i> will submit a draft application for payment to the <i>Owner</i> and the <i>Consultant</i> . Upon receipt of the draft application for payment, and within 7 calendar days, a representative of each of the <i>Contractor</i> , <i>Owner</i> , and the <i>Consultant</i> shall attend a meeting to discuss and review the work completed during the <i>Payment Period</i> , including quantities, if applicable (the "Pre-Invoice Submission Meeting"). In the event that the scheduled date for the <i>Pre-Invoice Submission Meeting</i> is not a <i>Working Day</i> , the <i>Pre-Invoice Submission Meeting</i> shall occur on the next <i>Working Day</i> . The <i>Contractor</i> shall bring with it to the <i>Pre-Invoice Submission Meeting</i> the following:
		.1 a copy of the draft application for payment;
		.2 any documents the Contractor is required to bring to the Pre-Invoice Submission Meeting as stipulated in the Contract Documents or as reasonably requested by the Owner, and
		.3 any other documents reasonably requested, in advance, by the <i>Owner</i> or the <i>Consultant</i> ."
SC29.2	5.2.2	Delete GC 5.2.2 in its entirety and replace it with the following:
		"5.2.2 Applications for payment shall be given in accordance with the following requirements:
		.1 Within 5 calendar days following the <i>Pre-Invoice Submission Meeting</i> , the <i>Contractor</i> shall deliver its application for payment to the <i>Owner</i> and to the <i>Consultant</i> for <i>Work</i> performed during the <i>Payment Period</i> (" Proper Invoice Submission Date ") subject to the following:
		.1 if the fifth calendar day following the <i>Pre-Invoice Submission Meeting</i> , to which an invoice relates falls on a day that is not a <i>Working Day</i> , the <i>Proper Invoice Submission Date</i> shall be deemed to fall on the next <i>Working Day</i> .
		.2 The application for payment must be delivered to the <i>Owner/WCDSB Lead</i> and to the <i>Consultant</i> in the same manner as a <i>Notice in Writing</i> during the hours of 9:00 am to 4:00pm (EST) on the <i>Proper Invoice Submission Date</i> . Delivery to the <i>Owner</i> shall be to the following email address:
		.3 If an application for payment is received after 4:00 p.m. (EST) on the applicable <i>Proper Invoice Submission Date</i> , the application for payment will not be considered or reviewed by the <i>Owner</i> and <i>Consultant</i> until the next <i>Proper Invoice Submission Date</i> . Notwithstanding the foregoing, the <i>Owner</i> in its sole and absolute discretion may elect to accept an application for payment submitted after 4:00 p.m. on the applicable <i>Proper Invoice Submission Date</i> ; however, such acceptance shall not be construed as a waiver of any of its rights or waive or release the <i>Contractor</i> 's obligations to strictly comply with the requirements prescribed in this subparagraph 5.2.2.3.
		.4 No applications for payment shall be accepted by the <i>Owner</i> prior to the <i>Proper Invoice Submission Date</i> .
		.5 All applications for payment shall include all of the requirements for a <i>Proper Invoice</i> prescribed by the <i>Construction Act</i> and this <i>Contract</i> and be dated the last day of the applicable <i>Payment Period</i> ;"



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SC29.3	5.2.3	Delete GC 5.2.3 and replace it with the following:
		"5.2.3 The amount claimed shall be for the value, proportionate to the amount of the Contract, of Work performed and Products delivered and incorporated into the Work as of the last date of the applicable Payment Period. Materials may also be deemed to be supplied to an improvement, for payment purposes, when, in the Owner's opinion, they are placed and properly secured on the land on which the improvement is made, or placed upon land designated by the Owner or agent of the Owner, but placing the materials on the land so designated does not, of itself, make that land subject to a lien. 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. 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."
SC29.4	5.2.4	After the word "Consultant" in GC 5.2.4 add the words "and the Owner"
SC29.5	5.2.5	After the word "Consultant" in GC 5.2.5 add the words "or the Owner".
SC29.6	5.2.6	In GC 5.2.6, <u>delete</u> the word "Consultant" and <u>replace</u> it with "Owner".
SC29.7	5.2.9	Add new 5.2.9 as follows:
		"5.2.9 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 recommend to the Owner that the Owner retain a reasonable amount for the value of the as-built drawings not presented for review."

SC30 GC 5.3 PAYMENT

SC30.1	5.3.1	Delete GC 5.3.1 in its entirety, including all subparagraphs thereunder, and replace it with the following: "5.3.1 After receipt by the <i>Owner</i> and the <i>Consultant</i> of an application for payment submitted by the <i>Contractor</i> in accordance with GC 5.2 - APPLICATIONS FOR PAYMENT:		
		.1 the Consultant will either:		
		(a) issue to the <i>Owner</i> with a copy to the <i>Contractor</i> , a progress payment certificate in the amount applied for by the <i>Contractor</i> in the <i>Proper Invoice</i> , or		
		(b) issue to the Owner, with a copy to the Contractor, a certificate for payment for an amount determined by the Consultant to be properly due to the Contractor after applying any credits, withheld amounts, or other set-offs which the Consultant has determined that the Owner is entitled to notwithstanding any notice of dispute or disagreement that the Contractor may have served, along with the Consultant's reasons why an amount other than what is claimed in the Proper Invoice is properly due to the Contractor, which finding the Owner may accept or amend prior to the Owner issuing a Notice of Non-Payment, if any, in accordance with GC 5.3.2;		



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		.2	2 the Owner shall make payment to the Contractor on account as provided in Article A-5 PAYMENT,
			(a) in the amount stated in the certificate for payment, or
			(b) in the amount stated in the certificate for payment less such amount stated in the Owner's Notice of Non-Payment issued pursuant to GC 5.3.3,
			on the 28th calendar day after receipt of a <i>Proper Invoice</i> , unless such 28th calendar day lands on a day that is other than a <i>Working Day</i> , in which case payment shall be made on the next <i>Working Day</i> after such 28th day."
SC30.2	5.3.2 to	Add new (paragraphs 5.3.2, 5.3.3, 5.3.4, 5.3.4, 5.3.5, 5.3.6, and 5.3.7 as follows:
	5.3.7	() C S	All payments to the <i>Contractor</i> shall be processed using electronic funds transfer "EFT") and deposited directly to the <i>Contractor's</i> bank account unless agreed to otherwise by the <i>Contractor</i> and the <i>Owner</i> in writing. Prior to the <i>Contractor</i> submitting its first application for payment, the <i>Owner</i> and the <i>Contractor</i> shall exchange such information as is necessary to facilitate <i>EFT</i> payments.
		F F	In the event that the application for payment delivered by the <i>Contractor</i> pursuant to GC 5.2 - APPLICATIONS FOR PAYMENT does not include the requirements for a <i>Proper Invoice</i> or where the <i>Owner</i> disputes the amount claimed as payable in the <i>Proper Invoice</i> , then the <i>Owner</i> shall within 14 calendar days of receipt of the application for payment, issue a <i>Notice of Non-Payment</i> (Form 1.1).
		5 f: () ii	Where the <i>Owner</i> has delivered a <i>Notice of Non-Payment</i> , the <i>Owner</i> and the <i>Contractor</i> shall first engage in good faith negotiations to resolve the dispute. If within a calendar days following the issuance of a <i>Notice of Non-Payment</i> , despite good aith efforts by both parties and the assistance of the <i>Consultant</i> , the <i>Owner</i> and the <i>Contractor</i> cannot resolve the dispute, either party may commence an <i>Adjudication</i> in accordance with the procedures set out in the <i>Construction Act</i> . Any portion of the <i>Proper Invoice</i> which is not the subject of the <i>Notice of Non-Payment</i> shall be payable within the time period set out in GC 5.3.1.2.
		a tl	Provided that the <i>Owner</i> complies with its obligations under the <i>Construction Act</i> , and subject to any interim determination of an adjudicator in accordance with any <i>Adjudication</i> , and where applicable, a final determination made in accordance with he dispute resolution processes prescribed by this <i>Contract</i> , the <i>Owner</i> shall be entitled to claim in a <i>Notice of Non-Payment</i> a right to deduct from or, set off against, any payment of the <i>Contract Price</i> :
			any amount expended by the <i>Owner</i> in exercising the <i>Owner</i> 's rights under this <i>Contract</i> to perform any of the <i>Contractor</i> 's obligations that the <i>Contractor</i> has failed to perform;
		.:	any damages, costs or expenses (including, without limitation, reasonable legal fees and expenses) incurred by the <i>Owner</i> as a result of the failure of the <i>Contractor</i> to perform any of its obligations under the <i>Contract</i> ;
			any other amount owing from the <i>Contractor</i> to the <i>Owner</i> under this <i>Contract</i> .
		b	The amounts disputed and described under the <i>Notice of Non-Payment</i> shall be held by the <i>Owner</i> until all disputed amounts of the <i>Proper Invoice</i> have been resolved bursuant to PART 8 – DISPUTE RESOLUTION.
			The Contractor represents, warrants, and covenants to the Owner that it is familiar with its prompt payment and trust obligations under the Construction Act and will



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take all required steps and measures to ensure that it complies with the applicable prompt payment and trust provisions under the Construction Act including, without limitation, section 8.1 of the *Construction Act*. Evidence of the *Contractor's* compliance under this GC 5.3.7, including evidence demonstrating that all *EFTs* by the Owner to the Contractor are kept in a bank account in the Contractor's name will be made available to the Owner within 5 Working Days following receipt by the Contractor of a Notice in Writing making such request."

SC31 G	C 5.4	SUBSTANTIAL PERFORMANCE OF THE WORK- AND PAYMENT OF HOLDBACK
SC31.1	GC 5.4	Delete GC 5.4 – SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK in its entirety and replace it with the following:
		"GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK
		5.4.1 When the Contractor considers that Substantial Performance of the Work has been achieved, the Contractor shall prepare and submit to the Consultant and the Owner a comprehensive deficiency list of items to be completed or corrected, including any incomplete Close-Out Documentation, and apply for a review by the Consultant and the Owner to establish Substantial Performance of the Work. Failure to include an item on the list does not alter the responsibility of the Contractor to complete the Contract.
		5.4.2 Prior to, or as part of its written application for <i>Substantial Performance of the Work</i> the <i>Contractor</i> shall submit to the <i>Consultant</i> submit to the <i>Consultant</i> all closeout documentation required by the <i>Contract Documents</i> , including but not limited to, warranties, manuals, guarantees, as-built drawings and all other relevant literature from suppliers and manufacturers including, but not limited to, where applicable (the "Close-Out Documentation"):
		 equipment, maintenance, and operations manuals; equipment specifications, data sheets and brochures, parts lists and assembly drawings, performance curves and other related data; line drawings, value charts and control sheets sequences with description of the sequence of operations; warranty documents; guarantees; certificates; service and maintenance reports;
		.8 Specifications; .9 Shop Drawings; .10 coordination drawings; .11 testing and balancing results and reports; .12 Commissioning and quality assurance documentation; .13 distribution system diagrams; .14 spare parts; .15 samples;
		 2.16 existing reports and correspondence from authorities having jurisdiction in the Place of the Work; 2.17 inspection certificates; 2.18 red-lined record drawings from the construction trailer in two copies and other materials or documentation required to be submitted under the Contract.
		5.4.3 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:

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.1	prepare a final deficiency list incorporating all items to be completed or
	corrected, including any incomplete or unsubmitted Close-Out Documentation.
	Each item shall have an indicated value for correction or completion and the
	determination of the total value of such items shall be determined pursuant to
	GC 5.8 - 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 the Consultant rendering a determination in
	accordance with GC 5.4.3.2

- .2 having completed the requirements set out in GC 5.4.3.1,
 - (a) the Consultant shall advise the Contractor in writing that the Work or the designated portion of the Work is not substantially performed and give reasons why, or
 - (b) the Consultant shall 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.
- 5.4.4 Following the issuance of the certificate of *Substantial Performance of the Work* referenced in subparagraph 5.4.3.2(b):
 - .1 The Contractor shall publish, in a construction trade newspaper in the area of the location of the Work, a copy of the certificate of Substantial Performance of the Work referred to in GC 5.4.2.2(b) within seven (7) calendar days of receiving a copy of the certificate signed by the Consultant, and the Contractor shall provide suitable evidence of the publication to the Consultant and the Owner. If the Contractor fails to publish such notice, the Owner shall be at liberty to publish said certificate and back-charge the Contractor its reasonable costs for doing so;
 - .2 The Contractor shall complete the Work within forty (40) calendar days of the date certified as the date of Substantial Performance of the Work:
 - .3 Notwithstanding any other provisions of the Contract, no payments will be processed between Substantial Performance of the Work and Ready-for-Takeover.
 - .4 The Owner reserves the right to contract out any or all unfinished Work if it has not been completed within forty (40) days of Substantial Performance of the Work using, without limitation, the funds retained in accordance with GC 5.8 DEFICIENCY HOLDBACK, without prejudice to any other right or remedy and without affecting the warranty period. The cost to the Owner of completing the Work including Owner and Consultant wages and materials shall be deducted from the Contract Price.
- 5.4.5 After publication of the certificate of the *Substantial Performance of the Work*, and provided that the *Contractor* has completed performance of the *Work* within the 40 calendar days following certification of *Substantial Performance of the Work*, the *Contractor* may submit an application for payment of the outstanding *Construction Act* holdback amount, which application for payment shall:
 - .1 include all of the requirements listed in EXHIBIT "1" PROJECT SPECIFIC REQUIREMENTS FOR A PROPER INVOICE, as applicable to the application for payment of the holdback amount; and
 - .2 include a statement that the *Contractor* has not received any written notices of lien or any claims for liens from any *Subcontractor* or *Supplier*.

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5.4.6	The Construction Act holdback amount shall become due and payable the day immediately following the expiration of the holdback period prescribed by the Construction Act (in most cases being the 61st calendar day following the publication of the certificate of Substantial Performance of the Work referred to in GC 5.4.4.1), subject to the occurrence of any of the following:
	.1 the preservation of a lien in respect of the <i>Project</i> that has not been satisfied, discharged or otherwise provided for in accordance with the <i>Construction Act</i> ;
	.2 receipt by the Owner of a written notice of lien that has not been satisfied, discharged or otherwise provided for in accordance with the Construction Act; or
	.3 prior to the expiry of 40 calendar days following the publication of the certificate of Substantial Performance of the Work, the Owner publishes a Notice of Non-Payment of holdback in accordance with the Construction Act (Form 6), setting out the amount of holdback that will not be paid, which may include non-payment to secure the correction of deficiencies and/or the completion of the Work.
5.4.7	Notwithstanding the <i>Owner's</i> obligation to make payment of the holdback amount in accordance with GC 5.4.6, the processing of such payment remains subject to the <i>Owner's</i> internal <i>EFT</i> timing limitations. The <i>Owner</i> covenants, and the <i>Contractor</i> agrees, that payment of the holdback shall be made by <i>EFT</i> at the first opportunity during the <i>Owner's</i> normal processing of <i>EFTs</i> upon the holdback becoming due in accordance with GC 5.4.6.

SC32 GC 5.5 FINAL PAYMENT

SC32.1	GC 5.5	<u>Delete</u> GC 5.5 in its entirety, including all subparagraphs thereunder and <u>replace</u> it with the following:		
		"5.5.1 When Ready-for-Takeover has been achieved in accordance with GC 12.1 — READY-FOR-TAKEOVER and the Contractor considers the Work is complete, and after the Contractor, the Owner, and the Consultant have attended a Pre-Invoice Submission Meeting analogous to the requirement in GC 5.2.1 (the "Final Pre-Invoice Submission Meeting"), the Contractor may submit an application for final payment to the Owner and to the Consultant, which application for payment shall:		
		.1 include all of the requirements set out in GC 5.2.2, including without limitation those requirements listed in APPENDIX "1" - PROJECT SPECIFIC REQUIREMENTS FOR A PROPER INVOICE that are specific to an application for final payment; and		
		if applicable, (a) a certificate from the <i>Consultant</i> or written confirmation from the <i>Owner</i> that the deficiencies or incomplete <i>Work</i> waived by the <i>Owner</i> pursuant to GC 12.1.2 have been fully rectified as of the date of the <i>Contractor's</i> application for final payment, and/or (b) written confirmation, signed by the <i>Owner</i> and the <i>Contractor</i> , that the <i>Contract Price</i> has been reduced by a specified amount in exchange for the <i>Owner</i> releasing the <i>Contractor</i> of its obligation to rectify the certain outstanding deficiencies and/or incomplete <i>Work</i> waived by the <i>Owner</i> pursuant to GC 12.1.2, as detailed in such written confirmation.		

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5.5.2	No later than 5 calendar days prior to the <i>Final Pre-Invoice Submission Meeting</i> , the <i>Contractor</i> will, if not already provided, submit to the <i>Consultant</i> all <i>Close-Out Documentation</i> .		
5.5.3	Delivery of all <i>Close-Out Documentation</i> is a requirement for the <i>Proper Invoice</i> for final payment.		
5.5.4	After receipt by the <i>Owner</i> and the <i>Consultant</i> of an application for payment submitted by the <i>Contractor</i> that is a <i>Proper Invoice</i> and by no later than 10 calendar days after the receipt of the <i>Proper Invoice</i> :		
	.1 the Consultant will either:		
	(a) issue to the <i>Owner</i> with a copy to the <i>Contractor</i> , a progress payment certificate in the amount applied for by the <i>Contractor</i> in the <i>Proper Invoice</i> , or		
	(b) deliver a finding to the Owner with reasons why an amount other than what is claimed in the Proper Invoice is properly due to the Contractor, which finding the Owner may accept or amend prior to issuing a Notice of Non-Payment (Form 1.1), if any, in accordance with GC 5.5.2;		
	.2 the Owner shall make payment to the Contractor on account as provided in Article A-5 PAYMENT,		
	(a) in the amount stated in the certificate for payment, or		
	(b) in the amount stated in the certificate for payment less such amount stated in the <i>Owner's Notice of Non-Payment</i> issued pursuant to GC 5.5.5,		
	on the 28th calendar day after receipt of a <i>Proper Invoice</i> , unless such 28th calendar day lands on a day that is other than a <i>Working Day</i> , in which case payment shall be made on the next <i>Working Day</i> after such 28th day.		
5.5.5	In the event that the application for final payment delivered by the <i>Contractor</i> does not include the requirements of GC 5.5.1 (including the requirements for a <i>Proper Invoice</i>) and GC 5.5.2 or where the <i>Owner</i> disputes the amount claimed as payable in the <i>Proper Invoice</i> , then the <i>Owner</i> shall within 14 calendar days of receipt of the application for payment, issue a <i>Notice of Non-Payment</i> . Where the <i>Owner</i> has delivered a <i>Notice of Non-Payment</i> , as specified under this GC 5.5.5, the <i>Owner</i> and the <i>Contractor</i> shall first engage in good faith negotiations to resolve the dispute. If within 5 calendar days following the issuance of a <i>Notice of Non-Payment</i> , despite good faith efforts by both parties with the assistance of the <i>Consultant</i> , the <i>Owner</i> and the <i>Contractor</i> cannot resolve the dispute, either party may commence an <i>Adjudication</i> in accordance with the procedures set out in the <i>Construction Act</i> . Any portion of the <i>Proper Invoice</i> which is not the subject of the <i>Notice of Non-Payment</i> shall be payable within the time period set out in GC 5.5.4.2.		
5.5.6	Subject to the provisions of the <i>Construction Act</i> and any other rights conferred on the <i>Owner</i> at law or under this <i>Contract</i> to withhold payment or backcharge or set-off against payment, the <i>Owner</i> shall pay the amount payable under a <i>Proper Invoice</i> for final payment in accordance with the <i>Construction Act</i> .		
5.5.7	When the <i>Consultant</i> issues certificate of completion in accordance with GC 5.5.4.1, the <i>Consultant</i> shall also issue a certificate for release of any holdback for finishing work amount. In accordance with the <i>Construction Act</i> , the <i>Owner</i> may retain any amounts which are required by law to satisfy any liens against the <i>Work</i> , in respect of any third party claims made to the <i>Owner</i> in respect of the <i>Contract</i> or the <i>Work</i> , and in respect of any claims the <i>Owner</i> may have against the <i>Contractor</i> . Subject to		

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the foregoing, the <i>Owner</i> shall release the holdback in accordance with the <i>Construction Act.</i> "

SC33 GC 5.6 DEFERRED WORK

SC33.1	5.6.1	<u>Delete</u> paragraph 5.6.1 and <u>replace</u> with the following:		
		"5.6.1 If because of conditions reasonably beyond the control of the <i>Contractor</i> , there are items of work that cannot be performed, payment in full for that portion of the <i>Work</i> which has been performed as certified by the <i>Consultant</i> shall not be withheld or delayed by the <i>Owner</i> on account thereof, but the <i>Owner</i> may withhold, subject to its requirement to issue a <i>Notice of Non-Payment</i> under the <i>Construction Act</i> , until the remaining portion of the <i>Work</i> is finished, only such an amount that the <i>Consultant</i> determines is sufficient and reasonable to cover the cost of performing such remaining work. The remaining work shall be valued as deficient work as defined in GC 5.8.1."		

SC34 *NEW* GC 5.8 DEFICIENCY HOLDBACK

SC34.1	5.8.1	Add ne	Add new GC 5.8 – DEFICIENCY HOLDBACK as follows:		
		"GC 5.8	B DEFICIENCY HOLDBACK		
		5.8.1	Notwithstanding any provisions contained in the <i>Contract Documents</i> concerning certification and release of monies to the <i>Contractor</i> , the <i>Owner</i> reserves the right to establish a deficiency holdback, at the time of the review for <i>Substantial Performance</i> of the <i>Work</i> , based on a 200% dollar value of the deficiencies listed by the <i>Consultant</i> .		
		5.8.2	5.8.2 In performing the calculation under GC 5.8.1,		
			.1 no individual deficiency will be valued at less than five hundred dollars (\$500.00); and		
			.2 for any Close-Out Documentation not submitted in advance of or as part of the Contractor's application for Substantial Performance of the Work, an amount shall be retained by the Owner as part of the deficiency holdback that is equal to the estimated time and material costs to retain a third-party to re-create the applicable Close-Out Documentation, as determined by the Consultant, until such time as the applicable Close-Out Documentation is submitted and approved.		
		5.8.3	The deficiency holdback shall be due and payable to the <i>Contractor</i> on the 61 st day following completion of all of the deficiencies listed by the <i>Consultant</i> , there being no claims for lien registered against the title to the <i>Place of the Work</i> issued in accordance with the <i>Construction Act</i> , and less any amounts disputed under an <i>Owner's Notice of Non-Payment</i> (Form 1.1)."		

PART 6 CHANGES IN THE WORK

SC35 GC 6.1 OWNER'S RIGHT TO MAKE CHANGES

SC35.1	6.1.2	Add the following to the end of GC 6.1.2:

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		"This requirement is of the essence and it is the express intention of the parties that any claims by the <i>Contractor</i> for a change in the <i>Contract Price</i> and/or <i>Contract Time</i> shall be barred unless there has been strict compliance with PART 6 - CHANGES IN THE WORK. No verbal dealings between the parties and no implied acceptance of alterations or additions to the <i>Work</i> and no claims that the <i>Owner</i> has been unjustly enriched by any alteration or addition to the <i>Work</i> , whether in fact there is any such unjust enrichment or not, shall be the basis of a claim for additional payment under this <i>Contract</i> , an increase to the <i>Contract Price</i> , or a claim for any extension of the <i>Contract Time</i> ."					
SC35.2	6.1.3 to	Add nev	w paragraphs 6.1.3, 6.1.4, 6.1.5, 6.1.6, 6.1.7 and 6.1.8 as follows:				
	6.1.8	"6.1.3	The <i>Contractor</i> agrees that changes resulting from construction coordination, including but not limited to, site surface conditions, site coordination, and <i>Subcontractor and Supplier</i> coordination are included in the <i>Contract Price</i> and the <i>Contractor</i> shall be precluded from making any claim for a change in the <i>Contract Price</i> as a result of such changes.				
		6.1.4	6.1.4 Labour costs shall be actual, prevailing rates at the <i>Place of the Work</i> paid to workers, plus statutory charges on labour including WSIB, unemployment insurance, Canada pension, vacation pay, hospitalization and medical insurance. The <i>Contractor</i> shall provide these rates, when requested by the <i>Consultant</i> , for review and/or agreement.				
		6.1.5	6.1.5 Quotations for changes to the <i>Work</i> shall only include <i>Direct Costs</i> and be accompanied by itemized breakdowns together with detailed, substantiating quotations or cost vouchers from <i>Subcontractors</i> and <i>Suppliers</i> , submitted in a format acceptable to the <i>Consultant</i> and shall include any <i>Direct Costs</i> associated with extensions in <i>Contract Time</i> .				
		6.1.6	6.1.6 When both additions and deletions covering related <i>Work</i> or substitutions are involved in a change to the <i>Work</i> , payment, including <i>Overhead</i> and profit, shall be calculated on the basis of the net difference, if any, with respect to that change in the <i>Work</i> .				
		6.1.7	6.1.7 No extension to the <i>Contract Time</i> shall be granted for changes in the <i>Work</i> unless the <i>Contractor</i> can clearly demonstrate that such changes significantly alter the overall construction schedule submitted at the commencement of the <i>Work</i> . Extensions of <i>Contract Time</i> and all associated costs, if approved, shall be included in the relevant <i>Change Order</i> .				
		6.1.8	When a change in the <i>Work</i> is proposed or required, the <i>Contractor</i> shall within 10 calendar days submit to the <i>Consultant</i> for review a claim for a change in <i>Contract Price</i> and/or <i>Contract Time</i> . Should 10 calendar days be insufficient to prepare the submission, the <i>Contractor</i> shall within 5 calendar days, advise the <i>Consultant</i> in writing of the proposed date of submission of the claim. Claims submitted after the dates prescribed herein will not be considered."				

SC36 GC 6.2 CHANGE ORDER

SC36.1	6.2.1	In paragraph 6.2.1 after the last sentence in the paragraph add the following:
		"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."

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SC36.2	6.2.3 to	Add nev	w paragra	aphs 6.2.3, 6.2.4, and 6.2.5 as follows:
	6.2.5	"6.2.3		lue of a change shall be determined in one or more of the following methods cted by the Consultant:
			.1	by estimate and acceptance of a lump sum;
			.2	by negotiated unit prices which include the <i>Contractor's</i> overhead and profit, or;
			.3	by the actual <i>Direct Cost</i> to the <i>Owner</i> , 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%.
		6.2.4	All quo	otations shall include Direct Costs and be submitted in a complete manner
			.1 .2 .3 .4 .5	quantity of each material, unit cost of each material, man hours involved, cost per hour, Subcontractor quotations submitted listing items 1 to 4 above and item 6 below. mark-up.
		6.2.5	resultir	wner and the Consultant will not be responsible for delays to the Working from late, incomplete or inadequately broken-down valuations submitted Contractor."

SC37 GC 6.3 CHANGE DIRECTIVE

SC37.1	6.3.6.1	Amend paragraph 6.3.6.1 by deleting the final period and adding the following:		
		".1 Ten percent (10%) for profit plus five percent (5%) for overhead on work by the <i>Contractor's</i> own forces up to the value of \$15,000 and five percent (5%) for profit plus three percent (3%) for <i>Overhead</i> on work by the <i>Contractor's</i> own forces in excess of \$15,000 and,		
		.2 Ten percent (10%) fee on amounts paid to <i>Subcontractors</i> or <i>Suppliers</i> 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 <i>Subcontractor's</i> or <i>Supplier's</i> price has been approved by the <i>Owner</i> , the <i>Subcontractor</i> or <i>Supplier</i> 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 <i>Overhead</i> on such actual net cost for changes in the <i>Work</i> , up to the value of \$15,000 and five percent		



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		(5%) for profit and three percent (3%) for overhead on such actual net cost changes in the <i>Work</i> in excess of \$15,000."	
SC37.2	6.3.6.2	<u>Delete</u> paragraph 6.3.6.2 and <u>replace</u> it with the following:	
		".2 If a change in the <i>Work</i> results in a net decrease in the <i>Contract Price</i> , the amount of the credit shall be the net cost, without deduction for <i>Overhead</i> or profit."	
SC37.3	6.3.7.1(4)	<u>Delete</u> GC 6.3.7.1(4).	
SC37.4	6.3.7.7	Amend GC 6.3.7.7 by <u>deleting</u> the words "described in paragraph 6.3.7.1" and <u>replacing</u> them with "approved by the <i>Owner</i> in writing and in advance of any such expenses being incurred;"	
SC37.5	6.3.7.9	Amend GC 6.3.7.9 by <u>adding</u> the following to the end of the paragraph: "when specifically requested by the <i>Owner</i> or as directed by the <i>Consultant</i> ,".	
SC37.6	6.3.7.10	Amend GC 6.3.7.10 by <u>adding</u> the following to the end of the paragraph: ", provided that such amounts are not caused by negligent acts, omissions, or default of the <i>Contractor</i> or <i>Subcontractor</i> ,".	
SC37.7	6.3.7.13	<u>Delete</u> GC 6.3.7.13.	
SC37.8	6.3.7.15	<u>Delete</u> GC 6.3.7.15.	
SC37.9	6.3.7.17	Delete GC 6.3.7.17 in its entirety including all subparagraphs.	
SC37.10	6.3.11	Delete GC 6.3.11 and replace it with the following:	
		"6.3.11 The value of the <i>Work</i> performed as a result of a <i>Change Directive</i> shall not be eligible to be included in progress payments until the amount, including the method for determining the amount, of such <i>Change Directive</i> has been determined."	

SC38 GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

SC38.1	6.4.1	Delete paragraph 6.4.1 in its entirety 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 insofar as the Place of Work was available for investigation 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 <i>Contractor</i> will be considered by the <i>Owner</i> or the <i>Consultant</i> in connection with conditions which could reasonably have been ascertained by such investigation or other due diligence undertaken prior to the execution of the <i>Contract</i> .		
SC38.2	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 <i>Contractor</i> believes that the conditions of the <i>Place</i> of the Work differ materially from those reasonably anticipated, differ materially from those indicated in the <i>Contract Documents</i> or were concealed from discovery notwithstanding the conduct of the investigation described in paragraph 6.4.1, it shall provide the <i>Owner</i> and the <i>Consultant</i> with <i>Notice in Writing</i> no later than five (5) <i>Working Days</i> after the first observation of such conditions."		
		-and-		

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		<u>amend</u> the existing second sentence of paragraph 6.4.2 in the second line, following the word "materially" by <u>adding</u> the words "or were concealed from discovery notwithstanding the conduct of the investigation described in paragraph 6.4.1,".		
SC38.3	6.4.3	Delete paragraph 6.4.3 in its entirety and substitute the following:		
		"6.4.3 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."		
SC38.4	6.4.5	Add new paragraph 6.4.5 as follows:		
		"6.4.5 No claims for additional compensation or for an extension of <i>Contract Time</i> shall be allowed if the <i>Contractor</i> fails to give <i>Notice in Writing</i> to the <i>Owner</i> or <i>Consultant</i> , as required by paragraph 6.4.2."		

SC39 GC 6.5 DELAYS

SC39.1	6.5.1	In paragraph 6.5.1 <u>delete</u> the words after the word "for" in the fourth line and <u>replace</u> them with the words "reasonable <i>Direct Costs</i> 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)."	
SC39.2	6.5.2	 <u>Delete</u> GC 6.5.2 in its entirety and <u>replace</u> it with the following: "6.5.2 If the <i>Contractor</i> is delayed in the performance of the <i>Work</i> by a stop work order issued by a court or other public authority and providing that such order was issued on account of a direct breach, violation, contravention, or a failure to abide by any laws, ordinances, rules, regulations, or codes by the <i>Owner</i>, <i>Other Contractor(s)</i>, or the <i>Consultant</i>, and relating to the <i>Work</i> or the <i>Place of the Work</i>, then the <i>Contract Time</i> shall be extended for such reasonable time as the <i>Consultant</i> may determine. The <i>Contractor</i> shall be reimbursed by the <i>Owner</i> for reasonable <i>Direct Costs</i> 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)." 	
SC39.3	6.5.3	"6.5.3 If either party is delayed in the performance of their obligations under this Contract by Force Majeure, then the Contract Time shall be extended for such reasonable time as the Owner and the Contractor shall agree. The extension of time shall not be less than the time lost as a result of the event causing the delay, unless the parties agree to a shorter extension. Neither party shall be entitled to payment for costs incurred by such delays. Upon reaching agreement on the extension of the Contract Time attributable to the Force Majeure event, the Owner and the Contractor shall execute a Change Order indicating the length of the extension to the Contract Time and confirming that there are no costs payable by the either party for the extension of Contract Time. However, if at the time an event of Force Majeure arises a party is in default of its obligations under the Contract and has received a notice of default pursuant to PART 7 – DEFAULT NOTICE, this paragraph 6.5.3 shall not excuse a party from its obligation to cure the default(s). For greater certainty, the defaulting party, to the extent possible, must continue to address and cure the default notwithstanding an event of Force Majeure."	
SC39.4	6.5.4	Delete paragraph 6.5.4 in its entirety and replace it with the following:	

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		"6.5.4	No extension or compensation shall be made for delay or impact on the <i>Work</i> unless notice in writing of a claim is given to the <i>Consultant</i> not later than ten (10) <i>Working Days</i> after the commencement of the delays or impact on the <i>Work</i> , provided however, that, in the case of a continuing cause of delay or impact on the <i>Work</i> , only one notice of claim shall be necessary."
SC39.5	6.5.6 to 6.5.8	Add nev	w paragraphs 6.5.6, 6.5.7 and 6.5.8 as follows:
		"6.5.6	If the <i>Contractor</i> is delayed in the performance of the <i>Work</i> by an act or omission of the <i>Contractor</i> or anyone directly or indirectly employed or engaged by the <i>Contractor</i> , or by any cause within the <i>Contractor's</i> control, then (i) firstly, at its expense, and to the extent possible, the <i>Contractor</i> shall accelerate the work and/or provide overtime work to recover time lost by a delay arising under this paragraph 6.5.6, and (ii) secondly, where it is not possible for the <i>Contractor</i> to recover the time lost by implementing acceleration measures and/or overtime work, the <i>Contract Time</i> may be extended for such reasonable time as the <i>Owner</i> may decide in consultation with the <i>Consultant</i> and the <i>Contractor</i> . The <i>Owner</i> shall be reimbursed by the <i>Contractor</i> for all reasonable costs incurred by the <i>Owner</i> as the result of such delay, including, but not limited to, Owner's staff costs, the cost of all additional services required by the <i>Owner</i> from the <i>Consultant</i> or any sub-consultants, project managers, or others employed or engaged by the <i>Owner</i> , and in particular, the costs of the <i>Consultant's</i> services during the period between the date of <i>Substantial Performance of the Work</i> 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 <i>Substantial Performance of the Work</i> achieved by the <i>Contractor</i> .
		6.5.7	Without limiting the obligations of the <i>Contractor</i> described in GC 3.2 – CONSTRUCTION BY OWNER OR OTHER CONTRACTORS or GC 9.4 – CONSTRUCTION SAFETY, the <i>Owner</i> or <i>Consultant</i> may, by <i>Notice in Writing</i> , direct the <i>Contractor</i> to stop the <i>Work</i> where the <i>Owner</i> or <i>Consultant</i> determines that there is an imminent risk to the safety of persons or property at the <i>Place of the Work</i> . In the event that the <i>Contractor</i> receives such notice, it shall immediately stop the <i>Work</i> and secure the site. The <i>Contractor</i> shall not be entitled to an extension of the <i>Contract Time</i> or to an increase in the <i>Contract Price</i> unless the resulting delay, if any, would entitle the <i>Contractor</i> to an extension of the <i>Contact Time</i> or the reimbursement of the <i>Contractor's</i> costs as provided in paragraphs 6.5.1, 6.5.2 or 6.5.3. No claim for delay shall be made by the <i>Contractor</i> and the <i>Contract Time</i> shall not be extended due to climatic conditions or arising from the <i>Contractor's</i> efforts to
		6.5.8	

PART 7 DEFAULT NOTICE

SC40 GC 7.1 OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT

SC40.1	7.1.2	In GC 7.1.2, <u>delete</u> the words "and if the <i>Consultant</i> has given a written statement to the <i>Owner</i> and <i>Contractor</i> which provides the detail of such neglect to perform the <i>Work</i> properly or such failure to comply with the requirements of the <i>Contract</i> to a substantial degree".
SC40.2	7.1.3.4	Add a new subparagraph 7.1.3.4 as follows:
		".4 an "acceptable schedule" as referred to in subparagraph 7.1.3.2. means a schedule approved by the <i>Consultant</i> and the <i>Owner</i> wherein the default can be corrected within the balance of the <i>Contract Time</i> and shall not cause delay to any other aspect of the



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			rk or the work of other contractors, and in no event shall it be deemed to give a right extend the Contract Time."	
SC40.3	7.1.4.1	<u>Delete</u> s	subparagraph 7.1.4.1 and replace it with the following:	
		".1 correct such default and deduct the cost, including <i>Owner's</i> expenses, thereof from any payment then or thereafter due the <i>Contractor</i> ."		
SC40.4	7.1.4.2	<u>Delete</u> s	subparagraph 7.1.4.2 and replace it with the following:	
		co	providing <i>Notice in Writing</i> to the <i>Contractor</i> , terminate the <i>Contractor</i> 's right to ntinue with the <i>Work</i> in whole or in part or terminate the <i>Contract</i> , and publish a notice termination (Form 8) in accordance with the <i>Act</i> ."	
SC40.5	7.1.5.3		aragraph 7.1.5.3 <u>delete</u> the words: "however, if such cost of finishing the <i>Work</i> is less e unpaid balance of the <i>Contract Price</i> , the <i>Owner</i> shall pay the <i>Contractor</i> the ce"	
SC40.6	7.1.6 to 7.1.10	Delete of follows:	GC 7.1.6 and <u>replace</u> it with new paragraphs 7.1.6, 7.1.7, 7.1.8, 7.1.9 and 7.1.10 as	
		"7.1.6	In addition to its right to terminate the <i>Contract</i> set out herein, the <i>Owner</i> may terminate this <i>Contract</i> at any time for any other reason and without cause upon giving the <i>Contractor</i> fifteen (15) <i>Working Days Notice in Writing</i> to that effect. In such event, the <i>Contractor</i> shall be entitled to be paid for all <i>Work</i> performed including reasonable profit, for loss sustained upon <i>Products</i> and <i>Construction Equipment</i> , and such other damages as the <i>Contractor</i> may have sustained as a result of the termination of the <i>Contract</i> , but in no event shall the <i>Contractor</i> be entitled to be compensated for any loss of profit on unperformed portions of the <i>Work</i> , or indirect, special, or consequential damages incurred.	
		7.1.7	The <i>Owner</i> may suspend <i>Work</i> under this <i>Contract</i> at any time for any reason and without cause upon giving the <i>Contractor Notice in Writing</i> to that effect. In such event, the <i>Contractor</i> shall be entitled to be paid for all <i>Work</i> 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 <i>Products</i> and <i>Construction Equipment</i> , and such other damages as the <i>Contractor</i> may have sustained as a result of the suspension of the <i>Work</i> , but in no event shall the <i>Contractor</i> 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 <i>Contract</i> 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 <i>Contract</i> or a suspension of the <i>Work</i> under GC 7.1 - OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, OR TERMINATE THE CONTRACT or GC 7.2 - CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the <i>Contractor</i> shall use its best commercial efforts to mitigate the financial consequences to the <i>Owner</i> arising out of the termination or suspension, as the case may be.	
		7.1.9	Upon the resumption of the <i>Work</i> following a suspension under GC 7.1 - OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, OR TERMINATE THE CONTRACT or GC 7.2 - CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the <i>Contractor</i> 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	



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suspension shall continue after such termination of the Contract or suspension of the Work."

SC41 GC 7.2 CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT

SC41.1	7.2.2	Delete paragraph 7.2.2 and replace it with the following:
		"7.2.2 If the <i>Work</i> is suspended or otherwise delayed for a period of 40 consecutive <i>Working Days</i> or more under a stop work order issued by a court or other public authority on account of a breach, violation, contravention, or a failure to abide by any laws, ordinances, rules, regulations, or codes directly by the <i>Owner</i> , the <i>Owner</i> 's other contractor(s), or the <i>Consultant</i> , and relating to the <i>Work</i> or the <i>Place of the Work</i> , the <i>Contractor</i> may, without prejudice to any other right or remedy the <i>Contractor</i> may have, terminate the <i>Contract</i> by giving the <i>Owner</i> Notice in <i>Writing</i> to that effect."
SC41.2	7.2.3.1	Delete subparagraph 7.2.3.1 in its entirety.
SC41.3	7.2.3.2	Delete subparagraph 7.2.3.2 in its entirety.
SC41.4	7.2.3.4	In subparagraph 7.2.3.4, <u>delete</u> the words "except for GC 5.1 - FINANCING INFORMATION REQUIRED OF THE OWNER".
SC41.5	7.2.5	Delete paragraph 7.2.5 and replace it with the following:
		"7.2.5 If the default cannot be corrected within the 5 <i>Working Days</i> specified in paragraph 7.2.4, the <i>Owner</i> shall be deemed to have cured the default if it:
		.1 commences correction of the default within the specified time;
		.2 provides the <i>Contractor</i> with an acceptable schedule for such correction; and,
		.3 completes the correction in accordance with such schedule."
SC41.6	7.2.6 to	Add new paragraphs 7.2.6, 7.2.7, 7.2.8 and 7.2.9 as follows:
	7.2.9	"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.
		7.2.7 The <i>Contractor</i> shall not be entitled to give notice of the <i>Owner's</i> default or terminate the <i>Contract</i> in the event the <i>Owner</i> withholds certificates or payment or both in accordance with the <i>Contract</i> because of:
		.1 the Contractor's failure to pay all legitimate claims promptly, or
		.2 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



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	termination shall continue in force and shall survive termination of this <i>Contract</i> by the <i>Contractor</i> .
7.2.9	If the <i>Contractor</i> suspends the <i>Work</i> or terminates the <i>Contract</i> as provided for in GC 7.2 – CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the <i>Contractor</i> shall ensure the site and the <i>Work</i> are left in a safe, secure condition as required by authorities having jurisdiction at the <i>Place of the Work</i> and the <i>Contract Documents</i> ."

PART 8 DISPUTE RESOLUTION

SC42 GC 8.1 AUTHORITY OF THE CONSULTANT

SC42.1	8.1.3	<u>Delete</u> paragraph 8.1.3 in its entirety and <u>substitute</u> as follows:	
		"8.1.3 If a dispute is not resolved promptly, the <i>Consultant</i> will give such instruction as in the <i>Consultant's</i> opinion are necessary for the proper performance of the <i>Work</i> and to prevent delays pending settlement of the dispute. The parties shall act immediately according to such instructions, it being understood that by doing so neither party will jeopardize any claim the party may have."	

SC43 GC 8.2 ADJUDICATION

SC43.13	8.2.2 to 8.2.7	Add ne	w GC 8.2.2, 8.2.3, 8.2.4, 8.2.5, 8.2.6, and 8.2.7 as follows:
	. J. <u>-</u>	"8.2.2	Save and except where the <i>Contractor</i> has given an undertaking, in accordance with the <i>Act</i> , to refer a dispute to <i>Adjudication</i> , prior to delivering a notice of <i>Adjudication</i> in a form prescribed by the <i>Act</i> , the parties agree to first address all disputes with at least one in-person meeting with the <i>Owner's</i> representative, the <i>Consultant's</i> representative, and the <i>Contractor's</i> representative. The parties agree that such steps will be taken to resolve any disputes in a timely and cost-effective manner.
		8.2.3	Notwithstanding any other provisions in PART 8 DISPUTE RESOLUTION, the parties shall engage in <i>Adjudication</i> proceedings as required by, and in accordance with, the <i>Construction Act</i> .
		8.2.4	The following procedures shall apply to any <i>Adjudication</i> the parties engage in under the <i>Construction Act</i> :
			.1 any hearings shall be held at a venue within the jurisdiction of the <i>Place of the Work</i> or such other venue as the parties may agree and which is acceptable to the adjudicator;
			.2 the Adjudication shall be conducted in English;
			.3 each party may be represented by counsel throughout an Adjudication;
			.4 there shall not be any oral communications with respect to issues in dispute that are the subject of an <i>Adjudication</i> between a party and the adjudicator unless it is made in the presence of both parties or their legal representatives; and
			.5 a copy of all written communications between the adjudicator and a party shall be given to the other party at the same time.

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	8.2.5	Any documents or information disclosed by the parties during an <i>Adjudication</i> are confidential and the parties shall not use such documents or information for any purpose other than the <i>Adjudication</i> in which they are disclosed and shall not disclose such documents and information to any third party, unless otherwise required by law, save and except the for the adjudicator.
	8.2.6	If the Contractor fails to comply with any of the notice requirements set out in the Contract, including the time limits set out in any of the following:

- .1 GC 6.4 CONCEALED OR UNKNOWN CONDITIONS;
- .2 GC 6.5 DELAYS;
- .3 GC 6.6 CLAIMS FOR A CHANGE IN CONTRACT PRICE;
- .4 PART 8 DISPUTE RESOLUTION
- .5 GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES
- .6 GC 9.3 ARTIFACTS AND FOSSILS; or
- .7 GC 9.5 MOULD

in respect of any claim or dispute, the *Contractor* shall have no entitlement whatsoever (including to an increase in the *Contract Price*, or an extension of *Contract Time*) in the context of an *Adjudication* under the *Construction Act* and waives the right to make any such claims or disputes in an *Adjudication*. This GC 8.2.6 shall operate conclusively as an estoppel and bar in the event such claims or disputes are brought in an *Adjudication* and the *Owner* may rely on this GC 8.2.6 as a complete defence to any such claims or disputes.

8.2.7 The parties hereby acknowledge and agree,

- .1 that counterclaims, claims of set-off or the exercise or use of other contractual rights that permit the *Owner* to withhold, deduct or retain from monies otherwise owed to the *Contractor* under the *Contract* may be referred to, and included as part of, *Adjudications* under the *Construction Act*:
- .2 that disputes related to the termination or abandonment of the *Contract*, as well as any disputes that arise or are advanced following the termination or abandonment of the *Contract*, shall not be referred to *Adjudication* under the *Construction Act*.
- .3 that notice(s) of Adjudication, with respect to any dispute or claim relating to the Project, shall not be given, and no Adjudication shall be commenced following Contract completion, Contract abandonment, or termination of the Contract:
- .4 that any Adjudication between the Contractor and a Subcontractor or a supplier that relates to an Adjudication between the Owner and the Contractor shall be joined together to be adjudicated by a single adjudicator, provided that the adjudicator agrees to do so, and the Contractor shall include a provision in each of its contracts that contain an equivalent obligation to this GC 8.2.7.4; and
- .5 that, other than where the *Contractor* is obliged to commence an *Adjudication* pursuant to an undertaking under the *Construction Act*, neither the *Owner* nor the *Contractor* shall commence an *Adjudication* during the *Restricted Period*.
- 8.2.8 The parties acknowledge and agree that no *Adjudication*, arbitration, action, suit or other proceeding may be brought by the *Contractor* against the *Owner* in respect of a claim for an increase to the *Contract Price* as set out in GC 6.6, before the *Consultant* has issued its findings in respect of same, pursuant to GC 6.6.5. For greater clarity and without limiting the foregoing, the amount applied for in each *Proper Invoice* shall not include any amounts pertaining to the *Contractor's* claim for an increase in *Contract Price* unless and until the *Consultant* has issued a written notice to the *Contractor* regarding the validity of such claim, as provided for in GC 6.6.5. However, nothing in this GC 8.2.8 shall prevent a *Contractor* from commencing an *Adjudication* where, pursuant to the *Construction Act*, the *Contractor* is required



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	to give an undertaking to a Subcontractor to commence an Adjudication following delivery of a Notice of Non-Payment."

SC44 GC 8.3 NEGOTIATION, MEDIATION AND ARBITRATION

SC44.1	8.3.1	Mediate made if	Amend paragraph 8.3.1 by changing part of the second line from "shall appoint a <i>Project Mediator</i> " to "may appoint a <i>Project Mediator</i> , except that such an appointment shall only be made if both the <i>Owner</i> and the <i>Contractor</i> agree."	
SC44.2	8.3.4		paragraph 8.3.4 by changing part of the second line from "the parties shall request <i>ject Mediator</i> " to "and subject to paragraph 8.3.1 the parties may request the <i>Project or</i> ".	
SC44.3	8.3.6 to 8.3.9		paragraphs 8.3.6, 8.3.7 and 8.3.8 in their entirety and <u>replace</u> them with the following Cs 8.3.6, 8.3.7, 8.3.8, and 8.3.9:	
		"8.3.6	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 <i>Contractor</i> and the <i>Owner</i> agree. If the <i>Contractor</i> and the <i>Owner</i> agree to resolve the dispute by arbitration, the arbitration shall be conducted in the jurisdiction of the <i>Place of the Work</i> .	
		8.3.7	Prior to delivering a notice of <i>Adjudication</i> in a form prescribed by the <i>Act</i> , the parties agree to first address all disputes by attending at least one meeting with the <i>Owner's</i> representative, the <i>Consultant's</i> representative, and the <i>Contractor's</i> representative, prior to commencing an <i>Adjudication</i> . The parties agree that such steps will be taken to resolve any disputes in a timely and cost effective manner. If a resolution to the dispute(s) is not made at such a meeting, any party who plans to commence an <i>Adjudication</i> shall provide the other party with 5 <i>Working Days' Notice in Writing</i> of its intention to issue a notice of <i>Adjudication</i> .	
		8.3.8	Other than where the <i>Contractor</i> is obliged to commence an <i>Adjudication</i> pursuant to an undertaking under the <i>Construction Act</i> , neither the <i>Owner</i> nor the <i>Contractor</i> shall commence an <i>Adjudication</i> during the <i>Restricted Period</i> .	
		8.3.9	Where either party has delivered a notice of <i>Adjudication</i> in a form prescribed by the <i>Act</i> , the procedures and rules set out under the <i>Construction Act</i> and the regulations thereto shall govern the <i>Adjudication</i> ."	

PART 9 PROTECTION OF PERSONS AND PROPERTY

SC45 GC 9.1 PROTECTION OF WORK AND PROPERTY

SC45.1	9.1.1.1	<u>Delete</u> subparagraph 9.1.1.1 in its entirety and <u>substitute</u> the following:	
		".1 errors in the <i>Contract Documents</i> which the <i>Contractor</i> could not have discovered applying the standard of care described in paragraph 3.14.1;"	
SC45.2	9.1.2	Delete paragraph 9.1.2 in its entirety and substitute as follows:	
		"9.1.2 Before commencing any <i>Work</i> , the <i>Contractor</i> shall determine the locations of all underground or hidden utilities and structures indicated in or inferable from the <i>Contract Documents</i> , or that are inferable from an inspection of the <i>Place of the Work</i> exercising the degree of care and skill described in paragraph 3.14.1."	
SC45.3	9.1.5	Add new paragraph 9.1.5 as follows:	

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"9.1.5 With respect to any damage to which paragraphs 9.1.3 or 9.1.4 apply, the <i>Contractor</i> 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 <i>Contractor</i> , without first consulting the <i>Owner</i> and receiving written instructions as to the course of action to be followed from either the <i>Owner</i> or the <i>Consultant</i> . Where, however, there is danger to life, the environment, or public safety, the <i>Contractor</i> shall take such emergency action as it deems necessary to remove the danger."
as it deems necessary to remove the danger."

SC46 GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

SC46.1	9.2.1	Amend GC 9.2.1 by inserting the following to the end of the paragraph:
		"For the purposes of GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES, <i>Excess Soil</i> shall not be considered a 'toxic and hazardous substance'."
SC46.2	9.2.5.5	Add a new subparagraph 9.2.5.5 as follows:
		".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."
SC46.3	9.2.6	Amend GC 9.2.6 by adding the following words after the word "responsible" in the second line:
		"or whether any toxic or hazardous substances or materials already at the <i>Place of the Work</i> (and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements) were dealt with by the <i>Contractor</i> or anyone for whom the <i>Contractor</i> 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 <i>Owner</i> or others,".
SC46.4	9.2.8	Amend GC 9.2.8 by adding the following words after the word "responsible" in the second line:
		"or whether any toxic or hazardous substances or materials already at the <i>Place of the Work</i> (and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements) were dealt with by the <i>Contractor</i> or anyone for whom the <i>Contractor</i> 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 <i>Owner</i> or others,".
SC46.5	9.2.10	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."

SC47 GC 9.4 CONSTRUCTION SAFETY

SC47.1	9.4.1	Delete GC 9.4.1 in its entirety and replace it with the following:



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		"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 OHSA, including, but not limited to those of the "constructor", and shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Work. The Contractor's health and safety program documentation shall be made available for review by the Owner or Consultant immediately upon request. Without limiting the foregoing, the Contractor shall be solely responsible for construction safety in respect of the Consultant, Subcontractors and Suppliers, the Owner's own forces, Other Contractors, and all persons attending the Place of the Work during the course of the Project."
SC47.2	9.4.2	Amend GC 9.4.2 by <u>adding</u> the following words after "and the <i>Contractor</i> ": ", <i>Subcontractors</i> and <i>Suppliers</i> ".
SC47.3	9.4.3	Amend GC 9.4.3 by <u>adding</u> the following words after "and the <i>Contractor</i> ": ", <i>Subcontractors</i> and <i>Suppliers</i> ".
SC47.4	9.4.4	Delete GC 9.4.4 and replace it with the following:
		"9.4.4 The <i>Owner</i> 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 <i>Contractor</i> with respect to occupational health and safety and related matters."
SC47.5	9.4.5	Delete GC 9.4.5 in its entirety and replace it with the following:
		"9.4.5 Prior to the commencement of the <i>Work</i> , the <i>Contractor</i> shall submit to the <i>Owner</i> .
		.1 a current WSIB clearance certificate;
		.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 a copy of the Notice of Project filed with the Ministry of Labour naming itself as "constructor" under the OHSA; and
		. 5 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 <i>Place of the Work</i> ;"
SC47.6	9.4.6 to	Add new GC 9.4.6, 9.4.7, 9.4.8, 9.4.9, 9.4.10, 9.4.11, and 9.4.12 as follows:
	9.4.12	"9.4.6 The <i>Contractor</i> shall indemnify and save harmless the <i>Owner</i> , 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 <i>Contractor</i> under <i>OHSA</i> and any other occupational health and safety legislation in force at the <i>Place of the Work</i> including the payment of legal fees and disbursements on a solicitor and client basis. Such indemnity shall apply to the extent to which the <i>Owner</i> is not covered by insurance.
		9.4.7 If the <i>Owner</i> is of the reasonable opinion that the <i>Contractor</i> has not taken such precautions as are necessary to ensure compliance with the requirements of paragraph 9.4.1, the <i>Owner</i> may take any remedial measures which it deems necessary, including stopping the performance of all or any portion of the <i>Work</i> , and

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	the <i>Owner</i> may use its employees, the <i>Contractor</i> , any <i>Subcontractor</i> or any other contractors to perform such remedial measures.
9.4.8	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.
9.4.9	Unless otherwise provided in the <i>Contract Documents</i> , the <i>Contactor</i> shall develop, maintain and supervise for the duration of the <i>Work</i> 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 <i>Owner</i> and any workers' compensation or occupational health and safety statutes or regulations in force at the <i>Place of the Work</i> .
9.4.1	The <i>Contractor</i> shall provide a copy of the safety program described in GC 9.4.9 hereof to the <i>Consultant</i> for delivery to the <i>Owner</i> prior to the commencement of the <i>Work</i> , and shall, ensure, as far as it is reasonably practical to do so, that every employer and worker performing work in respect of the <i>Project</i> complies with such program.
9.4.1	The <i>Contractor</i> 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 <i>Place of the Work</i> , including, without limitation, articles necessary for administering first-aid to any person and an emergency procedure for the immediate removal of any inured person to a hospital or a doctor's care.
9.4.1	The <i>Contractor</i> shall promptly report in writing to the <i>Owner</i> and the <i>Consultant</i> all accidents of any sort arising out of or in connection with the performance of the <i>Work</i> , 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 <i>Contractor</i> to the <i>Owner</i> and the <i>Consultant</i> by telephone or messenger in addition to any reporting required under the applicable safety regulations."."

PART 10 GOVERNING REGULATIONS

SC48 GC 10.1 TAXES AND DUTIES

SC48.1	10.1.2	Amend paragraph 10.1.2 by adding the following sentence to the end of the paragraph:
		"For greater certainty, the <i>Contractor</i> shall not be entitled to any mark-up for overhead or profit on any increase in such taxes and duties and the <i>Owner</i> shall not be entitled to any credit relating to mark-up for overhead or profit on any decrease in such taxes. The <i>Contractor</i> shall provide a detailed breakdown of <u>Add</u> itional taxes if requested by the <i>Owner</i> in a form satisfactory to the <i>Owner</i> ."
SC48.2	10.1.3	Add new paragraph 10.1.3 as follows:
		"10.1.3 Where the <i>Owner</i> is entitled to an exemption or a recovery of sales taxes, customs duties, excise taxes or <i>Value Added Taxes</i> applicable to the <i>Contract</i> , the <i>Contractor</i> shall, at the request of the <i>Owner</i> , 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 <i>Owner</i> . The

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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."

SC49 GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

SC49.1	10.2.5	Amend paragraph 10.2.5 by adding the words "Subject to paragraph 3.4" at the beginning of the paragraph. -and- 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."
SC49.2	10.2.6	Amend paragraph 10.2.6 by adding the following sentence to the end of the paragraph: "In the event the <i>Owner</i> suffers loss or damage as a result of the <i>Contractor</i> 's failure to comply with paragraph 10.2.5 and notwithstanding any limitations described in paragraph 12.1.1, the <i>Contractor</i> agrees to indemnify and to hold harmless the <i>Owner</i> and the <i>Consultant</i> from and against any claims, demands, losses, costs, damages, actions suits or proceedings resulting from such failure by the <i>Contractor</i> ."
SC49.3	10.2.7	Amend paragraph 10.2.7 by inserting the words "which changes were not, or could not have reasonably been known to the <i>Owner</i> or to the <i>Contractor</i> , as applicable, at the time of bid closing and which changes did not arise as a result of a public emergency or other <i>Force Majeure</i> event" to the second line, after the words "authorities having jurisdiction".
SC49.4	10.2.8	Add new paragraph 10.2.8 as follows: "10.2.8 The <i>Contractor</i> shall furnish all certificates that are required or given by the appropriate governmental authorities as evidence that the <i>Work</i> as installed conforms with the laws and regulations of authorities having jurisdiction, including certificates of compliance for the <i>Owner's</i> occupancy or partial occupancy. The certificates are to be final certificates giving complete clearance of the <i>Work</i> , in the event that such governmental authorities furnish such certificates."

SC50 GC 10.4 WORKERS' COMPENSATION

SC50.1	10.4.1	Delete paragraph 10.4.1 and replace with the following:
		"10.4.1 Prior to commencing the <i>Work</i> , and with each and every application for payment thereafter, including the <i>Contractor's</i> application for payment of the holdback amount following <i>Substantial Performance of the Work</i> and again with the <i>Contractor's</i> application for final payment, the <i>Contractor</i> shall provide evidence of compliance with workers' compensation legislation in force at the <i>Place of the Work</i> , including payments due thereunder."

SC51 GC 11.1 INSURANCE

SC51.1	11.1	Delete entirety of GC 11.1 and replace with the following:
		"GC 11.1 INSURANCE

11.1.1

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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, <u>amend</u>ment, 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 \$10,000,000.00 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 Ready-for-Takeover, as set out in the certificate of Ready-for-Takeover, on an ongoing basis for a period of 6 years following Ready-for-Takeover. 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 \$5,000,000.00 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 <u>amendment</u> 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

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-owed aircraft and watercraft if used directly or indirectly in the performance of the *Work*, including use of <u>Add</u>itional 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 <u>Add</u>itional insureds. The policy shall

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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 <u>Add</u>itional insureds, for not less than the <u>replace</u>ment 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 <u>Add</u>ition 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 <u>Add</u>ition, 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

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	advance of cancellation, change or <u>amend</u> ment restricting coverage. Subject to satisfactory proof of financial capability by the <i>Contractor</i> for self-insurance of his equipment, the <i>Owner</i> agrees to waive the equipment insurance requirement.
11.1.2	The <i>Contractor</i> shall be responsible for deductible amounts under the policies except where such amounts may be excluded from the <i>Contractor's</i> 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 <i>Work</i> is substantially less than the <i>Contract Price</i> , the <i>Owner</i> may reduce the amount of insurance required to waive the course of construction insurance requirement.
11.1.4	If the <i>Contractor</i> fails to provide or maintain insurance as required by the <i>Contract Documents</i> , then the <i>Owner</i> shall have the right to provide and maintain such insurance and provide evidence of same to the <i>Contractor</i> . The <i>Contractor</i> shall pay the costs thereof to the <i>Owner</i> on demand, or the <i>Owner</i> may deduct the amount that is due or may become due to the <i>Contractor</i> .
11.1.5 /	All required insurance policies shall be with insurers licensed to underwrite insurance in the jurisdiction of the <i>Place of the Work</i> ."

SC52 *NEW* GC 11.2 CONTRACT SECURITY

SC52.1	GC 11.2	Add new GC 11.2 – CONTRACT SECURITY as follows:
		"GC 11.2 CONTRACT SECURITY
		11.2.1 The <i>Contractor</i> shall, prior to the execution of the <i>Contract</i> , furnish a performance bond and labour and material payment bond which meets the requirements under paragraph 11.2.2.
		11.2.2 The performance bond and labour and material payment bond shall:
		.1 be issued by a duly licensed surety company, which has been approved by the <i>Owner</i> and is permitted under the <i>Construction Act</i> ,
		.2 be issued by an insurer licensed under the <i>Insurance Act</i> (Ontario) and authorized to transact a business of suretyship in the Province of Ontario;
		.3 shall be in the form prescribed by the Construction Act;
		.4 have a coverage limit of at least 50 per cent of the Contract Price, or such other percentage of the Contract Price as stated in the Contract Documents;
		.5 extends protection to <i>Subcontractors</i> , <i>Suppliers</i> , and any other persons supplying labour or materials to the <i>Project</i> ; and
		.6 shall be maintained in good standing until the fulfillment of the <i>Contract</i> , including all warranty and maintenance periods set out in the <i>Contract Documents</i>
		11.2.3 It is the intention of the parties that the performance bond shall be applicable to all of the <i>Contractor's</i> obligations in the <i>Contract Document</i> and, wherever a performance bond is provided with language which conflicts with this intention, it shall be deemed to be amended to comply. The <i>Contractor</i> represents and warrants to the <i>Owner</i> that it has provided its surety with a copy of the <i>Contract Documents</i> prior to the issuance of such bonds.

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11.2.4	Without limiting the foregoing in any way, the bonds shall indemnify and hold harmless the <i>Owner</i> for and against costs and expenses (including legal and <i>Consultant</i> services and court costs) arising out of or as a consequence of any default of the <i>Contractor</i> under this <i>Contract</i> .
11.2.4	The <i>Contractor</i> shall be responsible for notifying the surety company of any changes made to the <i>Contract</i> during the course of construction.
11.2.5	The premiums for bonds required by the <i>Contract Documents</i> shall be included in the <i>Contract Price</i> .
11.2.6	Should the <i>Owner</i> require additional bonds by the <i>Contractor</i> or any of his <i>Subcontractors</i> , after the receipt of bids for the <i>Work</i> , the <i>Contract Price</i> shall be increased by all direct costs attributable to providing such bonds. The <i>Contractor</i> shall promptly provide the <i>Owner</i> , through the <i>Consultant</i> , with any such bonds that may be required."

PART 12 OWNER TAKEOVER

SC53 GC 12.1 READY-FOR-TAKEOVER

SC53.1	12.1.1	Delete GO	C 12.1	.1 in its entirety and replace it with the following:
		"12.1.1		dy-for-Takeover shall be achieved when all of the following has occurred, as ied and approved by the Owner.
			.1	Substantial Performance of the Work has been achieved, as certified by the Consultant,
			.2	a permit for occupancy of the <i>Place of the Work</i> has been obtained from the authorities having jurisdiction;
			.3	the Work to be performed under the Contract has satisfied the requirements for deemed completion in accordance with Section 2(3) of the Construction Act,
			.4	final cleaning and waste removal, as required by the Contract Documents;
			.5	the <i>Contractor</i> has delivered to the <i>Consultant</i> and the <i>Owner</i> all inspection certificates from authorities having jurisdiction with respect to any component of the <i>Work</i> which has been completed;
			.6	subject only to GC 12.1.2, the entire <i>Work</i> has been completed to the requirements of the <i>Contract Documents</i> , including completion of all items on the punch list prepared at the time of <i>Substantial Performance of the Work</i> and the <i>Work</i> is being used for its intended purpose, and is so certified by the <i>Consultant</i> ;
			.7	subject only to GC 12.1.2, the <i>Contractor</i> has submitted to the <i>Owner</i> and the <i>Consultant</i> in a collated and organized matter, all <i>Close-Out Documentation</i> and any other materials or documentation required by the <i>Contract Documents</i> ;
			.8	subject only to GC 12.1.2, all <i>Products</i> , systems and components of the <i>Project</i> have been commissioned and certified for operation and accepted by the <i>Owner</i> and <i>Consultant</i> , and
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		9 subject only to GC 12.1.2, the <i>Contractor</i> has submitted to the <i>Owner</i> and the <i>Consultant</i> full and complete as-built drawings and <i>Specifications</i> revised by the <i>Contractor</i> to reflect the as-built state of the <i>Work</i> , clearly showing changes to the <i>Drawings</i> and <i>Specifications</i> from the original <i>Contract Documents</i> , all of which have been approved by the <i>Owner</i> acting reasonably."
SC53.2	12.1.2	Delete GC 12.1.2 in its entirety and replace it with the following:
		"12.1.2 The Owner may, in its sole, absolute, and unfettered discretion, waive compliance with a requirement, or a part thereof, for achieving Ready-for-Takeover set out in GC 12.1.1.6 to 12.1.1.9 (inclusive). Where the Owner exercises the discretion afforded under this GC 12.1.2, the Contractor shall be required to comply with GC 5.5.1.2 as part of its application for final payment and the Owner and the Contractor, in consultation with the Consultant, shall establish a reasonable date for completing the Work."
SC53.3	12.1.3	Delete GC 12.1.3 in its entirety and replace it with the following:
		"12.1.3 When the <i>Contractor</i> considers the <i>Work Ready-for-Takeover</i> , it shall submit a written application to the <i>Owner</i> and the <i>Consultant</i> for review."
SC53.4	12.1.4	In GC 12.1.4, <u>delete</u> the words "list and" from the second line.
SC53.5	12.1.5	Delete GC 12.1.5 in its entirety and replace it with the following: "12.1.5 Following the confirmation of the date of Ready-for-Takeover by the Consultant and as confirmed by the Owner, the Contractor may submit a final application for payment in accordance with GC 5.5 – FINAL PAYMENT."
SC53.6	12.1.6	Delete GC 12.1.6 in its entirety.

SC54 GC 12.2 EARLY OCCUPANCY

SC54.1	GC	Delete GC 12.2 – EARLY OCCUPANCY BY THE OWNER in its entirety, including
	12.2	all subparagraphs thereunder and replace it with the following:
		"12.2.1 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 have reached Substantial Performance of the Work, provided that such taking possession and use will not unduly 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 Project nor shall it relieve the Contractor of any of its obligations under the Contract.
		12.2.2 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 this 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."



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SC55 GC 12.3 WARRANTY

SC55.1	12.3.2	<u>Delete</u> from the first line of paragraph 12.3.2 the word "The" and <u>replace</u> it with the words "Subject to GC 1.1.3, the"		
SC55.2	12.3.7 to	Add new paragraphs 12.3.7 to 12.3.12 as follows:		
	12.3.12	"12.3.7 Where required by the <i>Contract Documents</i> , the <i>Contractor</i> shall provide a maintenance bond as security for the performance of the <i>Contractor's</i> obligations as set out in GC 12.3 WARRANTY.		
		12.3.8 The <i>Contractor</i> shall provide fully and properly completed and signed copies of all warranties and guarantees required by the <i>Contract Documents</i> , containing:		
		 the proper name of the <i>Owner</i>, the proper name and address of the <i>Project</i>, the date the warranty commences, which shall be at the "<i>Ready-for-Takeover</i>" unless otherwise agreed upon by the <i>Consultant</i> in writing. a clear definition of what is being warranted and/or guaranteed as required by the <i>Contract Documents</i>; and the signature and seal (if required by the governing law of the <i>Contract</i>) of the company issuing the warranty, countersigned by the <i>Contractor</i>. 		
		12.3.9 Should any <i>Work</i> 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 <i>Contractor</i> shall ensure that its <i>Subcontractors</i> are bound to the requirements of GC 12.3 – WARRANTY for the <i>Subcontractor's</i> portion of the <i>Work</i> .		
		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 in Writing 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."		



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PART 13 INDEMNIFICATION AND WAIVER

SC56 GC 13.1 INDEMNIFICATION

SC56.1	GC 13.1	Delete GO	C 13.1 – INDEMNIFICATION in its entirety and replace it with the following:
		"13.1.1	The <i>Contractor</i> shall indemnify and hold harmless the <i>Owner</i> , its parent, subsidiaries and affiliates, their respective partners, trustees, officers, directors, agents and employees and the <i>Consultant</i> 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 <i>Owner</i> 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 <i>Contractor</i> , its employees, agents, <i>Subcontractors</i> , <i>Suppliers</i> 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 <i>Work</i> , the <i>Owner's</i> property or equipment, the <i>Contractor's</i> property or equipment or equipment or property adjacent to the <i>Place of the Work</i> or death or injury to the <i>Contractor's</i> personnel).
		13.1.2	The <i>Owner</i> shall indemnify and hold the <i>Contractor</i> , its agents and employees harmless from and against claims, demands, losses, costs, damages, actions, suits or proceedings arising out of the <i>Contractor's</i> performance of the <i>Contract</i> which are attributable to a lack of or defect in title or an alleged lack of or defect in title to the <i>Place of the Work</i> .
		13.1.3	The provisions of GC 13.1 - INDEMNIFICATION shall survive the termination of the <i>Contract</i> , 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 <i>Work</i> shall constitute a waiver or release of any of the provisions of GC 13.1
		13.1.4	Notwithstanding the provisions of GC1.1 - CONTRACT DOCUMENTS, GC 1.1.6, GC13.1 - INDEMNIFICATION shall govern over the provisions of GC 1.3.1 of GC1.3 – RIGHTS AND REMEDIES."

SC57 GC 13.2 WAIVER OF CLAIMS

SC57.13	13.2.1	In paragraph 13.2.1 in the third line after the word "limitation" <u>add</u> the words "claims for delay pursuant to GC 6.5 DELAYS" -and-
		add the words "(collectively "Claims")" after "Ready-for-Takeover" in the fourth line.
SC57.14	13.2.1.1	In subparagraph 13.2.1.1, in each instance change the word "claims" to "Claims" and change the word "claim" to "Claim".
SC57.15	13.2.1.2	In subparagraph 13.2.1.2 change the word "claims" to "Claims".
SC57.16	13.2.1.3	Delete subparagraph 13.2.1.3 in its entirety.
SC57.17	13.2.1.4	In paragraph 13.2.1.4 change the word "claims" to "Claims".
SC57.18	13.2.2.1	In paragraph 13.2.2.1 <u>delete</u> the words "in paragraphs 13.2.1.2 and 13.2.1.3" and <u>replace</u> them with "in paragraph 13.2.1.2"
		-and-
		change the word "claims" to "Claims" in both instances and change the word "claim" to "Claim".



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SC57.19	13.2.3	Delete paragraph 13.2.3 in its entirety.
SC57.20	13.2.4	Delete paragraph 13.2.4 in its entirety.
SC57.21	13.2.5	Delete paragraph 13.2.5 in its entirety.
SC57.22	13.2.6	In paragraph 13.2.6 change the word "claim" to "Claim" in all instances in the paragraph.
SC57.23	13.2.8	In paragraph 13.2.8 change "The party" to "The Contractor
		-and-
		change the word "claim" to "Claim" in all instances in the paragraph.
SC57.24	13.2.9	In paragraph 13.2.9 <u>delete</u> the words "under paragraphs 13.2.1 or 13.2.3" and <u>replace</u> them with "under paragraph 13.2.1"
		-and-
		change both instances of the words "the party" to "the <i>Contractor</i> ". Change the word "claim" to "Claim" in all instances in the paragraph.

SC58 *NEW* PART 14 OTHER PROVISIONS

SC58.1	14.1	Add new PART 14 – OTHER PROVISIONS as follows:
		"PART 14 OTHER PROVISIONS
		GC 14.1 OWNERSHIP OF MATERIALS
		14.1.1 Unless otherwise specified, all materials existing at the <i>Place of the Work</i> at the time of execution of the <i>Contract</i> shall remain the property of the <i>Owner</i> . All <i>Work</i> and <i>Products</i> delivered to the <i>Place of the Work</i> by the <i>Contractor</i> shall be the property of the <i>Owner</i> . The <i>Contractor</i> shall remove all surplus or rejected materials as its property when notified in writing to do so by the <i>Consultant</i> ."
SC58.2	14.2	Add new GC 14.2 – CONSTRUCTION LIENS as follows:
		"GC 14.2 LIENS
		14.2.1 Notwithstanding any other provision in the <i>Contract</i> , the <i>Consultant</i> shall not be obligated to issue a certificate, and the <i>Owner</i> shall not be obligated to make payment, subject to the <i>Owner</i> 's requirement to issue a <i>Notice of Non-Payment</i> (Form 1.1) to the <i>Contractor</i> , if at the time such certificate or payment was otherwise due:
		.1 a claim for lien has been registered against the <i>Project</i> lands by a <i>Subcontractor</i> or a <i>Supplier</i> that has not been vacated or discharged by the <i>Contractor</i> in accordance with the requirements of this <i>Contract</i> , or
		.2 if the Owner or a mortgagee of the Project lands has received a written notice of a lien that has not been resolved by the Contractor through the posting of security or otherwise.
		14.2.2 In the event a construction lien arising from the performance of the <i>Work</i> is registered or preserved against the <i>Project</i> lands by a <i>Subcontractor</i> or a <i>Supplier</i> , or a written notice of a lien is given or a construction lien action is commenced



14.2.5

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against the Owner by a Subcontractor or a Supplier, then the Contractor shall, at its own expense: within 10 calendar days of registration of the construction lien, vacate or discharge the lien from title to the premises (i.e. the Place of the Work). If the lien is merely vacated, the Contractor shall, if requested, undertake the Owner's defence of any subsequent action commenced in respect of the lien, at the Contractor's sole expense; within 10 calendar days of receiving notice of a written notice of a lien, post security with the Ontario Superior Court of Justice so that the written notice of a lien no longer binds the parties upon whom it was served; and satisfy all judgments and pay all costs arising from such construction liens and actions and fully indemnify the Owner against all costs and expenses arising from same, including legal costs on a full indemnity basis. 14.2.3 In the event that the Contractor fails or refuses to comply with its obligations pursuant to paragraph 14.2.2, the Owner shall, at its option, be entitled to take all steps necessary to address any such construction liens including, without limitation and in addition to the Owner's rights under paragraph 13.2.4, the posting of security with the Ontario Superior Court of Justice to vacate the claim for lien from title to the *Project* lands, and in so doing will be entitled to a full indemnity from the Contractor for all legal fees, security, disbursements and other costs incurred and will be entitled to deduct same from amounts otherwise owing to the Contractor. 14.2.4 In the event that any Subcontractor or Supplier registers any claim for lien with respect to all or part of the Place of Work, the Owner shall have the right to withhold, in addition to the statutory holdback, the full amount of said claim for lien plus either: (a) \$250,000 if the claim for lien is in excess of \$1,000,000 or (b) 25% of the value of the claim for lien and to bring a motion to vacate the registration of said claim for lien and any associated certificate of action in respect of that lien, in accordance with Section 44 of the Act, by paying into court as security the amount withheld.

Nothing in this GC 14.2 serves to preclude the Contractor from preserving and

perfecting its lien in the event of non-payment by the Owner."

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Project-specific requirements for a "Proper Invoice"

To satisfy the requirements for a *Proper Invoice*, the following criteria, as may be applicable in each case, must be included with the *Contractor's* application for payment:

- .1 the written bill or request for payment must be in writing;
- .2 the Contractor's name and current address;
- .3 the Contractor's HST registration number;
- .4 the date the application for payment was prepared by the *Contractor*,
- .5 the period of time in which the services or materials were supplied to the *Owner*.
- .6 the purchase order number provided by the *Owner*,
- .7 reference to the provisions of the *Contract* under which payment is being sought (e.g. GC 5.3 –PAYMENTS for progress payments, GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK GC 5.5 FINAL PAYMENT for final payment, etc.);
- .8 a description, including quantities where appropriate, of the services or materials, or a portion thereof, that were supplied and form the basis of the *Contractor's* request for payment;
- .9 the amount the *Contractor* is requesting to be paid by the *Owner*, set out in a statement based on the schedule of values approved under GC 5.2.4, separating out any statutory or other holdbacks, set-offs and HST:
- .10 a sworn Statutory Declaration in the form CCDC 9A-2018, only for second and subsequent progress payments;
- .11 a current Workplace Safety Insurance Board clearance certificate:
- .12 a pre-approved schedule of values, supplied by the Contractor, for Divisions 1 through 14 of the Specifications (or equivalent Construction Specifications Institute Masterformat) of the Work, aggregating the total amount of the Contract Price, including all supporting invoicing;
- a separate pre-approved schedule of values, supplied by each *Subcontractor*, for each of Division 15, 16, and 17 of the *Specifications* (or equivalent Construction Specifications Institute Masterformat) of the *Work*, aggregating the total amount of the *Contract Price*, including all supporting invoicing;
- .14 invoices and other supporting documentation for all claims against the cash allowance;
- .15 a current, acceptable, and up to date Construction Schedule Update;
- .16 if requested by the *Owner*, a current and valid certificate(s) of insurance as required under GC 11.1 INSURANCE;
- .17 the name, title, telephone number and mailing address of the person at the place of business of the *Contractor* to whom payment is to be directed;
- .18 a current, up to date, and approved *Shop Drawing* log:
- in the case of the *Contractor's* application for final payment, in addition to the foregoing requirements (as applicable):
 - (a) any Close-Out Documentation, together with complete and final as-built drawings;

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- (b) 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;
- (c) the *Contractor*'s written certification that there are no outstanding claims, pending claims or future claims from the *Contractor* or their *Subcontractors* or *Suppliers*; and
- (d) sufficient evidence of the *Contractor's* compliance with GC 3.11.



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APPENDIX 2 to the Supplementary Conditions

SPECIAL SUPPLEMENTARY CONDITIONS

The Standard Construction Document CCDC 2 2020 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, together with the changes with the new Construction Act is hereby made part of these Contract Documents, with the following amendments, additions and modifications:

SC59 ARTICLE A-10 TIME OF THE ESSENCE

SC59.1	Article	1 				
	A-10	replace it with the following:				
		"ARTICLE A-10 TIME OF THE ESSENCE/LIQUIDATED DAMAGES".				
SC59.2	Articles 10.3 to	Insert the following new Articles 10.3 to 10.7 as follows:				
	10.7	"10.3 The Contractor further acknowledges that it understands that the Owner is responsible and must account to the students and staff of Waterloo Catholic District School Board. A failure by the Contractor to attain Ready-for-Takeover within the time prescribed in the Contract could result in damages to the Owner and to the students and staff of the Waterloo Catholic District School Board, which would be difficult or impractical to quantify but would nevertheless have a significant negative impact on the Owner and its ability to provide services the Owner is obliged to provide to the students and staff of the Waterloo Catholic District School Board.				
		Given the significance of the requirement for the Contractor to achieve <i>Ready-for-Takeover</i> , as described in Article A-10.3, without limiting the <i>Owner's</i> entitlement to any additional or other damages, if the <i>Contractor</i> fails to achieve <i>Ready-for-Takeover</i> by the time prescribed in Article A-1, the <i>Owner</i> will incur substantial damages and the extent of such damages shall be incapable or very difficult to accurately measure. Nonetheless, the parties acknowledge that as of the effective date of this <i>Contract</i> , the amount of liquidated damages set forth in Article A-10.5 below represents a good faith estimate on the part of the parties as to the actual potential damages that the <i>Owner</i> would suffer as a result of late completion of the <i>Project</i> . The amount of such liquidated damages does not include any penalty. Notwithstanding the foregoing, the <i>Owner</i> shall be entitled to the greater of (i) the liquidated damages as calculated pursuant to Article A-10.5, or (ii) in the event that the <i>Contractor</i> claims that this liquidated damages provision is invalid or unenforceable and the <i>Contractor</i> prevails on such a defence, the damages arising from the delay suffered by the <i>Owner</i> including, without limitation, consequential, special, incidental, and indirect damages, costs and expenses incurred or suffered by the <i>Owner</i> .				
		The Contractor shall pay to the Owner (or have deducted from Contract payments) liquidated damages of \$_0 for each calendar day of delay beyond the prescribed date for Ready-for-Takeover, until Ready-for-Takeover is achieved and certified pursuant to the terms of the Contract. Liquidated damages will be assessed as incurred and reflected as deductions from amounts that may be due under any applications for payment pending at the time that such liquidated damages are assessed.				
		All liquidated damages that have not been deducted from payments prior to final payment shall be deducted from the final payment to be made by the <i>Owner</i> to the <i>Contractor</i> pursuant to GC 5.5 FINAL PAYMENT, and any amount of liquidated				



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	damages in excess of the final payment amount, shall be paid by the <i>Contractor</i> to the <i>Owner</i> , within 30 calendar days following a written demand by the <i>Owner</i> for such payment.
10.7	The liquidated damages payable under this Article A-10 are in addition to and without prejudice to any other remedy, action or any other alternative claim that may be available to the <i>Owner</i> ."

END OF AMENDMENTS TO CCDC 2 - 2020

Part 1 General

.1 Section Includes:

Provision of labour, materials, equipment and incidental services necessary to provide all work described in the Summary of Work, and illustrated on accompanying drawings and specifications.

Part 2 Summary of Work

- .1 Removal and replacement of existing VCT flooring in select areas of the school as indicated in Architectural drawings.
- .2 Remove and replace existing double-glazed failed sealed window units with new as indicated in Architectural drawings.
- .3 The removal and replacement of select portions of the existing roofing as indicated in the Architectural drawings.
- .4 Contractor to repair exterior brick, mortar joints and control joints where required.
- .5 Remove and replace existing two (2) exterior doors and frames as indicated in Architectural drawings

Part 3 Project Coordination

.1 Coordinate progress of the Work, progress schedules, submittals, use of site, temporary utilities, construction facilities and controls.

Part 4 Contractor's Use of Site

- .1 Use of site shall be limited to following areas:
 - .1 Work:
 - .1 Immediate areas required for completion of the Work.
- .2 Storage:
 - .1 Storage of materials shall be determined on site following discussions with the Consultant and the Owner.
- .3 Do not unreasonably encumber site with materials, equipment or Contractor's storage.
- .4 Move stored products or equipment which interfere with operations of Owner or other contractors.
- .5 Contractor shall pay for use of any additional storage required for the execution of work.
- .6 Supply and install fencing around access routes, storage and working areas in compliance with Contract Documents and Authorities having jurisdiction.

Part 5 Signs

- .1 Provide temporary signage for project identification and for safety requirements in locations approved by the Consultant and the Owner.
- .2 Signage other than the Project sign, Contractor's identification signage on trailers and vehicles, or that required for construction safety, will not be permitted on site.

END OF DOCUMENT

1 General

- .1 Section Includes
 - .1 Provision of labour, materials, equipment and incidental services necessary to provide all work described in the Specifications Manual and acompanying drawings in compliance with this section, as follows:

2 Related Sections

- .1 Section 01 21 00 Allowances
- .2 Section 01 30 00 Administrative Requirements
- .3 Section 01 60 00 Product Requirements

3 Regulatory Requirements

.1 Products and services provided to complete the Work shall meet or exceed requirements of specified standards, municipal by-laws, building codes and referenced documents.

4 Independent Inspection Agencies

- .1 Independent Inspection/Testing Agencies will be engaged by the Owner for the purpose of inspecting and/or testing individual portions of the Work. The initial cost of such services will be borne by the Owner, as allocated under Section 01210. Allowances.
- .2 Where evidence exists that defective work has occurred or that work has been carried out incorporating defective materials, the Consultant may have additional tests, inspections or surveys performed, in order to determine if work is defective. Tests, inspections or surveys carried out under these circumstances will be made at the Contractor's expense in the event of defective work or at the Owner's expense where work is in conformance.
- .3 Materials or works that fail to meet specified requirements may be rejected by the Consultant whenever found at any time prior to final acceptance of the work regardless of previous inspection. If rejected, defective materials or work shall be promptly removed and replaced or repaired to the satisfaction of the Consultant, at no expense to the Owner.

6 Access to Work

.1 Allow inspection/testing agencies access to the Work, off site manufacturing and fabrication plants.

7 Procedures

.1 Notify the appropriate agency and Consultant in advance of the requirement for tests, in order that attendance arrangements can be made.

- .2 Submit samples and/or materials required for testing, when specifically requested in specifications. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in the Work.
- .3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store, cure and inspect test samples.

8 Reports

- .1 Submit three copies of inspection and test reports to the Consultant.
- .2 Provide copies to Subcontractor of work being inspected or tested, manufacturer or fabricator of material being inspected or tested.
- .3 Submit one copy of inspection and test reports to the Building Official having jurisdiction, where required by that official.

9 Tests and Mix Designs

- .1 Furnish test results and mix designs as may be requested.
- .2 The cost of tests and mix designs beyond those called for in the Contract
- .3 Documents or beyond those required by the law of the Place of Work shall be appraised by the Consultant and may be authorized as recoverable.

END OF DOCUMENT

1 General

- .1 Section Includes
 - .1 Provision of labour, materials, equipment and incidental services necessary to provide all work under **cash allowances**, as follows:
 - .2 All allowances listed below are to be included in the Bid Price.
 - .3 Expend each Cash Allowance as directed by the Owner / Consultant.
 - .4 <u>The General Contractor must obtain written approval via Site Instruction before using any funds from the Cash Allowance.</u>
 - .5 Each Cash Allowance will be adjusted to actual cost as defined hereunder and Contract Price will be amended accordingly by written order.
 - .6 Progress payments for work and material authorized under Cash Allowances will be made in accordance with Part 4 Allowances, Part 5 -Payment and Part 6 Changes in the work, of the contract document CCDC 2-2020.

2 Related Sections

.1 Division 00 – TENDER REQUIREMENTS.

3 Hardware Allowance

- .1 The following cash allowance **does not include H.S.T.**
- .2 Cash allowance for this item shall include and provide payment for:
 - .1 Net costs of materials + applicable duties and taxes.
 - .2 Deliveries to site.
 - .3 Protection from damage by elements or otherwise.
 - .4 Finishing Hardware for the supply of aluminum door hardware as follows; continuous hinges, exit devices, mullions, lock cylinders, door pulls, door closers, electric strikes, overhead stops, thresholds and door sweeps.
 - .5 Card access equipment is by security provider.

4 Interior Signage

- .1 The following cash allowance **does not include H.S.T.**
- .2 Material cash allowance shall include and provide payment for:
 - .1 Net costs of materials + applicable duties and taxes.
 - .2 Deliveries to site.

.3 Protection from damage by elements or otherwise.

5 Abatement

- .1 The following cash allowance **does not include H.S.T.**
- .2 Material cash allowance shall include and provide payment for:
 - .1 Net costs of materials + applicable duties and taxes.
 - .2 Deliveries to site.
 - .3 Protection from damage by elements or otherwise.
- 6 Owl Tech to remove existing and reinstall card reader.
 - .1 The following cash allowance **does not include H.S.T.**
 - .2 Material cash allowance shall include and provide payment for:
 - .1 Net costs of materials + applicable duties and taxes.
 - .2 Deliveries to site.
 - .3 Protection from damage by elements or otherwise
- 7 Testing and Inspection
- 8 LED Exterior Pylon Sign Upgrade
 - .1 The following cash allowance **does not include H.S.T.**
 - .2 Material cash allowance shall include and provide payment for:
 - .1 Net costs of materials + applicable duties and taxes.
 - .2 Deliveries to site.
 - .3 Protection from damage by elements or otherwise
- 9 Total Cash allowances for above listed items: \$ 65,000.00 (does not include H.S.T.)

END OF DOCUMENT

1 General

- .1 Section Includes
 - .1 Provision of labour, materials, equipment and incidental services necessary to provide all work described in the Specifications Manual and accompanying drawings in compliance with this section, as follows:

2 Project Meetings

- .1 Schedule and administer Owner / Consultant / Contractor project progress meetings every second week throughout progress of the Work.
- .2 Schedule and administer Contractor / Subcontractor progress meetings every second week throughout progress of the Work.
- .3 Provide physical space and make arrangements for meetings.
- .4 Record all minutes of all progress meetings. Itemize significant proceedings and decisions. Identify 'action by' appropriate parties.
- .5 Reproduce and distribute copies of minutes within three days after each meeting and transmit to meeting participants and affected parties not in attendance.

3 Documents Required

- .1 Maintain at job site, one copy each of the following:
 - .1 Contract drawings.
 - .2 Project manual.
 - .3 Addenda and Bid Revisions.
 - .4 Reviewed shop drawings.
 - .5 Change directives, change orders and other Contract modifications.
 - .6 Field test and inspection reports.
 - .7 Approved schedules.
 - .8 Manufacturer's installation and application instructions.

4 Schedules

- .1 Construction Progress Schedule.
 - .1 Prepare schedule in horizontal bar chart form, with weekly horizontal time scale identifying first work day of each week.
 - .2 Indicate separate bar for each trade or operation of the Work. Arrange trades in chronological order for commencement of that part of the Work.
 - .3 Indicate 2 bars for each trade, one for projected schedule and the other to indicate actual progress.
 - .4 Identify projected major milestones in the course of the Work such as completion of foundation work, structure, closing in, major inspections

by inspection authorities or building officials, Substantial Performance, etc.

.2 Cash Flow Schedule

.1 Prepare schedule in horizontal bar chart form to coincide with Construction Progress Schedule, for Owner's financial planning purposes.

.3 Submittal Schedule

- .1 Provide complete list of all Shop Drawings, Product Data and Samples required for submittal.
- .2 Provide complete list of all manufactured products to be used in the course of the Work, including those amended by addenda or bid revision.
- .4 Submit one copy of each schedule to the Consultant for review, prior to first progress billing. Amend schedules as requested by Consultant.
- .5 Submit 4 copies of each subsequent issue of schedules to the Consultant.
- .6 Update schedule on a regular basis or as requested by the Consultant.

5 Additional Documents

- .1 The Consultant may issue additional documents in the form of drawings, specifications, schedules, or written instructions to assist in the proper execution of the Work. These documents shall take one of the following forms as defined in CCDC 2-2020:
 - .1 Supplemental Instruction
 - .2 Notice of Chage
 - .3 Change Order
 - .4 Change Directive
- .2 .5 Other, as defined in CCDC 2-2020.

6 Submittals

- .1 Submit to Consultant all items specified for review, with reasonable promptness and in orderly sequence so as to not cause delay in the Work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2 Schedule submissions at least 10 days before reviewed submissions will be needed.
- .3 Do not proceed with work affected by the submittal until review is complete.
- .4 Review all submittals prior to submission to the Consultant. This review represents that necessary requirements have been determined and verified, or will

be, and that each submittal has been checked and coordinated with the requirements of the Work and the Contract Documents. Submittals not stamped, signed, and dated will be returned without review.

- .5 Verify field measurements and affected adjacent work are coordinated.
- .6 Contractor's responsibility for errors and omissions in submission, or deviations from requirements of Contract Documents, is not relieved by Consultant's review of submittals.
- .7 Keep one reviewed copy of each submission on site.

7 Shop Drawings

- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by the Contractor to illustrate details of a portion of the Work.
- .2 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of the Section under which the adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .3 Adjustments made on shop drawings by the Consultant are not intended to change the Contract Price. If adjustments affect the value of Work, state such in writing to the Consultant prior to proceeding with the Work.
- .4 Make changes in shop drawings as the Consultant may require, consistent with Contract Documents. When resubmitting, notify the Consultant in writing of any revisions other than those requested.
- .5 Submit one transparency and number of copies required by Contractor (4) for distribution, plus 3 copies which will be retained by Consultant.
- Shop drawings submitted by FAX, or as copies of FAX transmissions are not acceptable as shop drawings, and will not be reviewed.
- .7 Reproductions of Consultants' drawings are not acceptable as shop drawings, and will not be reviewed.
- .8 Shop drawings not submitted in the scale type of the contract documents (ie. metric for metric drawings) will not be reviewed.

8 Product Data

.1 Above will only be accepted if they conform to the following:

Section 01 30 00 ADMINISTRATIVE REQUIREMENTS Page 4 of 8

- .1 Delete information which is not applicable to project.
- .2 Supplement standard information to provide additional information applicable to project.
- .3 Show dimensions and clearances required.
- .4 Show performance characteristics and capacities.
- .5 Show wiring diagrams, when requested, and controls.
- .2 Submit product data sheets or brochures for requirements requested in specification Sections and as the Consultant may reasonably request where shop drawings will not be prepared due to standardized manufacture of product.
- .3 Submit number of copies required by Contractor (4) for distribution, plus 3 copies which will be retained by Consultant.
- .4 Product data sheets submitted by FAX, or as copies of FAX transmissions will not be accepted.

9 Return of Submissions

- .1 If upon review by the Consultant, no errors or omissions are discovered, or if only minor corrections are made, the shop drawing transparency or one copy of the product data will be returned and fabrication and installation of Work may proceed.
- .2 If shop drawings or data sheets are rejected, noted copy will be returned and resubmission of corrected shop drawings or data sheets through the same procedure indicated above, shall be performed before fabrication and installation of Work may proceed.

10 Samples

- .1 Submit for review samples in duplicate, in sizes as requested in respective specification Sections. Label samples as to origin and intended use in the Work.
- .2 Where colour, pattern or texture is criterion, submit full range of samples.
- .3 Construct field samples and mock-ups at locations acceptable to Consultant.
- .4 Deliver samples prepaid to Consultant's office.
- .5 Notify the Consultant in writing, at the time of submission of deviations in samples from requirements of Contract Documents.
- .6 Adjustments made on samples by the Consultant are not intended to change the Contract Price. If adjustments affect the value of Work, state such in writing to

the Consultant prior to proceeding with the Work.

- .7 Make changes in samples which the Consultant may require, consistent with Contract Documents.
- .8 Reviewed samples or mock-ups will become standards of workmanship and material against which installed work will be checked on project.

11 Submission Requirements

- .1 Accompany submissions with transmittal letter containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Drawing or page numbers of each shop drawing or data sheet.
 - .5 Submission identification (i.e. "Architectural Woodwork Shop Dwgs.").
- .2 Submissions shall include (where applicable):
 - .1 Date and revision date.
 - .2 Project title and number.
 - .3 Name of:
 - .1 Contractor.
 - .2 Subcontractor.
 - .3 Supplier.
 - .4 Manufacturer.
 - .5 Separate detailer.
 - .4 Identification of product or material.
 - .5 Relation to adjacent structure or materials.
 - .6 Field dimensions, clearly identified as such.
 - .7 Specification Section number.
 - .8 Reference standards (CSA, CGSB, ASTM, etc.)
 - .9 Contractor's stamp, initialled or signed, certifying review of submission, verification of field measurements and compliance with contract documents.

12 Distribution of Submittals after Review

- .1 .1 Distribute copies of shop drawings and product data which carry Consultant's stamp as follows (where applicable):
 - .1 Job site file (Record documents).
 - .2 General Contractor's office.
 - .3 Other prime contractors.
 - .4 Subcontractors.
 - .5 Suppliers or Fabricators.
 - .6 Distribute samples as directed.

13 Incentive Application Check List

- .1 Please ensure that the following information is submitted to the Waterloo Catholic District School Board:
 - .1 **Energy Efficient Equipment**: To be eligible for an incentive, all proposed equipment has to have an **ENERGY STAR or DLC** label on it.
 - .2 **Proposed Equipment**: Submit proposed equipment including: spec sheets and quantities per equipment type. Documentation must include: make and model of equipment such as motors, roof top units, chillers, VFDs, lamp, and ballast etc.
 - .3 **Initial Quote**: Initial quote and any additional invoices must reflect the proposed equipment and should include a detailed breakdown of the equipment proposed to be installed, quantity per equipment type, and equipment and labor costs. The invoice also has to include the make and model number, and type of proposed equipment as shown in the "Initial Quote (Proposed Equipment)" form.
 - .4 **Equipment Disposal and Decommissioning**: The intent of this procedure is to remove the old equipment from the system thereby realize the energy savings provided by the new or retrofitted material. The existing equipment that is being retrofitted **must not** be disposed of in the landfill.

The Contractor must submit written proof or evidence or acknowledgement that the disposal of all materials was done so in accordance with all current disposal requirements (see attached). Acceptable Documents: Invoices OR Disposal Certificates OR Disposal Declaration Form. This documentation must be on the disposal facility's letterhead or invoice, or the Contractor's letterhead or invoice. The Disposal Certificate/ Invoice/ Declaration must indicate the total number of old equipment.

Note: During the construction phase, some of the equipment (e.g., bulbs, lamps, ballasts etc.) when removed might break and will not be recyclable. It is important that the number of total recycled equipment and the total number of broken equipment is noted on the disposal certificate.

.5 Confirmation: The Contractor will take all necessary steps to have equipment that was removed or replaced as part of any Work disposed of or decommissioned in accordance with appropriate disposal or decommissioning processes, applicable laws, and in accordance with commercially reasonable environmental practices 13.2 Initial Quote (Proposed Equipment)

2012 21111111 21	10.12 Initial Quote (1 Toposeu Equipment)						
Date:							
School Board:							
School Name:							
School Address:							
List of proposed equipment:							
Product name (e.g., lamp, ballast, boiler, heat pump, roof top units, etc.)	Quantity	Model number and Manufacturer	Cost Breakdown for equipment & labor				
Example: Lamps	30 lamps	Sylvania F032/841/ECO	Equipment: \$2,000 Labor: \$1,000				

13.3 Disposal Declaration Form					
Date:					
School Board:					
School Name:					
School Address:					
Application #:					
LDC#:					
ISEO#:					
Equipment	Quantity	Comments			
Lighting example: Manufacturer: Sylvania Model #: F032/841/ECO Wattage: 32W	# of fixtures: 15 # of lamps: 30				
(Modify as required)					
Manufacturer: Model #: Wattage:					
(Modify as required)					
Manufacturer: Model #: Wattage:					
Disposal Facility:					
Contractor Company Name:					
Name and Title:					
Signature:					
		all necessary steps to dispose of equipment			

that was removed or replaced (listed below) as part of this Retrofit Program Application in accordance with appropriate disposal or decommissioning processes, applicable laws, and in accordance with commercially reasonable environmental practices.

Part 1 General

1.1 SECTION INCLUDES

.1 Safety requirements and adherence.

1.2 RELATED SECTIONS

- .1 Section 01 30 00 Administrative Requirements.
- .2 Limited Designated Substance Audit Report (prepared by MTE April 27, 2023).
- .3 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.3 REFERENCES

- .1 Occupational Health and Safety Act Revised Statues of Ontario, Revised Regulation 851/90.
- .2 Occupational Health and Safety Act Revise Statutes of Ontario 1990.
- .3 Hazardous Projects Act and the Canada Labour Code, most recent edition.
- .4 Occupational Health and Safety Regulation for Construction Projects, Revised Statutes of Ontario, Regulation 213-91.
- .5 The Worker Place Safety Board Act, Revised Statues of Ontario, 1990 and Regulations of the Board as amended 1990, Toronto.
- Ontario Building Code Act, Chapter 51 and Ontario Regulation 413/90 including amendments to the Regulation 158/93 and 160/93.
- .7 Ontario Regulation 454 Fire Code.
- .8 Regulation 447 Environmental Protection Act.
- .9 Workplace Safety Information Board Regulation 1101 First Aid Requirement.
- .10 Nation Building Code 2005, Part 8: Safety Measures at Construction and Demolition Sites.
- .11 Ensure that no part of the work is subjected to a load which will endanger its safety or cause permanent deformation.

1.4 SAFETY PLAN

.1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to commencing any site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.

.2 Consultant may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.

1.5 RESPONSIBILITY

- .1 The "Prime Contractor" according applicable local jurisdiction, is responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.
- .3 Should any unforeseen or peculiar safety-related factor, hazard, or condition become evident during performance of Work, and follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction. Advise Consultant verbally and in writing.

1.6 SUBMITTALS

- .1 Make submittals in accordance with Section 01 33 00.
- .2 Submit site-specific Health and Safety Plan: Within seven (7) days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:
 - .1 Results of site-specific safety hazard assessment.
 - .2 Results of safety and health risk or hazard analysis for site tasks and operation.
- .3 Submit two (2) copies of Contractor's authorized representative's work site health and safety inspection reports to Consultant and authority having jurisdiction, weekly.
- .4 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .5 Submit copies of incident and accident reports.
- .6 Submit Material Safety Data Sheets (MSDS) to Consultant.
- .7 Consultant will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within ten (10) days after receipt of plan. Revise plan as appropriate and resubmit plan to Consultant within ten (10) days after receipt of comments from Consultant.
- .8 Consultant's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .9 Medical Surveillance: Where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to Consultant.
- On-site Contingency and Emergency Response Plan: Address standard operating procedures to be implemented during emergency situations.

1.7 SAFETY ACTIVITIES

- .1 Perform site specific safety hazard assessment related to project.
- .2 Schedule and administer Health and Safety meeting with Consultant prior to commencement of Work.

1.8 HEALTH AND SAFETY REQUIRMENTS

- .1 Enforce the use of CSA approved hardhats and safety boots for all entering or working on the construction site. Refuse admission to those refusing to conform to this regulation.
- .2 Provide and maintain adequate lighting where workmen or public may be subject to hazards in the work area.
- .3 Comply with the requirements of the Workplace Hazardous Material Information System (WHMIS) regarding labelling and the provisions of material safety data sheets.
- .4 In addition to the requirements of the Occupational Health and Safety Act, and the Regulations for Construction Projects, provide temporary safeguards and protection against;
 - .1 Accident or injury to any workmen or other persons on the site, adjacent work and property, roads and walks.
 - Damage to any part of the work and to any adjoining or adjacent structures, properties, pavement, walks, services, and other similar items by frost, weather, overloading, and any other cause resulting from the execution of the work.
- .5 Make good with material identical with existing and adjoining surfaces any damage resulting from the execution of the work to any part of the work or any buildings, pavements, landscaping, poles, hydrants, services, etc., on or surrounding the site.

1.9 POSTING OF DOCUMENTS

.1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Province having jurisdiction, and in consultation with Consultant.

1.10 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Consultant.
- .2 Provide Consultant with written report of action taken to correct non-compliance of health and safety issues identified.

Consultant may stop Work if non-compliance of health and safety regulations is not corrected.

1.11 WORK STOPPAGE

.1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.

1.12 FIRE PROTECTION

- .1 Provide and maintain temporary fire protection equipment during performance of Work required by insurance companies having jurisdiction and governing codes, regulations and bylaws.
- .2 Burning rubbish and construction waste materials is not permitted on site.
- .3 Maintain placed or installed fire resistive construction, fireproofing, firestopping, to protect the portions of the Work during construction.

END OF SECTION

April 27, 2023

MTE File No.: C32961-956

Denny Bitovski Health and Safety Officer Waterloo Catholic District School Board 35 Weber Street West, Unit A, P.O. Box 9116 Kitchener, Ontario N2G 4G2

Dear Denny:

RE: 2023 Asbestos Audit Update

Our Lady of Fatima Catholic Elementary School

55 Hammet Street, Cambridge, ON

1.0 Introduction

MTE Consultants Inc. (MTE) was authorized by the Waterloo Catholic District School Board (WCDSB) to conduct the 2023 asbestos inspection of the subject building.

The purpose of the assignment was to re-assess and document the location, type, and condition of identified asbestos-containing materials (ACM) present within the building and make appropriate recommendations for management, abatement or remedial activities, as required.

The audit was conducted in accordance with the Ontario Ministry of Labour, *Regulation 278/05-Designated Substance-Asbestos on Construction Projects and in Buildings and Repair Operations* (O. Reg. 278/05). This report shall replace previous audit reports.

2.0 Scope of Work

The Scope of Work for this assessment was completed by MTE and included the following activities:

- Review of existing and historical reports and documentation pertaining to ACM within the building;
- Visual inspection to assess the condition of previously identified ACM, excluding portable structures;
- Collection of building material samples that are suspect ACM, as applicable;
- Submission of samples to an accredited laboratory, as applicable;
- Photographic log of damaged materials; and
- Preparation of this report with findings and recommendations.

3.0 Methodology and Assessment Criteria

This inspection was conducted by visual and laboratory identification methods for the assessment of ACM and their corresponding location, use, condition, and friability. The areas outlined in Section 2.0 were inspected limited to building components, materials and service

connections. Notwithstanding that reasonable attempts were made to identify all ACMs, the possibility of concealed material exists and may not become visible until substantial demolition has occurred and therefore are currently undocumented and did not include the following.

- Locations that may be hazardous to the surveyor, such as electrical equipment;
- Where invasive inspection could cause consequential damage to the property or impair the integrity of the equipment, such as roof systems, underground services or components of mechanical equipment;
- Locations concealed by building finishes that require substantial demolition or removal for access or determination of quantities;
- Materials that is present in such an inconsistent fashion that without complete removal of finishes, the extent cannot be determined;
- Non-permanent items or personal contents, furnishings; and
- Settled dust or airborne agents unless otherwise stated.

3.1 Condition of ACM

During the audit process the general condition of ACMs were observed and noted. Materials which are damaged can pose an increased exposure risk to workers, building occupants and the public. While assessing damage can be subjective, abatement items were grouped into two categories to aid in remedial prioritization:

Monitor Annually

These are items which display minor isolated damage; however, do not pose an immediate risk to workers from exposure to asbestos fibres due to the current condition of the material and/or location. No remediation is required at this time; however, these items should be monitored on a yearly basis for evidence of continued degradation. Should the condition of the material change an evaluation should be completed by a competent person to determine remedial action.

Abatement Action Required

These are items which display damage and may pose potential risk to workers from exposure to asbestos fibres due to the physical condition and/or location of the material. Clean-up, repair or removal of these materials is required as soon as reasonably possible.

4.0 Findings

An inspection of building was conducted by MTE on April 27, 2023. The single-storey school building and was constructed in 1959 with additions in1969, 2004, 2013. The inspection did not include areas of post 2004 new construction or renovation (where all building finishes have been removed and replaced).

The summary of identified ACM is provided in Table 1 of **Appendix A** and associated Figures are provided in **Appendix B**. These together provide a current summary of the ACM identified throughout the building.

The bulk asbestos sample location and analytical summary is provided in Table 2 of **Appendix A**, and Laboratory Certificates of Analysis for any sampling conducted as part of the 2019 inspection are also provided, as applicable.

4.1 Analytical Results

During this inspection, no samples were collected.

4.2 Removed ACM

No ACM has been removed since the previous audit.

4.3 Discovery of Additional ACM

No additional ACM or suspect ACM was identified.

4.4 Damaged ACM

Damaged ACM was identified and requires removal, repair or annual monitoring.

5.0 Conclusions and Recommendations

A detailed summary of recommended actions is provided in **Appendix A.**

5.1 Remedial

Damaged ACM was identified and requires removal, repair or annual monitoring.

Any materials requiring annual monitoring display minor damage; however, do not pose an immediate risk to workers from exposure to asbestos fibres due to the current condition of the material and/or location. No remediation is required at this time; however, these items should be monitored on a yearly basis for evidence of continued degradation. Should the condition of the material change an evaluation should be completed by a competent person to determine remedial action.

All asbestos work must be conducted by contractors who are trained and experienced in the type of asbestos operations required, and should be overseen by a qualified third party Health, Safety and Environmental professional. In order to conduct Type 3 asbestos operations, contractors must be certified as Asbestos Abatement Workers AAW (Trade code 253W) and Asbestos Abatement Supervisors AAS (Trade code 253S) by The Ministry of Training, Colleges and Universities (Ministry of Advanced Education and Skills Development) as prescribed by Section 20 of O. Reg. 278/05.

5.2 Long Term Management

This audit was conducted for the long term management of ACM within the building. If any construction, renovation, alteration, or maintenance activities are required or planned, additional inspections are required. A Designated Substance Assessment is required prior to completing any demolition or renovation activities at a facility as outlined in the Section 30 OHSA.

ACM may also be present in concealed locations. If any construction, renovation, alteration, or maintenance activities are required or planned, invasive inspections of concealed locations for potential ACM must be performed prior to such activities. Should any suspect ACM be discovered, work should cease and the materials should not be disturbed. Suspect ACM must be treated as asbestos-containing or sampled and proven to not contain asbestos. Any activities that require disturbance of ACM must be performed in accordance with O. Reg. 278/05.

There are no requirements under current legislation to remove ACM from a building simply because it is present. However, O. Reg. 278/05 requires that an Asbestos Management Program be implemented and maintained by the owner/employer where ACM is identified or suspected present.

6.0 Limitations

Services performed by **MTE Consultants Inc**. (MTE) were conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the Environmental Engineering & Consulting profession. No other representation expressed or implied as to the accuracy of the information, conclusions or recommendations is included or intended in this report.

This report was completed for the sole use of MTE and The Client. It was completed in accordance with the approved Scope of Work referred to in this report. As such, this report may not deal with all issues potentially applicable to the site and may omit issues which are or may be of interest to the reader. MTE makes no representation that the present report has dealt with all important environmental features, except as provided in the Scope of Work. All findings and conclusions presented in this report are based on site conditions as they existed during the time period of the investigation. This report is not intended to be exhaustive in scope or to imply a risk-free facility.

Any use which a third party makes of this report, or any reliance on, or decisions to be made based upon it, are the responsibility of such third parties. MTE accepts no responsibility for liabilities incurred by or damages, if any, suffered by any third party as a result of decisions made or actions taken, based upon this report. Others with interest in the site should undertake their own investigations and studies to determine how or if the condition affects them or their plans.

It should be recognized that the passage of time may affect the views, conclusions and recommendations (if any) provided in this report because environmental conditions of a property can change. Should additional or new information become available, MTE recommends that it be brought to our attention in order that we may re-assess the contents of this report.

If you have any further questions, please do not hesitate to call.

Yours Truly,

MTE Consultants Inc.

Michael Bennett, B.E.S. Indoor Environments Technologist 519-743-6500 ext. 1459 mbennett@mte85.com Paul Semeniuk, B.E.S., C.E.T.
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Appendix A

Tables



Table 1 - Summary of Asbestos-Containing Material and Recommended Actions								
Our Lady of Fatima Catholic Elementary School								
Material	Location	Material Description	Approximate Quantity	Photograph	Management Requirements If No Impacts to Material	Recommended Actions If Material Will Be Or Likely Be Impacted By Maintenance, Renovation, Construction or Demolition Activities		
Damaged Asbestos Non-Friable	Exterior of Original Building	Transite Cement Board	< 1 m²		Monitor Annually	Removal/Repair in accordance with O. Reg. 278/05 as a Type 1 Operation		
Suspect Asbestos Non-Friable	Exterior of Building	Roofing materials (Paper/Felts/Mastics/Sealants)	-	-	In place management in accordance with O. Reg. 278/05	Sample prior to maintenance/renovations/ construction/demolition activities and if confirmed ACM, removal in accordance with O. Reg. 278/05		
Suspect Asbestos Non-Friable	Exterior/Interior of Building	Exterior/Interior Sealants in Windows/Doors	-	-	In place management in accordance with O. Reg. 278/05	Sample prior to maintenance/renovations/ construction/demolition activities and if confirmed ACM, removal in accordance with O. Reg. 278/05		
Suspect Asbestos Non-Friable	Exterior of Building	Brick Mortar	-	-	In place management in accordance with O. Reg. 278/05	Sample prior to maintenance/renovations/ construction/demolition activities and if confirmed ACM, removal in accordance with O. Reg. 278/05		
Potentially Concealed Asbestos	Interior of Building	Floor Mastics and Leveling Compounds	-	-	In place management in accordance with O. Reg. 278/05	Invasive sampling prior to maintenance/renovations/construction/demolition activities, if sampling confirms as ACM, removal in accordance with O. Reg. 278/05		
Potentially Concealed Asbestos	Electrical Wiring Throughout Interior of Building	Jacketing on Electrical Wiring	-	-	In place management in accordance with O. Reg. 278/05	Invasive inspection prior to maintenance/renovations/construction/demolition activities, if present and sampling confirms as ACM, removal in accordance with O. Reg. 278/05		
Potentially Concealed Asbestos	Doors Throughout Building	Door Core Insulation	-	-	In place management in accordance with O. Reg. 278/05	Invasive inspection prior to maintenance/renovations/construction/demolition activities, if present and sampling confirms as ACM, removal in accordance with O. Reg. 278/05		
Potentially Concealed Asbestos	Wall Cavities, Attic Spaces	Vermiculite Loose-Fill Insulation			In place management in accordance with O. Reg. 278/05	Invasive inspection prior to maintenance/renovations/construction/demolition activities, if present and sampling confirms as ACM, removal in accordance with O. Reg. 278/05		
Potentially Concealed Asbestos	Dome Light Fixtures	Heat Shields	-	-	In place management in accordance with O. Reg. 278/05	Invasive inspection prior to maintenance/renovations/construction/demolition activities, if present and sampling confirms as ACM, removal in accordance with O. Reg. 278/05		
Potentially Concealed Asbestos	Toilet Fixtures	Pipe Gasket/Flange at Floor Connection	-	-	In place management in accordance with O. Reg. 278/05	Invasive inspection prior to maintenance/renovations/construction/demolition activities, if present and sampling confirms as ACM, removal in accordance with O. Reg. 278/05		
Potentially Concealed Asbestos	Concealed by Wall/Ceiling/Exterior Finishes	Asbestos Cement (Transite) Sheets	-	-	In place management in accordance with O. Reg. 278/05	Invasive inspection prior to maintenance/renovations/construction/demolition activities, if present and sampling confirms as ACM, removal in accordance with O. Reg. 278/05		
Potentially Concealed Asbestos	Underground Piping Systems	Asbestos Cement (Transite) Pipe	-	-	In place management in accordance with O. Reg. 278/05	Invasive inspection prior to maintenance/renovations/construction/demolition activities, if present and sampling confirms as ACM, removal in accordance with O. Reg. 278/05		

Table 1 - Summary of Asbestos-Containing Material and Recommended Actions							
	Our Lady of Fatima Catholic Elementary School						
Material	Location	Material Description	Approximate Quantity	Photograph	Management Requirements If No Impacts to Material	Recommended Actions If Material Will Be Or Likely Be Impacted By Maintenance, Renovation, Construction or Demolition Activities	

Notes:

- 1) A copy of this report should be provided to all prospective contractors prior to tender or quotation, in accordance with Section 30 of the Occupational Health and Safety Act.
- 2) Recommended actions are the minimum required actions, as prescribed by the appropriate Acts, regulations, guidelines, standards, codes and general best practice measures. Prior to demolition, the Contractor may choose to alter the approach and combine or break out sections of work. This is acceptable provided that the appropriate Acts, regulations, guidelines, standards and codes are followed and afford protection for the health and safety of workers, occupants and the public that is at least equal to the protection that would be provided by complying with the minimum requirements.
- 3) All waste generated is subject to characterization and disposal in accordance with Ontario Regulation 347.

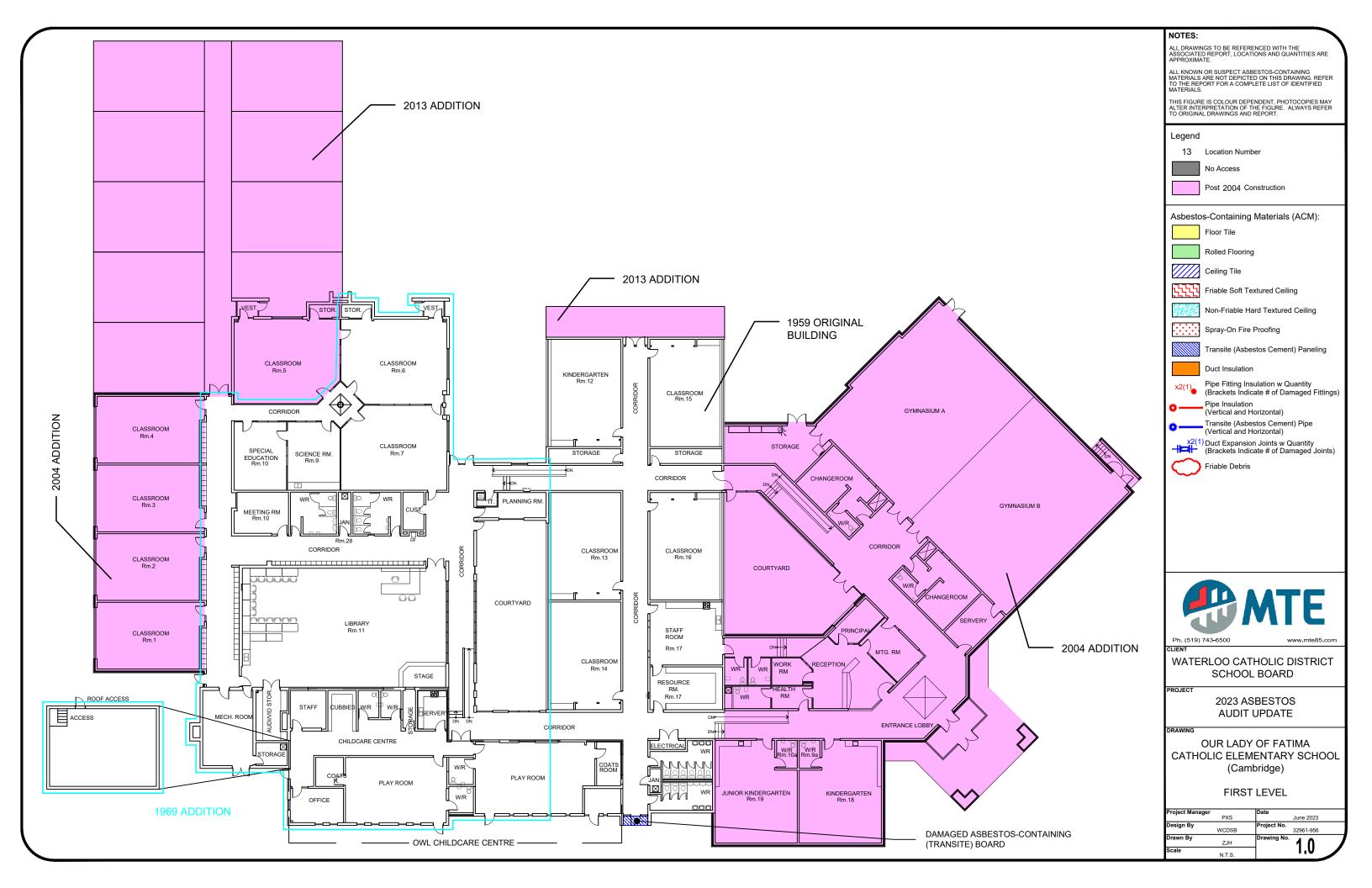
		TABLE 2: BULK ASBESTOS SAMPLING SUMMA	RY		
Sample #	Location	Material Description	Asbestos Content (%)	Fibre Type	Is Material ACM
2011 - Asbestos Au	dit Update				
32961-300-S01A	Boiler Room	Drywall Joint Compound	ND	-	No
32961-300-S01B	Boiler Room	Drywall Joint Compound	ND	-	No
32961-300-S01C	Boiler Room	Drywall Joint Compound	ND	-	No
32961-300-S02A	Room 12	1'x1' Ceiling Tile	ND	-	No
32961-300-S02B	Room 12	1'x1' Ceiling Tile	ND	-	No
32961-300-S02C	Room 12	1'x1' Ceiling Tile	ND	-	No
32961-300-S03A	Exterior Overhang	Texture Coat	ND	-	No
32961-300-S03B	Exterior Overhang	Texture Coat	ND	-	No
32961-300-S03C	Exterior Overhang	Texture Coat	ND	-	No
32961-300-S04A	Exterior Soffit	Transite - Layer 1	20	Chrysotile	Yes
32961-300-S04A	Exterior Soffit	Transite - Layer 2	40	Chrysotile	Yes
32961-300-S04B	Exterior Soffit	Transite	NA	Chrysotile	Yes
32961-300-S04C	Exterior Soffit	Transite	NA	Chrysotile	Yes
	gnated Substance Au			, ,	
S01A	Corridor	Texture Coat	ND	_	No
S01B	Corridor	Texture Coat	ND	_	No
S01C	Corridor	Texture Coat	ND	_	No
S02A	Mechanical Room	Drywall Joint Compound	ND	_	No
S02B	Mechanical Room	Drywall Joint Compound	ND	_	No
S02C	Mechanical Room	Drywall Joint Compound	ND	-	No
S03A	Mechanical Room	Yellow Caulking	ND	-	No
S03B	Mechanical Room	Yellow Caulking	ND	-	No
S03C	Mechanical Room	Yellow Caulking	ND	-	No
S04A	Kindergarten Room	White Caulking	ND	-	No
S04B	Kindergarten Room	White Caulking	ND	-	No
S04C	Kindergarten Room	White Caulking	ND	-	No
2015 - Asbestos Au					
S01A	Washroom	Drywall Joint Compound	ND	-	No
S01B	Washroom	Drywall Joint Compound	ND	-	No
S01C	Janitor Closet	Drywall Joint Compound	ND	-	No
2016 - Asbestos Au	dit Update				
S01A	Classroom 14	9"x9" Grey with Brown/White Streak Vinyl Floor Tile	4.13	Chrysotile	Yes
S01B	Classroom 14	9"x9" Grey with Brown/White Streak Vinyl Floor Tile	NA	Chrysotile	Yes
S01C	Classroom 14	9"x9" Grey with Brown/White Streak Vinyl Floor Tile	NA	Chrysotile	Yes
S02A	Classroom 14	9"x9" Teal with White Streak Vinyl Floor Tile	0.82	Chrysotile	Yes
S02B	Classroom 14	9"x9" Teal with White Streak Vinyl Floor Tile	NA	Chrysotile	Yes
S02C	Classroom 14	9"x9" Teal with White Streak Vinyl Floor Tile	NA	Chrysotile	Yes
S02A	Classroom 14	Black Mastic	<mdl< td=""><td>Chrysotile</td><td>No</td></mdl<>	Chrysotile	No
2018 - Asbestos Au	dit Update				
S01A	Classroom 14	9"x9" Grey/Teal Vinyl Floor Tile - Black Mastic	2	Chrysotile	Yes
S01B	Classroom 14	9"x9" Grey/Teal Vinyl Floor Tile - Black Mastic	NA	Chrysotile	Yes
					Yes

A bulk material sample containing 0.5% or more asbestos therefore establishes that material as asbestos-containing. In accordance with Table 1 of O. Reg. 278/05, a minimum number of samples for the material to be classified as non asbestos. A homogeneous material is defined by O. Reg. 278/05 "as material that is uniform in colour and texture". Homogeneous samples are identified by an alphabetical suffix to sample names to represent multiple samples of a homogeneous material. When a homogeneous material is analysed it is determined to be asbestos-containing upon the first positive detection of asbestos equal to or greater than 0.5%. Subsequent samples of the same material are therefore not analysed. Some bulk samples are comprised of multiple layers and as such will require multiple analysis. In such cases each layer is isolated at the laboratory and analysed individually to determine asbestos content. As a result the laboratory may report additional samples beyond the submitted number of samples or include multiple analyses as subsets within a sample.

Appendix B

Figures





1 General

.1 Provision of labour, materials, equipment and incidental services necessary to provide all work described in the Specifications Manual and accompanying drawings in compliance with this section, as follows:

2 References

- .1 National Fire Code of Canada (Latest Edition)
- .2 Ontario Fire Code (Latest Edition)
- .3 Standard for Building Construction Operations FCC No. 301- latest revision, as issued by the Fire Commissioner of Canada.
 - .1 This document may be viewed at the Regional Engineer's Office.
 - .2 Copies of this document may be obtained from:

Ontario Fire Marshall

Overlea Blvd.

Toronto, Ontario M4H 1A8

3 Extinguishers

Provide and maintain in working order, adequate, temporary Canadian Underwriter's labelled, chemical solution, dry pressure Class ABC type and 2 ½ gallon (9 or 11 litre) fire extinguishers and locate in prominent positions, to approval of authorities having jurisdiction.

4 Control of Combustible Materials

- .1 The stockpiling of construction materials must be carefully controlled. The Fire Code prohibits such storage where the materials create a fire hazard to a building or its occupants. Materials stored and equipment used in the portion of the building under construction could create a fire hazard; for instance, the storage of excessive amounts of foam plastic insulation or the placement of open flame portable heating appliances. The control of combustibles on a construction site is also regulated under the Occupational Health and Safety Act. Contractor shall ensure the Act is strictly adhered to by all participants in the construction of the project.
- .2 Handle and dispose of any flammable and combustible liquid in accordance with the requirements of the Gasoline Handling Act. Contractor shall ensure the Act is strictly adhered to by all participants in the construction of the project. Waste material containing oil, gas or any other combustible liquid shall be disposed of in a suitable safety container daily.
- .3 Report any occurrence jeopardizing "fire safety requirements", immediately to the Architect.

1 General

- .1 Section includes
 - .1 Provision of labour, materials, equipment and incidental services necessary to provide all work described in the Specifications Manual and accompanying drawings in compliance with this section, as follows:

2 Installation and Removal

.1 Provide temporary utilities, facilities and controls in order to execute the work expeditiously. Remove from site all such work after use.

3 Access

- .1 Provide and maintain adequate access to project site.
- .2 Provide and maintain temporary roads where indicated, or as required to provide access to portions of the site, and provide snow removal during period of work.
- .3 If authorized to use existing roads for access to project site, maintain such roads for duration of Contract and make good damage resulting from Contractor's use of roads.

4 Contractor's Site Office

- .1 Provide minimum 2400 x 4800 mm office and furnish with drawing layout table, drawing storage rack, 3 drawer filing cabinet, shelving and coat hooks.
- .2 Install lighting to provide 750 Lx.
- .3 Heat to maintain 22 deg. C. inside temperature.
- .4 Provide 2 operable windows for cross ventilation.

5 Temporary Telephone and Facsimile

- .1 Provide and pay for temporary telephone and Fax machine necessary for own use and use of trades.
- .2 Pay telephone or cellular telephone are not acceptable.
- .3 Toll and long-distance charges to be paid for by those making the call.

6 Equipment, Tools and Materials Storage

.1 Provide adequate weathertight trailers for storage of materials, tools, and equipment.

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.2 Trailers required by the trades as workshops or for storage of material related to that trade shall be provided by such trades.

7 Sanitary Facilities

- .1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.
- .2 Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition.
- .3 When permanent water and drain connections are completed, provide temporary water closets and urinals complete with temporary enclosures, inside building. Permanent facilities may be used on approval of Owner.

8 Hoarding

- .1 Erect hoarding around entire perimeter of site and as required by governing authorities and/or Owners to protect the public, workers, public and private property from injury or damage.
- .2 Site perimeter hoarding shall be 1800mm high Insta Fence.
- .3 Provide lockable gates within site hoarding for access to site, and to prevent public access.
- .4 Provide barricades and covered walkways required by governing authorities for public right-of-way and for public access to building.
- .5 Provide barriers around trees and plants designated to remain. Protect from damage.

9 Enclosure of Structure

- .1 Provide temporary weathertight enclosures and protection for exterior openings.
- .2 Erect enclosures to allow access for installation of materials and working inside enclosure.
- .3 Erect enclosures to withstand wind pressure and snow loading.
- .4 Close off floor areas where walls are not finished; seal off other openings; enclose building interior work area for temporary heat.

10 Temporary Power and Light

.1 Arrange, pay for and maintain temporary electrical power supply in accordance with governing regulations and ordinances.

- .2 Install temporary facilities for power such as pole line and underground cables to approval of local power supply authority.
- .3 Electrical power and lighting systems installed under this contract can be used for construction requirements provided that guarantees are not affected thereby. Make good damage. Replace lamps which have been used over period of 3 months.

11 Temporary Water Supply

- .1 Arrange, pay for and maintain temporary water supply in accordance with governing regulations and ordinances.
- .2 Permanent water supply system installed under this contract can be used for construction requirements provided that guarantees are not affected thereby. Make good damage.

12 Temporary Heating and Ventilating

- .1 Pay for costs of temporary heat and ventilation used during construction, including costs of installation, fuel, operation, attendance and maintenance. Use of direct fired heaters discharging waste products into work areas will not be permitted unless prior approval is given by Consultant.
- .2 Provide temporary heat and ventilation in enclosed areas as required to:
 - .1 Facilitate progress of work.
 - .2 Protect work and products against dampness and cold.
 - .3 Prevent moisture condensation on surfaces.
 - .4 Provide ambient temperatures and humidity levels for storage, installation and curing of materials.
 - .5 Provide adequate ventilation to meet health regulations for safe working environment.
- .3 Maintain minimum temperature of 10 deg. C., or higher where construction is in progress and maintain until acceptance of structure by Consultant.

.4 Ventilating

- .1 Prevent hazardous accumulation of dust, fumes, mists, vapours or gases in areas occupied during construction.
- .2 Provide local exhaust ventilation to prevent harmful accumulation of hazardous substances into atmosphere of occupied areas.
- .3 Dispose of exhaust materials in manner that will not result in harmful exposure to persons.
- .4 Ventilate storage spaces containing hazardous or volatile materials.
- .5 Ventilate temporary sanitary facilities.

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- .6 Continue operation of ventilation and exhaust system for a time after cessation of work process, to assure removal of harmful elements.
- .5 Maintain strict supervision or operation of temporary heating and ventilating equipment.
 - .1 Conform with applicable codes and standards.
 - .2 Enforce safe practices.
 - .3 Prevent abuse of services.
 - .4 Prevent damage to finishes.
 - .5 Vent direct-fired combustion units to outside.
 - .6 The permanent heating system of the building, or portions thereof, may be used when available, when approved by owner, as follows:
 - .1 Activate radiation system under direction of Consultant to provide temporary heat, after building is closed in. Finally, flush system and treat water, under direction of Consultant.
 - .2 Activate air system under direction of Consultant to provide temporary heat, after Consultant is satisfied that system will not be damaged by freezing. Protect ducting system by filters inspected and replaced as necessary. Finally vacuum-clean entire ducting system and renew filters.
 - .3 Refer to Divisions 15 & 16 for replacement of filters at time of final acceptance of work and for additional requirements.

13 Drainage

.1 As called for or illustrated in the Contract Documents.

14 Site Signs and Notices

- .1 Maintain approved signs and notices in good condition for duration of project, and dispose of off site on completion of project or earlier if directed by consultant.
- .2 Project Sign: Provide one temporary project sign at location approved by Owner and Consultant. Refer to Section 01 58 00.
- .3 No other signs or advertisements of any description except notices regarding safety and instruction, shall be put up around the building, or site, without the approval of the Consultant.

15 Construction Safety Measures

.1 Observe all construction safety measures as required by the General Conditions of the Contract, and by all authorities having jurisdiction, provided that in case of

Section 01 52 00 TEMPORARY CONSTRUCTION FACILITIES & CONTROLS Page 5 of 6

conflict or discrepancy, the more stringent requirements shall apply.

- .2 Provide spare safety helmets for, and enforce their use by the Consultants, the Owner, their representatives and any authorized visitors to the site.
- .3 Provide and maintain fences, gates and locks, covered walkways, guard rails, barriers, night lights, and appropriate warning signage as required for the protection of the public, and of public and private property; as required by the General Conditions of the Contract, and by all authorities having jurisdiction. Erect and maintain sturdy railings around shafts, and the like, to protect workmen and the public from injury. Remove all such temporary protective measures when no longer required.

16 WHMIS

- .1 Comply with all requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets.
- .2 Deliver copies of WHMIS data sheets to Consultant on delivery of materials.

17 Falsework

.1 Design and construct falsework in accordance with CSA S269.1.

18 Scaffolding

- .1 Design, construct and maintain scaffolding in accordance with CSA S269.2-M87.
- .2 Erect scaffolding independent of walls. Remove promptly when no longer required.

19 Hoisting

- .1 Provide, operate and maintain hoists or cranes required for moving of workers, materials and equipment. Make financial arrangements with Subcontractors for use thereof.
- .2 Hoists or cranes shall be operated by qualified operators.

20 Site Storage and Overloading

- .1 Confine the Work and the operations of employees to limits indicated by the Contract Documents. Do not unreasonably encumber the premises with products.
- .2 Do not load or permit to be loaded any part of the Work with a weight or force that will endanger the Work.

21 Construction Parking

.1 Parking will be permitted on site provided it does not disrupt the performance of Work. Location and extent of parking shall be agreed upon with the Owner.

22 Dust Tight Screens

- .1 Provide dust tight screens or partitions to localize dust generating activities within buildings, and for the protection of workers, finished areas of Work and the public.
- .2 Maintain and relocate protection until such work is complete.

23 Protection of Building Finishes and Equipment

- .1 Provide protection for finished and partially finished building finishes and equipment during performance of Work.
- .2 Be responsible for damage incurred due to lack of or improper protection. The owner shall not assume any responsibility for losses (i.e. vandalism or criminal acts) not prevented due to inadequate protection or security on site.

24 Public Traffic Flow

.1 Provide and maintain flag persons, traffic signals, barricades and flares, lights, or lanterns as required to perform the work and protect the public.

25 Temporary Bracing

.1 Provide temporary bracing of structures in compliance with OBC 2006 and requirements of all other applicable codes. It is the Contractor's sole responsibility to ensure temporary bracing of structures is maintained until structure is safely connected to permanent lateral support. See requirements of Section 04200 – Masonry.

NOTE: Should discrepancies occur between this division and "Division 00 – "TENDER REQUIREMENTS", or other Project Consultant's notes on Contract Documents, the most stringent shall govern.

1 General

- .1 Section includes
 - .1 Provision of labour, materials, equipment and incidental services necessary to provide all work described in the Specifications Manual and accompanying drawings in compliance with this section, as follows:

2 Waste Management

- .1 The Contractor shall audit, separate and dispose of construction waste generated by new construction or by demolition of existing structures in whole or in part, in accordance with Ontario Regulations 102/94 and 103/94 made under the Environmental Protection Act.
- .2 Fires, and burning of rubbish or waste on site is prohibited.
- .3 Burying of rubbish or waste materials, except as specified herein, is prohibited.
- .4 Disposal of waste by concealing within building assemblies is prohibited.
- .5 Disposal of waste or volatile materials such as mineral spirits, oil, gasoline or paint thinner into waterways, or sewer systems is prohibited.

3 Drainage

.1 Provide temporary drainage and pumping as necessary to keep excavations and site free from water. Dispose of water containing silt in suspension in accordance with local authority requirements.

4 Site Clearing and Plant Protection

- .1 Protect trees and plants on site and adjacent properties where indicated.
- .2 Restrict tree removal to those designated by Consultant. Wrap in burlap trees and shrubs adjacent to construction work, storage areas and trucking lanes. Encase trees and shrubs with protective wood framework from grade level to height of 2100mm.
- .3 Protect roots to dripline during excavation and site grading to prevent disturbance
- .4 or damage. Avoid unnecessary traffic, dumping and storage of materials over root zones of protected trees. Minimize stripping of topsoil and vegetation.

5 Pollution Control

.1 Maintain temporary erosion and pollution control features installed under this Contract.

- .2 Control emissions from equipment and plant to local authorities' emission requirements.
- .3 Prevent sandblasting and other extraneous materials from contaminating air beyond application area, by providing temporary enclosures.
- .4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

1 GENERAL

- .1 Section includes
 - .1 Provision of labour, materials, equipment and incidental services necessary to provide all work described in the Specifications Manual and accompanying drawings in compliance with this section, as follows:
 - .2 Provide material and equipment of specified design and quality, performing to published ratings and for which replacement parts are readily available.
 - .3 Use products of one manufacturer for equipment or material of same type or classification unless otherwise specified.

2 Reference Standards

- .1 Within the specifications, reference standards are identified. Conform to these standards, in whole or part, as specifically requested.
- .2 If there is question as to whether any product or system is in conformance with applicable standards, the Consultant reserves the right to have such products or systems tested to prove or disprove conformance.
- .3 The cost for such testing will be borne by the Owner in the event of conformance with Contract Documents or by the Contractor in the event of non-conformance.
- .4 Conform to latest date of issue of referenced standards in effect on date of submission of bids, except where a specific date of issue is specifically noted.

3 Quality of Materials

- .1 Products, materials, equipment and articles (referred to as Products throughout the specifications) incorporated in the Work shall be new, not damaged or defective, and of the best quality (compatible with specifications) for the purpose intended. If requested, furnish evidence as to type, source and quality of Products provided.
- .2 Defective products, whenever identified prior to the completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is a 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 the quality or fitness of Products, the decision rests strictly with the Consultant based upon the requirements of the Contract Documents.

- .4 Unless otherwise indicated in the specifications, maintain uniformity of manufacture for any particular or like item throughout the building.
- .5 Permanent labels, trademarks and nameplates on Products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

4 Availability

- .1 Immediately upon signing Contract, review Product delivery requirements and anticipate foreseeable supply delays for any items. If delays in supply of Products are foreseeable, notify the Consultant of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.
- .2 In the event of failure to notify the Consultant at commencement of Work, and should it appears that Work may be delayed for such reason, the Consultant reserves the right to substitute more readily available products of similar character, at no increase in Contract Price.

5 Storage, Handling and Protection

- .1 Handle and store Products in a 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 seal and labels intact. Do not remove from packaging or bundling until required in the Work.
- .3 Store products subject to damage from weather in weatherproof enclosures.
- .4 Store cementitious products clear of earth or concrete floors, and away from walls.
- .5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
- .6 Store sheet materials and lumber on flat, solid supports and keep clear of ground. Slope to shed moisture.
- .7 Store and mix paints in a heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
- .8 Remove and replace damaged Products at own expense and to the satisfaction of the Consultant.

6 Transportation

- .1 Pay costs of transportation of Products required in the performance of the Work.
- .2 Transportation cost of Products supplied by the Owner will be paid for by the Owner. Unload, handle and store such Products.

7 Manufacturer's Instructions

- .1 Unless otherwise indicated in the specifications, install or erect Products in accordance with manufacturer's printed instructions. Do not rely on labels or enclosures provided with Products. Obtain written instructions directly from manufacturers.
- .2 Notify the Consultant in writing, of conflicts between the specifications and manufacturer's instructions, so that the Consultant may establish the course of actions.
- .3 Improper installation or erection of Products, due to failure in complying with these requirements, authorizes the Consultant to require removal and reinstallation at no increase in Contract Price.

8 Quality of Work

- .1 Quality of work shall be first class, executed by workers experienced and skilled in the respective duties for which they are employed. Immediately notify the Consultant if required Work is such as to make it impractical to produce required results.
- .2 Do not employ any unfit person or anyone unskilled in their required duties. The Consultant reserves the right to require the dismissal from the site, of workers deemed incompetent, careless, insubordinate or otherwise objectionable.

9 Fastenings

- .1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.
- .2 Prevent electrolytic action between dissimilar metals and materials.
- .3 Use non corrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in the affected specification Section.
- .4 Space anchors within limits of load limit or shear capacity and ensure that they provide positive permanent anchorage. Wood or any other organic material plugs are not acceptable.
- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.

- .6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.
- .7 Obtain Consultant's approval before using explosive actuated fastening devices.

10 Protection of Work in Progress

- .1 Adequately protect Work completed or in progress. Work damaged or defaced due to failure in providing such protection is to be removed and replaced, or repaired, as directed by the Consultant, at no increase in Contract Price.
- .2 Prevent overloading of any part of the building. Do not cut, drill or sleeve any load bearing structural member, unless specifically indicated, without written approval of Consultant.

1 GENERAL

- .1 Section includes
 - .1 Provision of labour, materials, equipment and incidental services necessary to provide all work described in the Specifications Manual and accompanying drawings in compliance with this section, as follows:

2 Cutting and Patching

- .1 Submit a written request in advance, for approval 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 Inspect existing conditions, including elements subject to damage or movement during cutting and patching.
- .3 After uncovering, inspect conditions affecting performance of work.
- .4 Beginning of cutting or patching means acceptance of existing conditions.
- .5 Perform cutting, fitting and patching, including excavation and fill, to complete the Work.
- .6 Remove and replace defective and non-conforming work.
- .7 Perform work to avoid damage to other work.
- .8 Prepare proper surfaces to receive patching and finishing.
- .9 Employ original installer to perform cutting and patching for weather-exposed and moisture-resistant elements, and sight-exposed surfaces.
- .10 Cut rigid materials using power saw or core drill. Pneumatic or impact tools not allowed.
- .11 Restore work with new products in accordance with Contract Documents.
- .12 Fit work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- .13 At penetration of fire-rated wall, ceiling, or floor construction, completely seal voids with firestopping material, full thickness of construction element. F.R.R. of

wall shall be maintained by using materials with same rating of wall.

- .14 Refinish surfaces to match adjacent finishes; for continuous surfaces refinish to nearest intersection; for an assembly, refinish entire unit.
- .15 Provide all openings greater than 200mm in non-structural elements of work for penetrations of mechanical and electrical work. Divisions 15 and 16 shall provide all sleeves and locations for sleeves.
- .16 Ensure that all cutting and patching work, including that paid for under Divisions 15 and 16, is properly performed by the respective trades skilled in that line of work.

3 Field Engineering

- .1 Qualifications of Surveyor
 - .1 Employ a qualified registered land surveyor, acceptable to Owner.
 - .2 Locate, confirm and protect control points prior to starting site work. Preserve permanent reference points during construction.

.2 Survey Requirements

- .1 Establish two permanent bench marks on site, referenced to established bench marks by survey control points. Record locations, with horizontal and vertical data for inclusion in Operations and Maintenance Manual.
- .2 Establish lines and levels, locate and lay out, by instrumentation.

.3 Records

- .1 Maintain a complete, accurate log of control and survey work as it progresses.
- .2 On completion of foundations and major site improvements, prepare certified survey showing dimensions, locations, angles and elevations of Work.

4 Location of Equipment and Fixtures

- .1 Location of equipment, fixtures and outlets indicated or specified are to be considered as approximate.
- .2 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with manufacturer's recommendations for safety, access and maintenance.
- .3 Inform Consultant of impending installation and obtain his approval for actual location.
- .4 Submit field drawings to indicate relative position of various services and equipment when required by Consultant.

5 Concealment

.1 Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas, except where indicated otherwise.

6 Lighting Fixtures at Suspended Ceilings

- .1 Ensure that secure support is provided for lighting fixtures by suspended ceilings, or by separate hangers, or by both.
- .2 Coordinate the ceiling system and lighting fixture installations to provide adequate support.
- .3 Submit affidavits with acceptable design information confirming that the installation of the suspended ceiling system and/or separate fixture hangers will provide adequate support for the lighting fixtures without exceeding specified deflection tolerances for the ceiling system.
- .4 Conform to current requirements of the Electrical Inspection Department of Ontario Hydro.

7 Existing Services

- .1 Where works involves breaking into or connecting to existing services, carry out work at times directed by governing authorities, with minimum of disturbance to pedestrian and vehicular traffic.
- .2 Before commencing work, establish location and extent of service lines in area of work and notify Consultant of findings.
- .3 Submit schedule to, and obtain approval from Consultant for any shut-down or closure of active service or facility. Adhere to approved schedule and provide notice to affected parties.
- .4 Provide adequate bridging over trenches which cross sidewalks or roads to permit normal traffic.
- .5 Where unknown services are encountered, immediately advise Consultant and confirm findings in writing.
- .6 Remove abandoned service lines to distance of 1.8m from foundations. Cap or otherwise seal lines at cut-off points as directed by Consultant.
- .7 Record locations of maintained, re-routed and abandoned service lines.

1 GENERAL

- .1 Section includes
 - .1 Provision of labour, materials, equipment and incidental services necessary to provide all work described in the Specifications Manual and accompanying drawings in compliance with this section, as follows:
 - .2 Refer to GC 3.13.
 - .3 Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
 - .4 Store volatile wastes in covered metal containers, and remove from premises at end of each working day.
 - .5 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.

2 Materials

.1 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

3 Project Cleanliness

- .1 Maintain the Work in tidy condition, free from accumulation of waste products and debris, other than that caused by the Owner or other Contractors.
- .2 Remove waste material and debris from the work areas daily, and deposit in waste container at the end of each working day.
- .3 Clean interior areas prior to start of finish work, maintain areas free of dust and other contaminants during finishing operations.

4 Final Cleaning

- .1 Immediately following Date of Substantial Performance, and prior to Owner occupancy of the building or portion of the building affected by the Work, conduct full and complete final cleaning operations.
- .2 Remove all surplus products, tools, construction machinery and equipment not required for the performance of remaining work, and thereafter remove any remaining materials, equipment, waste and debris.
- .3 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.

- .4 Cleaning operations shall include the removal of all stains, spots, scuff marks, dirt, dust, remaining labels, adhesives or other surface imperfections.
- .5 Clean and polish all glass and mirrors. Remove remaining manufacturer's and safety "X" labels.
- .6 Clean and polish all finished metal surfaces such as enamelled or stainless steel, chrome, aluminum, brass, and bronze.
- .7 Clean and polish all vitreous surfaces such as plumbing fixtures, ceramic tile, porcelain enamel, or other such materials.
- .8 Vacuum, clean and dust behind grilles, louvres and screens.
- .9 Steam clean all carpets immediately prior to occupancy by Owner.
- .10 Broom clean and wash exterior paved surfaces.
- .11 Remove dirt and other disfiguration from exterior surfaces.
- .12 Clean and sweep roofs, gutters, downspouts, areaways, drywells, and drainage systems.
- .13 Clean equipment and fixtures to a sanitary condition, clean or replace filters of mechanical equipment.

1 GENERAL

- .1 Section includes
 - .1 Provision of labour, materials, equipment and incidental services necessary to provide all work described in the Specifications Manual and accompanying drawings in compliance with this section, as follows:

2 Related Sections

.1 Section 01 78 10 - Closeout Submittals

3 Inspection and Declaration Procedures

.1 Arrange for, conduct and document final inspections, close-out and commissioning at the completion of the Work in accordance with procedures described in the General Conditions of CCDC 2-2020, and OAA/OGCA Document 100 (Latest Edition).

4 Substantial Performance

- .1 Contractor's Inspection
 - The Contractor and all Subcontractors shall conduct an inspection of the work, identify deficiencies and defects, and make corrections as required to conform with the Contract Documents. Notify Consultant in writing of satisfactory completion of Contractor's Inspection and that corrections have been made. Request a Consultant's Inspection.
- .2 Consultant's Inspection
 - .1 The Consultant and the Contractor will perform an inspection of the work to identify obvious defects or deficiencies. Contractor shall correct work accordingly.
- .3 Substantial Performance of the Work
 - .1 When deficiencies and defects have been corrected, and the Contractor determines that the requirements of the Contract have been substantially performed, the Contractor shall make application in writing for a certificate of Substantial Performance.
- .4 Certificate of Substantial Performance
 - .1 The Consultant shall notify the Contractor of approval of the application for Substantial Performance and issue a certificate.
 - .2 The Contractor shall publish a copy of the Certificate of Substantial Performance in a construction trade newspaper, and shall provide the Consultant with proof of the date of publication.
- .5 Commencement of Lien and Warranty Periods

.1 The day following the date of publication of Certificate of Substantial Performance shall be the date of commencement of the warranty period, and of the 45-day lien period prior to release of basic holdback, unless required otherwise by lien statute of the Place of the Work.

5 Inspection and Statement of Completion

- .1 Submit a written statement confirming that the following items have been completed:
 - .1 Work has been completed and inspected for compliance with Contract Documents.
 - .2 All defects have been corrected and deficiencies have been completed.
 - .3 Equipment and systems have been tested, adjusted and balanced and are fully operational.
 - .4 Certificates required by Boiler Inspection Branch, Fire Commissioner, and Utility companies have been submitted.
 - .5 Operation of systems have been demonstrated to Owner's personnel, and
 - .6 Work is complete and ready for Final Inspection.

.2 Final Inspection

.1 When items noted above are completed, request a final inspection of the Work by Owner, Consultants, and Contractor. If work is deemed incomplete by Consultant, complete outstanding items and request a reinspection.

.3 Final Payment

- .1 When final deficiencies and defects have been corrected, the Contractor shall make application for final certificate of payment.
- .2 Certificate of payments will deduct the standard 10% holdback, as well as an additional 2% deficiency holdback.

6 Reinspection

.1 Should reinspection by Consultants be required due to Contractor's failure to complete the work in compliance with Contract Documents, the Owner will deduct amount of Consultant's compensation for reinspection services, from monies owed to the Contractor.

1 GENERAL

- .1 Section includes
 - .1 Provision of labour, materials, equipment and incidental services necessary to provide all work described in the Specifications Manual and accompanying drawings in compliance with this section, as follows:

2 Related Sections

.1 Section 01 78 00 - Closeout Procedures

3 Quality

- .1 Spare parts, maintenance materials and special tools provided shall be new, not damaged or defective, and of the same quality and manufacture as products provided in the Work.
- .2 If requested, furnish evidence as to type, source and quality of Products provided.
- .3 Defective products will be rejected, regardless of previous inspections. Replace products at own expense.

4 Delivery, Storage, and Handling

- .1 Deliver all materials required as maintenance materials, spare parts or special tools, to the site, include shipping costs, and store as directed.
- .2 Store spare parts, maintenance materials and special tools in a manner to prevent damage, or deterioration.
- .3 Store in original and undamaged containers with manufacturer's seals or labels intact.
- .4 Store materials subject to damage from severe climatic changes in a climate controlled, weatherproof enclosure.
- .5 Store paints and freezable materials in a moderately heated and ventilated room.

5 Maintenance Materials, Spare Parts & Tools

- .1 Provide spare parts in quantities specified in individual specification sections.

 Provide identical items to those installed in the Work.
- .2 Provide maintenance materials in quantities specified in individual specification sections. Provide identical items of same manufacturer, dye lot or production run as items in the Work.

- .3 Provide special tools in quantities specified in individual specification sections, and tag items identifying their function and equipment or products to which they are associated.
- .4 Receive and catalogue all items. Include approved listings in Operations and Maintenance Manual.
- .5 Obtain receipts for delivered products and submit prior to Substantial Performance.

6 Operation and Maintenance Manual

- .1 Prepare Operation and Maintenance Manual during the course of construction and have completed prior to Date of Substantial Performance.
- .2 Contractor to address and fulfill all the requirements of CCDC 2-2020 prior to submitting closeout submittals for review.
- .3 Contractor shall provide digital copy (PDF format) to Consultants for review.
- .4 Submit TWO copies of the final completed volume(s) with the application for Substantial Performance in accordance with OAA/OGCA Document 100 (Latest Edition). Each final set of completed volume(s) to be accompanied with a digital copy of manual on ONE (1) USB key.
- .5 Incomplete manuals will be returned without review.
- .6 Format
 - .1 Bind data in commercial quality, white or grey, three ring 8 1/2" x 11" (219 x 279mm) binders, having clear cover and spline pockets.
 - .2 When multiple binders are used, correlate data into related consistent groupings.
 - .3 Identify each binder on the cover and spline with the following:
 OPERATION AND
 MAINTENANCE MANUAL
 2024 OUR LADY OF FATIMA CES

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- .4 Provide Table of contents and index tab sheets for each volume. Itemize and tabulate contents in accordance with Operation and Maintenance Manual Guide.
- .5 Provide drawings with reinforced punched binder tab, or insert into clear sleeves in folded format. Group drawings as to content, and index for quick reference.

7 As-Built Drawings

- .1 Record information on a clean set of black line opaque drawings, provided by Owner.
- .2 Provide felt tip marking pens, maintaining separate colours for each major system, for recording information.
- .3 Record information concurrently with construction progress. Do not conceal work until required information is recorded.
- .4 Contract Drawings and shop drawings: legibly mark each item to record actual construction, including:
 - .1 Measured depths of elements of foundation in relation to finish first floor datum.
 - .2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - .3 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
 - .4 Field changes of dimensions and detail.
 - .5 Changes made by change orders.
 - .6 Details not on original Contract Drawings.
 - .7 References to related shop drawings and modifications.
 - .8 Prior to completion of the Work, Contractor shall electronically transfer the marked-up information from the as-built documents to a master set of drawing and specification files provided by the Consultant, as required for submission to WCDSB. All documents must be turned over to Architect prior to final payment.

PART 1: PART 1: GENERAL

1.1 GENERAL REQUIREMENTS:

.1 Conform to all applicable Sections of Divisions 1.

1.2 DESCRIPTION

- .1 Related Work Specified Elsewhere:
 - .1 Mechanical & Electrical Divisions
- .2 Scope of Work:
 - .1 Contractor shall demolish & remove all items shown dashed / noted on drawing. Refer to Part 2 of this Section for directions regarding items removed by Owner, items or materials resulting from demolition, etc.
 - .3 Visit site at time of tender to determine & include for full extent of demolition & removal work involved.

1.3 REQUIREMENTS OF REGULATORY AGENCIES

- .1 Conform to 2012 OBC, municipal by-laws & all other requirements of utility or provincial authorities having jurisdiction. Submit all required documentation, gain all authority approvals, obtain & pay cost of separate demolition permits if such are required, pay all fees, inspection charges, disconnect charges, etc related to performing of demolition & removal work.
- .2 Put in place all safety measures such as hoarding, signage, garbage bins, etc & perform all temporary disconnect/capping-off work for existing services as required by Owner, Municipality & Provincial or Utility authorities having jurisdiction. Include all costs for erection & removal of such protective devices. Remove such devices immediately upon completion of demolition & removal work.
- .3 Configure & schedule work such that all required fire exits for existing building are maintained throughout course of demolition & removal work.

1.4 QUALITY ASSURANCE

- .1 Demolition & removal work shall be performed by skilled experienced personnel working for qualified demolition subcontractor with appropriate insurance coverage to perform described. Firms submitting tenders shall be actively engaged in work of this type & shall show proof of such experience if requested.
- .2 Demolition subcontractor shall appoint knowledgeable experienced job foreman who shall be on site full during demolition & removal work. Job foreman shall remain on site until all deficiencies are corrected & all clean-up work is performed to consultant's satisfaction.
- .3 Demolition & removal work shall be performed with utmost care to prevent damage to adjacent equipment/materials /finishes to be maintained or to items being removed & turned over to Owner

- or relocated. Make good, at no additional cost to Owner, any damage caused by failure to exercise care & protection.
- .4 Provide all measures required to ensure that areas being demolished are left secure after normal working hours.

1.5 INTERRUPTION OF EXISTING SERVICES

.1 Prior to commencement of any demolition & removal work, determine with care location & nature of existing mech/elect service within demolition work areas. Verify position of such items with Owner, local utilities, etc. Disconnection, capping-off demolition & alterations to existing mech/elect service & equipment shall be performed by properly qualified & experienced mech/elect subcontractors. Coordinate with mech/elect subcontractors & with Owners representatives to ensure proper scheduling of all necessary disconnects to allow demolition work to proceed yet permit Owner to continue his use of adjacent portions of building. Interruption of existing services necessary to Owners continued functions shall only be permitted when sufficient advance warning has been given to Owner that he can make alternative arrangements. Existing services shall be interrupted for shortest possible length of time each occurrence.

1.6 PROTECTION

- .1 This Subcontractor shall be responsible for protection of existing building assemblies /equipment /materials/finishes to be maintained so that they are not damaged by his demolition & removal work.
- .2 Provide temporary dust-proofing by means of partitions, filters, coverings, flexible screenings & tape to effectively isolate existing material/finishes /equipment. Such measures shall be in place prior to commencement of any demolition work. Openings in existing floors, walls & ceilings shall be covered & taped to prevent dust migration. Existing return air grilles leading from areas being demolished shall be equipped with temporary filters & cleaned or replaced on regular basis.

 Include all costs for erection & removal such protective devices. Remove such devices immediately upon completion of demolition work.
- .3 Where demolition results in a portion of the existing building being exposed to the exterior, provide temporary, weather-tight, insulated hoarding partition sufficient to prevent infiltration of exterior elements into the building.
- .4 Prevent damage of structures, services, walks, paving, trees, landscaping and adjacent grades.Make good damage caused by demolition work.
- .5 Prevent debris from blocking roof drainage systems, and mechanical and electrical systems which MUST remain.
- .6 Contractor will be responsible for cleaning any areas beyond the area of Work where dust or debris from the demolition has accumulated and will be responsible for the cost of replacing any equipment or material damaged due to inadequate dust barrier protection.

.7 Rubbish & waste materials resulting from demolition work may be left on site overnight only if stored in steel garbage container of appropriate size with spring loaded lockable closure doors. Position container to Owner's approval & remove or empty same on regular basis to prevent overfilling. Pay all costs related to rental of container & transportation to dump or authorized landfill site. Pay actual dumping charges at dump or authorized landfill site.

PART 2: PRODUCTS

2.1 ITEMS TO BE REMOVED/RELOCATED BY OWNER (NIC)

- .1 Owner, using his own personnel, may remove & relocate following existing materials or equipment:
 - .1 all loose furniture & equipment such as tables, desks, chairs, files, photocopiers, stored paper supplies, books, etc.
 - .2 all audio/visual equipment such as overhead projectors, projection screens, computers, etc.
- .2 There may be some overlap between Owner's removal & relocation work & commencement of work of this contract. Successful Contractor shall be expected to cooperate fully with Owner if such overlap occurs.

2.2 ITEMS OR MATERIALS RESULTING FROM DEMOLITION

- .1 Except for items noted on the Drawings, all other materials & equipment removed by this Section shall become property of this Subcontractor who shall become responsible for removing them completely from site.
- .2 Prior to commencement of demolition work however, this Subcontractor shall submit to Owner complete written list of materials & /or equipment to be removed from demolition work areas. Owner shall have right to request, in addition to items indicated above, that additional items on this list be turned over to him for his use. Owner shall reply in writing in this regard. Owner recognizes that adjustments to Tender Price may be sought by Subcontractor for such added requests.

PART 3: EXECUTION

3.1 GENERAL PROCEDURES

- .1 Select methods of demolition to result in minimum of noise & dust. Dampen surfaces as required during course of demolition to result in minimum of noise & dust generation.
- .2 Restrict traffic in area of demolition work to minimize safety hazards. Clean up on regular basis throughout day to ensure that tracking of dust & staining or blemishing of existing adjacent finishes which are to be maintained does not occur.

.3 Prevent unplanned movement, settlement, or damage during demolition operations. Provide bracing & shoring required. Carefully remove & lower heavy or large objects.

3.2 PREPARATION OF EXISTING FLOOR SUBSTRATE

- .1 At areas where existing floor finish materials are to be removed thereby exposing existing concrete substrate, this Subcontractor shall be responsible for cleaning & preparing existing concrete substrate ready for application of new floor finish materials.
- .2 Include all costs for labour, solvents, acids, pneumatic scalers, grinders, scarifier, etc as required to completely remove residual adhesive left on concrete substrate (after removal of existing floor finish materials) such that new floor finish materials can be successfully applied. Coordinate with other trades to ensure that solvents used in preparation work are compatible with adhesives to be used in applying new floor finish materials.

3.3 CLEAN -UP

- .1 Clean up in accordance with Section 01000, General Instructions.
- .2 Dispose of the removed material from the site promptly.
- .3 Waste Management Disposal Company must be approved and licensed by the Ministry of Environment for transportation and disposal of all site and construction related materials.
- .4 Transportation and disposal of all materials must meet Ministry of Environment guidelines.
- .5 Contractors are required to submit copies of all Bills of Lading from disposal facilities and transfer stations to the Consultant as proof of compliance.

END OF DOCUMENT

Section 04 01 21 MASONRY RESTORATION AND CLEANING Page 1 of 4

Part 1 General

1.1 SECTION INCLUDES

- .1 Steam and detergent cleaning of exterior brick veneer and Re-pointing mortar joints.
- .2 Repair of damaged masonry.

1.2 REFERENCES

- .1 CSA-A371-04 Masonry Construction for Buildings.
- .2 CSA-S304.1-04 Design of Masonry Structures.
- .3 Canadian Environmental Assessment Act.

1.3 ADMINISTRATIVE REQUIREMENTS

- .1 Pre-installation Meetings:
 - .1 Convene one (1) week before starting work of this section.
 - .2 Require attendance of parties directly affecting work of this section.
 - .3 Review conditions of installation, installation procedures, and coordination with related work.
- .1 Sequencing: Perform re-pointing after cleaning masonry surfaces.
- .1 Scheduling: Perform cleaning to exterior masonry between the hours of 07:00 to 23:00 pm.

1.4 SUBMITTALS FOR REVIEW

- .1 Product Data: Provide data on cleaning compounds.
- .2 Samples: Submit four (4) samples of face brick units to illustrate colour, texture and extremes of colour range to match existing.

1.5 QUALITY ASSURANCE

- .1 Restorer Qualifications:
 - .1 Company specializing in performing the work of this section with minimum three (3) years documented experience.
 - .2 Successful completion of at least three (3) projects of similar scope and complexity within past five (5) years.

1.6 MOCK-UP

.1 Clean, restore and re-point a 3 x 3 m (10 x 10 ft) panel of wall to determine extent of cleaning.

- .2 If unaccepted repeat, using different cleaning methods on up to three (3) different panels until acceptable.
- .3 Acceptable panel and method of procedure will become the standard for work of this section. The accepted panel will remain with the work.

1.7 DELIVERY, STORAGE, AND PROTECTION

- .1 Package and protect masonry units to arrive undamaged at the job site.
- .2 Store restoration cleaner materials in manufacturer's original packaging.
- .3 Store masonry under waterproof cover on pallets or plank platforms held off ground.

1.8 PROTECTION

- .1 Protect elements surrounding the work of this section from damage or disfiguration.
- .2 Immediately remove stains, efflorescence, or other excess resulting from the work of this section.
- .3 Protect roof membrane and flashings from damage.
- .4 Provide temporary dams to divert flowing water to exterior building face and landscape drains.

Part 2 Products

2.1 MANUFACTURERS

- .1 Acceptable Manufacturers:
 - .1 Diedrich Technologies.
 - .2 Dumond Chemical.
 - .3 Or approved alternative
- .2 Substitutions: Submit product data sheets of alternate products for review and approval.

2.2 CLEANING MATERIALS

.1 Cleaning Agent: Detergent type or pre-approved cleaning products as recommended by the Restorer.

2.3 MORTAR MATERIALS

.1 Conform to requirements of Section 04 04 05.

2.4 MASONRY MATERIALS

- .1 Brick: Veneer Masonry: to match existing.
- .2 Block: Foundations: to match existing.

Part 3 Execution

3.1 EXAMINATION

.1 Verify that surfaces to be cleaned and/or restored are ready for work of this section.

3.2 PREPARATION

- .1 Carefully remove and store fixtures, fittings, finishing hardware, and accessories.
- .2 Protect areas, landscaping materials, and surfaces not receiving work of this section to protect from damage.

3.3 REBUILDING

- .1 Cut out damaged and deteriorated masonry with care in a manner to prevent damage to any adjacent remaining materials.
- .2 Support structure as necessary in advance of cutting out units.
- .3 Cut away loose or unsound adjoining masonry and mortar to provide firm and solid bearing for new work.
- .4 Mortar Mix: Coloured and proportioned to match existing work.
- .5 Ensure that anchors and/or ties and flashings are correctly located and built in.
- .6 Install built in masonry work to match and align with existing, with joints and coursing true and level, faces plumb and in line. Build in all openings, accessories and fittings.

3.4 REPOINTING

- .1 Cut out loose or disintegrated mortar in joints to minimum 13 mm (1/2 inch) depth or until sound mortar is reached.
- .2 Utilize power tools only after test cuts determine no damage to masonry units will result.
- .3 Do not damage masonry units.
- .4 When cutting is complete, remove dust and loose material by brushing.
- .5 Pre-moisten joint and apply mortar specified in Section 04 04 05. Pack tightly in maximum 6 mm (1/4 inch) layers. Form a smooth, compact joint to match existing.
- .6 Moist cure for seventy-two (72) hours.

3.5 CLEANING EXISTING MASONRY

.1 Cleaning Detergent: Brush [or spray] applications to clean brick type masonry surfaces at locations as indicated on drawings with detergent solution to the manufacturer's written instructions. Saturate masonry with clean water and flush loose mortar and dirt.

3.6 CLEANING NEW MASONRY

- .1 Verify mortar is fully set and cured.
- .2 Clean surfaces and remove large particles with wood scrapers, brass or nylon wire brushes.
- .3 Scrub walls with detergent solution using stiff brush. Thoroughly rinse and wash off cleaning solution, dirt and mortar crumbs using clean, pressurized water.

3.7 AGING

- .1 Rub in new masonry work to match, as close as possible, adjacent original work.
- .2 Use carbon black in small amounts, rubbing in well with medium bristle brush.
- .3 After each application, dust off surplus and wash down with low pressure hose. Allow surface to dry before proceeding with succeeding applications.
- .4 Continue process until acceptance.

3.8 CLEANING

- .1 Section 01 74 00: Cleaning installed work.
- .2 As work proceeds and on completion, remove excess mortar, smears, droppings.
- .3 Clean surrounding surfaces.
- .4 Use non-metallic tools in cleaning operations.

END OF SECTION

Part 1 General 1.1 SECTION INCLUDES .1 Mortar for masonry.

1.2 RELATED SECTIONS

- .1 Section 04 20 00 Masonry Units.
- .2 Section 04 26 16 Veneer Masonry.
- .3 Section 09 91 10 Painting

1.3 REFERENCES

- .1 ASTM C207-06 Hydrated Lime for Masonry Purposes.
- .2 ASTM C494/C494M-08a Chemical Admixtures for Concrete.
- .3 ASTM C780-09 Test Method for Preconstruction and Construction Evaluation of mortars for Plain and Reinforced Unit Masonry.
- .4 ASTM C1329-05 Mortar Cement.
- .5 ASTM C1489-01(2008) e1 Lime Putty for Structural Purposes.
- .6 CSA-A179-04 Mortar and Grout for Unit Masonry.
- .7 CSA-A371-04 Masonry Construction for Buildings.
- .8 CAN/CSA-A3000-08 Cementitious Materials Compendium (Consists of A3001, A3002, A3003, A3004 and A3005).
- .9 CSA-S304.1-04 Design of Masonry Structures.

1.4 SUBMITTALS FOR INFORMATION

- .1 Section 01 33 00: Submission procedures.
- .2 Reports:
 - .1 Submit reports on mortar indicating conformance of component mortar materials to requirements of CSA-A179.
 - .2 Submit reports on grout indicating conformance of component grout materials to requirements of CSA-A179.

1.5 DELIVERY, STORAGE, AND PROTECTION

- .1 Section 01 61 00: Transport, handle, store, and protect products.
- .2 Maintain packaged materials clean, dry, and protected against dampness, freezing, and foreign matter.

1.6 ENVIRONMENTAL REQUIREMENTS

.1 Cold and Hot Weather Requirements: CSA-A371 - Masonry Construction for Buildings.

Part 2 Products

2.1 MATERIALS

- .1 Cementitious Material: CSA-A179.
 - .1 Portland Cement: CSA-A3001, Type GU grey colour.
- .2 Mortar Aggregate: CSA-A179, use aggregate passing 1.18mm sieve where 6mm thick joints are indicated.
- .3 Water: Clean and potable.

2.2 MORTAR COLOUR

.1 Mortar Colour: ground-coloured natural aggregates or metallic oxide pigments.

2.3 MORTAR MIXES

- .1 Mortar for Exterior Above Grade:
 - .1 Loadbearing Walls: CSA-A179, Type S using the Proportion specification.
 - .2 Non-Loadbearing Walls: CSA-A179, Type N using the Proportion specification.
- .2 Mortar for Interior Above Grade:
 - .1 Loadbearing walls: CSA-A179, Type S using the Proportion specification.
 - .2 Non-Loadbearing Partitions: CSA-A179, Type S using the Proportion specification.
- .3 Stain Resistant Pointing Mortar: CSA-A179, non-staining masonry cement for cementitious portion of specified mortar type.

2.4 MORTAR MIXING

- .1 Add mortar colour and admixtures to manufacturer's written instructions. Provide uniformity of mix and colouration.
- .2 Do not use antifreeze liquids, calcium chloride, frost inhibitors based on calcium chloride, salts or other substances used for lowering the freezing point or accelerating setting time.
- .3 If moisture is lost by evaporation, retemper as directed by the manufacturer.
- .4 Use mortar within period specified by mortar manufacturer.

2.5 GROUT MIXES

.1 Bond Beams: <21 MPa><<3000 psi>> strength at 28 days; <150 mm><<6 inches>> slump; mixed to CSA-A179 Fine grout].

.2 Engineered Masonry: <21 MPa><<3000 psi>> strength at 28 days; <150 mm><<6 inches>> slump; mixed to CSA-A179 Fine grout].

2.6 GROUT MIXING

- .1 Thoroughly mix grout ingredients in quantities needed for immediate use to CSA-A179 Fine grout.
- .2 Add admixtures in to manufacturer's written instructions; mix uniformly.
- .3 Do not use antifreeze liquids, calcium chloride, frost inhibitors based on calcium chloride, salts or other substances used for lowering the freezing point or accelerating setting time.

Part 3 Execution

3.1 EXAMINATION

- .1 Section 01 70 00: Verify existing conditions before starting work.
- .2 Request inspection of spaces to be grouted.

3.2 INSTALLATION

.1 Install mortar to CSA-A179.

3.3 FIELD QUALITY CONTROL

.1 Test mortar mix to CSA-A179 for compressive strength, air content, and slump.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

.1 This Section specifies clay brick and accessories..

1.2 RELATED SECTIONS

.1 04 04 05 Mortar and Masonry Grout

1.3 REFERENCES

- .1 ASTM International (ASTM).
 - .1 ASTM D2240-[10], Standard Test Method for Rubber Property Durometer Hardness..
- .2 CSA International (CSA)
 - .1 CAN/CSA A82-[06], Fired Masonry Brick Made From Clay or Shale.
 - .2 CAN/CSA A179-[04(R2009)], Mortar and Grout for Unit Masonry.
 - .3 CSA A370-[04], Connectors for Masonry.
 - .4 CSA-A371-[04], Masonry Construction for Buildings. .

1.4 ADMINISTRATIVE REQUIREMENTS

- .1 Co-ordination: Co-ordinate work of this Section with work of other trades for proper time and sequence to avoid construction delays.
- .2 Pre-installation Meeting: Convene pre-installation meeting after Award of Contract and one week prior to commencing work of this Section to verify project requirements, substrate conditions and coordination with other building sub-trades, and to review manufacturer=s written installation instructions.
 - .1 Comply with Section [01 31 19 Project Meetings] and co-ordinate with other similar pre-installation meetings.
 - .2 Notify attendees 2 weeks prior to meeting and ensure meeting attendees include as minimum:
 - .1 Owner;
 - .2 Consultant;
 - .3 Masonry subcontractor;
 - .4 Manufacturer's Technical Representative.
 - .3 Ensure meeting agenda includes review of methods and procedures related to masonry installation including co-ordination with related work.

.4 Record meeting proceedings including corrective measures and other actions required to ensure successful completion of work and distribute to each attendee within 1 week of meeting.

1.5 SUBMITTALS FOR REVIEW

- .1 Product Data: Provide data on cleaning compounds.
- .2 Samples: Submit four (4) samples of face brick units to illustrate colour, texture and extremes of colour range to match existing.

1.6 CLOSEOUT SUBMITTALS

- .1 Operation and Maintenance Data: Supply maintenance data for masonry for incorporation into manual specified in Section 01 78 00 Closeout Submittals.
- .2 Record Documentation: In accordance with Section [01 78 00 Closeout Submittals].
 - .1 List materials used in masonry work.
 - .2 Warranty: Submit warranty documents specified.

1.7 QUALITY ASSURANCE

- .1 Restorer Qualifications:
 - .1 Company specializing in performing the work of this section with minimum three (3) years documented experience.
 - .2 Successful completion of at least three (3) projects of similar scope and complexity within past five (5) years.
 - .3 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties

1.8 MOCK-UP

- .1 Clean, restore and re-point a 3 x 3 m (10 x 10 ft) panel of wall to determine extent of cleaning.
- .2 If unaccepted repeat, using different cleaning methods on up to three (3) different panels until acceptable.
- .3 Acceptable panel and method of procedure will become the standard for work of this section. The accepted panel will remain with the work.
 - .1 Include: Window sill and flashings.
 - .2 Assemble to illustrate component assembly and joints including masonry materials, weep drainage system, attachments, anchors, and perimeter sealant.
 - .3 Purpose: To judge quality of work and material installation.
 - .4 Allow Consultant [24] hours minimum prior to inspection of mock-up.

- .5 Do not proceed with work prior to receipt of written acceptance of mock-up by Consultant.
- .6 When accepted, mock-up will demonstrate minimum standard of quality required for work of this Section.
- .7 Approved mock-up will [not] remain part of finished work.

1.9 DELIVERY, STORAGE, AND PROTECTION

- .1 Delivery and Acceptance Requirements:
 - .1 Deliver material in accordance with Section [01 60 00 Common Product Requirements].
 - .2 Deliver masonry materials with identification labels intact and in sizes to suit project.
- .2 Storage and Handling Requirements:
 - .1 Keep materials dry until use [except where wetting of bricks is specified].
 - .2 Store under waterproof cover on pallets or plank platforms held off ground using plank or timber skids.

1.10 PACKAGING WASTE MANAGEMENT:

- .1 Return skids to manufacturer for reuse.
- .2 Remove waste packaging materials from site and dispose of packaging materials at appropriate recycling facilities.

1.11 PROTECTION

- .1 Protect elements surrounding the work of this section from damage or disfiguration.
- .2 Immediately remove stains, efflorescence, or other excess resulting from the work of this section.
- .3 Protect roof membrane and flashings from damage.
- .4 Provide temporary dams to divert flowing water to exterior building face and landscape drains.

1.12 WARRANTY

- .1 Project Warranty: Refer to Contract Conditions for project warranty provisions.
- .2 Manufacturer's warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to and not intended to limit other rights Owner may have under Contract Conditions.

.3 Warranty period: [5] years commencing on Date of Substantial Performance of Work.

Part 2 Products

2.1 MANUFACTURERS

- .1 Acceptable Manufacturers:
 - .1 Manufacturer: Brampton Limited, 225 Wanless Drive, Brampton, Ontario, Canada L7A 1E9, Phone: (905) 840-1011, e-mail: sales@BramptonBrick.com, URL: www.BramptonBrick.com.

2.2 DESIGN CRITERIA

- .1 Clay brick: To CAN/CSA A82:
 - .1 Compressive strength: [21] MPa minimum.
 - .2 5 hour boil water absorption: [17] % maximum.
 - .3 C/B Ratio: [0.78] maximum.
 - .4

.2 MANUFACTURED UNITS

- .1 Burned clay brick:
- .1 Type: As indicated in Architectural Drawings
- .2 Grade: [EG]
- .3 Size: 190 x 90 x 57 (Site Verify)
- .4 Colour and texture: To match approved sample on site.

Acceptable Material: Brampton Brick Ltd. Metric Modular Brick.

2.04 MORTAR AND GROUT

.1 Mortar and Grout: To CAN/CSA A179 / CSA A371, Type [N] [S].

2.05 CONNECTORS AND REINFORCMENT

- .1 Bar and wire reinforcement: To CSA-A371.
- .2 Connectors: To CSA-A370.
- .3 Corrosion protection: To CSA-A370.

2.06 ACCESSORIES

- .1 Aluminum flashings: Aluminum foil, 0.004 mm thick, asphalt laminated between two sheets of creped kraft paper with one exposed paper surface coated with asphalt-wax treatment.
- .2 Flashing overlap adhesive in accordance with written recommendations of flashing manufacturer.
- .3 Control joint filler: purpose made elastomer durometer hardness to ASTM D2240 of size and shape indicated.
- .4 Weep hole vents: Purpose made PVC

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of Conditions: Verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for masonry installation in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate in presence of Consultant.
 - .2 Inform Consultant of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Consultant.

3.2 PREPARATION

- .1 Carefully remove and store fixtures, fittings, finishing hardware, and accessories.
- .2 Protect areas, landscaping materials, and surfaces not receiving work of this section to protect from damage.

3.3 REBUILDING

- .1 Cut out damaged and deteriorated masonry with care in a manner to prevent damage to any adjacent remaining materials.
- .2 Support structure as necessary in advance of cutting out units.
- .3 Cut away loose or unsound adjoining masonry and mortar to provide firm and solid bearing for new work.
- .4 Mortar Mix: Coloured and proportioned to match existing work.
- .5 Ensure that anchors and/or ties and flashings are correctly located and built in.
- .6 Install built in masonry work to match and align with existing, with joints and coursing true and level, faces plumb and in line. Build in all openings, accessories and fittings.

3.4 INSTALLATION

- .1 Mixing and blending: Mix units within each pallet and pull units from [3] minimum other pallets to ensure uniform blend of colour and texture.
 - .1 Install masonry connectors and reinforcement to CSA A370 and in accordance with brick manufacturer's written recommendations.
 - .2 Connect walls of two or more wythes using [metal] connectors to CSA-A371 and as indicated.
 - .3 Tie masonry veneer to backing to CSA-A371 and as indicated.
 - .4 Reinforce masonry lintels as indicated.
- .2 Bond: Stretcher.
 - .1 Keep bond plumb throughout.
 - .2 Remove chipped, cracked, and otherwise damaged units in exposed masonry and replace with undamaged units.
 - .6 Grouting: Grout masonry to CSA-A371 and CSA-A179 and as indicated, and in accordance with manufacturer's written recommendations.
 - .7 Install continuous control joint fillers in control joints at locations indicated.
 - .8 Jointing: Ssimilar finish coating to adjacent walls.
 - .1 Allow joints to set just enough to remove excess water, then rake joints uniformly to 6 mm depth and compress with square tool to provide smooth, compressed, raked joints of uniform depth where raked joints are indicated.
 - .9 Install weep hole vents in vertical joints immediately over flashings, in exterior wythes of cavity wall and masonry veneer wall construction, at maximum horizontal spacing of 600 mm on centre.

3.04 BUILDING IN

- .1 Build work of other trades into masonry work (including anchors, wall plugs, and accessories) as work progresses.
 - .1 Space and align built-in parts accurately.
 - .2 Exercise care not to displace other materials from proper position.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

.1 Sheet and sealant materials for controlling vapour diffusion.

1.2 RELATED SECTIONS

- .1 Section 07 21 13 Board Insulation.
- .2 Section 07 27 00 Air Barriers.
- .3 Section 07 92 00 Joint Sealing.
- .4 Section 09 22 16 Non-structural Metal Stud Framing:
- .5 Mechanical/Electrical Commissioning Divisions

1.3 REFERENCES

- .1 ASTM C920-08 Elastomeric Joint Sealants.
- .2 ASTM C1311-02 Solvent Release Sealants.
- .3 ASTM E96/E96M-05 Test Methods for Water Vapour Transmission of Materials.
- .4 CGSB-19-GP-14M-1984 Sealing Compound, One Component, Butyl-Polyisobutylene Polymer Base, Solvent Curing.
- .5 CAN/CGSB-19.13-M87 Sealing Compound, One-component, Elastomeric, Chemical Curing.
- .6 CAN/CGSB-51.34-M86 Vapour Barrier, Polyethylene Sheet, for Use in Building Construction.
- .7 SWRI (Sealant, Waterproofing and Restoration Institute) Sealant and Caulking Guide Specification.

1.4 DEFINITION

.1 Vapour Retarder: A material or assembly of materials that resists water vapour diffusion through it.

1.5 SYSTEM DESCRIPTION

- .1 Materials and installation methods to provide continuity of vapour retarder:
 - .1 In conjunction with materials described in Section 07 21 13, 07 21 16, and 07 92 00.
 - .2 To seal gaps between enclosure components and opening frames.

1.6 PERFORMANCE REQUIREMENTS

.1 Maximum Vapour Permeability (Perm): 1.92 ng/Pa•s•m² measured in accordance with ASTM E96/E96M.

1.7 ADMINISTRATIVE REQUIREMENTS

- .1 Section 01 31 00: Project management and coordination procedures.
- .2 Coordination: Coordinate with other work having a direct bearing on work of this section.
- .3 Sequencing:
 - .1 Sequence Work to permit installation of materials in conjunction with other retardant materials and seals and air barrier assemblies.
 - .2 Do not install vapour retarder until items penetrating it are in place.

Part 2 Products

2.1 VAPOUR BARRIER MEMBRANES

- One component elastomeric rubber, high solids trowel applied coating system; "Air-Bloc 06" by Bakor Inc., complete with recommended primers.
- One component synthetic rubber high solid trowel applied coating system; "Air-Bloc 21" by Bakor Inc.
- .3 Polyethylene sheet of minimum 150 um (6 mils) thickness to CAN/CGSB-51.33-M, Type 2. Supply minimum 1800 mm (6') roll widths.
- .4 Foil Vapour Retarder: A single layer of woven polyethylene material bonded to and sandwiched between 2 radiant barrier aluminum foil sheets creating a no tear barrier. "Radiant Barrier Foil" manufactured by rFoilTM Products distributed by TVM Building Products.

2.2 FLEXIBLE TRANSISTION MEMBRANE

- .1 Butyl sheet air seal of minimum 1 mm (40 mils) thickness, having a Shore 'A' hardness of 60 plus or minus 10; tensile strength of minimum 8.3 MPa (1200 psi); minimum 400% elongation; and a tear resistance of minimum 32 KN/m (265 lb/in).
- .2 EPDM (Ethylene Propylene Diene Monomer), black laminated rubber derivative, free from pin holes, tears, blisters and edges free from nicks and cuts, in thickness of minimum 1 mm (40 mils). Membrane shall not crack, delaminate, become non-ductile or inflexible and shall maintain all these properties for a temperature range from 150 deg C to -60 deg C (302 deg F to -76 deg F).
- .3 Reinforced PVC sheet consisting of 2 0.508 mm (40 mils) thickness of plasticized polyvinyl chloride permanently bonded to 10 x 10 woven glass fibre mesh, and with a breaking strength of 227.5 N/cm (* lb/in force); a tear strength of 18.14 kg (* lb); elongation of 200%; water absorption rate of 0.4% by weight; and an ozone resistance of 50 pphm (7300 h) by volume.

.4 Sheet neoprene consisting of minimum of 1 mm (40 mils) thick, and having a tensile strength of 12.0 MPa (1740 psi); an elongation at break of 250% minimum; tear resistance of 21.0 KN/m (* lb/ft); a minimum tensile strength of 8.8 MPa (1275 psi); and an elongation of 200% minimum.

2.3 ADHESIVES

- .1 Vapour Barrier Sealant Tape: 50 mm (2") wide polyethylene with laminated cloth backing with high-tack rubber-based adhesive in total minimum thickness of 38 um (1-1/2 mil). "483" tape by 3M Canada Co. or approved manufacturer.
- .2 Butyl Strips: Minimum 1.5 mm (1/16") thick x 9 mm (3/8") wide strips of 100% solids polyisobutylene with paper release equivalent to "440 Tape" by Tremco (Canada Ltd.), or "PTI 303" by Protective Treatments Inc.

Part 3 Execution

3.1 EXAMINATION

- .1 Examine surface to receive membranes to assure they are smooth, dry and free from conditions that will adversely affect execution, permanence, or quality of work.
- .2 Do not install air/vapour barrier until other work which penetrates membrane has been completed.
- .3 Ensure membrane manufacturer's representative is on site at beginning of installation to provide training and supervision of Project Co's personnel in installation of air/vapour barrier. Manufacturer's representative shall provide frequent inspection visits thereafter to assure quality and competence of membrane installation.

3.2 PREPARATION

- .1 Remove loose or foreign matter which might impair adhesion.
- .2 Clean and prime substrate surfaces to receive adhesive and sealants in accordance with manufacturers' written instructions.

3.3 INSTALLATION

- .1 Vapour Retarder For Stud Framed Walls: Secure sheet barrier to stud faces with adhesive. Lap edges over stud faces, lap ends onto adjacent construction; caulk ends with sealant to ensure complete seal.
- .2 Vapour Retarder For Wall/Roof Junction: Lap sheet barrier from wall retarder onto roof vapour retarder continuously. Seal edges and ends with sealant and adhesive. Caulk with sealant to ensure complete seal. Position laps over firm bearing.
- .3 Vapour Retarder Seal For Openings: Install sheet barrier between window and door frames and adjacent vapour retarder and seal with [sealant] [adhesive]. Caulk with sealant to ensure complete seal. Position laps over firm bearing.

- .4 Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges or where compatibility with adjacent materials may be in doubt.
- .5 Vapour Barrier Box: Install vapour barrier boxes at electric outlet and switch locations on exterior walls. Lap and seal perimeter with sheet barrier.

END OF SECTION

1 GENERAL

.1 Section includes

- .1 Provision of all labour, materials, equipment and incidental services necessary to provide complete air barrier system as illustrated in accompanying drawings or called for elsewhere in the Contract Documents, including but not limited to the following:
 - .1 Preparation of substrates for installation of air barrier system.
 - .2 Installation of air barrier system.
 - .3 Installation of all periphery detailing around all interruptions in, penetrations through, and terminations of air barrier system

.2 Related Sections

.1 Section 07 51 00 – Built-Up Bituminous Roofing

.3 Quality Assurance

- .1 Air barrier system shall be applied by a contractor approved by the manufacturer and acceptable to the Consultant, specializing in performing work of this section with minimum 2 years documented experience.
- .2 The Contractor shall convene a pre-installation conference of the approved applicator, the Consultant, the manufacturer and any independent testing authority.

.4 Delivery, Storage and Handling

- .1 Deliver all air barrier products and accessory materials to the site in manufacturer's original unopened packages with all labels intact.
- .2 Store materials in such a manner so as to protect them from precipitation, ground moisture and temperature extremes. Raised platforms, waterproof coverings or interior storage shall be employed when and where necessary.

.5 Environmental Requirements

- .1 Do not install solvent curing sealants or vapour release adhesive materials in enclosed spaces without ventilation.
- .2 Maintain temperature and humidity recommended by materials manufacturers before, during and after installation.

.6 Coordination

- .1 Coordinate work of this Section with all related Sections.
- .2 Sequence work to permit installation of materials in conjunction with related air/vapour seals.

.3 Schedule work such that insulation or building veneer installation follows as closely as possible the installation of the air barrier system so as to minimize exposure.

.7 Extended Warranty

.1 Provide a three (3) year extended system warranty against defects in manufacturer's materials or defective installation. Warranty shall include coverage of installed materials which fail to achieve air tight and watertight seal, exhibit loss of adhesion/cohesion, or do not cure.

2 PRODUCTS

- .1 Transition Membrane: SBS modified bitumen membrane reinforced with proprietary glass scrim, adhesive applied "Blueskin AG" by Monsey Bakor Inc.
- .2 Primer/Cleaner: Mineral spirits or Xylol.
- .3 Sealant: Bakor "Polybitume" mastic.

3 EXECUTION

.1 General

- .1 Examine all substrates to receive air barrier system, to ensure they are suitable for installation to commence. Report any unsatisfactory conditions in writing to the Contractor prior to commencement of the installation.
- .2 Surfaces shall be clean, dry, continuous and be free of voids, excessive gaps and foreign matter that would impair the adhesion or regularity of the air barrier installation.
- .3 Tape joints in sheathing boards, and fill cracks in masonry or concrete with mastic.
- .4 The Contractor shall request that the Consultant inspect the air barrier installation immediately upon completion. Deficiencies must be corrected immediately. Replace any torn sheet membranes, and touch up any liquid applied membranes.

.2 Preparation

Clean and prime substrate surfaces to receive air barrier in accordance with manufacturer's instructions.

.3 Air Barrier Installation

.1 Apply transition membranes to span all dissimilar substrate materials and around perimeters of all doors, windows, and other openings in building

envelope. Minimum lap shall be 76mm on both substrates.

.2 Unroll into place, applying hand pressure only. Do not roll using pressure roller. Minimum end and side laps shall be 50mm.

END OF DOCUMENT

1. Scope of Work

.1 Cold Applied Membrane

.1 Replacement:

- .1 Furnish and install specified roofing and related components to Waterloo Catholic District School Board, Our Lady of Fatima CES. Roof Areas R-B, R-C, R-D & R-F.
- .2 Existing Roof Composition is as follows: All roof compositions are to be confirmed by contractor.

Roof Areas R-B, R-C, R-D & R-F:

Metal/Wood Deck, 2 Ply Vapor Barrier, 1.5" Urethane Insulation, 0.5" Fiberboard Insulation, 3 Ply Membrane, Gravel

.2 Preparation:

- .1 Removal and disposal of existing roof and related components down to existing deck.
- .2 Coordinate with abatement contractor for removal of all asbestos containing products, if required.
- .3 Remove all loose dirt and debris from roofing surface.
- .4 Retrofit and upgrade all existing drains and scuppers to establish proper drainage.
- .5 Remove electrical conduit and gas lines if necessary and reinstall on quick blocks.
- .6 Remove and store patio stones for reinstallation. Replace all damaged patio stones.

.3 Wall Repair

- .1 Localized wall repair or replacement if required.
- .2 Install plywood sheathing where necessary to allow for suitable substrate for flashing.
- .3 Cut and raise all necessary wall siding to accommodate new insulation thickness.

.4 Install at Roof Areas; **R-B, R-C, R-D & R-F**.

- .1 Prime any new metal or wood components using Tremprime WB that are to receive asphaltic materials.
- .2 Install self-adhering AVC membrane and associated primer over existing deck.
- .3 Build up perimeter wood detail to suit new insulation thickness.
- .4 Install 1 layer of 3.5" Polyisocyanurate into Low Rise Foam Insulation Adhesive.

- .5 Install Cover Board 0.5" Asphalt Coated Fiberboard into Low Rise Foam Insulation Adhesive.
- .6 Install Polyisocyanurate Sumps at all drains. Minimum size to be 8 ft. x 8 ft.
- .7 A built-up roof membrane 3 Ply Cold Process
- .8 Install Roofing Membrane as follows:
 - .1 Plies: Three
 - .2 Ply Type: Composite Ply HT
 - .3 Interply Adhesive: Burmastic Cold Process Adhesive.
- .9 4.9 Surfacing: 3/8" Clean round pea gravel, free of all fines, splinters etc. into Cold Process Flood Coat.
- .5 Specified Flashings and accessories: Install flashings at all roof perimeters, projections, and drains incorporating:
 - .1 Repaint all existing gas lines using safety yellow.
 - .2 Reinforced EPDM/SBR Rubber sheet adhered with Elastomeric Bedding Adhesive as per detail drawings.

2. REFERENCES

- .1 CSA Canadian Standards Association
- .2 CGSB Canadian General Standards Board
- .3 ULC Underwriters Laboratories of Canada
- .4 ASTM American Society for Testing and Materials
- .5 CRCA Canadian Roofing Contractors' Association
- .6 OIRCA Ontario Industrial Roofing Contractors' Association

3. SITE MEETINGS

- .1 Pre-bid meeting
- .2 Pre-job meeting
- .3 Progress meetings
- .4 Final Inspection Meeting

4. SUBMITTALS

- .1 Provide product data sheets and material Safety Data Sheets (MSDS) for all products to be used at the site and/or incorporated in the Work.
- .2 Manufacturer Certificates: Signed by roofing manufacturer verifying that installer is approved, authorized or licensed by manufacturer to install specified Products.

- .3 Installer Certificates: Signed by installer verifying that they have the specified qualifications described below.
- .4 Copy of Manufacturer's 20 Year Warranty.

5. TEST REPORTS

.1 Manufacturer Field Inspection Reports: manufacturer's written acceptance of roofing installation based on regular inspections.

6. PROJECT CONTROL

- .1 Provide all supervision, labour, equipment and materials necessary to the orderly, competent, and expeditious completion of the work. Maintain site supervision capable of acting competently with on site instructions issued by the Owner.
- .2 Do not assume that the presence on site of the Owner, Consultant or the Manufacturer's Representative implies acceptance of work completed to date or work in progress.
- .3 Retain on site for reference as required, a copy of all specifications, addenda, drawings, written instructions and changes in the Scope of Work.
- .4 Advise Owner of start-up date and alert Owner to any intended or unintended schedule changes.

7. QUALITY CONTROL

- .1 During the Work, bring to the attention of the Owner/Consultant any condition not expected or not previously identified.
- .2 Provide the Owner/Consultant and their representative with access to the site for purposes of inspecting the Work.
- .3 Pay for any extra testing or inspection whereby the Work was found deficient.
- .4 Correct, at no cost to the Owner, all deficient work in a manner acceptable to the standard of these specifications.

8. DELIVERY, STORAGE, HANDLING

- .1 Deliver materials to job site in new, dry, unopened, and clearly marked containers indicating product and manufacturer names.
- .2 Store materials with attention to moisture and temperature sensitivity of each. Refer to manufacturers' literature and instructions for guidance.
- .3 Store material so as not to overload structural deck.
- .4 Secure stored materials against damage from wind, ongoing work, vandalism, and theft.
- .5 Handle and apply all materials in accordance with the manufacturer's recommendations. Identify and remove from site immediately, all damaged materials.

9. SITE CONDITIONS

- .1 Protect adjacent properties from damage as a result of contract operations.
- .2 Protect the Work and the Owner's property from damage as a result of contract operations.
- .3 Confine equipment, material storage, and operations of workers to limits indicated by laws, ordinances, permits, and prior arrangements with the Owner.
- .4 Do not interrupt or hamper occupant operations without prior written approval.
- .5 Remove progressively all debris created by the execution of the Work and dispose of same at appropriate disposal sites.
- .6 Alert the Owner to the expected presence of odours, fumes, or dust and co-ordinate the shielding of ventilation equipment or scheduling of process to achieve acceptable abatement.
- .7 Upon completion of the work, leave premises in original order and condition.

10. ENVIRONMENTAL REQUIREMENTS

- .1 Do not install roofing during weather that might adversely affect the performance of the system.
- .2 Do not install roofing over surfaces that are wet, icy, dirty or otherwise unacceptable to the system being installed.
- .3 Secure the Work in a safe and watertight fashion before the onset of inclement weather and at the end of each day's work.

11. CHANGES

.1 Where the Owner wishes to alter, add to, or deduct from the Work, provide pricing as requested.

12. PAYMENT

- .1 Provide detailed progress billings at the end of each month and/or at the total completion of the Work. Progress Billings are to be sent to the Owner's Representative for approval.
- .2 Where early shipment of material to site is desirable to avoid transportation problems or supply shortages, make prior arrangements with Owner for progress payments.
- .3 No payment will exceed the value of the Work completed to date and/or the materials delivered to date, nor shall it imply approval or acceptance of work performed. Sufficient contract monies will be retained to ensure acceptable completion of the contract.
- .4 Provide, upon the request of the Owner, a Statutory Declaration declaring that all previously paid monies have been properly dispersed. It shall be the responsibility of the contractor to verify all terms of payment.

13. WARRANTY

- .1 Submit extended warranties in accordance with the General Conditions of the Contract.
- .2 Installer's Extended Warranty: standard 2-year warranty, commencing from the date of Substantial Performance of the Work.
- .3 Manufacturer's Extended Warranty: a written guarantee that the manufacturer will replace, at no cost to the Owner, any portion of the roofing system down to the existing roof deck for a period of 20 years, commencing from the date of Substantial Performance of the Work. Wind uplift warranty shall cover wind velocity up to a maximum wind speed of not greater than 117km/h (73 mph).

14. WARRANTY MAINTENANCE

- .1 The Manufacturer shall issue a non-prorated warranty for a period of Twenty Years. All components including the vapour retarder, insulation, cover board, membrane, flood coat, perimeter flashings including metal shall be covered under this warranty.
- .2 Warranty shall include inspections in years 2 and 5, 10 & 15 of the warranty. The following duties shall be carried out at no extra cost to the Owner as required, by the Manufacturer.
 - .1 sealing of flashing seams
 - .2 filling of pitch pockets
 - .3 repairs to blisters and ridges
 - .4 caulking at metal details as required
 - .5 written inspection report
 - .6 removal of light debris from the roof and premises
 - .7 cleaning of drain screens
- .3 Upon satisfactory completion, the warranty and all construction information regarding the roof installation shall be placed on an Online Roof Management Program at no additional cost to the Owner.
- .4 The manufacturer shall provide to the owner access to an Online Data Base. All pertinent details regarding this project shall be entered on the data base such as:
 - .1 construction of the entire roof system
 - .2 warranty documentation
 - .3 Scale roof drawing.
 - .4 Inspection schedule (warranty requirements)
 - .5 Photographs of the roof system
 - .6 Substantial completion date.

15. MANUFACTURERS

- .1 Manufacturers of cold-applied built-up asphalt roofing systems having Products considered acceptable for use: Basis of Design: Tremco 3 Ply BurMastic
 - .1 Tremco Canada or approved equal.
- .2 Materials
 - .2 Primer:
 - 1. Tremprime WB by Tremco.
 - .3 2. Insulation and Substrate: To provide an average R Value of 20.
 - 1. Insulation 1 layer of Trisotech Polyisocyanurate 3.5"
 - 2. Overlay Insulation -0.5" Asphalt Coated Fiberboard.
 - 3. Sumps: 8' x 8' by Posi Slope or approved equal.
 - .4 2. Substrate Board and Insulation Adhesive
 - 1. Low Rise Foam Insulation Adhesive
 - .5 3. Vapour Retarder
 - 1. AVC Membrane and Primer.
 - .6 4. Flashing Membrane & Adhesive:
 - 1. TRA Membrane
 - 2. Tremlar V
 - .7 5. Three Ply Cold Applied BUR
 - 1. Composite Ply HT Felt
 - 2. Burmastic Adhesive
 - .8 6. Reinforcing Membrane:
 - 1. Burmesh
 - .9 7. Ballast:
 - 1. 3/8" Pea Gravel free of fines and long splinters.

2. Accessories

1. Drains: Prefabricated drains as manufactured by Altra Metal Specialties – Model ABD-CR-X-SS: Aluminum Body Roof Drain complete with clamping ring.

2. Metal Flashings and Coping

Metal counter flashings and caps shall be 24 gauge, G90 galvanized Grade A steel conforming to ASTM A525. Finish to be Stelco 8000 series and colour to be as selected by the Board. Obtain written confirmation of colour prior to ordering.

Two-piece gooseneck flashings are to be installed around all electrical projections.

3. Sealant

One-part polyurethane – approved product and manufacturer – Dymonic by Tremco.

EXECUTION

PREPARATION – ROOF AREA AS PER DRAWINGS.

- 1. Examine all drains and report any plugged drains to the Inspector. Any drains not reported and found plugged at the end of the contract will be deemed the responsibility of the contractor. Use temporary plugs during roof removal operations and remove before the end of each working day or when rain is imminent.
- 2. Remove existing counter flashing and dispose.
- 3. Remove existing roofing, insulation and vapour retarder down to existing deck. All flutes to be cleared of all debris.
- 4. Raise and re-install all equipment as necessary to accommodate roofing work. Add blocking to curbs and sleepers to ensure 150 mm (8 inch) flashing clearance from top of cant strip. Contractor shall be responsible for the disconnection and reconnection of any units.
- 5. Replace all deteriorated wood cants, blocking and equipment supports as required.
- 6. Install new wood blocking to raise perimeter details to accommodate the new insulation thickness, if necessary. Height of new blocking at perimeter to provide a minimum 2 inches clearance above top of cant strip.
- 7. Install plywood sheathing at perimeter wall details if required to provide smooth substrate for base flashing installation.
- 8. Verify acceptability of deck, projections, curbs, parapets, walls and other constructions as these pertain to the roofing work and its expected performance.
- 9. Correct any deficiencies in these constructions or advise Inspector of conditions believed to be beyond the Scope of Work.

10. Fill and pack all joints, cracks, seams, and openings in the deck and its appurtenances to prevent air leakage from the building interior.

ROOF DECK

- .1 Deck reattachment:
 - .1 Mechanically reattach loose sections of deck to steel or wood support members according to existing fastening pattern.
- 2. Deck replacement:
 - .1 Remove defective decking. Examine supports. If unsound, contact owner immediately for future action.
 - .2 Install new decking in accordance with appropriate building regulations and CSSBI, (Canadian Sheet Steel Building Institute).
- .1 Deck protection (Metal):
 - .3 Remove loose flaking rust, down to clean, dust free, sound metal surface.
 - .4 Apply one coat of rust inhibitive paint over prepared surface at the rate of 6 m2/litre (250 ft2/gal).

AIR BARRIER

- 1. Apply primer and install on to substrate, overlapping side and end laps in conformance with manufacturer's written recommendations. Begin work at bottom of slopes, unroll and align on substrate. Ensure all edges are supported.
- 2. Remove release sheet and adhere membrane, working in sections to avoid wrinkles in membrane.
- 3. Seal membrane at insulation perimeters and around penetrations to ensure sealed connections with base sheet at upstands.
- 4. Sprayed in Place Foam:
 - 1. Fill all cavities and joints with foam insulation according to the manufacturer's directions.

CARPENTRY

1. Wood Blocking:

- 1. Construct wood blocking as per details. Blocking, or several thicknesses of wood may be necessary so that the top of the nailer will be level with the top of the roof insulation or top of the deck (if no insulation is used).
- 2. Offset blocking layers 300mm (12 inches) and weave corners.
- 3. Assemble blocking using two staggered rows of nailing. Space nails in any row a maximum of 600mm (24 inches) on centre. Within 2440mm (8 feet) of outside corners, reduce maximum spacing to 300mm (12 inches) on centre.

2. Wood Cants

1. Install wood cants over nailer. Nail two (2) rows staggered. Spacing in any one (1) row shall not exceed 600 mm (24 inches). Within 2440 mm (8 feet) of outside corner, spacing shall not exceed 300 mm (12 inches) in any one (1) row. Mitre all inside and outside corners of the wood cant.

VAPOUR RETARDER

1. Self Adhering Membrane:

- 1. Apply primer and install on to substrate, overlapping side and end laps in conformance with manufacturer's written recommendations. Begin work at bottom of slopes, unroll and align on substrate. Ensure all edges are supported.
- 2. Remove release sheet and adhere membrane, working in sections to avoid wrinkles in membrane.
- 3. Seal membrane at insulation perimeters and around penetrations to ensure sealed connections with base sheet at upstands.

INSULATION

- 1. Firmly butt each insulation board to surrounding boards. Do not jam or deform owners.
- 2. Minimize elevation variation between boards at joints to provide level surface to accommodate subsequent roofing.
- 3. Stagger joints at least 150mm (6 inches).
- 4. Leave no voids at blocking, penetrations, walls, or parapets.
- 5. At all drains and scuppers slope insulation for a radius of 3600 mm (144 inches), where feasible to ensure positive drainage. Minimum 1200mm (48 inches).

- 6. Adhere insulation into ribbons of low rise foam insulation adhesive in ½" to ¾" beads approximately 12" o.c. throughout field and 6" o.c. at perimeters and corners.
- 7. Immediately after placement, walk insulation owners into adhesive to achieve solid contact.

COLD APPLIED BUR

1. Three ply - cold:

- 1. Starting at the low point of the Roof, install three (3) plies of ply sheet, shingle fashion. Overlap starter strips 660 mm (26 inches) with first ply, then overlap each succeeding ply 625 mm (24 2/3 inches). Place ply sheets to ensure water will flow over or parallel to; but never against exposed edges.
- 2. Embed into Cold Process Adhesive, 300, 600 and 900 mm (12, 24 and 36 inch) wide plies to start and finish roof membrane along roof edges and terminations.
- 3. Solidly coat each ply of felt for the full width with Cold Process Adhesive. Immediately after installation, broom and/or roll ply sheet. Ensure complete and continuous seal and contact between adhesive and felts, including ends, edges and laps without wrinkles, fish mouths, or blisters.
- 4. Extend all plies to the top edge of all cant strips and cut off evenly.
- 5. Apply uniform and continuous pressure to exposed edge and end laps to ensure complete adhesion.
- 6. Avoid walking on plies until adhesive has set.
- 7. Overlap previous days' work 600 mm (24 inches) as required.
- 8. Cut out fishmouths/side laps which are not completely sealed and patch. Replace all sheets which are not fully and continuously bonded.
- 9. Lap ply membrane ends 150 (6 inches). Stagger end laps 1 metre (3 feet) minimum.
- 10. Adhesive application rate: Minimum 1.0 Litres/Sq. Metre (2.5 Gals per 100 Sq. ft).

TEMPORARY WATERSTOP/TIE-INS

- 1. Remove embedded gravel, dirt and debris from top ply of felt along termination for 450 mm (18 inches).
- 2. Extend roofing system at least 300 mm (12 inches) onto prepared area installing insulation fillers as required.
- 3. Seal edge with 150 mm (6 inch) wide reinforcing membrane embedded between alternate courses of temporary waterstop adhesive.

- 4. At beginning of next day's work, remove temporary connection by cutting felts evenly along edge of existing roof system and remove insulation fillers.
- 5. Temporary waterstop adhesive application rate:
 - 1. Cold 3.3 l/m2 (12 ft2/gallon)

PERMANENT WATERSTOP/TIE-INS

- 1. Remove embedded gravel, dirt and debris from top ply of felt along termination for a distance of 450 mm (18 inches).
- 2. Install 450 mm (18 inch) wide ply sheet(s) from exposed deck to the existing roofing with a continuous application of permanent waterstop adhesive.
- 3. Extend roofing system beyond permanent waterstop ply sheet and at least 300 mm (12 inches) onto prepared area of adjacent roofing.
- 4. Seal leading edge of new membrane with 300 mm (12 inch) wide reinforcing membrane embedded between alternate courses of flashing adhesive.
- 5. Permanent waterstop adhesive application rate:
 - .1 Cold 3.3 l/m2 (12 ft2/gallon)

FLASHINGS

- 1. Canted eave with fascia: Elastomeric sheeting (including replacement of Gravel Stop Details.
 - 1. Extend reinforced elastomeric sheeting over outside face of cant and fascia and secure to underside of fascia. Mechanically fasten with 38 mm (1.5 inch) common roofing nails, 200 mm (8 inches) on centre.
 - 2. Extend reinforced elastomeric sheeting down over cant strip and embed in flashing adhesive onto roof surface a minimum of 150 mm (6 inches).
 - 3. Ensure complete bond and continuity without wrinkles or voids. Lap sheeting ends 100 mm (4 inches); and adhere with flashing adhesive.
 - 4. Overcoat lap edges with end lap stripping adhesive and membrane.
 - 5. Tie in leading edge of sheeting with stripping ply membrane embedded between alternate courses of stripping ply adhesive.
- 2. Low parapet wall flashing: Elastomeric Sheeting
 - 1. The exposed joint between the wall and deck shall be sealed securely to provide a complete air seal.
 - 2. Adhere elastomeric sheeting completely to flashing surface, cant, and roofing with flashing adhesive.
 - 3. Ensure complete bond and continuity without wrinkles or voids. Lap sheeting ends 100 mm (4 inches); and adhere with flashing adhesive.
 - 4. Extend elastomeric sheeting up and over parapet at least 38 mm (1.5 inches) and face nail with 38 mm (1.5 inches) common roofing nails, 200 mm (8 inches) O.C.

- 5. Overcoat lap edges with end lap stripping adhesive and membrane.
- 6. Tie in leading edge of sheeting with stripping ply membrane embedded between alternate courses of stripping ply adhesive.

3. Wall Flashing: Elastomeric Sheeting

- 1. The exposed joint between the wall and deck shall be sealed securely to provide and complete air seal.
- 2. Adhere elastomeric sheeting completely to flashing surface, cant and roofing with flashing adhesive.
- 3. Ensure complete bond and continuity without wrinkles or voids. Lap sheeting ends 100 mm (4 inches) and adhere with flashing adhesive.
- 4. Elastomeric sheeting width: sufficient to extend at least 150 mm (6 inches) beyond toe of the cant onto roof surface and 200 mm (8 inches) above the roof surface.
- 5. Secure the top of the elastomeric sheeting to the vertical plane with a flashing termination bar. Mechanically fasten 300 mm (12 inches) O.C. Overcoat bar with end lap stripping adhesive and membrane.
- 6. Overcoat lap edges with end lap stripping adhesive and membrane.
- 7. Tie in leading edge of sheeting with stripping ply membrane embedded between alternate courses of stripping ply adhesive.
- 8. Flashing detail shall conform to drawing entitled, Base Flashing for wall flashing (with thru-wall counterflashing).

4. Building Expansion Joint(s): Elastomeric Sheeting

- 1. Fill joint with loose insulation.
- 2. Install elastomeric sheeting centred over expansion joint.
- 3. Adhere sheeting completely to horizontal and vertical blocking surfaces with flashing adhesive allowing the sheet to . Press sheeting into adhesive. Ensure complete bond and continuity without wrinkles or voids.
- 4. Sheeting width: Sufficient to extend onto adjacent roofing 150 mm (6 inches), minimum.
- 5. Lap sheeting ends 100 mm (4 inches); and adhere with flashing adhesive.
- 6. Overcoat lap edges with end lap stripping adhesive and membrane.
- 7. Tie in leading edge of sheeting with stripping ply membrane embedded between alternate courses of stripping ply adhesive.

5. Area Divider - Elastomeric Sheeting:

- 1. Install elastomeric sheeting centred over area divider extending onto roof membrane a minimum of 150 mm (6 inches) beyond toe of cant on either side,
- 2. Adhere sheeting completely with flashing adhesive. Press sheeting into adhesive. Ensure complete bond and continuity without wrinkles or voids.
- 3. Lap sheeting ends 100 mm (4 inches); and adhere with flashing adhesive.
- 4. Overcoat lap edges with end lap stripping adhesive and membrane.
- 5. Tie in leading edge of sheeting with stripping ply membrane embedded between alternate courses of stripping ply adhesive.

6. Sleeper Flashings - Elastomeric Sheeting:

- 1. Adhere sheeting completely to horizontal and vertical blocking surfaces with flashing adhesive. Press sheeting into adhesive. Ensure complete bond and continuity without wrinkles or voids.
- 2. Sheeting width: Sufficient to extend over the sleeper down onto adjacent roofing 150 mm (6 inches), minimum.
- 3. Lap sheeting ends 100 mm (4 inches); and adhere with flashing adhesive.
- 4. Overcoat lap edges with end lap stripping adhesive and membrane.
- 5. Tie in leading edge of sheeting with stripping ply membrane embedded between alternate continuous courses of stripping ply adhesive.
- 6. If membrane does not completely cover sleeper, secure top edge with a flashing termination bar. Mechanically fasten 300 mm (12 inches) O.C. Overcoat bar with end lap stripping adhesive and membrane

.7 Curb Details - Elastomeric Sheeting:

- 1. Adhere sheeting completely to horizontal and vertical blocking surfaces with flashing adhesive. Press sheeting into adhesive. Ensure complete bond and continuity without wrinkles or voids.
- 2. Sheeting width: Sufficient to extend from 50 mm (2 uinches) down inside face of curb down onto adjacent roofing 150 mm (6 inches), minimum. Mechanically fasten sheeting on inside face of curb.
- 3. Lap sheeting ends 100 mm (4 inches); and adhere with flashing adhesive.
- 4. Overcoat lap edges with end lap stripping adhesive and membrane.
- 5. Tie in leading edge of sheeting with stripping ply membrane embedded between alternate continuous courses of stripping ply adhesive.

8. Soil Stack Flashings:

- 1. Apply elastomeric flashing adhesive to the prepared area and place aluminum base over the pipe and set into the flashing adhesive.
- 2. Prime flange.
- 3. Install elastomeric sheeting with stripping ply adhesive and membrane.

- 4. Cover flange completely. Extend flashing at least 100mm (4 inches) onto adjacent roofing. Remove wrinkles and voids. Lap flashing ply ends 100mm (inches).
- 5. Tie in leading edge of sheeting with stripping ply membrane embedded between alternate courses of stripping ply adhesive.

9. Pitch pans:

- 1. Apply 1.5 mm (1/16 inch) uniform layer of flashing adhesive to surface receiving metal flange.
- 2. Install pre-manufactured pitch pan into adhesive. Prime flange prior to installation.
- 3. Pitch pans shall be a 24-gauge galvanised steel, a minimum 100 mm (4 inches) high. There shall be at least 50 mm (2 inches) clearance between the projection and side wall.
- 4. Adhere elastomeric sheeting completely to flashing surface with flashing adhesive. Cover flange completely. Extend flashing at least 100mm (4 inches) onto adjacent roofing. Ensure complete bond and continuity without wrinkles and voids. Lap sheeting ends 100mm (inches).
- 5. Overcoat lap edges with end lap stripping adhesive and membrane.
- 6. Tie in leading edge of sheeting with stripping ply membrane embedded between alternate courses of stripping ply adhesive.
- 7. Fill pitch pan 25 mm (1 inch) from top with pitch pan base filler.
- 8. Fill remainder with pitch pan topping mastic. The mastic shall be crowned to ensure water run-off.
- 9. Install metal cap and caulk opening.

10. At piping through roof boxes

- 1. Fabricate and install two-piece pipe box. The bottom portion shall be fabricated with 100 mm (4 inch) flange. The top section shall be notched to fit over piping. Openings shall be a minimum 200 mm (8 inches) above the roof surface.
- 2. Set flange in mastic, nail flange to wood blocking 75 mm (3 inches) o.c. Prime flange.
- 3. Fill box interior with batt insulation.
- 4. Fasten top and closure detail to bottom.
- 5. Wipe clean metal surfaces of box and piping with metal cleaner. Prime metal with metal primer. Caulk joint between box and piping. Tool neatly.
- 6. Install elastomeric sheeting with flashing adhesive and membrane.
- Flashing detail shall conform to drawing entitled, Piping Through Roof
- 8. Overcoat lap edges with end lap stripping adhesive and membrane.

9. Tie in leading edge of sheeting with stripping ply membrane embedded between alternate courses of stripping ply adhesive.

DRAINS

- 1. Install new drain assembly per manufacturer's instructions, plug/seal drain to prevent water entry until service connection is completed.
- 2. Elastomeric sheeting:
 - .1 Provide 600 x 600 mm (24 x 24 inch) elastomeric sheeting reinforcement to drain.
 - .2 Centre sheeting over drain.
 - .3 Adhere sheeting with continuous application of flashing adhesive.
 - .4 Remove wrinkles/entrapped air.
 - .5 Apply mastic to exposed edge of membrane inside the drain opening.
- 3. Reclamp flashing collar to drain in bed of flashing adhesive.
- 4. Cut/remove excess sheeting within drain.
- 5. Overcoat lap edges with end lap stripping adhesive and membrane. Tie in leading edge of sheeting with stripping ply membrane embedded between alternate courses of stripping ply adhesive.

METAL FLASHINGS

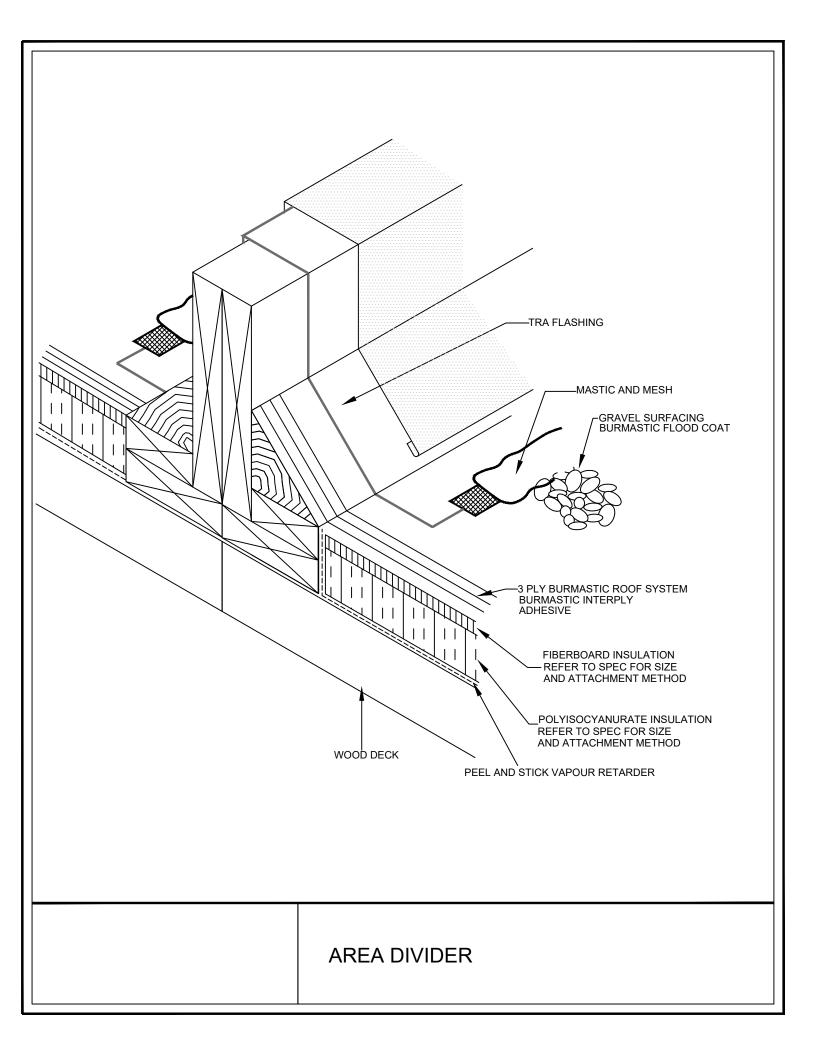
1. Installation of metal flashing shall be in accordance with the metal flashing section of the Canadian Roofing Contractors' Association (CRCA) manual.

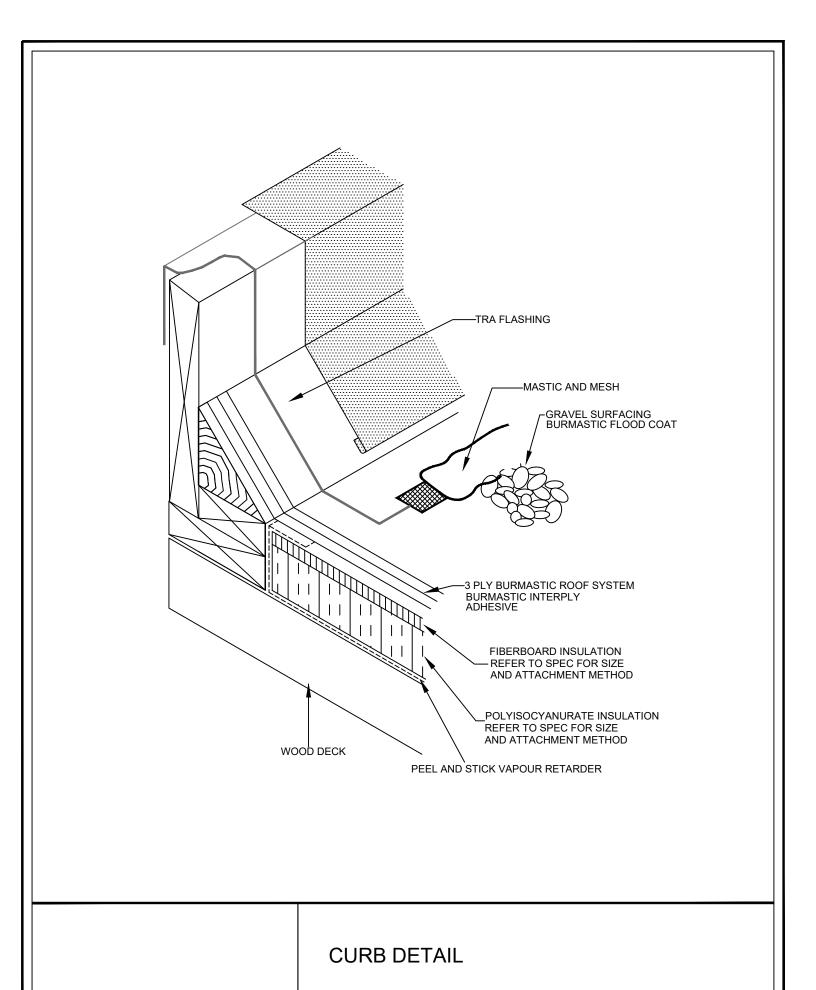
SURFACING APPLICATION

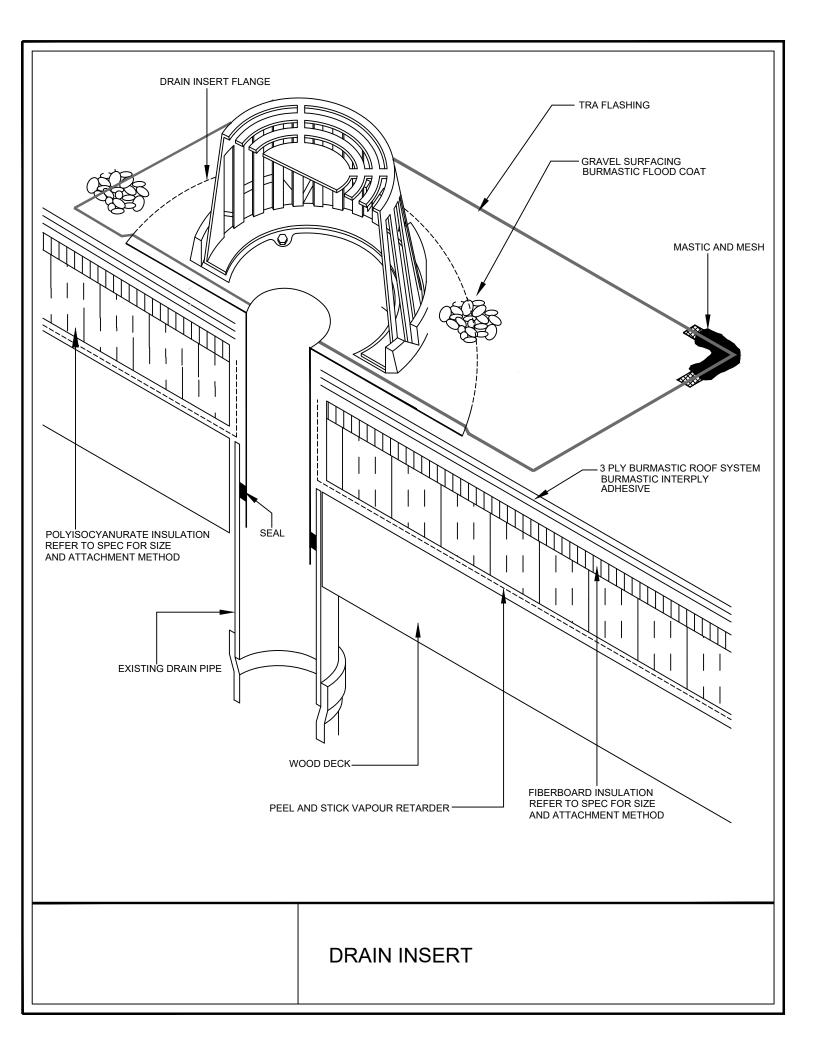
Gravel Finish

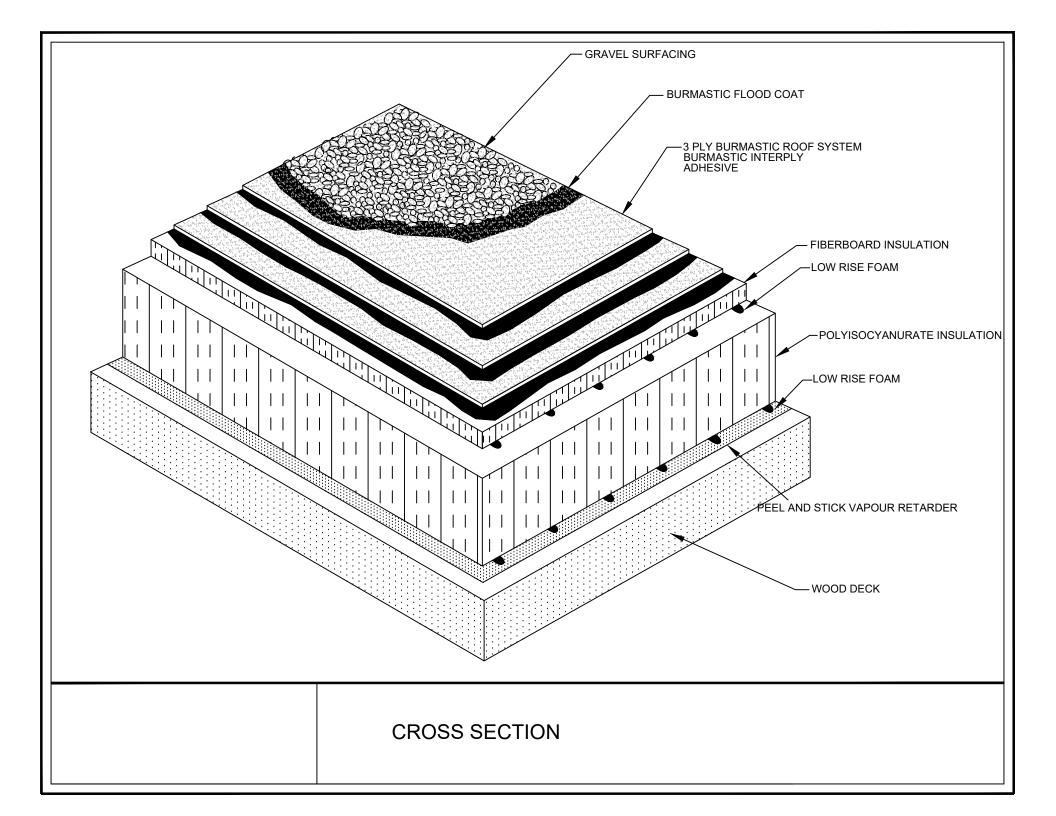
- 1. Prior to application of surface treatment system, contractor shall inspect roof with manufacturer's representative.
- 2. Ensure surface is clean and dry. Flood coat the entire roof with specified flood coat bitumen at the rate of 6 gallons per square (cold adhesive) or 60 lbs. per square
- 3. Immediately broadcast minimum 25 kg per sq. metre (500 lbs. per 100 sq. ft.) of new, clean, dry roofing gravel. Cover flood coat material completely.
- 4. Rake out gravel to provide a neat even surface.

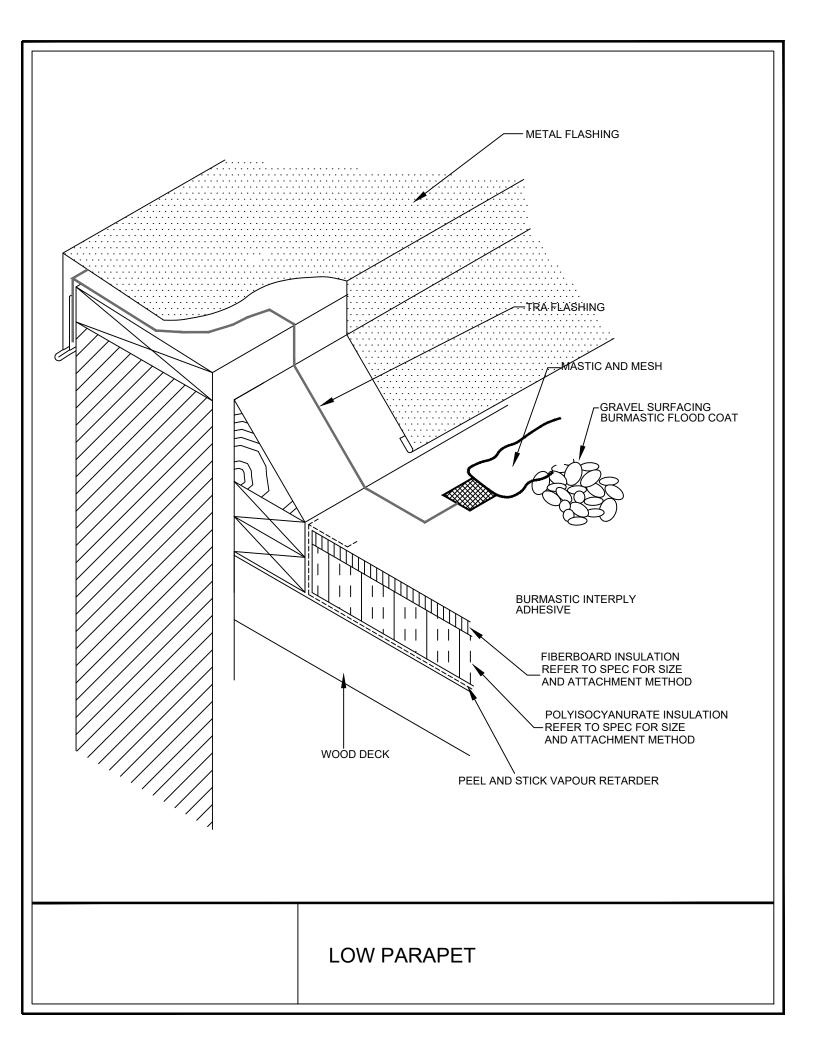
END OF SECTION

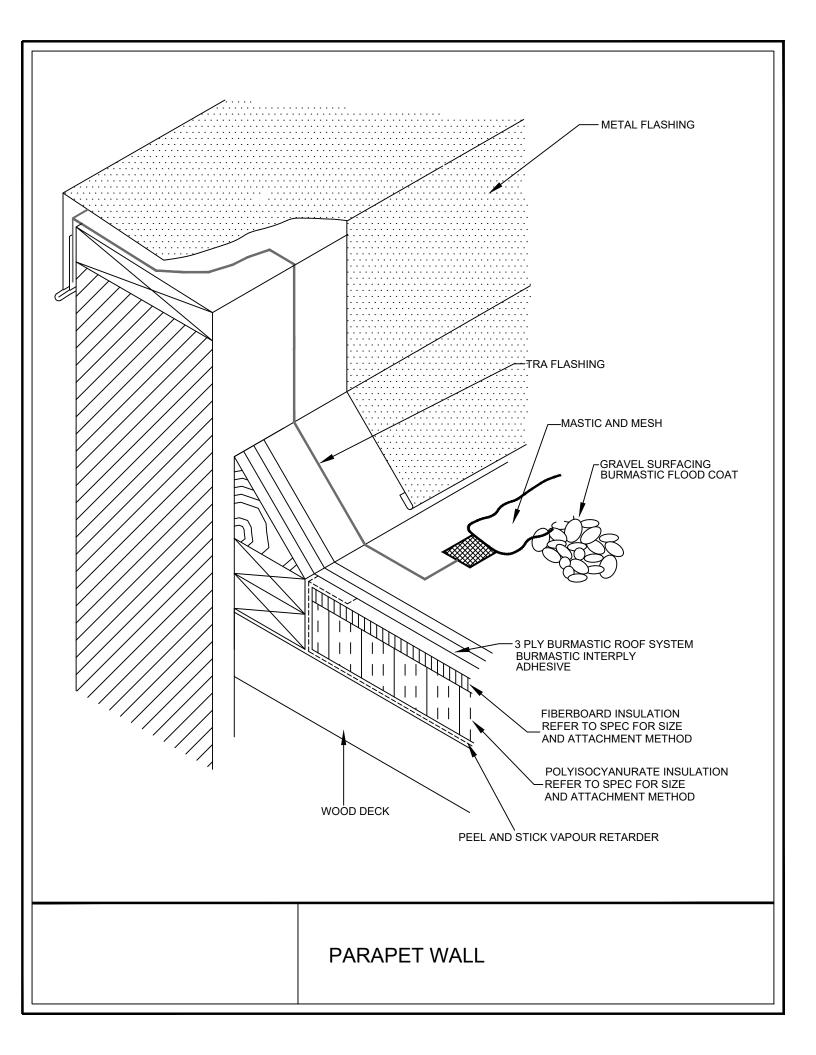


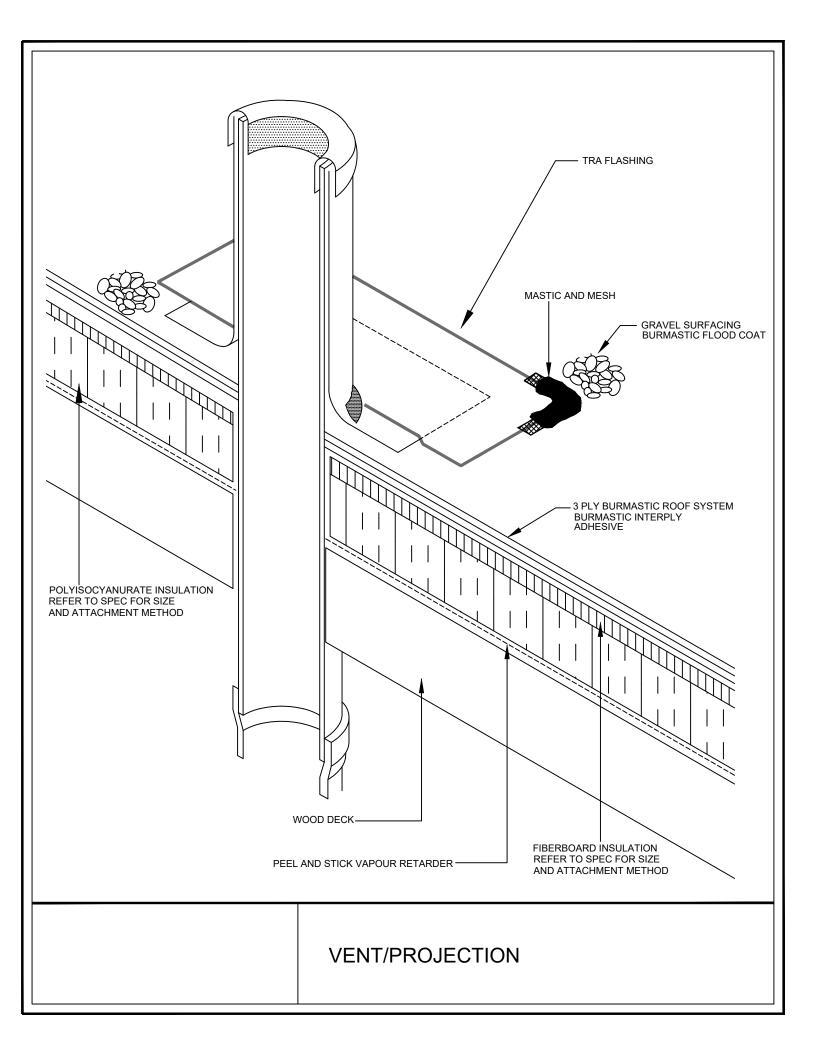


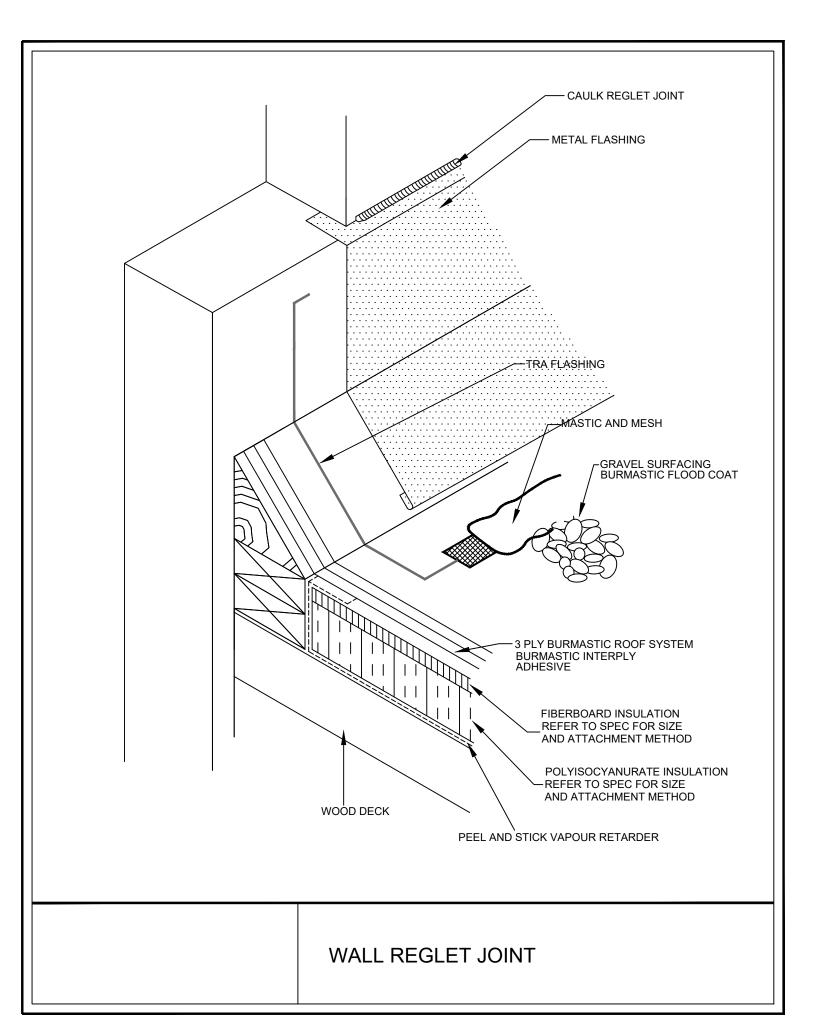


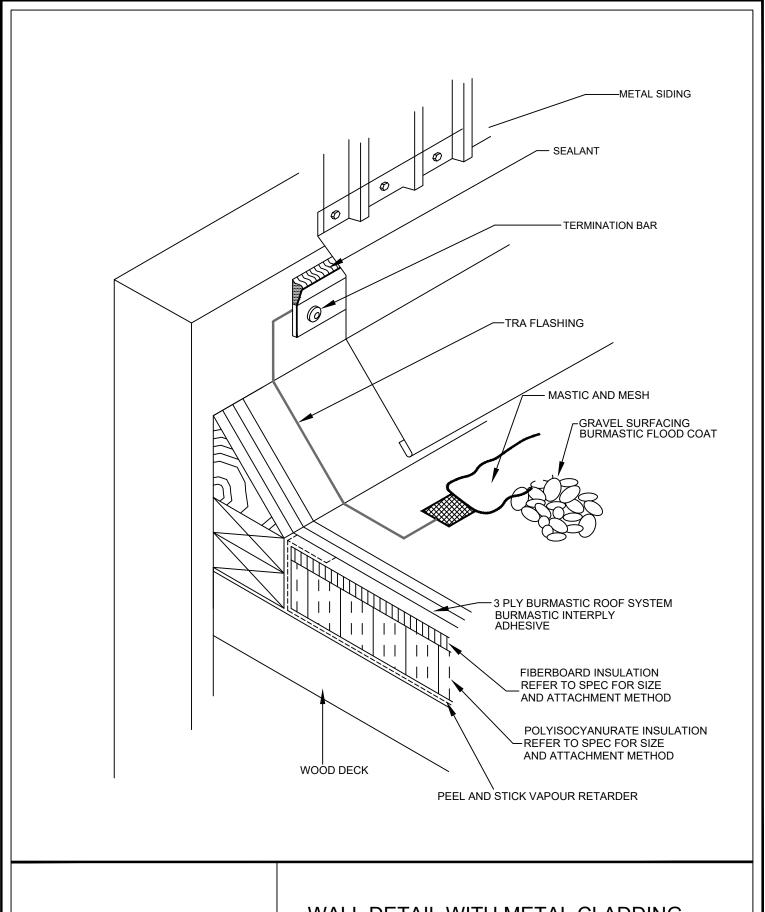












WALL DETAIL WITH METAL CLADDING

Part 1 General

1.1 SECTION INCLUDES

- .1 Counterflashings over membrane flashings.
- .2 Counterflashings at roof mounted equipment and vent stacks.

1.2 RELATED SECTIONS

- .1 Section 07 92 00 Joint Sealants.
- .2 Section 09 91 10 Painting: Prime and finish painting.
- .3 Electrical Division.
- .4 Mechanical Division.

1.3 REFERENCES

- .1 ASTM A653/A653M-06 Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- .2 ASTM B32-08 Solder Metal.
- .3 ASTM <B209M-07 Aluminum and Aluminum-Alloy Sheet and Plate (Metric).> << B209-07 Aluminum and Aluminum-Alloy Sheet and Plate.>>
- .4 ASTM D2178-04 Asphalt Glass Felt Used in Roofing and Waterproofing.
- .5 ASTM D4586-07 Asphalt Roof Cement, Asbestos-Free.
- .6 CAN/CGSB-51.34-M86 Vapour Barrier, Polyethylene Sheet for Use in Building Construction.
- .7 CSA-A231.1-06/A231.2-06 Precast Concrete Paving Slabs/Precast Concrete Pavers.
- .8 Province of Ontario Roofing Contractors Association Roofing Specifications Manual.
- .9 CRCA (Canadian Roofing Contractors Association) Roofing and Waterproofing Manual.
- .10 SMACNA (Sheet Metal and Air Conditioning Contractors' National Association) Architectural Sheet Metal Manual.

1.4 ADMINISTRATIVE REQUIREMENTS

- .1 Coordination:
 - .1 Coordinate with other work having a direct bearing on work of this section.

1.5 SUBMITTALS FOR REVIEW

- .1 Section 01 33 00: Submission procedures.
- .2 Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.

1.6 SUBMITTALS FOR INFORMATION

.1 Installation Data: Manufacturer's special installation requirements.

1.7 QUALITY ASSURANCE

- .1 Perform work in accordance with CRCA standard details and requirements.
- .2 Maintain one (1) copy of document on site.
- .3 Fabricator Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three (3) years documented experience.
- .4 Installer Qualifications: Company specializing in performing the work of this section with minimum three (3) years documented experience and approved by the manufacturer.

1.8 DELIVERY, STORAGE, AND PROTECTION

- .1 Stack preformed and prefinished material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- .2 Prevent contact with materials which may cause discolouration or staining.

Part 2 Products

2.1 SHEET MATERIALS

- .1 Sheet Steel Concealed from View: Commercial quality galvanized sheet to ASTM A653M, 0.50 mm (26 ga) thick minimum, Z275 zinc coated by hot-dip process.
- .2 Prepainted Sheet Steel Exposed to View: Supply 0.607 mm (24 ga) minimum thickness unless otherwise indicated on Drawings, commercial quality, Type A to ASTM A653M with Z275 zinc coating designation, prepainted in colour indicated and as selected by Architect.
- .3 Heavy Gauge Metal Flashing: Supply 3.416 mm (10 ga) minimum thickness, commercial quality, Type A to ASTM A653M with Z275 zinc coating designation, prepainted in colour indicated and as selected by Architect.

2.2 ACCESSORIES

.1 Slip Sheet: Rosin sized building paper; 1.2 mm thick EPDM strips or modified bituminous sheet by Roofing Membrane Manufacturer recommendations.

- .2 Starter Strips: Of same material as flashing used, 1.2 mm (18 ga), minimum 38 mm (1-1/2") wide, interlocked with metal flashing.
- .3 Flashing Cleats, Starter Strips, Skirts, Clips and Backup Plates: Same as specified sheet metal, unless indicated otherwise, make cleats at best 50 mm (2") wide and interlocked with metal flashing.
- .4 Flashing Fasteners: Nails, screws, bolts and other fastening devices and fasteners to CSA B111, Table 12, finished to match metal being fastened where exposed to view. Size and type to suit applicable conditions. Use stainless steel where connecting directly to concrete.
- .5 Isolation Coating: Supply Bakor "410-02" (or approved equal).
- .6 Bedding Compound: Rubber-asphalt type.
- .7 Plastic Cement: Conforming to CAN/CGSB-37.5-M recommended by installer and acceptable to Architect.
- .8 Sealant: Supply 1 part polysulphide, PRC "Rubber Caulk 5000-S", Parr "Unilastic" (or approved equal)

2.3 COMPONENTS

.1 Accessories: Profiled to suit gutters and downspouts.

2.4 FABRICATION

- .1 Fabricate rainwater leaders, copings, parapet vertical flashings, flashings, curb counter flashing starter clips, strips and miscellaneous flashings in accordance with CRCA recommendations and to detail indicated.
- .2 Form sections true to shape, accurate in size, square, and free from distortion or defects. Equally space joints in any one run of flashing to suit building module or window spacing and, in all cases, locate in consultation with Architect before installation commences. Make dedicated flashings meeting the Project requirements for roof mounted equipments to details shown.
- .3 Form pieces in longest practical lengths. Make joints to permit thermal movement. Make flashing surfaces free from building, warp, wave, dents, oil canning or other defects.
- .4 Hem exposed edges on underside 13 mm (1/2"); mitre and seam corners.
- .5 Form material with standing seam.
- .6 Fabricate corners from 1 piece with minimum 450 mm (18") long legs; seam for rigidity, seal with sealant. Make corners square and surfaces straight and in true planes.
- .7 Fabricate vertical faces with bottom edge formed outward 6 mm (1/4") and hemmed to form drip.

- .1 Fabricate flashings to allow toe to extend 50 mm (2") over roofing gravel and paver. Return and brake edges. Form sheet metal pans 150 mm (6") nominal size, with 75 mm (3") upstand, and 100 mm (4") flanges. Fill pans watertight with plastic cement.
- .2 Fabricate cleats and starter strips of same material as sheet, minimum 50 mm (2") wide, interlockable with sheet.

2.5 FINISHES

- .1 Shop, prepare and prime exposed ferrous metal surfaces.
- .2 Concealed metal surfaces to receive 1 coat of bituminous paint, 0.4 mm (1/64") thickness.
- .3 Metal finishes designated on Drawings.

2.6 EXAMINATION

- .1 Verify roof openings, curbs, pipes, sleeves, or vents through wall or roof are solidly set, reglets in place, and nailing strips located.
- .2 Verify roofing termination and base flashings are in place, sealed, and secure.

2.7 PREPARATION

- .1 Field measure site conditions prior to fabricating work.
- .2 Install starter, edge strips and cleats before starting installation.
- .3 Secure flashings in place using concealed fasteners. Use exposed fasteners only in locations accepted by Architect.
- .4 Apply plastic cement compound between metal flashings and felt flashings.
- .5 Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- .6 Provide and maintain continuity of air/vapour barrier to adjacent dissimilar materials. Seal to form weathertight seal between flashing and adjoining surfaces and between flashing and other work.

2.8 INSTALLATION

- .1 Conform to drawing details included in CRCA manuals.
- .2 Install copings, curb coverings, starter strips, (back-up plates), pipe collars and other flashings to details shown on Drawings.
- .3 Exposed fastenings will not be permitted in the Works.
- .4 Install starter strips where indicated or required to present a true, non-waving, leading edge. Anchor to back-up to provide rigid, secure installation.

- .5 End joints where adjacent lengths of metal flashing meet shall be made using an "S-lock" joint as detailed on Drawings. Execute by inserting the end of 1 coping length in a 25 mm (1") deep "S" lock formed in the end of the adjacent length. Extend concealed portion of the "S" lock 25 mm (1") outwards and nail to substrate. Face nailing of joints will not be permitted.
- .6 Caulking: Caulk where required to form weathertight seal between flashing and adjoining surfaces and between flashing and other work of this Section. Caulking work consists of bedding between members where possible and with neatly formed caulking bead where exposed.
- .7 Seal metal joints watertight.

END OF SECTION

1 GENERAL

.1 Section Includes

.1 Provision of all labour, materials, equipment and incidental services necessary to provide all hollow metal doors, frames and screens, as illustrated in accompanying drawings or called for elsewhere in the Contract Documents.

.2 Related Sections

- .1 Section 07 90 00 Joint Protection
- .2 Section 08 71 00 Door Hardware Common Requirements
- .3 Section 08 80 00 Glass and Glazing
- .4 Section 09 91 00 Painting

.3 Reference Standards

- .1 ASTM A653/A653M Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-coated (Galvannealed) by the Hot-Dip Process.
- .2 CAN4 S104-M80 Fire Tests of Door Assemblies.
- .3 CAN4 S105M-M85 Fire Door Frames.
- .4 CAN/CSA-G40.20/G40.21-M92 General Requirements for Rolled or Welded Structural Quality Steel.
- .5 CGSB 1.181-92 Ready Mixed Organic Zinc-Rich Coating.
- .6 CGSB 51-GP-21M Thermal Insulation, Urethane and Isocyanurate, Unfaced.
- .7 Canadian Steel Door and Frame Manufacturers' Association, (CSDFMA) Canadian Manufacturing Specifications for Steel Door and Frames, 1990.
- .8 NFPA 80-1992 Fire Doors and Fire Windows.

.4 Requirements of Regulatory Agencies

- .1 Steel fire rated doors and frames: labelled and listed by an organization accredited by Standards Council of Canada in conformance with CAN4 S104M-80 revised 1985 and CAN4 S105M-1985 for ratings specified or indicated.
- .2 Install labelled, fire resistance rated, steel doors and frames in accordance with NFPA 80 except where specified otherwise.

.5 Shop Drawings

- .1 Submit shop drawings in accordance with Section 01 30 00.
- .2 Indicate each type of door, material, steel core thicknesses, mortises, reinforcements, location of exposed fasteners, glazed openings, arrangement of hardware and fire ratings.

.3 Indicate each type frame material, core thickness, reinforcements, glazing stops, location of anchors and exposed fastenings and finishes.

2 PRODUCTS

- .1 Materials
 - .1 Accepatable manufacturers shall be Baron, Allsteel, Fleming, Daybar or approved equal by Owner / Consultant.
 - .2 Steel sheet: Cold rolled, commercial grade to ASTM A568-81, Class 1, hot-dip galvanized to ASTM A653/A653M, coating designation ZF75 (A25).

.2 Doors

.1	Surface sheets and top and bottom end channels	16 gauge	1.5 mm
.2	Frames and framing	16gauge	1.5 mm
.3	Reinforcement for surface applied hardware	12 gauge	2.7 mm
.4	Hinge reinforcement	10 gauge	3.4 mm
.5	Flush bolt reinforcement	16 gauge	1.5 mm
.6	Lock and strike reinforcement	16 gauge	1.5 mm
.7	"T" strap anchors	16 gauge	1.5 mm
.8	"L" strap anchors	18 gauge	1.2 mm
.9	Stud type	18 gauge	1.2 mm
.10	Glazing stops	20 gauge	1.0 mm

.3 Door Core

- .1 Honeycomb: structural core consisting of 16.5 kg/m density kraft paper having 25mm maximum cell size.
- .2 Steel Stiffened: vertically stiffened with 0.9mm steel ribs and all voids filled with semi-rigid mineral fibre insulation (min. density 24kg/m3).
- .3 Bonded core: Polystyrene or Polyisocyanurate closed cell board insulation (min. density 32kg/m3).

.4 Frames

.1 Interior steel frames

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- .1 1.2mm base thickness for openings 1200mm or less in unsupported width.
- .2 1.6mm base thickness for openings over 1200mm in unsupported width, and for all frames located in fire separations.
- .2 Exterior steel frames: 1.5mm base thickness.
- .3 Provide other door and frame components in accordance with CSDFMA specifications.
- .5 Primer
 - .1 Zinc-rich rust inhibitive type only.
- .6 Colour
 - .1 Colour to match existing frame and doors. Site verify.
- .7 Accessories
 - .1 Door Silencers: Single stud rubber/neoprene type.
 - .2 Frame Thermal Breaks: Rigid PVC extrusion conforming to CGSB 41-GP-19Ma.
- .8 Fabrication General
 - .1 Fabricate doors and frames as detailed, to CSDFMA-1990 Specifications for Commercial Steel Doors and Frames, except where specified otherwise.
 - .2 Blank, reinforce, drill and tap doors and frames for mortised hardware. Mortised cut-outs shall be protected with steel guard boxes.
 - .3 Reinforce doors and frames for surface mounted hardware.
 - .4 Provide for appropriate anchorage to floor and wall construction. Each wall anchor shall be located immediately above or below each hinge reinforcement on the hinge jamb and directly opposite on the strike jamb.
 - .5 For rebate opening heights up to and including 1520mm, provide two anchors, and an additional anchor for each additional 760mm or fraction thereof.
 - .6 Each door opening shall be prepared for rubber stud door silencers, three (3) for single doors, two (2) for double doors.
 - .7 Apply, at factory, touch up primer to doors and frames manufactured from galvanized steel where coating has been removed during fabrication.
 - .8 Fabricate thermally broken frames for exterior doors using 1.2mm steel, separating exterior portion of frame from interior portion with polyvinylchloride

thermal breaks.

- .9 All pairs of doors fabricated to have a labelled fire resistance rating of more than 1 1/2 hours shall be provided with flat steel astragals in accordance with NFPA 80.
- .10 Make provision for glazing as indicated and provide necessary glazing stops in accordance with tested and labelled assemblies.
- .11 All glazing rebates and stops for frames located in fire separations shall be minimum 20mm in height.
- .12 Fire labelled doors and frames shall be provided for those openings requiring fire protection ratings. Doors and frames shall be tested in accordance with CAN4-S104.
- .13 Provide all required internal steel reinforcement to ensure structural rigidity and integrity, including connections to nearest building structure elements.

.9 Welded Frames

- .1 Cut mitres and joints accurately and weld continuously on inside of frame profile.
- .2 Grind welded corners and joints to flat plane, fill with metallic paste filler and sand to uniform smooth finish.
- .3 Butt joints of mullions, transom bars, centre rails and sills shall be coped accurately and securely welded.
- .4 Weld in two (2) temporary jamb spreaders per frame to maintain alignment during shipment.
- .5 Glazing stops shall be formed channel, accurately fitted, butted at corners and fastened to frame sections with countersunk oval head tamper resistant sheet metal screws. Stops shall be 20mm high at frames in fire separations, 16mm high for all others.

.10 Knock-down Frames

- .1 Accurately form interlocking joints of knocked down frames to maintain alignment when field assembled.
- .2 Floor anchors shall be securely attached to the inside of each jamb profile.

.11 Doors

- .1 Exterior doors: bonded core construction.
- .2 Make provision for glazing as indicated and provide necessary glazing stops.
- .3 Construct stile and rail doors in same manner as flush doors.
- .4 Construct matching transom panels or inactive leaves in same manner as doors.
- .5 Fabricate doors with longitudinal edges mechanically interlocked. Seams shall be visible.
- .6 Fire labelled doors shall be provided for those openings requiring fire protection ratings, as indicated. Such frames shall be tested in strict conformance with CAN4-S104, ASTM E-152 or NFPA 252.

3 EXECUTION

- .1 Installation General
 - .1 Install all doors and frames in strict accordance with National Fire Protection Association (NFPA) 80, Fire Doors and Fire Windows.
- .2 Door Installation
 - .1 Install doors in accordance with manufacturer's instructions and templates.
 - .2 Provide even margins between doors and jambs and doors and finished floor and thresholds as follows:
 - .1 Hinge side: 1.0 mm.
 - .2 Latchside and head: 1.5 mm.
 - .3 Finished floor, top of carpet, and thresholds: 13 mm.
 - .4 Adjust operable parts for correct function.
- .3 Frame Installation
 - .1 Set frames plumb, square, level and at correct elevation.
 - .2 Secure anchorages and connections to adjacent construction.
 - .3 Brace frames rigidly in position while building-in. Install temporary horizontal wood spreader at third points of door opening to maintain frame width. Provide vertical support at centre of head for openings over 1200mm wide. Remove temporary spreaders after frames are built-in.

Waterloo Catholic District School Board Our Lady of Fatima CES Renovation Project No. RFT 2024-04

Section 08 11 20 STANDARD HOLLOW METAL DOOR AND FRAMES Page 6 of 6

- .4 Make allowances for deflection of structure to ensure structural loads are not transmitted to frames.
- .5 Install all frame reinforcing where indicated or required for structural rigidity.

.4 Finish Repairs

.1 Touch up with primer galvanized finish damaged during installation.

END OF DOCUMENT

Part 1 General

1.1 SECTION INCLUDES

- .1 Hardware for hollow steel doors.
- .2 Hardware for aluminum doors.
- .3 Hardware for wood doors.
- .4 Supply and installation of barrier free operators and switches (as required)
- .5 Thresholds.
- .6 Weatherstripping, seals, and door gaskets.

1.2 WORK COVERED

- .1 Supply and delivery of finish hardware for the pressed steel doors and aluminum frame entrance doors, and the cost to prepare the Final Hardware Schedule.
- .2 This allowance includes the following:
 - .1 Supply only of hollow metal frame back boxes
 - .2 Supply only of aluminum frame back boxes
 - .3 Supply and installation of barrier free operators and switches
 - .4 Supply and installation of conduits and hardware: electric strikes, and door contacts.
 - .5 Supply and installation of low voltage wire for automatic operators, and remote release buttons.
 - .6 Supply and installation of permanent cylinders
- .3 This allowance excludes the following:
 - .1 120vac power connection to barrier free operators.
 - .2 All applicable taxes
- .4 Final hardware inspection to be completed by hardware supplier and reported to WCDSB to ensure installation of all devices meets specifications.

1.3 REFERENCES

- .1 BHMA (Builders Hardware Manufacturers Association) A156 series.
- .2 CAN4-S104-M80(R1985) Method for Fire Tests of Door Assemblies.
- .3 CAN/ULC-S132-2007 Emergency Exit and Emergency Fire Exit Hardware.
- .4 CSDMA (Canadian Steel Door Manufacturers Association).

- .5 DHI (Door and Hardware Institute Canada) AHC and EHC certification programs.
- .6 DHI (Door Hardware Institute) A115 series.
- .7 NFPA 80 Fire Doors, Fire Windows.
- .8 NFPA 252-2008 Fire Tests of Door Assemblies.
- .9 UL 10B Fire Tests of Door Assemblies.
- .10 UL 305 Panic Hardware.

1.4 PRICE AND PAYMENT PROCEDURES

.1 Allowances: Section 01 21 00 - Cash allowances affecting this section.

1.5 ADMINISTRATIVE REQUIREMENTS

- .1 Coordination: Coordinate with other work having a direct bearing on work of this section.
 - .1 Coordinate the work with other directly affected sections involving manufacture or fabrication of internal reinforcement for door hardware and recessed items.
 - .2 Coordinate Owner's keying requirements during the course of the Work.
- .2 Sequencing: Sequence installation to ensure utility connections are achieved in an orderly and expeditious manner.

1.6 SUBMITTALS FOR REVIEW

- .1 Section 01 30 00 Administrative Requirements.
- .2 Shop Drawings:
 - .1 Indicate locations and mounting heights of each type of hardware, schedules, catalogue cuts, electrical characteristics and connection requirements.
 - .2 Submit manufacturer's parts lists, templates, and maintenance data.
- .3 Samples:
 - .1 Submit one (1) sample of hinge, latchset, lockset, closer, and control device illustrating style, colour, and finish.
 - .2 Samples will be returned to supplier.

1.7 SUBMITTALS FOR INFORMATION

- .1 Section 013000 Administrative Requirements.
- .2 Installation Data: Manufacturer's special installation requirements.

1.8 CLOSEOUT SUBMITTALS

.1 Operation and Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.

- .2 Warranty Documentation: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.
- .3 Record Documentation:
 - .1 Record actual locations of installed cylinders and their master key code.
 - .2 Keys: Deliver with identifying tags to Owner by security shipment direct from hardware supplier.

1.9 MAINTENANCE MATERIAL SUBMITTALS

- .1 Tools:
 - .1 Provide special wrenches and tools applicable to each different or special hardware component.
 - .2 Provide maintenance tools and accessories supplied by hardware component manufacturer.
 - .3 Brief maintenance staff regarding proper care, cleaning and general maintenance.

1.10 QUALITY ASSURANCE

- .1 Perform Work in accordance with the following requirements:
 - .1 BHMA A156 series.
 - .2 CSDMA.
 - .3 CSDMA
 - .4 NFPA 80.
 - .5 NFPA 252.
 - .6 UL 10B.
 - .7 UL 305.
 - .8 ULC S132.
 - .9 CAN4-S104.
 - .10 Maintain one copy on site.
- .2 Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three (3) years experience.
- .3 Installer Qualifications: Company specializing in performing the work of this section with minimum three (3) years approved by the manufacturer.
- .4 Hardware Supplier Personnel: Employ an Architectural Hardware Consultant (AHC)] to assist in the work of this section.
- .5 Hardware Supplier Personnel: Employ an Electrified Hardware Consultant (EHC)] to assist in the electronics and controls work of this section.

1.11 REGULATORY REQUIREMENTS

.1 Conform to applicable code for Products requiring electrical connection. Listed and classified by ULC and testing firm acceptable to the authority having jurisdiction as suitable for the purpose specified and indicated.

1.12 DELIVERY, STORAGE, AND PROTECTION

- .1 Store finishing hardware in locked, clean and dry area
- .2 Package each item of hardware including fastenings, separately or in like groups of hardware, label each package as to item definition and location

1.13 WARRANTY

- .1 Warranty of the hardware items specified in this section will be for a period of one year with the exception of the door closers which shall have a five year factory warranty against defects in material and workmanship.
- .2 The one year and 5 year warranty will commence after substantial completion.

Part 2 Products

2.1 MATERIALS

- .1 This section will include the supply of finish hardware from a schedule under the direction of the Consultant.
- .2 Finishing hardware fabricated of the same material shall be consistent in colour and finish throughout.
- .3 Supply all necessary screws, bolts, expansion shields, inserts and other items of same finish and colour as required for complete installation and for proper functioning.
- .4 The final finishing hardware schedule shall be forwarded to division 15 and 16 for coordination with mechanical and electrical components of the work.

Part 3 Execution

3.1 EXAMINATION

- .1 Verify that doors and frames are ready to receive work and dimensions are as instructed by the manufacturer.
- .2 Verify that electric power is available to power operated devices and is of the correct characteristics.

3.2 INSTALLATION

- .1 Provide instruction and templates to fabricators and installers
- .2 Use templates provided by hardware item manufacturer.
- .3 Mounting heights for hardware from finished floor to centre line of hardware item:
 - .1 Locksets: OBC requirements
 - .2 Exit Devices: OBC requirements

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Section 08 71 00 DOOR HARDWARE – COMMON REQUIREMENTS Page 5 of 5

.3 Door Pulls - OBC requirements
 .4 Auto Operator Switches - OBC requirements

3.3 ADJUSTING

.1 Adjust hardware for smooth operation.

3.4 PROTECTION OF FINISHED WORK

.1 Do not permit adjacent work to damage hardware or finish.

3.5 SCHEDULES

.1 Refer to Architectural drawings and Door Schedule.

END OF SECTION



2090 Shirley Drive Kitchener Ontario N2B 0A3

Phone: (519) 578.1000 Toll Free: (800) 265.8959 Fax: (519) 578.3262

Schedule of Finish Hardware

ARCHITECT/DESIGNER: L360 ARCHITECTURE

1490 RICHMOND ST. SUITE 305

LONDON ON N6G 0J4

PHONE - 519-473-6641 FAX - 519-473-4707

CONTRACTOR:

PHONE

FAX

PROJECT: OUR LADY OF FATIMA

55 HAMMET STREET

CAMBRIDGE

6283

PROJECT CONSULTANT: SIMON HANSON

PREPARED: February 01, 2024

REVISED: February 01, 2024 FOR TENDER



www.knells.ca

DOOR INDEX

Mark	Heading #	Mark	Heading #	Mark	Heading #
D1	D1				
D2	D2				

K Knell's DOOR & HARDWARE

KNELLS DOOR AND HARDWARE

OUR LADY OF FATIMA

2090 SHIRLEY DRIVE

KITCHENER

ON N2B 0A3

Control No.6283

6283

Tel: 519-578-1000 Fax: 519-578-3262

Hardware Finishes

Finish	Description
630	SATIN STAINLESS STEEL
689	POWDER COAT, ALUMINUM
ALUMINUM	ALUMINUM
C.A.	CLEAR ANODIZED
C32D	STAINLESS STEEL, SATIN
CL	CLEAR
US32D	SATIN STAINLESS STEEL



KNELLS DOOR AND HARDWARE

OUR LADY OF FATIMA

2090 SHIRLEY DRIVE

KITCHENER

ON N2B 0A3

Control No.6283

6283

Tel: 519-578-1000

Fax: 519-578-3262

HARDWARE SCHEDULE - CODE # 6283

OUR LADY OF FATIMA 55 HAMMET STREET

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1 SGL D	OOOR D1 EXTERIOR FROM VE	STIBULE	900	LHR	
799 x 2	100 x 44 HMDI Door/ HMF Fra	ame	NON-R	RTD Door/NO	N-RTD Frame
3	HINGE, 4 1/2, HVY WT	LH199BB 4-1/2 X 4-1/2 NRP	ι	JS32D	LAW
1	RIM EXIT DEVICE EXIT ONLY OR DUMMY TRIM	16-8810F 900MMW X NO TRIM X 649 (DEVCYL-NONE)	ι	JS32D	SAR
1	CYLINDER	10J0200-26-DQM-Z20	2	26	MED
1	PULL	GSH 1180-2 X THROUGH BOLT MOUNTING	C	C32D	GAL
1	CLOSER	4040XP.RWPA.689	6	589	LCN
1	WEATHER STRIPPING	W-2050S X 17-2	C	C.A.	KNC
1	DOOR SWEEP	W-38S X 900MMW	C	C.A.	KNC
1	THRESHOLD	CT-75 X 900MM	Д	ALUMINUM	KNC
	ng # D2 DORS D2 EXTERIOR FROM CC	PRRIDOR	900	LHR,RHR	l
1 PR DO					N-RTD Frame
1 PR DO	DORS D2 EXTERIOR FROM CC		NON-R		
1 PR DO	DORS D2 EXTERIOR FROM CC	Frame	NON-R	RTD Door/NO	N-RTD Frame
1 PR DO 965/965 2	DORS D2 EXTERIOR FROM CC 5 x 2082 x 44 ALD Door/ ALF I CONTINUOUS HINGE	Frame SL11 CL HD X 2159MM X SDTF	NON-R	RTD Door/NO	N-RTD Frame SEL
1 PR DO 965/965 2 2	DORS D2 EXTERIOR FROM CO 5 x 2082 x 44 ALD Door/ ALF I CONTINUOUS HINGE RIM EXIT DEVICE	Frame SL11 CL HD X 2159MM X SDTF 16-8810J 950MMW X NO TRIM X 649 (DEVCYL-NONE)	NON-R	RTD Door/NO CL JS32D	N-RTD Frame SEL SAR
1 PR DO 965/965 2 2 2	DORS D2 EXTERIOR FROM CC 5 x 2082 x 44 ALD Door/ ALF I CONTINUOUS HINGE RIM EXIT DEVICE CYLINDER	Frame SL11 CL HD X 2159MM X SDTF 16-8810J 950MMW X NO TRIM X 649 (DEVCYL-NONE) 10J0200-26-DQM-Z20	NON-R C L 2	RTD Door/NO CL JS32D 26	N-RTD Frame SEL SAR MED
1 PR DO 965/965 2 2 2 2	DORS D2 EXTERIOR FROM CO 5 x 2082 x 44 ALD Door/ ALF I CONTINUOUS HINGE RIM EXIT DEVICE CYLINDER ELECTRIC STRIKE	Frame SL11 CL HD X 2159MM X SDTF 16-8810J 950MMW X NO TRIM X 649 (DEVCYL-NONE) 10J0200-26-DQM-Z20 9400-12/24D-630	NON-R	RTD Door/NO CL JS32D 26 530	N-RTD Frame SEL SAR MED ES-CD
1 PR DO 965/965 2 2 2 2 1 2	DORS D2 EXTERIOR FROM CO 5 x 2082 x 44 ALD Door/ ALF I CONTINUOUS HINGE RIM EXIT DEVICE CYLINDER ELECTRIC STRIKE PULL	Frame SL11 CL HD X 2159MM X SDTF 16-8810J 950MMW X NO TRIM X 649 (DEVCYL-NONE) 10J0200-26-DQM-Z20 9400-12/24D-630 GSH 1180-2 X THROUGH BOLT MOUNTING	NON-R C L 2 6	RTD Door/NO CL JS32D 26 530	N-RTD Frame SEL SAR MED ES-CD GAL
1 PR DO 965/965 2 2 2 1 2 2	DORS D2 EXTERIOR FROM CO 5 x 2082 x 44 ALD Door/ ALF I CONTINUOUS HINGE RIM EXIT DEVICE CYLINDER ELECTRIC STRIKE PULL OVERHEAD STOP	Frame SL11 CL HD X 2159MM X SDTF 16-8810J 950MMW X NO TRIM X 649 (DEVCYL-NONE) 10J0200-26-DQM-Z20 9400-12/24D-630 GSH 1180-2 X THROUGH BOLT MOUNTING 104S	NON-R C L 2 6 C C	RTD Door/NO CL JS32D 26 530 C32D JS32D	N-RTD Frame SEL SAR MED ES-CD GAL GLY
1 PR DO 965/965 2 2 2 1 2 2 2	DORS D2 EXTERIOR FROM CO 5 x 2082 x 44 ALD Door/ ALF I CONTINUOUS HINGE RIM EXIT DEVICE CYLINDER ELECTRIC STRIKE PULL OVERHEAD STOP CLOSER	SL11 CL HD X 2159MM X SDTF 16-8810J 950MMW X NO TRIM X 649 (DEVCYL-NONE) 10J0200-26-DQM-Z20 9400-12/24D-630 GSH 1180-2 X THROUGH BOLT MOUNTING 104S 4040XP.RWPA.689	NON-R C 2 6 C L	RTD Door/NO CL JS32D 26 530 C32D JS32D	N-RTD Frame SEL SAR MED ES-CD GAL GLY LCN
1 PR DO 965/965 2 2 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	DORS D2 EXTERIOR FROM CO 5 x 2082 x 44 ALD Door/ ALF I CONTINUOUS HINGE RIM EXIT DEVICE CYLINDER ELECTRIC STRIKE PULL OVERHEAD STOP CLOSER DOOR SWEEP	Frame SL11 CL HD X 2159MM X SDTF 16-8810J 950MMW X NO TRIM X 649 (DEVCYL-NONE) 10J0200-26-DQM-Z20 9400-12/24D-630 GSH 1180-2 X THROUGH BOLT MOUNTING 104S 4040XP.RWPA.689 W-38S X 950MMW	NON-R C L 2 6 C L	RTD Door/NO CL JS32D 26 530 C32D JS32D 589 C.A.	N-RTD Frame SEL SAR MED ES-CD GAL GLY LCN KNC

1 GENERAL

.1 Section Includes

.1 Provision of all labour, materials, equipment and incidental services necessary to provide glass and glazing of all doors, and screens. All work, as illustrated in accompanying drawings or called for elsewhere in the Contract Documents.

.2 Related Sections

.1 Section 08 11 20 - Standard Hollow Metal Door and Frames

.3 Reference Standards

- .1 ANSI/ASTM E330-90 Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.
- .2 ASTM D2240-91 Test Method for Rubber Property Durometer Hardness.
- .3 ASTM E84-91a Test Method for Surface Burning Characteristics of Building Materials.
- .4 CAN/CGSB-12.1-M90 Tempered or Laminated Safety Glass.
- .5 CAN/CGSB-12.3-M91 Flat, Clear Float Glass.
- .6 CAN/CGSB-12.5-M86 Mirrors, Silvered.
- .7 CAN/CGSB-12.8-M90 Insulating Glass Units.
- .8 CAN/CGSB-12.10-M76 Glass, Light and Heat Reflecting.
- .9 CAN/CGSB-12.11-M90 Wired Safety Glass.
- .10 CAN/CGSB-12.20-M89, Structural Design of Glass for Buildings.
- .11 Flat Glass Manufacturers Association (FGMA) Glazing Manual.
- .12 Laminators Safety Glass Association Standards Manual.

.4 Performance Requirement

- .1 Size glass to withstand wind loads, dead loads and positive and negative live loads acting normal to plane of glass to a design pressure measured in accordance with the OBC and CAN/CGSB-12.20-M89.
- .2 Limit glass deflection to 1/200 with full recovery of glazing materials.
- .3 Provide thermal stress analysis for all single glazed lites and all sealed glass units. Make recommendations for additional heat treatment, thickness change, or other required modifications prior to ordering of materials or manufacture of sealed glass units.

.5 Samples

.1 Submit samples of all tinted, coated, and surface treated glass in accordance with Section 01 30 00.

.6 Environmental Requirements

- .1 Install glazing when ambient temperature is 10°C minimum. Maintain ventilated environment for 24 hours after application.
- .2 Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

.7 Maintenance Data

- .1 Provide maintenance data including cleaning instructions for incorporation into
- .2 Operations and Maintenance manual. Extended Warranty
 - 1 Provide sealed glass unit manufacturer's warranty certificate stating that the factory-sealed insulating glass units specified under this section are guaranteed against failure of seal of enclosed air space and deposits on inner faces of glass detrimental to vision, for a period of ten (10) years from the Date of Substantial Performance.

2 PRODUCTS

- .1 Float Glass
 - .1 Float glass: to CAN/CGSB-12.3 Glazing quality, maximum sizes as per Ontario Building Code, 6mm thick.
 - .2 Laminated Safety glass: to CAN/CGSB-12.1 clear of thickness noted and with standard thickness safety film, unless otherwise noted.
 - .3 Low emissivity (LOW E) glass, 6mm thick (all exterior applications).
 - .1 Metallic coating: soft, sputtered. (GC to site verify and match existing conditions)
 - .2 All interior and exterior pains with exterior panes being tinted.

All exterior glazing to be 6mm clear tempered on 6mm clear Solarban 60 (#3) insulated sealed units.

Interior glass in all exterior components shall be Clear Float Type. All entrance doors and sidelites shall be clear tempered on the exterior and clear tempered on the interior.

.2 Accessories

.1 Setting blocks: Neoprene Shore A durometer hardness to ASTM D2240, to suit glazing method, glass light weight and area.

- .2 Spacer shims: Neoprene, Shore A durometer hardness to ASTM D2240, 75 mm long x one half height of glazing stop x thickness to suit application. Self adhesive on one face.
- .3 Glazing gaskets: extruded, black, closed cell or dense elastomer of durometer appropriate to the function. Exterior glazing shall be Tremco "VISIONstrip" coextruded EPDM gasket with integral glazing tape.
- .4 Glazing splines: resilient polyvinyl chloride, extruded shape to suit glazing channel retaining slot.
- .5 Glazing clips: manufacturer's standard type.

.3 Sealed Glass Unit Fabrication

- .1 Fabricate sealed glass units through the Insulating Glass Manufacturers
 Association of Canada Certification Program to CAN/CGSB 12.8-M90. Sealed
 units shall bear IGMAC Certified Products List number and be properly
 identified.
- .2 Dessicant shall consist of three components; an extruded aluminum spacer manufactured in continuous lengths and bent to window configuration, a primary Polyisobutylene seal between spacer and glass sheets, and a secondary two part Silicone or Polysulfide perimeter seal.

3 EXECUTION

- .1 Examination
 - .1 Verify that openings for glazing are correctly sized and within tolerance.
 - .2 Verify that surfaces of glazing channels or recesses are clean, free of obstructions, and ready to receive glazing.

.2 Preparation

- .1 Clean contact surfaces with solvent and wipe dry.
- .2 Seal porous glazing channels or recesses with substrate compatible primer or sealer.
- .3 Prime surfaces scheduled to receive sealant.

.3 Exterior Glazing

- .1 Combination Method Gasket / Splines
 - .1 Cut glazing gasket to length and set against permanent stops. Sealv corners by butting tape and dabbing with sealant.

- .2 Apply heel bead of sealant along intersection of permanent stop with frame ensuring full perimeter seal between glass and frame to complete continuity of air and vapour seal.
- .3 Place setting blocks at 1/4 points, with edge block maximum 150mm from corners.
- .4 Rest glazing on setting blocks and push against tape and heel bead of sealant with sufficient pressure to attain full contact at perimeter of light or glass unit.
- .5 Install removable stops with splines.

.4 Cleaning

- .1 During installation, remove all corrosive or foreign materials or droppings resulting from work of this or other trades.
- .2 Perform initial cleaning operation of all glass and mirrors upon completion of installation. Remove all remaining labels, protective films, or other surface imperfections.
- .3 Provide the General Contractor with instructions for the proper method and materials to be used in the final cleaning of finished surfaces.

.5 Protection of Finished Work

.1 After installation, mark large lites with an "X" by using removable plastic tape. Do not use masking tape. Do not mark heat absorbing or reflective glass units.

NOTE: This Contractor to review Architectural Drawings in conjunction with **this** Section for door and window glass type requirements. See general note, illustrating required conditions.

END OF DOCUMENT

1 GENERAL

.1 Section Includes

.1 Provisions of all labour, materials, equipment and incidental services necessary to provide porcelain and ceramic tiling, including tile baseboard with aluminum cap above, as illustrated in accompanying drawings or called for elsewhere in the Contract Documents.

.2 Related Sections

- .1 Section 07 90 00 Joint Sealing
- .2 Section 09 25 00 Gypsum Board Systems
- .3 Section 10 80 50 Washroom Accessories

.3 Reference Standards

- .1 Ceramic Tile Installation Manual 200-1979 (R1989), Terrazzo Tile and Marble Association of Canada (TTMAC).
- .2 CAN/CGSB-75.1-M88, Ceramic tile.
- .3 Handbook for Ceramic Tile Installation, Tile Council of America.
- .4 ANSI A108 Series, Specifications for Installation of Ceramic Tile.
- .5 ANSI A118 Series, Specifications for Mortars and Grouts for Ceramic Tile Installation.
- .6 ANSI A136.1-1992, Standard for Organic Adhesives for Installation of Ceramic Tile.

.4 Quality Assurance

.1 Installer shall have a minimum of two (2) years documented experience in the installation of ceramic tile, and if requested, will submit such documentation to the Consultant prior to award of contract.

.5 Submittals

- .1 Submit sample panels of each tile type specified, in accordance with Section 01 30 00.
- .2 Sample panels shall be minimum 1200 x 1200mm in size, and shall consist of minimum 4 tiles bonded to 6mm G1S plywood, with grouted joints to represent project installation. Where cut tile patterns are indicated, include one sample of cut condition.
- .3 Submit samples of preformed bases, trim and other specialty shapes.

.6 Maintenance Material

- .1 Provide minimum 5% or minimum one box (whichever is greater) of each type and colour of tile required for project for maintenance use in accordance with Section 01 78 00.
- .2 Maintenance material to be of same production run as installed material.
- .3 Provide instructions for the care and maintenance of all ceramic tiles for this project, for inclusion in Operations and Maintenance Manual.

.7 Environmental Conditions

- .1 Maintain air temperature and structural base temperature at ceramic tile installation area above 10 °C for 48 hours before, during and 48 hours after installation.
- .2 Exclude construction traffic from areas to receive tile during installation and curing period.
- .3 Protect tile flooring subjected to construction traffic with non-staining covers.

.8 Warranty

- .1 Provide Mortar and Grout manufacturer's system warranty guaranteeing that the listed products, installed as per the manufacturer's approved methods and practices, will not fail due to material or manufacturing defects for a period of five (5) years from the Date of Substantial Performance.
- .2 Warranty shall cover the total replacement cost (all labour and materials) of the defective area.

2 PRODUCTS

- .1 Tiles:
- .1 Porcelain Tile:
 - .1 Shall be porcelain tile, Centura as noted on drawings, with 125mm tile baseboard with aluminum cap as required. Applicable to washroom areas and as called for on accompanying drawings or elsewhere in the Contract Documents. Colour as noted on drawings and/or to be selected by Owner / Consultant.

.2 Mortar and Adhesive Materials

- .1 Pre-Mixed Thin Set Mortar: shall be "Kerabond" by Mapei Inc., or equivalent by Laticrete, L & M Tile products Ltd., Sternson.
- .2 Polymer Additive: "Keralastic" by Mapei Inc., or equivalent by Laticrete.
- .3 Epoxy Mortar: "Kerapoxy" two-component, 100% solids epoxy mortar by Mapei Inc., or equivalent by Laticrete.

Waterloo Catholic District School Board Our Lady of Fatima CES Renovation Project No. RFT 2024-04

Section 09 30 70 CERAMIC TILING Page 3 of 5

- .4 Mosaic Adhesive: to CGSB 71-GP-22M, Type 1, by Mapei Inc., or equivalent by Laticrete or L & M Tile products Ltd.
- .3 Metal Edge Trim: Aluminum with lip of edge strip extending under and with shoulder finishing flush with top of finish floor.

.4 Grout

- .1 Floor grout: "Charcoal Grey #929", sanded, pre-mixed floor grout by Mapei Inc., or equivalent by Laticrete or L & M Tile products Ltd.
- .2 Wall grout: "02 Pewter /Wall" unsanded, dry, pre-mixed floor grout by Mapei Inc., or equivalent by Laticrete.
- .3 Epoxy grout: "Kerapoxy" two-component, 100% solids, epoxy grout by Mapei Inc., or equivalent by Laticrete, or L & M Tile products Ltd.
- .4 Schluter: Systems Trims and control joints or approved alternate.

.5 Accessories

- .1 Waterproofing Membrane: "PRP 315" two-component, trowel-applied waterproof membrane, by Mapei Inc., or equivalent by Laticrete.
- .2 Reinforcing mesh: 6mm thick interlocking plastic or fiberglass grid.
- .3 Sealant: in accordance with Section 07 90 00, colour selected by Consultant.

.6 Reducers

- .1 Resilient reducer: Schluter Reno-U. Colour to match ceramic tile as approved by Client/Consultant.
- .2 Or approved alternate.
- .3 General Contractor to provide samples on site for final approval by Architect/Owner prior to ordering.

.7 Mortar Mixes

- .1 Thin Set System: 7.6 Litres polymer additive to 22.7 kg powdered mortar mix.
- .2 Epoxy System: mix as per manufacturer's instructions.
- .3 Measure mortar ingredients by volume. Mix thoroughly to smooth, homogeneous consistency.

- .4 Use low speed mixer (150 rpm). Avoid air entrapment and prolonged mixing.
- .5 Let slake 10 to 15 minutes. Re-stir without adding liquid.

3 EXECUTION

- .1 Surface Preparation
 - .1 Ensure substrates are dry, clean, and free of all oil, grease and other materials detrimental to the installation of setting bed materials.
- .2 Ensure substrates are sound, level, free of cracks greater than 3mm in width, and changes in elevation that may adversely affect installation.
- .3 Apply levelling or patch material recommended by mortar and grout manufacturer to substrate for any significant changes in elevation, and allow to set thoroughly. Sand as required to ensure an acceptable finish floor is completed.

.2 Quality of Work

- .1 Fit tile around corners, fitments, fixtures, drains and other built-in objects.

 Maintain uniform joint appearance. Cut edges smooth and even. Provide transition saw cuts to allow for expansion conditions.
- .2 Maximum surface tolerance (1:800).
- .3 Lay out tiles so perimeter tiles are minimum 1/2 size.
- .4 Sound tiles after setting and replace hollow-sounding units to obtain full bond.
- .5 Make joints between tile uniform and approximately 3mm wide, plumb, straight, true, even and flush with adjacent tile. Ensure sheet layout not visible after installation. Align patterns.
- .6 Make inside corners square butt joints, and outside corners bullnosed.
- .7 Use return edged (bullnosed) tiles at termination of wall tile panels, except where panel butts projecting surface or differing plane.
- .8 Clean installed tile surfaces after installation and grouting cured.

.3 Tile Installation

.1 Apply setting bed material with a clean, round or square-notched trowel of type recommended for that material. Do not apply more material than can be covered

with tiles in 10 minutes (approx. 1 m2).

- .2 Place tiles firmly into setting bed using a slight twisting motion to ensure full contact. Immediately beat-in tile to flatten all ridges or notches.
- .3 Clean out joints of excess mortar, and wipe smudges from tile face.
- .4 Install specified manufacturer's preformed bases and trim.
- .5 Allow minimum 24 hours after installation of tiles, before grouting.

.4 Grouting

- .1 Dampen surface of tile with a damp towel. Do not flood or overly wet tiles.
- .2 Using a purpose-made rubber float, apply grout evenly by moving across tiles diagonally first in one direction and then in the opposite direction, to ensure joints are filled with material. Promptly remove excess grout as the work progresses, using rubber float.
- .3 Remove remaining grout using dampened towel and clean water, by repeatedly dragging towel across the surface of the tiles, rinsing the towel and changing the water frequently.
- .4 Allow grout to cure minimum 3 to 4 hours before cleaning off remaining grout "haze".

END OF DOCUMENT

1 GENERAL

- .1 Section Includes
 - .1 Provision of all labour, materials, equipment and incidental services necessary to provide resilient base and accessories, as illustrated in accompanying drawings or called for elsewhere in the Contract Documents.
- .2 Related Sections
 - .1 Section 06 40 00 Architectural Woodwork
 - .2 Section 09 25 00 Gypsum Board Systems
 - .3 Section 09 65 11 Resilient Flooring
- .3 Reference Standards
 - .1 CAN/CSA A126.5-87, Resilient Wall Base.
- .4 Quality Assurance
 - .1 Resilient base materials shall be installed by a firm, having a minimum of five (5) years documented experience in resilient flooring installation, and be approved by the material manufacturer.
- .5 Submittals
 - .1 Samples
 - .1 Submit duplicate 300mm long sample pieces of base in accordance with Section 01 30 00.
- .6 Closeout Submittals
 - .1 Maintenance Materials: Deliver 5% of total room lengths of each colour and type resilient base material required for project for maintenance use, in accordance with Section 01 78 00.
 - .2 Maintenance Data: Provide maintenance data for resilient base for incorporation into Operations and Maintenance manual.
- .7 Sequencing and Scheduling
 - .1 Installation of resilient base and accessories shall not commence until all overhead mechanical, electrical, and dust generating work is completed.
 - .2 Schedule resilient base installation for completion after installation of millwork.

- .8 Environmental Requirements
 - .1 Maintain air and substrate temperature in area of installation above 20°C for 48 hours before, during and 48 hours after installation.

2 PRODUCTS

- .1 Materials
 - .1 Resilient base and accessory materials specified are by Roppe, Johnsonite, or an approved alternative.
 - .2 Base for resilient flooring: rubber, 100mm high, by Roppe or Johnsonite with moulded Dura cove base and preformed in and out corners. Or approved alternate.
 - .3 Reducers
 - .1 Resilient reducer: Johnsonite No. SSR-B.
 - .2 Or approved alternate.
 - .3 General Contractor to provide samples on site for final approval by Architect/Owner prior to ordering.
 - .4 Cove caps
 - .1 Resilient: Johnsonite No. SCC-B.
 - .2 Or approved alternate.
 - .3 General Contractor to provide samples on site for final approval by Architect/Owner prior to ordering.
 - .5 Fillet strips: for coved resilient sheet flooring, Johnsonite No. CFS-A. Or approved alternate.
 - .6 Primers and adhesives: waterproof, of types recommended by resilient base manufacturer for specific material on applicable substrate.
- .2 Contractor to verify appropriate thickness on site
- .3 Colour to be approved by Owner/Architect

3 EXECUTION

- .1 Base Application
 - .1 Lay out base to minimize joints. Use minimum 610mm long pieces. Double cut all joints to ensure tight fit.
 - .2 Adhesive must cover 90% of back of base, leaving 6mm at top for excess adhesive during rolling process.

- .3 Set base in adhesive tightly by using a 3 kg. hand roller, against wall and floor surfaces.
- .4 Install straight and level to variation of 1:1000.
- .5 Scribe and fit to door frames and other obstructions.
- .6 Base shall be cut and discontinued at all millwork.
- .7 Cope internal corners. Use preformed corner units for right angle outside corners. Use formed straight base material for external corners of other angles.
- .8 Install toeless type base before installation of carpet on floors.
- .2 Accessories Applications
 - .1 Install all accessories using hot-melt adhesive.
 - .2 Install transition strips between flooring materials aligned with edges of door frames under doors where not indicated. GC to site verify all locations prior to tender close.
- .3 Cleaning and Protection of Finished Work
 - .1 Remove excess adhesive from floor, base and wall surfaces damage.
 - .2 Protect new base and accessories from time of installation until final waxing. Prohibit traffic on floor for 48 hours after installation.

END OF DOCUMENT

1 GENERAL

- .1 Section Includes
 - .1 Supply and installation of the indoor Resilient Multipurpose and Athletic surfacing. Related Sections References for the correct construction and preparation of concrete slabs to receive resilient flooring.

.2 Submittals

.1 Product Data:

Manufacturer's promotional brochures, specifications and installation instructions

- .2 Samples:
 - .1 Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
- .3 Closeout Submittals:
 - .1 Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
 - .2 Submit three (3) copies of the material and installation warranties as specified.

.3 Quality Assurance

- .1 Qualifications:
 - .1 The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
 - .2 The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
 - .3 The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
 - .4 The indoor resilient multipurpose surfacing supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
 - .5 The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years' experience in the field installing indoor resilient multipurpose surfacing and have

worked on at least five (5) projects of similar size, type and complexity.

.2 Certifications:

- .1 Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
- .2 The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- .3 The indoor resilient multipurpose surfacing manufacturer to submit official ISO 14001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.

.3 Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM and/or EN standard testing procedures.

.4 Delivery, Storage and Handling

.1 Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Tarkett Sports' recommendations.

.2 Storage:

Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

.5 Project/Site Conditions

- .1 It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- .2 The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.

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- .3 All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.
- .4 Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- .5 An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- .6 Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- .7 Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155.A specified (FF) of 50 and an (FF) of 50 and an (FL) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight edge; however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.
- .8 Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- .9 Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- .10 Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.

.11 Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

.6 Warranty

.1 Materials:

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 8 years. A 3rd party limited warranty shall also be provided as reinforcement. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.

.2 Installation:

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

.7 Additional Materials

.1 Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

2 PRODUCTS

.1 Manufacturers

The basis of the design for the indoor resilient multipurpose and athletic surfacing flooring is Omnisport 6.5 mm for the athletic surfacing application as manufactured by Tarkett Sports. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer. Additional approved optional material Jonnsonite 5mm Training colour Golden Maple. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.

.2 Materials

.1 For Resilient Multipurpose Flooring Surfacing:

Omnisports 6.5 - Prefabricated sport surface 6.5mm (1/4") with wood flooring design and slightly textured embossed surface as supplied by Tarkett Sports. Or approved alternate. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and Top Clean, a factory applied UV cured urethane treatment. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability. The foam force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process. Laminated

or adhered foam layers will not be allowed. Field constructed products will not be accepted. Flooring will contain anti-fungal treatment.

.1 Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width		6'6" (2 m)
Length		85' (25.9m) approx.
Total Thickness		6.5 mm
Vertical Deformation	PASSED	1.3 (EN 14809)
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Friction	PASSED	99 (EN 13036-4)
Fungus Resistance	Excellent	Treated for permanent resistance.
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999}
Sound Insulation	Excellent	+/= 19 dB (ISO 717/2)
In Room Sound Insulation	ASTM F925	61dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Shock Absorption	PASSED	ASTM F2772 Category 2

.2 Welding Rod:

As supplied by the indoor resilient athletic surfacing manufacturer or supplier. Color to blend with the indoor resilient surfacing color or design. All seams shall be welded to create monolithic and impermeable surface. All cross seams are to be avoided.

.3 Adhesive:

As approved by the indoor resilient athletic surfacing manufacturer.

.4 Accessories:

- .1 Resilient base and accessory materials specified are by Johnsonite, or an approved alternative.
- .2 Base for resilient flooring: rubber, 100mm high, by Johnsonite with moulded Dura cove base and preformed in and out corners.
- .3 Or approved alternate.

.4 Reducers:

- .1 Resilient reducer: Johnsonite No. EG-XXX-H.
- .2 Resilient reducer: Johnsonite No. CTA-XXX-J.
- .3 Resilient reducer: Johnsonite No. CTA-XXX-H.
- .4 Resilient reducer: Johnsonite No. CTA-XXX-A.
- .5 Contractor to verify appropriate thickness and quantity on site.
- .5 Colour to be approved by Owner/Architect as indicated in Architectural drawings
- .2 Or approved alternate.

3 EXECUTION

- .1 Examination
 - .1 It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
 - .2 Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
 - .3 Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
 - .4 Verify that there is a stable room temperature of at least 65°F.
 - .5 Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
 - .1 <u>Direct Full Spread Adhering to Concrete Subfloor</u>: moisture content less than 6 pounds/1,000 sq.ft./24 hours when tested using calcium chloride per ASTM F 1869 or no more than 83 % RH when tested per ASTM F2170.
 - .2 For GreenLayTM Installation to Concrete Subfloor: moisture content less than fifteen (15) pounds/1,000 sq.ft./24 hours when tested using calcium chloride (test performed by General Contractor) per ASTM F 1869 or no more than 92 % RH when tested per ASTM F2170. Follow Tarkett Sports' Installation Recommendations.

- .6 If both tests are performed, use the highest value. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- .7 Verify that the concrete subfloor surface pH level is within the 7 10 range.
- .8 Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

.2 Preparation Of Surfaces

- .1 Sand the entire surface of the concrete slab.
- .2 Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- .3 Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

.3 Options For Moisture Mitigation

.1 For projects with moisture conditions higher than the specified tolerances, **TARKOLAY** may be used for conditions that do not exceed 12 lbs per ASTM F1869 and/or 92% per ASTM F2170. Use only approved two component urethane adhesives as directed by the manufacturer.

.4 Installation

- .1 The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- .2 All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- .3 Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- .4 Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation.
- .5 Install appropriate threshold plates or transition strips where necessary.

.5 Cleaning

.1 Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

.6 Protection

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

.7 Related Standards And Guidelines

- .1 ASTM F1869 "Standard Test Method for Measuring Moisture Evaporation Rate of Concrete Subfloor Using Anhydrous Calcium Chloride"
- .2 ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- .3 ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- .4 ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"

END OF DOCUMENT

1 GENERAL

.1 .1 Section Includes

- .1 Provision of all labour, materials, equipment and incidental services necessary to provide painting and cover to the exposed surfaces of the building, components and accessories not otherwise protected or covered, to the full intent of the drawings and specifications as illustrated in accompanying drawings or called for elsewhere in the Contract Documents.
- .2 Surface preparation of substrates to receive painting and finishing is not included in this section of work, except for specific pre-treatments specified herein or in the Canadian Painting Contractors' Architectural (CPCA) Painting Specification Manual.
- .3 This section of work shall include, but is not limited to, the painting and finishing of all exposed surfaces of the following substrates.
- .4 .1 Exterior
 - .1 Steel (Prime painted)
 - .2 Steel (Galvanized)
- .5 .2 Interior
 - .1 Steel (Prime painted)
 - .2 Steel (Galvanized)

.2 Related Sections

- .1 Section 08 11 20 Standard Hollow Metal Doors and Frames
- .2 Divisions 15, 16 Colour code marking bands or stencils for identification of piping, ductwork and electrical conduits
- .3 Reference Standards
 - .1 CAN2-85.100-M81, National Standards of Canada, Painting.
 - .2 Canadian Painting Contractors' Architectural (CPCA) Painting Specification Manual.
- .4 Materials and Equipment Not to Be Painted
 - .1 Surfaces not to be painted shall be left completely free of droppings and accidentally applied materials resulting from the work of this Section.

- .2 Items not to be painted include concealed structural elements, and equipment furnished with complete factory applied paints and finish systems, including but not limited to the following:
 - .1 Glazed, rubber, vinyl or acoustical tile.
 - .2 Non-ferrous metals such as copper, aluminum, stainless steel, bronze, brass or nickel.
 - .3 Finish hardware, excepting hardware that is factory primed.

.5 Cooperation with Other Trades

- .1 Schedule and coordinate this work with other trades and do not proceed until other work and/or job conditions are as required to achieve satisfactory results.
- .2 Examine the Specifications for the various other trades and become thoroughly familiar with all their provisions regarding painting.

.6 Quality Assurance

- .1 Material Manufacturers
 - .1 All paint and finish products shall be those listed in the CPCA manual, latest edition unless otherwise specified or listed herein.
- .2 Applicators
 - .1 This contractor shall have a minimum of five (5) years documented experience in commercial painting and finishing, and shall maintain a qualified crew of size necessary to fully satisfy the requirements of this section.

.7 Completion Schedule

.1 Furnish the Consultant with a schedule showing expected completion of the respective coats of paint for the various areas and surfaces. Keep this schedule current as the job progresses.

.8 Colour Schedule

.1 The final selection of colours and surface textures of all finishes throughout shall be provided by the Consultant.

.9 Submittals

- .1 Samples
 - .1 Submit samples in accordance with Section 01 30 00.

- .2 Submit duplicate 300 x 300mm sample panels of each type of paint and finish application for approval by the Consultant. here manufacturer of paint differs from that listed in the colour schedule, employ spectrograph technology to ensure accurate colour match, or submit samples of each colour and include mixing code for match comparison.
- .3 Finished work to match approved samples.

.2 Mock-up

.1 If requested by the Consultant, finish one complete surface or item of each colour scheme required showing selected materials, colours and textures. If approved, the mock-up shall serve as a standard for similar work throughout the building.

.10 Delivery, Storage and Handling

- .1 Paint and finish materials shall be delivered to the site in sealed original labelled containers bearing manufacturer's name, type of paint, brand name, colour designation and instructions for mixing and/or reducing.
- .2 Store materials in a heated, dry, well ventilated, indoor place having a minimum ambient temperature of 7°C.
- .3 Keep waste rags in metal drums and remove all rags, waste and trash from the building at the end of each working shift.
- .4 Provide CO2 fire extinguisher of minimum 20 lb. (9 kg) capacity in storage area.
- .5 Ensure that health and fire regulations are complied with in storage area.

.11 General Colour Requirements

- .1 Refer to the finish schedule for type and extent of finishes, and to the colour schedule for individual colour and texture selections. Where manufacturer of paint differs from that listed in the colour schedule, employ spectrograph technology to ensure accurate colour match.
- .2 The following major items will be painted:
 - .1 Exterior
 - .1 Doors and frames
 - .2 .2 Interior
 - .1 Doors
 - .2 Door frames
 - .3 Walls

.12 Environmental Conditions

- .1 Temperatures: No painting shall be performed when substrate or ambient air temperatures are below 5°C. Minimum allowable temperatures for application of Latex paints are 7°C (interior work) and 10°C (exterior work).
- .2 Relative humidity: shall not exceed 85%.
- .3 Moisture content of substrates: Masonry and concrete materials shall be allowed to cure for a minimum of 28 days before application of paints. Substrates shall be measured by electronic moisture meter, to the following maximums:
 - .1 Plaster and Gypsum board: 12%.
 - .2 Masonry, concrete/concrete block: 12% for solvent based paints.
 - .3 Wood: 15%.
- .4 Lighting: Painting shall not proceed unless a minimum of 15 candlepower/ft.2 lighting is provided on the surfaces to be painted.
- .5 Ventilation: All areas where painting is proceeding require adequate continuous ventilation and sufficient heating facilities to maintain temperatures above 7°C for 24 hours before during and after paint application.

.13 Maintenance Materials

.1 Supply Owner with one clearly identified, sealed gallon of each colour and type of paint, stain and varnish used for this work, in accordance with Section 01780.

.14 Guarantee

.1 Provide upon completion of the work, a 100% Maintenance Bond stating that the work was performed in accordance with these specifications and the CPCA manual (latest edition), and is guaranteed for a period of two(2) years from Date of Substantial Performance.

2 PRODUCTS

.1 Materials

- .1 Paint, varnish, stain, enamel, lacquer and fillers shall be of a type and brand herein specified and/or listed under Chapter 5 of the CPCA manual.
- .2 Paint materials such as linseed oil, shellac, turpentine, and any materials not specified herein but required for first class work with the finish specified shall be the highest quality product of an approved manufacturer. All materials shall be compatible with finish paint or coating materials.
- .3 Two coats of the specified paints are required throughout.

.2 Mixing

- .1 Paints shall be ready-mixed unless otherwise specified, except that any coating in paste or powder form or to field-catalyzed shall be field-mixed in accordance with the directions of its manufacturer.
- .2 Pigments shall be fully ground and shall maintain a soft paste consistency in the vehicle during storage that can and shall be dispersed readily and uniformly by paddle to a complete homogeneous mixture.
- .3 The paint shall have good flow and brush properties and shall dry or cure free of sags or runs to yield the desired finish specified.

.3 Concrete Block (Primer):

.1 Benjamin Moore and Co. Ltd. # M-88 Latex block filler. First coat to be applied at a spread rate of 75 sq.ft. per 3.79 litre container. Each coat wet thickness to be 21.0 mils. Each coat dry thickness to be 8.0 mils.

Benjamin Moore and Co. Ltd. as specified on the drawings. Apply two coats at a spread rate of 500 sq.ft per 3.79 litre container. Each coat wet thickness to be 3.0 mils. Each coat dry thickness to be 1.3 mils.

or

.2 Glidden #36250 concrete block filler.

Apply one coat at a spread rate of 380 sq.ft. per 3.78 litre container. Each coat wet thickness to be 19.0 mils. Each coat dry thickness to be 8.0 mils.

Glidden colour as specified on the drawings Apply two coats at a spread rate of 500 sq.ft per 3.79 litre container. Each coat wet thickness to be 3.0 mils. Each coat dry thickness to be 1.3 mils. Samples to be provided prior to start of work.

.4 Hollow Metal Doors/Frames:

.1 Benjamin Moore and Co. Ltd. # 023 Fresh Start Primer. Apply one coat: spread rate of 425 sq.ft. per 3.79 litre container. Each coat wet thickness to be 3.7 mils. Each coat dry thickness to be 1.1 mils.

Benjamin Moore and Co. Ltd. as specified on the drawings. Apply two coats at a spread rate of 500 sq.ft per 3.79 litre container. Each coat wet thickness to be 3.0 mils. Each coat dry thickness to be 1.3 mils. Samples to be provided prior to start of work.

or

.2 Glidden #250 Gripper Primer. Apply one coat at a spread rate of 389 sq.ft. per 3.78 litre container. Each coat wet thickness to be 4.0 mils. Each coat dry

thickness to be 2.0 mils.

.3 Devoe #4038 Devguard.

Apply two coats at a spread rate of 320 sq.ft per 3.78 litre container. Each coat wet thickness to be 5.0 mils. Each coat dry thickness to be 2.25 mils.

3 EXECUTION

- .1 Inspection of Surfaces
 - .1 Examine surfaces to receive paint finishes for defects which cannot be corrected by procedures specified herein, and which may result in unsatisfactory paint finishes. Report items to Consultant and Contractor in writing, prior to commencement of work of this section, or after initial prime coat shows defects in substrate.
 - .2 The application of subsequent prime and finish coats shall be construed as acceptance of the surfaces, and thereafter this subcontractor shall be fully responsible for satisfactory work as required herein.

.2 Preparation of Surfaces

.1 Refer to the CPCA manual Chapter 3 for surface preparations not specified in this section.

.3 Protection

- .1 Protect all adjacent surfaces from paint and damage resulting from the work of this section, and make good any damage caused by failure to provide such protection.
- .2 Furnish sufficient drop cloths, shields and protective equipment to prevent spray or dropping from fouling surfaces not being painted or where painting has been completed.
- .3 Cotton waste, cloths and material which may constitute a fire hazard shall be placed in closed metal containers and removed daily from the site.
- .4 Remove and protect, prior to painting operations, all hardware, accessories, device plates, lighting fixtures, factory finished work, and similar items, or provide ample in-place protection. Remove all electrical plates, surface hardware, fittings and fastenings. These items shall be labelled, stored, cleaned if necessary and reinstalled following successful completion of the work in each area. Solvents detrimental to lacquer finishes are not to be used for cleaning these items.

.5 Application

- .1 Paint application shall be by currently accepted trade method.
- .2 Painting coats specified are intended to cover surfaces satisfactorily when applied in strict accordance with manufacturer's recommendations.
- .3 Apply each coat at the proper consistency. Sand lightly between coats.
- .4 Tint primers to same colour range as finish coats.
- .5 Do not apply finishes on surfaces that are not sufficiently dry. Each coat of finish should be dry and hard before a following coat is applied unless specified otherwise by the manufacturer.
- .6 Tint filler to match wood for clear finishes. Work filler well into wood grain and remove excess prior to setting.
- .7 Exterior woodwork to receive paint finish shall be back-primed upon arrival on site with exterior primer paint, stain or varnish, as required by specified finish.
- .8 Spraying of paint will not be allowed, unless approved by the manufacturer of the materials to be applied, and the Consultant.
- .9 Provide complete coverage and hide. When colour, stain, dirt or undercoats show through final coat of paint, provide additional coats until the paint film is of uniform finish, colour, appearance and coverage, at no additional cost to the Owner.
- .10 Allow all coats to dry to manufacturer's recommendations before applying succeeding coats.
- .11 Touch up all suction spots or "hot spots" in concrete after the application of the first coat, before applying the second coat.
- .12 Where spray painting is specified, finish 100 ft2 (10m2) by spraying a sample of the finish upon the request of the Consultant, using materials specified. Do not spray paint sound block surfaces on Gymnasium area.
- .13 Surfaces to be stained shall appear uniform in shading with colour variations caused only by the natural wood grain.
- .14 Barricade areas where finishing is in progress to prevent traffic or other activities, and otherwise protect work until dry. Post "Wet Paint" signs and remove when no longer required.

Replace at the expense of this Section, porous materials soiled or damaged by finishing materials which cannot be removed.

.6 Clean-up

.1 Upon completion of the work, remove all paint and varnish spots from floors, glass and other surfaces. Remove from the premises all rubbish and accumulated materials of whatever nature not caused by others and leave this work in clean, orderly and acceptable conditions.

END OF DOCUMENT