



119 Van Order Drive, Kingston, ON K7M 1B9 ☎ Fax (613) 546-9375 ☎ Phone (613) 546-5591 www.kfhc.ca

PUBLIC TENDER

PROJECT MANUAL

THK PT 19-05

WORK: Site Improvements
Eldon Hall & Notch Hill
Kingston, ON

PRE-BID MEETING: Tuesday, August 6, 2019
11:00 a.m.
35 Eldon Hall

CLOSING: Thursday, August 15, 2019
11:00:00 a.m. Local Time
119 Van Order Drive

Contractor Name and Address:

Closing Date August 15, 2019
Time 11:00:00 a.m. Local Time
Description of Work Site Improvements
Address of Work Eldon Hall & Notch Hill Kingston, ON
Tender No. THK PT 19-05

PUBLIC TENDER BID ENVELOPE

DO NOT OPEN

Kingston & Frontenac Housing Corporation

119 Van Order Drive

KINGSTON, ON K7M 1B9

Attn: S. VanderSchoor

PLEASE PRINT THIS PAGE AND ATTACH IT TO YOUR BID SUBMISSION ENVELOPE

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NOTE:

Bidders must ensure that they receive all the contents listed above. Any omissions must be drawn to the attention of the Housing Office at least five (5) days prior to bid closing.

SPECIFICATIONS INDEX

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1.0 GENERAL

1.1 Supplementary Definitions

- .1 Whenever any of the following words or phrases are used in the Project Manual or Contract, they shall have the meanings attributed to them, as follows:
 - .1 "Owner" means Town Homes Kingston.
 - .2 The Owner's Representative is Kingston & Frontenac Housing Corporation.
 - .3 The "Owner" shall mean the Owner or the Owner's Representative.

END OF SECTION

Scott VanderSchoor
Kingston & Frontenac Housing Corporation
119 Van Order Drive
Kingston, ON K7M 1B9

Re: THK PT 19-05
Site Improvements
35 Eldon Hall & 55 Notch Hill
Kingston, Ontario

1.0 CONTRACT PRICE

.1 I/We _____
(Company Name)
having carefully examined the Bid Documents and visited the Project Site, and
having examined and complied with Section 00 10 00 – Instruction to Bidders,
hereby offer to enter into a Contract to perform the work required in the Bid
Documents for the **STIPULATED PRICE** of

Dollars (\$ _____) including payment of all applicable federal,
provincial and municipal taxes.

This Bid is firm, irrevocable and open to acceptance by the Owner for sixty
(60) days from the date of Bid closing.

.2 The following amount of HST **has been included** in the above STIPULATED
PRICE

\$ _____ **HST REGISTRATION NO.** _____.

.3 I/We agree to comply in all respects with the requirements set out in the Bid
Documents including **ADDENDA No.** _____ to **No.** _____ inclusive as issued
as supplements thereto. (If no addenda have been received, indicate 'NIL' in the
spaces provided).

.4 I/We agree to commence this work immediately upon being notified in writing to
do so by the Housing Corporation and that work will be done on a continuous
basis.

.5 I/We expressly warrant that the prices contained in my/our bid, whether as unit
prices or lump sums are quoted in utmost good faith on my/our part without any
collusive arrangement or agreement with any other person or partnership or
corporation and that I/we are not party or privy to any deceit tending to mislead
the Owner into accepting my/our bid as a truly competitive offer.

- .6 I/We agree to complete all work required, acceptable to the Owner.
- .7 I/We enclose a bid bond, certified cheque, bank draft or irrevocable letter of credit in the amount of **\$18,000.00** payable to the Owner and valid for sixty (60) days from the date of bid closing.

.8 **Tax Compliance Declaration**

I hereby certify that _____
(name of company)
at the time of submitting this bid, is in compliance with all tax statutes administered by the Ministry of Finance for Ontario and that in particular, all returns required to be filed under all provincial tax statutes have been filed and all taxes due and payable under those statutes have been paid or satisfactory arrangements for their payments have been made and maintained.

2.0 CONTRACT PRICE BREAKDOWN

Item	Spec No.	Description	Contract Price
2.1	00 21 00	Bonding	L.S. \$ _____
2.2	Div. 1	General Requirements, Mobilization, Demobilization, Special Costs etc.	L.S. \$ _____
2.3	01 74 00	Cleaning Cleaning of the site and the disposal of all waste products and/or debris generated by the construction activity as well as any material present in the work area prior to the commencement of the work..	L.S. \$ _____
2.4		Replace Paths with Concrete Removal and disposal of existing asphalt paths and reinstatement with new concrete paths including new granular as indicated.	L.S. \$ _____ Cost/sq.ft. \$ _____

-
- 2.5 Replace Paths with Hydroseed**
Removal and disposal of existing asphalt paths and reinstatement with new topsoil and hydroseed.
- L.S. \$ _____
- Cost/sq.ft. \$ _____
-
- 2.6 Guard Rails and Hand Rails**
Wholesale removal of existing railings on site and localized installation of railings as indicated.
- L.S. \$ _____
-
- 2.7 Wheelchair Ramp Replacement**
Demolition, removal and replacement of two (2) existing wheelchair ramps including all associated site work, concrete work and railing replacement.
- L.S. \$ _____
-
- 2.8 Retaining Wall Repairs**
Repair of all indicated retaining wall locations, repairs to include the supply of new precast units as required.
- L.S. \$ _____
-
- 2.9 Concrete Stair Repairs**
Localized concrete stair repairs as indicated on the drawings.
- L.S. \$ _____
-
- 2.10 Concrete Stair Replacement**
Localized concrete stair replacement as indicated on the drawings.
- L.S. \$ _____
-

2.11	Bench Replacement Removal and replacement of existing park benches including all labour and material required to cast new pads as specified.	
	Quantity – 2 @ _____ / each	L.S. \$ _____
2.12	Basketball Net Replacement Removal and replacement of existing basketball net including all related concrete and site work.	
		L.S. \$ _____
2.13	Various Plantings Localized plantings as indicated on the drawings.	
		L.S. \$ _____
2.14	All other works All other works indicated on the drawings not indicated on the items listed above.	
		L.S. \$ _____
2.15	Any additional item/ items not specified in BID FORM which are specified in the Contract which the Contractor would like to specifically designate in BID FORM. (Indicate: - Description of Work Item - Quantity (if applicable) - Unit Cost with ‘*’ - Lump Sum Cost with ‘ L.S. ’)	
.1		\$ _____
.2		\$ _____
.3		\$ _____
2.16	CONTRACT PRICE	\$ _____
2.17	H.S.T. (13%)	\$ _____
2.18	CONTRACT PRICE PLUS H.S.T.	\$ _____

3.0 SUBCONTRACTORS

- .1 We submit a complete list of subcontractors we propose to use on this Contract and the Sections of the Work to be done by them.
- .2 We reserve the right to substitute another subcontractor for the same work in the event that a subcontractor should withdraw his bid, or become bankrupt. All subcontractor substitutions are subject to the Owner's approval.
- .3 Any such substitution, in order to be considered for approval by the Owners and/or Consultant, is contingent on the submission of conclusive evidence of withdrawal, bankruptcy or unsatisfactory performance.
- .4 The Contractor is responsible for all costs incurred as a result of substituting one subcontractor for another.
- .5 **Tenders may not be considered unless the names of all subcontractors are listed in space provided.**

SECTION	TITLE	NAME OF SUBCONTRACTOR

- 2.1.1 The following is a list of the sections of The Work which we propose to execute with our own forces:

SECTION	TITLE

SECTION	TITLE

4.0 AGREEMENT TO BOND

- 3.1 Attached is our agreement to provide performance bonds as requested in Bid Documents.
- 3.2 We agree to furnish Bonds in accordance with “Section 00 10 00 – Instructions to Bidders” and the General Conditions of this contract within fourteen (14) days of Contract execution.

5.0 ACCEPTANCE

- 4.1 This Bid is irrevocably open to acceptance for a period of **sixty (60) days** from the date of bid closing and is promised in consideration of the amount of **[10% of the bid/Bid Security]** (we attach a Bid Security). Failure to enter into a contract after Owner’s acceptance of this bid shall result in forfeiture of the Bid Security.
- 4.2 We agree to enter into a contract with the Owners within five (5) days of written notification of acceptance of this Bid.
- 4.3 We understand and agree that this bid may be adjusted in accordance with any or all of the separate or additional prices submitted herewith.
- 4.4 We understand that the submission of this bid implies acceptance of the existing conditions at the site.
- 4.5 We understand that the lowest or any tender will not be necessarily be accepted and that selected items may be deleted from the Project as represented in the Bid Form.
- 4.6 We understand that the Owner reserves the right to waive minor defects or irregularities in the bid submission.
-

- 4.7 We understand that the Owner may withhold total and partial payment to cover third party liability claims as outlined in Tender Documents.
- 4.8 We agree to staff on-site activity on **or around September 3, 2019**. We agree to complete The Work by **November 1, 2019** as outlined in these specifications.
- 4.9 We understand that Contract time is of the essence and that any improvements to the schedule submitted with our bid will be considered prior to the award of the Contract. We therefore submit the following improvement to the completion date indicated in the tender package for consideration in evaluating our Bid
THK PT 19-05

6.0 BIDDER'S SIGNATURE AND COMPANY SEAL

SIGNED AND SEALED * this _____ day of _____, 2019.

Print full name

Contractor: _____

Signing Officer: _____

Address: _____

WSIB Account Number: _____

City: _____

Postal Code: _____

Telephone No: _____

Fax No.: _____

Signature: _____

Printed Signature: _____

Email Address: _____

NOTE: BIDDERS ARE ADVISED THAT FAILURE TO COMPLETE THIS FORM WILL CAUSE DISQUALIFICATION.

* Affix Corporate Seal (if applicable).

END OF SECTION

Bond No. _____ Project No. _____

Amount \$ _____

Know All Men By These Presents, that _____

As Principal, hereinafter called the Principal, and _____

as Surety, hereinafter called the Surety, are held and firmly bound unto Kingston & Frontenac Housing Corporation as Oblige, in the amount of _____

_____ Dollars (\$ _____)
lawful money of Canada, for the payment of which sum, well and truly to be made, the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas, the Principal has submitted a written proposal, (or tender) to the Oblige dated the _____ day of _____, _____, for _____

Now Therefore The Condition Of This Obligation in such that if the aforesaid Principal shall have the tender accepted within sixty (60) days from the closing date of the Call for Tenders and the said Principal will, within such reasonable time as may be allowed after notice of such acceptance, enter into a formal contract and give a good and sufficient bond to secure the performance of the terms and conditions of the contract, then this obligation shall be null and void; otherwise the Principal and Surety will pay unto the Oblige the difference in money between the amount of the bid of the said Principal and amount for which the Oblige legally contracts with another party to perform the work if the latter amount be in excess of the former.

The Surety shall not be liable for a greater sum than the specified penalty of this Bond. Any suit under this Bond must be instituted before the expiration of six months from the date of this Bond.

The Testimony Whereof, the Principal has hereunto set its had and affixed its seal, and the Surety has caused these presents to be sealed with its corporate seal duly attested by the signatures of its duly authorized officers, this _____ day of _____, A.D. _____.

Signed, Sealed and Delivered

in the Presence of:

Principal

Surety

END OF SECTION

No. (the “**Bond**”) Bond Amount \$

.....
(name of the contractor*)

as a principal, hereinafter [collectively] called the “**Contractor**”, and

.....
(name of the surety company**)

.....
a corporation created and existing under the laws of

.....
(place of incorporation)

as a surety, and duly authorized to transact the business of Suretyship in the Province of Ontario and hereinafter called the “**Surety**”, are held and firmly bound unto ...Town Homes Kingston as obligee, hereinafter called the “**Owner**”, in the amount of

\$

.....
(Bond Amount in figures)

hereinafter called the “**Bond Amount**”, for the payment of which sum the Contractor and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally in accordance with the provisions of this Bond (the “**Obligation**”).

WHEREAS the Contractor has entered into a written contract with the Owner dated the

..... day of in the year for
(name of month) (title or description of the contract)

(the “**Original Contract**”) and, for the purpose of specifying the conditions of the Obligation, this contract together with amendments made in accordance with its terms are by reference made part hereof and are hereinafter referred to collectively as the “**Contract**”;

NOW THEREFORE the condition of this Obligation is such that if the Contractor shall promptly and faithfully perform the Contract then this Obligation shall be null and void; otherwise it shall remain in full force and effect, subject to the following terms and conditions:

1.0 WRITTEN NOTICE

- .1 The Owner may make a written demand on the Surety in accordance with this Bond, by giving notice to the Surety substantially in the form Schedule A (the “**Notice**”), shared when necessary. Except for a Pre-Notice Meeting in accordance with Section 2.1, the Surety shall have no obligation under this Bond until it receives a Notice.

.2 Where the Surety includes two or more companies, the Notice may be delivered to the first listed Surety on behalf of all Sureties. The first listed Surety is hereby authorized to respond to the Notice on behalf of the Sureties, and the Owner is not required to give separate Notice to each Surety and is entitled to correspond with the first listed Surety on behalf of all Sureties.

2.0 PRE-NOTICE MEETING

- .1 The Owner may, at its sole discretion and acting reasonably, request a pre-Notice conference by notifying the Surety and the Contractor in writing that it is considering declaring the Contractor to be in default under the Contract (the "Pre-Notice Meeting"). This notice and request for a Pre-Notice Meeting by the Owner does not constitute a Notice under this Bond, nor under the Contract, nor is it a precondition to the giving of a Notice. Upon receipt of such request the Surety shall propose a face-to-face meeting, a telephone conference call or a meeting by any other form of electronic media between the Contractor, the Owner and the Surety to take place at a time and place mutually convenient for all parties within seven (7) business days (or such longer time as agreed by all parties) after the Surety's receipt of the Owner's request for a Pre-Notice Meeting in accordance with this Section. The Owner, the Contractor and the Surety shall make reasonable efforts to arrange and attend the Pre-Notice Meeting. In the event that the Owner delivers a Notice prior to the Pre-Notice Meeting, then the Pre-Notice is deemed to be retracted.
- .2 The purpose of a Pre-Notice Meeting is to allow the Owner, prior to exercising its other rights under this Bond, to express any concerns about the Contractor's performance pursuant to the Contract and to allow the Contractor to respond to such concerns. The participation of the parties in one or more Pre-Notice Meetings shall be without prejudice to their respective rights and obligations under the Contract, this Bond or applicable law, and neither the participation by any party in any Pre-Notice Meeting, nor any statement or position taken or information provided by any party during any Pre-Notice Meeting, may be relied on by any other party as a waiver or compromise of the rights or obligations of the Owner, the Surety or the Contractor under the Contract, this Bond or applicable law; including, but not limited to the Owner's right to declare the Contractor in default under the Contract and give Notice under this Bond.

3.0 SURETY'S INVESTIGATION AND RESPONSE

- .1 Upon receipt of a Notice from the Owner, the Surety shall promptly initiate an investigation of the Notice (the "**Investigation**"), using its best efforts, to determine if the Conditions Precedent have been satisfied and to determine its liability, if any, under the Bond.

-
- .2 Within the four (4) business days following receipt of the Notice, the Surety shall provide the Owner with an acknowledgement, substantially in the form set out as Schedule B (the “**Acknowledgement**”), identifying the date on which the Notice was received and requesting from the Owner the information and documentation (the “**Information**”) the Surety requires to continue the Investigation and, if necessary, request access to personnel who are knowledgeable about the circumstances of the Notice and to the Contract work site(s) where the work is being performed. Upon receipt of the Surety’s Acknowledgement, the Owner shall promptly, and in accordance with terms of the Contract, provide the Surety with the requested Information and access to personnel and the work site(s) within its possession or control.
- .3 The Surety shall within a reasonable time conduct the Investigation, but in any event no later than twenty (20) business days after receipt by the Surety of a Notice (or such longer period as may be agreed between the Surety and Owner), the Surety shall provide the Owner with its written response to the Notice, substantially in the form set out at Schedule C (the “**Surety’s Position**”), advising either that:
- a) The Surety accepts liability under the Bond and proposes to satisfy its Obligation by performing one of the options set out in Section 6.1; or
 - b) The Surety does not accept liability, providing its specific reasons; or
 - c) The Surety is unable to determine whether or not one or more of the Conditions Precedent has been satisfied and, in the Surety’s sole discretion, the Surety may propose a process for collaborating with the Owner in the advancement of the completion of the work so as to attempt to mitigate the Owner’s cost to complete the Contract.
- .4 The Surety shall also, if requested by the Owner to do so, meet with the Owner to discuss the status of the Investigation within five days following receipt of the request. This meeting may take place via a face-to-face meeting, a telephone conference call or a meeting by any other form of electronic media as may be mutually agreed to by the Owner and Surety.

4.0 NECESSARY INTERIM WORK

- .1 Prior to and during the Investigation, if the Owner must take action which is necessary to:
- d) ensure public or worker safety,
 - e) preserve or protect the work under the Contract from deterioration or damage, or
 - f) comply with applicable law,
-

The Owner may, acting with due diligence and provided written notice is subsequently provided to the Surety within three (3) Business Days of the commencement of such Necessary Interim Work provided that:

- i. Owner shall allow the Surety and/or its consultant(s) reasonable access to the Contract work site(s) during the course of the Necessary Interim Work for the purpose of monitoring the progress of the Necessary Interim Work;
 - ii. any such Necessary Interim Work shall be undertaken without prejudice to the rights of the Owner, the Contractor or the Surety under the Contract, this Bond or applicable law; and
 - iii. the reasonable costs incurred by the Owner in undertaking such Necessary Interim Work (to the extent they are not deducted in the calculation of the Balance of Contract Price in Section 9.1) shall be reimbursed by the Surety, subject to the Surety's liability being subsequently established and subject to such expenses being covered by this Bond. Any payments made by the Surety in respect of the Necessary Interim Work shall reduce the Bond Amount by the amount of any such payments.
- .2 Nothing in this section is intended to limit the ability of an Owner to take whatever steps are reasonably necessary in the public interest.
- .3 Subject to the foregoing provisions in Section 4.1, the Surety shall not raise the mere fact that the Necessary Interim Work proceeded as a defence to any claim by the Owner hereunder.

5.0 POST-NOTICE CONFERENCE

- .1 Upon receipt of a Notice, the Surety shall propose a face-to-face meeting, telephone conference call or a meeting by any other form of electronic media (a **"Post-Notice Conference"**) with the Owner at a mutually convenient time and place within five (5) business days (or such longer period as may be agreed between the Surety and Owner). The Contractor may participate in a Post-Notice Conference at the invitation of the Surety.
- .2 The purpose of the Post-Notice Conference shall be to determine what actions or work, if any, the Owner believes must be done while the Surety is conducting the Investigation in order to effectively mitigate the costs for which the Owner is seeking recovery under this Bond (the **"Mitigation Work"**). Mitigation Work may be performed after Necessary Interim Work and throughout the period of investigation by the Surety.

-
- .3 Provided the Owner provides reasonable evidence to the Surety that Mitigation Work is necessary during the Investigation and that the anticipated costs are reasonable, the Owner may proceed with the Mitigation Work subject to the following conditions:
- a) Owner shall pay the reasonable costs of the Mitigation Work;
 - b) Owner shall keep separate records of all amounts related to the Mitigation Work for which it intends to seek recovery under this Bond, including amounts to be set off against the Balance of Contract Price;
 - c) Owner shall allow the Surety and/or its consultant(s) reasonable access to the Contract work site(s) during the course of the Mitigation Work for the purpose of monitoring the progress of the Mitigation Work; and
 - d) the Mitigation Work shall be without prejudice to the rights or obligations of the Owner, the Contractor or the Surety under the Contract, this Bond or applicable law.
- .4 If the Surety objects to any part of the Mitigation Work, including without limitation the Owner's proposed Mitigation Work contractor(s), scope of work, cost or method of work, it shall immediately advise the Owner in writing of its objections and the reasons therefor. The Owner may still proceed with the Mitigation Work and the Surety's objections will be addressed through negotiation with the Owner or at the trial of any action brought pursuant to this Bond.
- .5 The reasonable costs incurred by the Owner in undertaking the Mitigation Work shall be reimbursed by the Surety, subject to the Surety's liability being subsequently established. Any payments made by the Surety in respect of the Mitigation Work shall form part of its Obligation under this Bond and shall reduce the Bond Amount by the amount of any such payments.
- .6 For greater clarity, any Necessary Interim Work being performed by the Owner pursuant to Section 4 may continue to be performed pending an agreement, if any, as to the Mitigation Work.
- .7 Subject to the foregoing provisions in this Section 5, the Surety shall not raise the mere fact that the Mitigation Work proceeded as a defence to any claim by the Owner hereunder.

6.0 SURETY'S OPTIONS

- .1 If the Surety has accepted liability pursuant to this Bond, the Surety shall promptly select and commence one of the following options:
- a) remedy the default; or
 - b) complete the Contract in accordance with its terms and conditions; or
-

- c) obtain a bid or bids for submission to the Owner for completing the Contract in accordance with its terms and conditions and, upon determination by the Owner and the Surety of the lowest responsible bidder:
 - i. arrange for a contract between such bidder and the Owner; and
 - ii. make available as work progresses (even if there should be a default, or a succession of defaults, under the contract or contracts of completion, arranged under this paragraph) sufficient funds to complete the Contractor's obligations in accordance with the terms and condition of the Contract including any applicable value-added taxes for which the Surety may be liable, less the Balance of Contract Price; or
 - d) pay the Owner the lesser of: (1) the Bond Amount, or (2) without duplication, the Owner's Direct Expenses plus the Owner's proposed cost of completion of the Contract and any applicable value-added taxes for which the Surety may be liable, less the Balance of Contract Price.
- .2 The option selected by the Surety is referred to in this Bond and the Schedules as the **"Surety Option"**.

7.0 OWNER'S DIRECT EXPENSES

- .1 Where the Surety is liable under this Bond, then the Surety shall be liable for the following fees and expenses, without duplication (the **"Owner's Direct Expenses"**):
- a) reasonable professional fees incurred by the Owner to complete the Contract which are a direct result of the Contractor's default and which would not have been incurred but for the default of the Contractor;
 - b) reasonable external legal fees incurred by the Owner to complete the Contract, which are a direct result of the Contractor's default and which would not have been incurred but for the default of the Contractor, with the exception of legal fees incurred by the Owner in defending a claim or action by the Contractor, or incurred by the Owner in pursuing an action against the Contractor;
 - c) reasonable, miscellaneous and out-of-pocket expenses incurred by the Owner to complete the Contract which are a direct result of the default of the Contractor and which would not have been incurred but for the default of the Contractor;
 - d) direct costs incurred as a result of an extension of the duration of the supply of services or materials used or reasonably required for use in the performance of the Contract, which are a direct result of the default of the Contractor and which would not have been incurred but for the default of the Contractor;

- e) reasonable costs of the Necessary Interim Work;
 - f) reasonable costs of the Mitigation Work; and
 - g) any additional fees and expenses agreed to by the Obligee, the Principal and the Surety.
- .2 For the purpose of Section 7.1(d), the “direct costs” incurred are the reasonable costs of performing the Contract during the extended period of time, 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, but for the extension, would not have been incurred.
- .3 Subject to any agreement to the contrary, between the Obligee, the Principal and the Surety, the Surety shall not be liable under this Bond for:
- a) any liquidated damages under the Contract;
 - b) if no liquidated damages are specified in the Contract, any damages caused by delayed performance or non-performance of the Contractor, except as provided in Section 7.1(d); or
 - c) any indirect or consequential damages, including but not limited to costs of financing, extended financing, hedging arrangements, loss of or deferral of profit, productivity or opportunity, or head office overhead costs.
- .4 If the Surety is liable under this Bond then, at the Owner’s option, Owner’s Direct Expenses may be deducted by the Owner from the Balance of the Contract Price as defined hereinafter or will be promptly reimbursed by the Surety subject to the other terms, conditions and limitations of this Bond and will reduce the Bond Amount.

8.0 CONDITIONS PRECEDENT

- .1 The Surety shall have no liability or Obligations under this Bond unless all of the following conditions precedent (the “**Conditions Precedent**”) have been satisfied:
- a) The Contractor is, and is declared by the Owner to be, in default under the Contract;
 - b) The Owner has given such notice to the Contractor of a default of the Contractor, as may be required under the terms of the Contract;
 - c) The Owner has performed the Owner’s obligations under the Contract; and
 - d) The Owner has agreed to pay the Balance of Contract Price to the Surety or as directed by the Surety.

9.0 BALANCE OF CONTRACT PRICE

- .1 The term “**Balance of Contract Price**” means the total amount payable by the Owner to the Contractor under the Contract, including any adjustments to the price in accordance with the terms and conditions of the Contract, or other amounts to which the Contractor is entitled, reduced by any amounts deducted by the Owner for the Owner’s Direct Expenses under Section 7.4 and all valid and proper payments made to or on behalf of the Contractor under the Contract.
- .2 The Balance of Contract Price shall be used by the Owner to first mitigate against any potential loss to the Surety under this Bond and then under the Labour & Material Payment Bond, when necessary, and the Owner shall assert all rights and remedies available to the Owner to the Balance of Contract Price and make payment of the Balance of Contract Price as directed by the Surety.

10.0 LIMITATIONS ON THE SURETY’S LIABILITY

- .1 Notwithstanding anything to the contrary contained in this Bond or in the Contract, the Surety shall not be liable for a greater sum than the Bond Amount under any circumstances.
- .2 The Surety’s responsibility to the Owner under this Bond in respect of any Surety Option or Owner’s Direct Expenses shall not be greater than that of the Contractor under the Contract.

11.0 RIGHT OF ACTION

- .1 No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Owner named herein, or the heirs, executors, administrators or successors of the Owner.

12.0 COMMENCEMENT OF ACTION

- .1 It is a condition of this Bond that any suit or action must be commenced before the expiration of two (2) years from the earlier of: (a) the date of substantial performance of the Contract as defined under the *Construction Act* (the “**Act**”); or (b) the date on which a Notice in respect of the default that is the subject of such suit or action is received by the Surety under this Bond.
 - .2 The Owner, the Contractor and the Surety agree that any suit or action is to be made to a court of competent jurisdiction in Ontario and agree to submit to the jurisdiction of such court notwithstanding any terms to the contrary in the Contract.
-

13.0 COMMON LAW RIGHTS

- .1 The rights and obligations of the Owner, the Contractor, and the Surety under this Bond are in addition to their respective rights and obligations at common law and in equity.

14.0 APPLICABLE LAW

- .1 This Bond is governed by the laws of the Province of Ontario.

15.0 NOTICES

- .1 All notices under this Bond shall be delivered by registered mail, facsimile, or electronic mail at the addresses set out below, subject to any change of address in accordance with this Section. Any notice given by facsimile or electronic mail shall be deemed to have been received on the next business day or, if later, on the date actually received if the person to whom the notice was given establishes that he or she did not, acting in good faith, receive the notice until that later date. Any notice given by registered mail shall be deemed to have been received five (5) days after the date on which it was mailed, exclusive of Saturdays and holidays or, if later, on the date actually received if the person to whom the notice was mailed establishes that he or she did not, acting in good faith, receive the notice until that later date. A change of address for the Surety is publicly available on the Financial Services Commission of Ontario website (see: https://www5.fSCO.gov.on.ca/Licensing/LicClass/eng/lic_companies_class.aspx). The address for the Owner or the Contractor may be changed by giving notice to the other parties setting out the new address in accordance with this Section.

The Surety:

[Surety corporate name]
[address]
[address]
[fax]
[email]

The Owner:

Town Homes Kingston
610 Montreal
Kingston, ON K7K 3J2
F 613-546-9375
c/o svanderschoor@kfhc.ca

The Contractor:

[Contractor corporate name]
[address]
[address]
[fax]
[email]

16.0 HEADINGS FOR REFERENCE ONLY

- .1 The headings and references to them in this Bond are for convenience only, shall not constitute a part of this Bond, and shall not be taken into consideration in the interpretation of this Bond.

IN WITNESS WHEREOF, the Contractor and the Surety have Signed and Sealed this Bond this day of in the year

[Contractor proper name]

Witnessed by :

By:

Name:

Title:

Name of Witness:

Address of Witness:

I have authority to bind the corporation.

[Surety corporate name]

By:

By:

Name:

Name:

Attorney-in-fact:

Attorney-in-fact:

* IF THERE ARE TWO OR MORE COMPANIES IN PARTNERSHIP OR JOINT VENTURE, JOINTLY AND SEVERALLY BOUND, INSERT THE NAME OF EACH PARTNER OR JOINT VENTURE PARTY, AND INSERT THE WORD "COLLECTIVELY" AFTER THE WORD "HEREINAFTER" IN THE FIRST LINE.

** IF THERE ARE TWO OR MORE SURETY COMPANIES, JOINTLY AND SEVERALLY BOUND, INSERT THE "[Name of the surety company], a corporation created and existing under the laws of [Place of incorporation]," FOR EACH SURETY, FOLLOWED BY "each as a surety and each duly authorized to transact the business of Suretyship in the Province of Ontario and hereinafter collectively called the "Surety".

*** INSERT THE CROWN, A MUNICIPALITY OR A BROADER PUBLIC SECTOR ORGANIZATION, AS APPLICABLE, OR SUCH OTHER PARTY DEEMED TO BE THE OWNER UNDER THE ACT, AND ENTERING INTO THE PUBLIC CONTRACT WITH THE CONTRACTOR.

This document is FORM 32 PERFORMANCE BOND UNDER SECTION 85.1 OF THE ACT, The "Construction Act of Ontario" as created by the Province of Ontario and provided to Kingston & Frontenac Housing Corporation by Surety Association of Canada May 11, 2018.

END OF SECTION

1.0 GENERAL

1.1 Definitions

- .1 "Owner" means Kingston & Frontenac Housing Corporation.

1.2 Instructions

- .1 Before submitting a bid, Bidders shall:
- .1 Examine and read the Bid Documents thoroughly.
 - .2 Examine the site and ascertain the extent and nature of all conditions, limitations, or building regulations affecting the performance of the Work. The site is open and available for review by the Bidders during normal business hours. Coordinate site access through the Manager of Technical Services. All dimensions are to be confirmed by on-site measurement by the Bidder.
 - .3 Confirm all utility services in the vicinity of the Work that will require protection and maintenance during the course of the Work.
 - .4 Consider the effect of regulatory requirements applicable to the Work.
 - .5 Study and correlate Bidder's observations with the Bid Documents.
 - .6 Immediately notify the Owner of all perceived omissions and discovered conflicts, errors and discrepancies in the Bid Documents.
 - .7 Be satisfied that Bidder understands the Bid Documents and is competent to undertake and complete the Work.
- .2 Bid shall include cost of all permits required (excluding the building permit), royalties, freight, government duties and taxes where applicable.
- .3 The Owner will obtain and pay for the Municipal Building Permit when required by the Ontario Building Code.
- .4 In the event of any change in any applicable tax made public after the date of tender closing, the Contract Price shall be adjusted by an amount equal to the increase or decrease in the cost of the Work to the Contractor brought about by the change in such tax.
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- .5 The Owner reserves the right to add or delete items to be performed under this Contract before and after the Contract is awarded without any penalty. Any revisions to the submitted Contract Price as a result of these deletions are to be solely based on the unit prices (or lump sum prices) quoted by the Bidder for those items.
 - .6 The Bidder shall not engage in collusion of any sort and, in particular, shall ensure that no person or other legal entity other than the Bidder has an interest in the Bidder's bid. The bidder shall prepare the bid without any knowledge of, comparison of figures with, or arrangement with any other person or firm preparing a bid for the same work.
 - .7 It is the Bidder's responsibility to provide all labour, material, equipment and supervision to complete the repairs outlined in these Bid Documents taking into account all site conditions, schedule and noise restrictions, work area restrictions, protection requirements, accessibility restrictions, etc. No extras will be entertained for inconveniences after award of the Contract.
 - .8 Bidder shall read the Bid Documents in their entirety prior to bidding in order to be aware of all project requirements.
 - .9 If the Bidder is a joint venture, each party to the venture must execute the bid under seal in the manner appropriate to such party.

1.3 Form of Contract

- .1 The Owner will issue an Award Letter which shall be the basis for acceptance of the Bid by the Owner and Award of the Contract to the Contractor. The Award Letter will describe information required by the Owner; namely, Performance Security and Insurance Certificate requirements.
- .2 Upon receipt of the documents outlined in the Award Letter, a Purchase Order or Contract Order, as amended by the General Conditions, will be raised by the Owner and issued to the Contractor.

1.4 Employment Equity

- .1 In accordance with the employment equity goals, the Owner encourages bidders to take an active role in supporting and facilitating opportunities for employment equity designated groups.

1.5 Site

- .1 The Work is to be performed at **35 Eldon Hall and 55 Notch Hill, Kingston, Ontario.**

1.6 Owner and Owner's Representative

- .1 The Owner is: Kingston & Frontenac Housing Corporation
119 Van Order Drive
Kingston, ON
K7M 1B9
- .2 The Owner's Representative is: Scott VanderSchoor
Manager of Technical Services
Tel: 613-546-5591 ext. 1560
Email: svanderschoor@kfhc.ca
- .4 Any questions during the Bid Period shall be directed to the office of the **Owner's Representative.**
- .5 Addenda will be issued in all cases where questions result in changes or clarification to BID DOCUMENTS.

1.7 Consultant

- .1 The Consultant is: John Adams, Engineering Intern
Read Jones Christoffersen Ltd.
780 Midpark Drive, Suite 103
Kingston, ON K7M 7P6
Tel: (343) 344-0103
Email: jadams@rjc.ca

1.8 Pre-Bid Closing Site Meeting

- .1 A **NON-MANDATORY** pre-bid closing site inspection and meeting will be held on site at **11:00 a.m.** on **Tuesday, August 6, 2019** for the benefit of all Bidders. Bidders should meet at **35 Eldon Hall, Kingston, Ontario.**

1.9 Examination of Site

- .1 The onus shall be on the Bidder to investigate the Project Site and inform themselves before bidding of all physical and labour conditions and administrative practices prevailing at the project site.
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- .2 The Bidder shall not claim at any time after the submission of their bid any misunderstanding of the terms and conditions of the Contract relating to the site conditions.
- .3 The Bidder shall make allowances as required for the installation of temporary services (heating and ventilators, etc.) into and out of the work area. No extra for this item will be entertained after bids have closed.

1.10 Bid Submission

- .1 Completed Bid Forms together with the required bid security, consents of surety and all supplementary bid submission material shall be delivered to the office of the Owner in a sealed envelope no later than **11:00:00 a.m. on Thursday, August 15, 2019** and addressed as follows:

Confidential: **Bid Submission**
Bid For: **Kingston & Frontenac Housing Corporation**
 119 Van Order Drive
 Kingston, ON
 K7M 1B9

Attention: **Scott VanderSchoor**
 Manager of Technical Services

Tender Number: **THK 19-05**
Tender Description: **Site Improvements**

- .2 Bidder's name shall be typed on the reverse side of the envelope.
- .3 Bids will be opened publically at the office of the **Owner's Representative.**
- .4 Using the Bid Form provided, the bid shall be filled out in ink or typed, signed in longhand by a duly authorized company official, and sealed with the Bidder's corporate seal.
- .5 The Bid Form shall not be altered and all spaces for information will be completed.
- .6 The **Owner** may, after bid closing time and before Contract award, require any Bidder to submit, in a form prescribed by or acceptable to the Owner, supplementary information about any aspect of the Bidder's bid that, in the Owner's opinion, is necessary for bid evaluation purposes.
- .7 Failure to fulfil the requirements of the Bid Documents will result in disqualification at the sole discretion of the Owner.

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- .8 Offers submitted after the specified time will be returned to the bidder unopened.
 - .9 Verbal or electronically submitted information will not be accepted as part of the bid documents.
 - .10 Bidders must not submit the entire tender specification documents with their bid submission forms.

1.11 Bonding Requirements

- .1 A bid deposit in the form of a certified cheque or bid bond made payable to the Owner in the amount of \$18,000.00, shall accompany all bids.
- .2 A Bidder who has already submitted a bid may submit a further bid at any time up to the official closing time. The last bid that is received shall supersede and invalidate all previously submitted bids by that Bidder for this Contract.
- .3 All bonds shall name the Owner as obligee.
- .4 The amount must be as stipulated and valid for a period of sixty (60) days from the date of Bid Closing.
- .5 The cost of bonds is to be included in the bid lump sum prices.

1.12 Sufficiency of Bid

- .1 The submission of a bid shall constitute an incontrovertible representation by the Bidder that:
 - .1 The Bidder has complied with all bid requirements.
 - .2 The Bidder is qualified and experienced to perform the Work in accordance with the Bid Documents.
 - .3 The bid is based upon performing the Work in accordance with the Bid Documents, without exception.
 - .4 The price or prices stated in the bid cover all the Bidder's obligations under the Contract and all matters and things necessary for the performance of the Work in accordance with the Bid Documents.
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1.13 Bid Irregularities

- .1 At the discretion of the Owner, bids that are unsigned, improperly signed or sealed, conditional, illegible, obscure, contain arithmetical errors, erasures, alterations or irregularities of any kind may be accepted or declared informal.
- .2 At the discretion of the Owner, bids that fail to include or to comply with bid security, bonding or insurance requirements may be accepted or declared informal.
- .3 Informal bids may or may not be considered at the sole discretion of the Owner.
- .4 The Owner may accept or waive a minor and inconsequential irregularity, or where practicable to do so, the Owner may, as a condition of bid acceptance, request a Bidder to correct a minor and inconsequential irregularity with no change in bid price.
- .5 The determination of what is, or is not, a minor and inconsequential irregularity, the determination of whether to accept, waive, or require correction of an irregularity, and the final determination of the validity of a bid, shall be at the Owner's sole discretion.
- .6 Discrepancies between words and figures will be resolved in favour of words.

1.14 Bid Withdrawal and Acceptance

- .1 The Owner reserves the right to reject any or all bids as the interests of the Owner may require, without stating reasons therefore, and the lowest or any bid will not necessarily be accepted.
 - .2 A Bidder who has already submitted a bid may submit a further bid at any time up to the official closing time. The last bid that is received shall supersede and invalidate all previously submitted bids by that Bidder for this Contract.
 - .3 A bid may be withdrawn at any time before the bid closing time, provided the request is in the form of a letter received at the office of the Owner before the bid closing time.
 - .4 Withdrawn bids may be resubmitted in accordance with these bidding requirements providing the resubmitted bid is received at the office of the Owner before the bid closing time.
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- .5 A bid may not be withdrawn at or after bid closing time and shall be open to acceptance by the Owner until whichever of the following occurs first:
- .1 Another Bidder has entered into a Contract with the Owner for performance of the Work.
 - .2 Sixty (60) days after the bid closing time.
- .6 The sixty (60) day acceptance period shall commence at midnight at the date of bid closing and shall terminate at midnight of the sixtieth (60th) day thereafter. If the sixtieth (60th) day falls on a statutory holiday, such day(s) shall be omitted from the computation.
- .7 The sixty (60) day acceptance period may be extended at the Owner's request and subject to the Bidder's written agreement to the extension.
- .8 If a Bidder withdraws his Bid after the Bid closing or if the Bidder does not provide Performance Security, Certificate of Liability Insurance or any other document required; the Owner may retain the Bid Security for its use.
- .9 In the case of an error in addition, the number shown in 1.1 of the Contract Price of the Section - Bid Form, shall be deemed to be the total bid price regardless of any other amount submitted by the Bidder.
- .10 Evaluation of Bid
- In evaluating the bids, the Owner may consider any criteria, with such consideration to be exercised by the Owner in its sole discretion, including the following:
- .1 The Contract Price as determined from the base bid or from the alternate bid.
 - .2 The Owner's authorized budget for the Work.
 - .3 The Contract Time.
 - .4 The Bidder's ability to effectively manage and perform the Work and work with other subcontractors.
 - .5 The Bidder's understanding of the Work.
 - .6 The Bidder's Unit Prices, Allowances, and Separate Prices, if applicable.
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- .7 The Bidder's ability to present cost saving opportunities that may be appropriate and acceptable to the Consultant and the Owner.
 - .8 The Bidder's experience, competence and past performance in undertaking work similar to the Work, as well as that of its subcontractors.
 - .9 The Bidder's financial strength and capability.
 - .10 The experience, qualifications and abilities of the Bidder's supervisory personnel.
 - .11 Aesthetic changes resulting from the Bidder's proposed approach to the Work.
 - .12 Other criteria which the Owner, in its sole discretion, may consider appropriate to its evaluation.
- .11 Acceptance of Bid
- .1 The lowest or any bid need not be accepted by the Owner. The Owner reserves the right to accept or reject any or all bids at their sole discretion on any basis at any time without further explanation or to accept any bids considered advantageous to the Owner.
 - .2 The Bidder acknowledges and agrees that the Owner will not be responsible for any costs, expenses, losses, damages or liabilities incurred by the Bidder as a result of or arising out of submitting a bid for the proposed Contract, or due to the Owner's acceptance or non-acceptance of their bid.
 - .3 The Owner may also elect not to proceed with the Project.
 - .4 Where all other factors are equal, lowest price shall govern. Where all factors are equal, including price, the Buyer shall select the successful Vendor based on a coin toss, which shall be conducted in the presence of the tied Prospective Vendors should they wish to attend. Award shall then be made to the winner of the coin toss.
 - .5 In the event that three or more tied or identical Bids remain following evaluation, the Buyer shall select the successful Vendor based on a lottery draw, which shall be conducted in the presence of the tied Prospective Vendors should they wish to attend. The Award shall then be made to the winner of the lottery.
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1.15 Canadian Content

- .1 The Owner reserves the right to give preference to materials, products and equipment of Canadian origin and manufacture.

1.16 Addenda

- .1 Direct all questions in writing to the Owner.
- .2 Answers to queries are only binding when confirmed by written Addenda.
- .3 Clarifications requested by Bidders must be submitted in writing to the Owner no less than four (4) days before the date set for receipt of the bids. Any reply will be in the form of an Addendum, a copy of which will be forwarded to known Bidders no less than two (2) days before the date set for receipt of the bids.
- .4 Addenda may be issued by the Owner during the bid period. Any Addenda will be delivered by the Owner via e-mail or courier to all parties recorded by the Owner as having received the Bid Documents.
- .5 All Addenda become part of the Bid and Contract Documents and the costs arising from any Addenda are to be included in the bid price.
- .6 Each Bidder shall ascertain before bid submission that all Addenda issued by the Owner have been received and the Bidder shall indicate in the Bid Form the addendum number(s) of all Addendum received.

1.17 Construction Schedule

- .1 Refer to schedule requirements outlined in Section 01 10 01 – General Requirements.
- .2 The Contractor will complete the work within the time specified in Section 01 10 01 – General Requirements 1.2.1.
- .3 TIME IS OF THE ESSENCE OF THE CONTRACT.

1.18 Qualifications

- .1 Persons of Bidders submitting bids for this Project shall be actively engaged and experienced in the type of work required by these Bid Documents and the Bidder shall provide, on request, a statement of similar work performed by those persons.

END OF SECTION

1.0 GENERAL

1.1 Definitions

- .1 Whenever any of the following words or phrases are used in the contract, they shall have the meanings attributed to them, as follows:
 - .1 "Bid" means any bid, tender or offer submitted by a bidder pursuant to the Instructions to Bidders.
 - .2 "Owner" means Kingston & Frontenac Housing Corporation.
 - .3 "Contractor" means the person, firm or corporation identified on the Contract Order responsible for the work of this contract.
 - .4 "Contract Price" means the total price including tax the Owner has agreed to pay the Contractor for the work stipulated in the Contract, and in any event shall not exceed the amount specified in the Purchase Order.
 - .6 "Business Day" means any day except a Saturday, Sunday or statutory holiday.
 - .7 "Building Code" means the Ontario Building Code (latest edition).
 - .8 "As detailed" means as shown on the drawings.
 - .9 "As specified" means as specified herein.
 - .10 "Provide" means supply and install.
 - .11 "Controlled" has the same meaning as in subsection 1 (5) of the Business Corporation Act.

1.2 Precedence of Documents and Interpretation

- .1 Whenever the words "shall" or "will" are used in the Contract, they have the meanings attributed to them in the Interpretation Act of Ontario.
- .2 Whenever words which have well known technical or trade meanings are used in the Contract, they are used in accordance with such recognized meanings.
- .3 The documents forming the Contract are complementary, and what is required by any one shall be as binding as if required by all.

The following documents all form part of the Contract:

- Instructions to Bidders
- Supplementary Conditions, if applicable
- General Conditions
- Bid Form
- Specifications with Appendices and Addenda
- Schedules
- Drawings
- Award Letter
- Purchase Order
- Contract Order

.4 In the event of conflict between documents, the following priorities shall apply:

- Documents of later date shall govern;
- Supplementary Conditions shall govern over General Conditions;
- General Conditions shall govern over Specifications;
- Specifications shall govern over Drawings;
- Figured dimensions shown on the Drawings shall govern even though they may differ from scaled dimensions.
- Drawings of larger scale shall govern over those of smaller scale of the same date.

1.3 Performance Security

.1 The Contractor shall provide performance security in favour of the Owner in order to secure the due and faithful performance of the contract. Such performance security will be as follows:

- .1 A Performance Bond issued by a Surety Company acceptable to the Owner in an amount equal to 50% of the Contract Price including tax.
 - .2 If the Contract Price including tax is less than \$1,000,000, the bond alternative forms of security must be equivalent to **20%** of the Contract Price. In each case, the following alternate forms of security are acceptable:
 - .1 an irrevocable letter of credit, bank draft, or certified cheque; or
 - .2 bearer or negotiable bonds of Dominion of Canada, Province of Ontario, or the Ontario Hydro Electric Power Commission (bonds to be assessed at market not face value); or
 - .3 such other collateral, excluding a letter of guarantee, as may be acceptable to the Owner.
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- .4 For contracts under \$100,000 in value, the alternate forms of security are reduced to 10% of the contract amount.
 - .2 If the Contractor fails to meet these requirements within the time stipulated by the award letter, the Owner retains the right to terminate the contract and use the bid security towards damages.
 - .3 Where security is in the form of a Performance Bond, the document will be retained by the Owner for a period of two (2) years from the date of substantial completion, after which it will be returned to the Contractor.
 - .4 Where alternate security is provided, it will be returned to the Contractor ninety (90) days after completion of the work and correction of all deficiencies.
 - .5 Where deficiencies involve seasonal work which must be postponed, sufficient funds will be retained from the contract amount to cover the cost of completing such deficiencies and the Performance Security returned to the Contractor. Where contract funds are not available, the Performance Security may be reduced to the amount required to cover the correction of the deficiencies and the balance of the security returned to the Contractor.

1.4 Insurance

- .1 Contractor must keep in force for the duration of the contract Public Liability and Property Damage Insurance in an amount not less than \$2,000,000. Without limiting the foregoing, such Insurance Coverage shall include Comprehensive General Liability; Contractual Liability; Personal Injury; and Contingent Liability with respect to Sub-Contractors. Submit proof of same in the form of an Insurance Certificate which lists Kingston & Frontenac Housing Corporation as an additional insured but only with respect to the operations of the named insured. Such Insurance Certificate must contain a firm undertaking to give the Owner thirty (30) days notice prior to any cancellation.
- .2 If the Contractor fails to meet the requirements of this item within the time stipulated by the award letter, the Owner retains the right to terminate the contract and use the Bid Security toward damages.

1.5 Workplace Safety & Insurance Board (WSIB)

- .1 Contractor will submit, evidence of compliance with all of the requirements of the Workplace Safety & Insurance Board (WSIB) of Ontario, including payments due thereunder. Such evidence must be furnished to the Owner before final payment is made.

1.6 Assignment of Contract or Proceeds of Contract

- .1 Contractor acknowledges that neither the Contract nor the proceeds thereof may be assigned without the written consent of the Owner.
- .2 Any contract entered into is binding upon the parties, their heirs and successors, and permitted assigns.
3. The contract cannot be assigned by the Contractor to any third party without the prior written consent of the Owner, which consent may be unilaterally withheld.

1.7 Taking The Work Out of the Contractors Hands

- .1 The Owner may, without any authorization, take all or part of the work out of the Contractor's hands and may employ such means as it may see fit to complete the work, including the use of Performance Security when applicable, in any of the following cases, namely:
 - .1 where the Contractor has made default or has delayed in commencing or in diligently executing the work or any portion thereof to the satisfaction of the person designated on the Contract Order, and the Owner has given notice thereof to the Contractor, and has by such notice required the Contractor to put an end to such default or delay, and such default or delay continues for seven (7) days after such notice was communicated.
 - .2 where the Contractor has made default in the completion of the work, or any portion thereof, within the time limit for such completion by the Contract.
 - .3 where the Contractor has become insolvent.
 - .4 where the Contractor has committed an act of bankruptcy.
 - .5 where the Contractor has abandoned the work.
 - .6 where the Contractor has made an assignment of the Contract without the required consent of the Owner; or
 - .7 where the Contractor has otherwise failed to observe or perform any of the provisions of the Contract.
- .2 Where the work or any portion thereof has been taken out of the Contractor's hands, the Contractor will not be entitled to any further payment, including payments then due and payable but not paid, and the obligation of the Owner to make payments shall be at an end, and the

Contractor shall be liable upon demand therefore to pay the Owner an amount equal to all loss and damage suffered by reason of the non-completion of the work by the Contractor.

- .3 Where the work or any portion thereof has been taken out of the Contractor's hands and that portion is subsequently completed by the Surety, or by the Owner, the Owner will determine the amount, if any, of the holdback and progress claims of the Contractor unpaid at the time of taking the work out of his hands that in the Owner's opinion is not required for the purposes of the Contract and the Owner may, if it is of the opinion that no financial prejudice will result, pay that amount to the Contractor.
- .4 The taking of the work, or any portion thereof, out of the Contractor's hands does not operate so as to relieve or discharge the Contractor from any obligations under the Contract or imposed upon him by law, except the obligation to complete the physical execution of that portion of work so taken out of his hands.
- .5 The Owner may take the work out of the Contractor's hands if a construction lien has been filed against the project and the Contractor does not take immediate steps to have the lien removed.

1.8 Indemnification Claims

- .1 Contractor will indemnify and save harmless the Owner from all claims relating to labour and materials furnished or supplied in executing the Contract and from and against all claims, demands, losses, costs, damages, actions, suits or proceedings by whomsoever made, brought or prosecuted in any manner based upon, arising out of, related to, occasioned by or attributable to the activities of the Contractor in performing the Contract, or to an infringement or an alleged infringement by the Contractor of a patent of invention.

1.9 Subcontractors

- .1 On request, the Contractor will provide a complete and firm list of names and addresses of the subcontractors whom he will use for the work.
- .2 Contractor agrees to:
 - .1 require his subcontractors to perform their work in accordance with and subject to the terms and conditions of the Contract Documents, and;
 - .2 be fully responsible to the Owner for acts and omissions of his subcontractors and of persons directly or indirectly employed by them as for acts and omissions of persons directly employed by him.

The Contractor therefore agrees that he will incorporate all the terms and conditions of the Contract Documents into all subcontract agreements.

- .3 nothing contained in the Contract Documents shall create any contractual relationship between any subcontractor and the Owner.

1.10 The Residential Tenancy Act

- .1 In accordance with the Residential Tenancy Act, access to premises of residents may only be gained by permission of the resident, or as necessary, upon the landlord giving notice to the resident specifying the time of entry not less than twenty-four (24) hours prior to the time of entry.
- .2 Contractor must schedule his work accordingly and shall advise the Owner not less than seventy-two (72) hours in advance of requested access to any residents' premises.

1.11 Laws, Notices, Permits and Fees

- .1 The laws of the municipality where the project is situated shall apply to the work.
- .2 Contractor will obtain all permits, licences and certificates and pay all fees required for the performance of the work.
- .3 The Owner will obtain and pay for **BUILDING PERMITS** when required.
- .4 Contractor will not be responsible for verifying that the Contract Documents are in compliance with the applicable laws, ordinances, rules, regulations and codes relating to the work. If the Contract Documents are at variance therewith, or changes which require modification to the Contract Documents are made to any of the laws, ordinances, rules, regulations and codes by the authorities having jurisdiction subsequent to the date of tender submission, any resulting change in the cost shall constitute a corresponding change in the Contract Price. Contractor must notify the Owner in writing requesting direction immediately on any such variance or change.
- .5 If the Contractor fails to notify the Owner in writing and obtain its direction as required above and performs any work knowing it to be contrary to any laws, by-laws, ordinances, rules, regulations, codes and orders of any authority having jurisdiction, he shall be responsible for and shall correct any violations thereof and shall bear all costs, expense and damages attributable to his failure to comply with the provisions of such laws, by-laws, ordinances, rules, regulations, codes and orders.

1.12 Ontario Labour Conditions and Regulations

- .1 Persons employed on the work must be fully qualified to perform the work required. The Contractor will comply with the provisions of the Government Contracts Hours and Wages Act, the Construction Lien Act, R.S.O. 1990, c. C.30 including all subsequent updates, and the Ontario Health and Safety Act & Regulations for Construction Project.
- .2 The Contractor shall comply with Ontario Regulation 644/88 including all subsequent updates - Workplace Hazardous Materials Information System (WHMIS) wherever and whenever controlled products are used within the scope and duration of this Contract.
- .3 The Contractor will be responsible to ensure that the Ontario Human Rights Code is adhered to by the Contractor and all of their employees and subcontractors.

1.13 Toxic and Hazardous Substances

- .1 Prior to the Contractor commencing the Work, the Owner shall:
 - .1 take all reasonable steps to establish whether or not any toxic or hazardous substances are present at the Place of the Work, and
 - .2 provide the Contractor with written report indicating all toxic or hazardous substances of such findings.
- .2 If the Contractor:
 - .1 encounters toxic or hazardous substances at the Place of the Work, or
 - .2 has reasonable grounds to believe that toxic or hazardous substances are present at the place of the Work, the Contractor shall
 - .3 takes all reasonable steps, including stopping the Work to ensure that no person suffers injury, sickness or death and that no property is injured or destroyed as a result of exposure to the presence of the substances, and
 - .4 immediately reports the circumstance to the Owner in writing.

1.14 Award Letter and Contract Order

- .1 The Owner will issue an Award Letter which shall be acceptance of the Bid and award of the Contract to the Contractor. Award Letter will describe information required by the Owner namely Performance Security and Insurance Certificate.
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- .2 Upon receipt of the above, a Contract Order will be raised.

1.15 Completion Date

- .1 The Contractor will complete the work within the time specified in Section 01 10 01 General Requirements 1.2.1.
- .2 TIME IS OF THE ESSENCE OF THE CONTRACT.

END OF SECTION

1.0 GENERAL

Except as otherwise specifically stated, all obligations set out herein shall be on account of the Contractor and at the Contractor's sole expense.

1.1 Description of Work

It is the Contractors responsibility to provide all labour, material, equipment and supervision to complete the work outlined in this specification, taking into account all site conditions, noise restriction, work area restrictions, protection requirements, accessibility restrictions, etc. No extras will be entertained for inconveniences after the award of this Contract.

In particular the work includes, but is not necessarily limited to the following:

1. The installation and maintenance of fencing and construction signage around each phase of the work as described herein.
2. For an itemized description of all work to be performed as part of this contract, carefully review the Technical Specifications as provided by the Consultant.
3. Repair/replace/restore all areas damaged by construction activity to a like-new condition; specifically, the Contractor shall repair all damage resulting from the Construction to the satisfaction of the Owner.
4. Final cleaning of site and the disposal all waste products and/or debris generated by the construction activity as well as any material present in the work area prior to the commencement of the Work. The areas requiring cleaning shall consist of all areas affected by the Work.

1.2 Work Sequence

- .1 The Work areas will be available as of **September 1, 2019**. Contractor to confirm start date. All work shall be completed by no later than **November 1, 2019**, providing for **up to a** total construction schedule **not surpassing nine (9) weeks**.
- .2 Time and all time limits stated within the Bid submittal and Contract Documents are of the essence of the Contract. Contractor shall perform work expeditiously with adequate forces to complete the Contract Work within the time specified.

1.3 Construction Schedule

- .1 In conjunction with and in a form acceptable to the Owner/Consultant and the Owner, provide within five (5) working days after contract award, a schedule indicating the phasing and procedures required to complete the Work within the submitted timeframe.
- .2 The construction schedule shall reflect completion of all work under the Contract within the specified time and in accordance with these specifications.
- .3 The Contractor shall submit a revised schedule to the Owner/Consultant if, after commencing the Work, the schedule fails to reflect actual progress or the Contractor wishes to make a major change to their approach. The revised construction schedule must be submitted in advance of beginning a revised approach.

1.4 Contractor's Use of Site

- .1 The use of all equipment is to be restricted in accordance with noise by-laws as modified herein. Contractor has access to the work areas with quiet work proceeding around the clock if desired.
 - .2 Work will be carried out between the hours of 7:00 A.M. and 5:00 P.M. Monday through Friday. Work outside of these hours must be approved by the Owner.
 - .3 The Contractor has twenty-four (24) hour access to site; however, the use of the premises will be restricted due to user occupancy.
 - .4 The Contractor shall schedule their operation to minimize the interruption of the normal use of the site and building and to comply with laws, ordinances, rules and regulations relating to Work.
 - .5 The building is to remain open and operational through the Contract. It is the Contractor's responsibility to ensure the building remains operational and that areas outside those designated for closure remain available and safely accessible at all times.
 - .6 Do not unreasonably encumber the Place of Work with materials or equipment. Construction related debris shall not be permitted to accumulate on site where visible to building users. Remove daily if necessary.
 - .7 Do not close or obstruct or store materials in roadways, sidewalks or passageways without prior approval from the Owner. Do not interfere with
-

safe passage to and from the building and adjacent public sidewalks and roads. Move stored products or equipment that interferes with building operations.

- .8 Take all precautions and provide all required protection to ensure the safety of the general public.
- .9 No storage of materials or equipment is allowed outside the designated work areas without the Owner's approval.
- .10 During transportation of materials or equipment through occupied areas, ensure the public, property, and finishes are protected from damage. All damage caused by the Contractor is to be repaired or rectified at the Contractor's expense.
- .11 Arrange all construction access into occupied areas with the Owner to allow the Owner to provide proper notice, where required.
- .12 Maintain work areas and the vicinity clean and tidy to the satisfaction of the Owner and Consultant.
- .13 The Contractor is to obtain and pay for all permits required for completion of the Work, excluding the Building Permit. Do not start construction until the Building Permit has been issued. Provide copies of all other permits to the Owner and Consultant and post on site where required.

1.5 Walkthrough Inspection of Site

- .1 Prior to start of Work, the Contractor and Owner will perform walk-through inspection of the site to determine existing conditions. Owner to pay for elevator service personnel during inspection if applicable.
- .2 The Contractor is to perform a thorough inspection of the site prior to the start of work and provide a written notice to the Owner that details all damaged property as well as all items that appear to be of poor working order or appearance (i.e. signs, fixtures, dirt, etc.).
- .3 Upon receiving this notice, the Owner will review the validity of the items listed.
- .4 If written notice is not given within five (5) days of commencement of Work, it will be assumed that the Contractor has reviewed the site and has accepted the condition of the property as being free of damage.
- .5 Any damages not listed as part of the written notice of clause 1.5.2 above found after the completion of the work will be the sole responsibility of the

Contractor to rectify. These rectifications shall be completed in a timely and satisfactory manner.

- .6 The project will not be considered substantially performed if the cost to correct these outstanding deficiencies is greater than the limits outlined in the Construction Lien Act.

1.6 Electrical Power

- .1 Discuss available power with the Owner prior to bidding. Existing 110V power outlets may be used for small hand tools. No other power is available without prior written approval from the Owner. Alternatively, the Contractor may pay for alterations to the electrical system that are required to accommodate the Contractor's equipment. Co-ordinate alterations with the Owner and reinstate the system to the Owner's satisfaction upon completion.
- .2 Power consumption will be paid for by the Owner.

1.7 Water Supply

- .1 The Contractor shall pay for the cost of any connections or alterations that they require to perform the Work. Reinstall the system to the Owner's satisfaction upon completion of the Work.
- .2 Water consumption will be paid for by the Owner.

1.8 Sanitary Facilities

- .1 Existing sanitary services, where available, may be used by the Contractor and his personnel on approval by the Owner. If not available at the specific project, the Contractor must provide this service at his own expense. Locate where agreeable to the Owner.
- .2 Provide all required signage necessary to protect the public from the construction and work area, control pedestrian and/or vehicular traffic flow, and to inform users that construction activity is in progress. Signage is to be of a professional quality and design to the Owner's satisfaction.

1.9 Protection of Work and Property

- .1 The Contractor shall take all reasonable precautions necessary to protect the Work and property from damage during performance of the Contract, and shall make good any damage to the Work or property caused by the Contractor or any of its Subcontractors.

- .2 Ensure all property is protected from dust and damage.
- .3 Dust, dirt, construction debris, water and fumes from the Work must be contained so as not to affect areas that are to remain in operation outside of the designated work areas. Resulting damage caused by contamination is the responsibility of the Contractor.
- .4 Contractor shall patch and repair all finishes or painted surfaces damaged during the course of the Work. This includes surfaces damaged by tape, fasteners, or similar materials during hoarding and protection.

1.10 Construction Barriers and Enclosures

- .1 Contractor shall supply and construct barriers as indicated in these specifications, on the drawings, and as directed by the Owner as the construction progresses.
- .2 Restrict access for unauthorized personnel by placing barricades or posting guards around areas of the Work. Unauthorized personnel shall mean the public and anyone not directly concerned with the execution, supervision or inspection.

1.11 Protection of Existing Exposed Facilities/Services

- .1 In general, no essential services such as electric power and domestic hot water supply are to be interrupted for more than one continuous hour, and no longer than three consecutive hours for the heating system during the heating season. In all cases, previous arrangements are to be made and approval obtained from the Owner.
- .2 All exposed conduit, fixtures, louvers and ducts are to be protected or Contractor to correct damages at their own expense. Contractor to promptly report any damage to the Owner.
- .3 The Contractor shall restore landscaping beds in the area of work to their original plantable state after the work is complete. The Owner will arrange to remove and store for replanting, all landscaping including plants, shrubs, trees, etc. impacted by the work.

1.12 The Work, Work in Progress, Property and Persons

- .1 Protect the Work during construction from damage by weather.

- .2 Protect existing buildings, equipment, plant materials, lawns, etc. from any damages resulting from performing work on this Contract. Any damages to be repaired without cost to the Owner.
- .3 Protect new work from damages from any cause. All finished surfaces must be protected so that no marks or scratches mar the finished surfaces prior to acceptance of the work.
- .4 Protect and be responsible for all new finished and unfinished work which is exposed and susceptible to vandalism or theft.
- .5 Take reasonable and required measures, including those required by authorities having jurisdiction, to protect the public and those employed on the Work from bodily harm.
- .6 Comply with requirements of the Ontario Occupational Health and Safety Act and Regulations for Construction Projects.
- .7 The Contractor shall be prepared to provide respirators, dust protection, ear protection, hard hats, etc. for those employed by the Owner at the Site.
- .8 Direct all Subcontractors to protect their own work, existing property, adjacent public and private property and work of other Sections from damage while working.

1.13 Location of Existing Utilities

- .1 The contractor shall be responsible for arranging for the location of all existing utilities prior to construction and protection of it during construction.
- .2 Use the electrical service and water service at the site only as directed by the Owner.
- .3 Supply and pay for hoses, extension cords, special wiring or boxes as required.

1.14 Fire Protection

Contractor will:

- .1 Take necessary precautions to eliminate fire hazards and to prevent damage to the Work, building materials, equipment and other property both public and private having to do with the Work. Inspect the Work at least once a week for this purpose.

- .2 Store and locate products and equipment packed in cardboard cartons, wood crates and other combustible containers in orderly and accessible manner. Place approved types of firefighting equipment in vicinity of products packed in this type of crate or carton until permanent fire protection and equipment are available.
- .3 Store no flammable products such as paint or fuel in the parking garage without the Owner's permission in writing.
- .4 Ensure tarpaulins to be fire-resistant.
- .5 Open fires or burning of rubbish or debris are not permitted on Site.

1.15 Site Enclosures

- .1 The Contractor shall erect and maintain site enclosures to completely enclose the Work area, to protect the public and property from injury or damage.
- .2 All enclosures to be marked with safety signage.
- .3 All enclosures and protection to be maintained daily, keeping them clean, orderly and graffiti free.
- .4 Remove temporary facilities from site promptly when directed by Owner.

1.16 Work Site Safety – Contractor is “Prime Contractor”

- .1 The Contractor shall, for the purposes of the Ontario Occupational Health and Safety Act, and for the duration of the Work and Contract:
 - .1 Be designated as “Prime Contractor” pertaining to safety at the “Work site”.
 - .2 Do everything that is reasonably practicable to establish and maintain a system or process that will ensure compliance with the Act and its regulations, as required, to ensure the health and safety of all persons at the “Work site”.
- .2 The Contractor shall direct all subcontractors, workers and any other persons at the “Work site” on safety related matters, to the extent required to fulfill its “Prime Contractor” responsibilities pursuant to the Act.

1.17 Material and Equipment

- .1 Unless otherwise specified, Contractor shall provide, maintain and pay for all materials, tools, machinery, equipment, temporary facilities, controls and conveniences necessary for execution of the Work. All materials shall be new, of merchantable quality, and suitable for the intended purpose.
- .2 Unless otherwise specified, comply with Manufacturer's latest printed instructions for materials and installation methods. Notify the Consultant in writing of any conflict between the Contract Documents and Manufacturer's instructions. Deliver, store and maintain packaged materials with Manufacturer's seals and labels intact.

1.18 Coordination

- .1 Co-operate with the Owner and arrange for all work to be expedited with the minimum of inconvenience to all parties, and report in writing any difficulties encountered in expediting the work.
- .2 The Contractor is responsible for coordination of trades. Lines of demarcation between Contractor's work and trades' work are solely the responsibility of the Contractor. The Owner assumes no responsibility for division of the Work or for any jurisdiction regarding such division.
- .3 Contractor is responsible for coordination with the Owner of all on-site activity as it affects the operation of the building.
- .4 The Contractor is to notify the Building Inspector at least 72 hours in advance for site review where a Building Permit is required to perform the work. No work shall be covered or concealed until the Building Inspector has reviewed it, unless they have informed the Contractor that a site review will not be performed. Such review does not absolve the Contractor from their responsibility to perform the Work in accordance with the Contract Documents.

1.19 Waste Removal and Cleaning

- .1 The Contractor shall maintain the Place of the Work free from unsightly or hazardous accumulations of waste materials and rubbish, and shall perform all required cleaning during the Work. Area of work to be cleaned and swept daily.
 - .2 All wastes, which create hazardous conditions, must be removed from the premises daily.
 - .3 Disposal of all waste products to be performed in strict accordance with the product Manufacturer's Material Safety Data Sheet, and in accordance
-

with the provincial Waste Control Regulations. Drainage systems shall not be used to dispose of Project wastes and materials.

- .4 Ensure all moisture sensitive equipment (i.e. exposed electrical and mechanical systems, etc.) are removed or protected against moisture infiltration during washing and dust-generating activities.
- .5 Remove all construction-related grease, dust, dirt, stains, labels, fingerprints, over-spray and other foreign materials immediately prior to the Consultant's final review. Return all adjacent areas, equipment, duct work, etc. to the Owner in a dust-free condition. Leave site in a neat and tidy condition at completion of the Work.

1.20 Superintendence and Workmanship

- .1 The Contractor shall provide a full time on-site Superintendent that is responsible for the quality, control, organization, and coordination of all phases of the Work. The Superintendent shall be in attendance at all site meetings.
- .2 Superintendence shall be satisfactory to the Owner.
- .3 Superintendence shall be deemed unsatisfactory and changes or additions to superintendence can be demanded by the Owner when control, organization, or coordination of the Work is not adequate, the quality of the Work does not meet the Contract Document requirements, directions given in accordance with the Contract Documents are not followed, or progress is behind schedule.
- .4 Ensure that only experienced, skilled, and certified tradesmen are employed.
- .5 Repair, replace or otherwise make good all unacceptable or defective work.

2.0 PRODUCTS

Not applicable

3.0 EXECUTION

Not applicable

END OF SECTION

1.0 GENERAL

1.1 Contract Close-Out Procedure

.1 Contractor's Review

- .1 The Contractor and their Subcontractors shall conduct a review of the work and correct all noted deficiencies.
- .2 The Contractor shall notify the Owner, in writing, of satisfactory completion of the "Contractor's Review" after the correction of all noted deficiencies and shall request an "Owner's Review".

.2 Owner's Review

- .1 The review team shall consist of the Owner and the Contractor. The Owner or their representative shall attend at their option.
- .2 The Owner will prepare a list of deficiencies noted during the "Owner's Review" and will issue the list to the Contractor.
- .3 The Owner will determine the value of work associated with any outstanding deficiencies noted during the Owner's Review. Payment of these retained funds will be withheld until the deficiencies have been rectified to the satisfaction of the Owner.
- .4 The Contractor shall correct all deficiencies indicated on the list in a timely and satisfactory manner.

.3 Final Review

- .1 The Contractor shall request a "Final Review" when the Contractor is satisfied that all deficiencies have been corrected. The request shall be made in writing.
- .2 The "Final Review" shall be conducted by the Owner and the Contractor.

.4 Certificate of Substantial Performance

- .1 The Contractor must submit a request in writing to the Owner for a Certificate of Substantial Performance.

.2 The Contractor shall comply with the following during Contract close-out:

- .1 The requirements of the Construction Lien Act.
- .2 The requirements of the Workers Compensation Act.
- .3 All other contractual requirements

.5 Total Performance

- .1 Immediately following the issuance of the Certificate of Substantial Performance, the Owner, in consultation with the Contractor, will establish a reasonable date for the "Total Performance of the Work".
- .2 The Contractor shall supply all guaranties and review certificates in accordance with the requirements of the Contract Documents prior to the date established for "Total Performance of the Work".

.6 Release of Holdback

- .1 The lien holdback amounts will be released pursuant to the Construction Lien Act.

2.0 PRODUCTS

Not applicable

3.0 EXECUTION

Not applicable

END OF SECTION

1.0 GENERAL

1.1 Payment and Holdbacks

- .1 For the purpose of the Construction Lien Act, R.S.O. 1990, c. C.30, the Payment Certifier shall be the Owner, or any person the Owner may designate from time to time as required by the Construction Lien Act, R.S.O. 1990, c. C.30, who shall:
 - .1 Determine and certify substantial performance; and
 - .2 Determine completion.

1.2 Applications for Payment

- .1 The Contractor shall submit a detailed schedule of values for the various components of the work in a form to the satisfaction of the Owner for review within ten (10) days of Award of Contract. This schedule of values shall form the basis by which progress draws are evaluated for completeness of the work performed.
- .2 Applications for payment on account may be made MONTHLY as the work progresses and submitted to the Kingston & Frontenac Housing Corporation naming Town Homes Kingston on all documentation such as invoices.
- .3 Before tax totals, all applicable taxes and totals must be shown separately on all invoices.

1.3 Evidence of Publication

- .1 Upon completion of the work, the Payment Certifier will issue a Certificate of Substantial Performance. Contractor must then provide the Owner with evidence acceptable to it of publication. Holdback will be released on the forty-sixth (60th) day from date of publication.

1.4 No Additional Payment for Increased Costs

- .1 The amount payable to the Contractor under the Contract will not be increased or decreased by reason of any increase or decrease in the cost of the work brought about by any increase or decrease in the cost of plant equipment, labour, materials or wage rates.

1.5 Deductions for Uncorrected Work

- .1 If in the opinion of the Payment Certifier, it is not expedient to correct defective work, or for work not done in accordance with the Contract Documents, the Owner may deduct from the Contract Price the difference in value between the work as done and that called for by the Contract.

1.6 Warranty/Guaranty Period

- .1 The Contractor shall provide a one (1) year minimum warranty for all Work of the Contract.

2.0 PRODUCTS

Not applicable.

3.0 EXECUTION

3.1 Remedial Work Under Guaranty/Warranty

- .1 The Contractor shall perform any required warranty repair work for the duration of the warranty period at no extra cost.
- .2 Notice will be provided to the Contractor during the warranty period within thirty (30) days of the discovery of any defect in the Work. The Contractor shall take necessary steps to protect the area against further damage immediately upon receipt of notice and shall take corrective action to make good any damage incurred. The Contractor shall schedule repair work with the Owner and shall make every attempt to make good the defects within three (3) weeks of notice.
- .3 Remedy is to be at no cost to the Owner and is to include all labour, material, equipment, and supervision necessary to make good defective areas of the Work and any damages incurred to obtain access to defective areas.
- .4 The Contractor must reimburse the Owner for any resulting assessment costs incurred to define the extent of the defect and for costs incurred to test the repaired defect to confirm acceptability of repairs.
- .5 The Contractor must reimburse the Owner for all associated costs incurred due to closure of the areas requiring repair under warranty.

- .6 Warranty periods for areas requiring repair are to be extended by the amount of time-lapsed between issuance of notice and completion of remedial work. The warranty/guaranty period will then re-commence upon completion of the remedial work.
- .7 Warranties are not to be deemed to restrict any liability of the Contractor arising out of any applicable law.

END OF SECTION

**ELDON HALL AND NOTCH HILL
SITE IMPROVEMENT
35 ELDON HALL | 55 NOTCH HILL
KINGSTON ON**

TECHNICAL SPECIFICATIONS

PREPARED FOR: KINGSTON AND FRONTENAC HOUSING CORPORATION
119 Van Order Drive
Kingston ON K7M 1B9

PREPARED BY: READ JONES CHRISTOFFERSEN LTD.
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RJC Job No.: TOR.111100.0003

KFHC Job No.: THK PT 19-05

Date: Issued for Tender – July 24, 2019

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1.0 GENERAL

The drawings listed below will be included in the General Contractor/ Owner agreement and will become part of the contract.

Drawing No.	Drawing Title	Date
	COVER PAGE AND GENERAL NOTES	JUNE 2019
R1.1	SITE PLAN	JUNE 2019
R2.1	ELDON HALL PLACE SITE IMPROVEMENT PLAN	JUNE 2019
R2.2	NOTCH HILL SITE IMPROVEMENT PLAN	JUNE 2019
R3.1	ACCESS RAMP PART PLAN	JUNE 2019
R4.1	SECTIONS AND DETAILS	JUNE 2019
R4.2	SECTIONS AND DETAILS	JUNE 2019

END OF SECTION

1.0 GENERAL**1.1 WORK INCLUDED**

- .1 Provide all labour, material, equipment and supervision necessary to prepare concrete repair areas on stairs and place new concrete repair material.
- .2 Use of pre-packaged materials is to be in targeted repair locations as directed by the Consultant.
- .3 All repairs to painted surfaces are to be cleaned after the concrete repairs have been completed and sufficient time for concrete curing has lapsed.

1.2 REPAIR QUANTITY DETERMINATION

- .1 Length and width shall be measured to the nearest 25 mm (1 inch).

1.3 REFERENCE STANDARDS

- .1 Ontario Building Code
- .2 CSA-A23.1-14 Concrete Materials and Methods of Concrete Construction

1.4 PERFORMANCE REQUIREMENTS

- .1 Repaired concrete surfaces shall not scale or crack excessively.
- .2 The concrete repair materials shall not spall or debond from the existing concrete.
- .3 The concrete repair materials shall achieve a minimum compressive strength of 20MPa within 24 hours.

1.5 SUBMITTALS

- .1 Submit manufacturer's product specifications and data sheets for the following products:
 - .1 Cement slurry bonding agent
 - .3 Top surface patch material
- .2 Do not commence placement of repair products until review is complete and proposed products and procedures are accepted by Consultant.

2.0 PRODUCTS

2.1 CEMENT SLURRY BONDING AGENT

- .1 Cement slurry grout consisting of a mixture of one part cement to one part fine aggregate and enough water to make a heavy cream consistency. Aggregate to conform to CSA Standard CSA-A23.1-14 Clause 4.2.3.

2.2 DELAMINATION REPAIR MATERIALS

- .1 Patch materials:

	<u>Product Name</u>	<u>Manufacturer</u>
.1	LM-S10	King
.2	Approved Alternative.	

2.3 ADMIXTURES

- .1 Use only compatible admixtures and add to mix in strict accordance with manufacturer's written instructions.
- .2 Use of calcium chloride not permitted.

3.0 EXECUTION

3.1 CONCRETE SURFACE PREPARATION

- .1 Clean all existing concrete surfaces to receive new concrete of foreign material, dust, debris, grease and oil as directed by Consultant.

3.2 CONCRETE PLACEMENT – SURFACE REPAIRS

- .1 Prepare patch surface, mix patch material and apply, finish, and cure in strict accordance with the more stringent requirements of the Contract Specifications and manufacturer's written instructions.
 - .1 The patch area shall be thoroughly wetted as required to achieve a saturated surface dry (SSD) state prior to placing concrete repair material.
 - .2 Puddles of free water shall be blown from the patch area and the surface is to be permitted to dry to a saturated surface dry (SSD) state prior to application of cement slurry.

- .3 Apply a cement slurry bonding agent to the surface of the concrete just prior to placing new concrete.
- .4 Pre-wet filter fabric, burlap, or cotton mats shall be available on site prior to placement of concrete to allow for immediate placement overtop of new concrete patches after their initial set.
- .5 Prepare pre-packaged concrete mix per manufacturer's specifications.
- .6 Concrete surfaces to be flush with existing surfaces, free of voids and cracks, and have a uniform surface and transition to the existing surface.
- .7 Finish concrete in accordance with CSA A23.1/A23.2. Initial finish shall be completed before any bleeding or free water is present on the surface of the concrete. Final finishing shall commence after the bleed water has disappeared and when the concrete has stiffened sufficiently to prevent the working of excess mortar to the surface. Do not add water to finish.
- .8 Do not overwork concrete surface.
- .9 Cure concrete per manufacturer's written instructions.

3.3 CONCRETE MIXING AND PLACING

- .1 Concrete shall be machine mixed unless otherwise stipulated by the manufacturer. Mixing and placing shall be in accordance with CSA-A23.1-14.
- .2 Concrete shall be deposited in the forms as nearly as practicable to its final position to avoid re-handling.
- .3 Depositing shall be continuous throughout each division and the concrete shall be so placed and worked that a uniform texture will be produced.
- .4 No concrete shall be placed later than one half hour after leaving the mixer. No re-tempered concrete shall be allowed.
- .5 Mix concrete in accordance with the manufacturer's written instructions.

3.4 CONCRETE CURING

- .1 Ensure manufacturer's recommended curing conditions are maintained over the patch area.

- .1 Initiate surface concrete repair wet curing as soon as possible after the concrete has sufficiently set, and no later than 30 minutes after finishing.
 - .2 The use of chemical curing compounds is not permitted.
 - .3 Protect concrete from the harmful effects of heat, cold, running or surface water, and mechanical shock.
 - .4 Do not place concrete when air temperature is below 10° C, or without implementing provisions to ensure proper curing of concrete when -- in the opinion of the Consultant -- there is a possibility of air temperature falling below 10° C. These provisions shall be reviewed by the Consultant and conform to the requirements of CSA-A23.1-14.
 - .5 Maintain concrete material and forms between 15° C and 32° C until concrete placement whenever the surrounding air is below 5° C. No frozen material or material containing ice shall be used. All existing concrete, reinforcement, forms, and ground that the concrete will contact is to be free from frost.
- .2 The Consultant will have cause to not certify payment for repairs undertaken without adequate wet-curing procedures or that become surface dry during the specified curing period.

3.5 REJECTION OF DEFECTIVE WORK

- .1 The Consultant shall have the right to order additional concrete testing of any portion of repairs in accordance with CSA Standard A23.1-14 if previous testing demonstrates non-conformance with specified requirements. The testing agency shall be selected by the Consultant and shall deal directly with the Consultant. Payment for costs associated with the additional concrete testing will be at the Contractor's expense.
- .2 Where it is the Consultant's opinion that material or workmanship fails to meet the specified requirements, the work shall be replaced or repaired to the approval of the Consultant at no additional cost to the Owner.

END OF SECTION

1.0 GENERAL**1.1 WORK INCLUDED**

- .1 Provide all labour, materials, equipment and services necessary to supply and install new reinforcing steel work shown on indicated in all the Contract Drawings and Specifications including accessories such as hanger bars, spirals, wire ties, support bars, chairs, spacers supports or other devices required to position reinforcing properly.

1.2 REFERENCE STANDARDS

- .1 Ontario Building Code
- .2 CSA-A23.1-14 Concrete Materials and Methods of Concrete Construction
- .3 CSA-G30.18 09 Carbon Steel Bars for Concrete Reinforcement
- .4 ACI Manual of Standard Practice for Detailing – 28th Edition
- .5 Reinforcing Steel Manual of Standard Practice – June 2010
- .6 CSA-23.3-04 Design of Concrete Structures

1.3 PRODUCT DELIVERY, STORAGE AND HANDLING

- .1 Store and protect reinforcement in a manner to prevent excessive rusting and fouling with dirt, grease, form-oil and other bond-breaking coatings.
- .2 Reinforcement at the time concrete is placed shall be free from excessive rusting, mud, oil or other coatings that adversely affect its bonding capacity.

2.0 PRODUCTS**2.1 MATERIALS**

- .1 Reinforcing steel bars shall conform to CSA G30.18-09 (grade 300 MPa) unless otherwise specified herein or on the drawings, Plain finish.
- .2 Bar supports shall conform to ACI 316 unless otherwise approved by the Consultant.

2.2 FABRICATION

- .1 Fabricate reinforcing to CSA-A23.1.
- .2 Fabricate reinforcing steel within the following tolerances:

- | | | |
|----|--|-------|
| .1 | Sheared length plus or minus | 25 mm |
| .2 | Depth of truss bar plus or minus | 10 mm |
| .3 | Outside dimension of stirrups, ties and spirals, plus or minus | 10 mm |
| .4 | Other bends plus or minus | 25 mm |
- .3 Colour-code each bar to correspond with code mark appearing on bar list.
- .4 Ship bundles of bar reinforcement clearly identified in accordance with bar lists.
- .5 Bars shall not be field bent, straightened, or re-bent, except where indicated or authorized by the Consultant. When field bending is authorized, bend without heat, applying slow and steady pressure. Replace bars that develop cracks or splits.
- .6 Splicing of reinforcing bars, unless indicated on the drawings, is prohibited except with the written approval of the Consultant. Such splices shall conform to the splice length for that class of splice according to CAN3-A23.3-04. Splices, where possible, shall be staggered.

3.0 **EXECUTION**

3.1 **INSTALLATION**

- .1 Reinforcement shall be accurately placed in the positions shown on the drawings, firmly tied, and supported by bar supports and side form spacers to assure proper concrete cover and spacing within allowable tolerances before and during placing of concrete.
- .2 Bar supports shall be sufficient in number and strength to carry the reinforcement they support and prevent displacement by workers or equipment before and during concreting. Bars shall be tied at all intersections, except where spacing is less than 250-mm in each direction, when alternate intersections shall be tied.
- .3 Bars shall be placed to the following tolerances unless noted otherwise.
- | | | |
|----|---|----------|
| .1 | Clear concrete protection of reinforcement | 5 mm ±. |
| .2 | Where the depth of a flexural member, thickness of a wall or smallest dimension of a column is: | |
| .1 | 200 mm or less | 5 mm ±. |
| .2 | larger than 200 mm but less than 600 mm | 10 mm ±. |
| .3 | 600 mm or larger | 20 mm ±. |

Lateral spacing of these bars shall be within 30 mm \pm of the specified spacing.

- .3 For longitudinal location of bends and ends of bars 50 mm \pm .
- .4 As Item 3 at discontinuous ends of members 20 mm \pm .
- .5 Specified spacing between bars 10 mm \pm .
- .4 Bars may be moved as necessary to avoid interference with other reinforcing steel, conduits or embedded items. If bars are moved more than one bar diameter or enough to exceed the specified tolerances, the resulting arrangement of bars shall be subject to approval of the Consultant.

3.2 INSPECTION AND TESTING

- .1 No concrete shall be placed until the Consultant has completed their review of reinforcing in place. The Contractor shall provide a minimum of 24 hours' notice of the time when the reinforcement will be substantially in place and ready for the Consultant's review.

END OF SECTION

1.0 GENERAL**1.1 WORK INCLUDED**

- .1 Production, mixing, handling, testing, transporting, placement and curing of cast-in-place concrete material.
- .2 Requirements for construction joints and slabs-on-grade.
- .3 Fabricated components, anchor bolts and other inserts to be built into concrete.

1.2 REFERENCE DOCUMENTS

- .1 Ontario Building Code - 2012
- .2 ASTM International
 - .1 ASTM C117-13, Standard Test Method for Materials Finer than 0.075 mm (No. 200) Sieve in Mineral Aggregates by Washing.
 - .2 ASTM C136/C136M-14, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
 - .3 ASTM C 309 03, Liquid Membrane Forming Compounds for Curing Concrete.
 - .4 ASTM D1751, Standard Specification For Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
 - .5 ASTM D698-12e2, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400ft-lbf/ft³) (600 kN-m/m³).
- .3 CSA Group
 - .1 CSA-A23.1-14 /A23.2-14, Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete, Including Update No. 1 2015.
 - .2 CSA B651-2012, Accessible Design for the Built Environment.

1.3 WORK INSTALLED BUT FURNISHED BY OTHERS

- .1 Anchor bolts, hangers, sleeves and other inserts for casting into concrete shall be supplied by applicable trades. Build in and/ or set these items and assume full responsibility for correct positioning.

1.4 SUBMITTALS

- .1 Concrete Mix Design:
 - .1 The Contractor shall be responsible for mix designs per CSA A23.1-14 Table 11, Alternate 1. The minimum requirements are indicated in these Specifications.
 - .2 Submit proposed mix designs to the Consultant a minimum of 2-weeks prior to placement for review. Do not proceed with concrete placement until the Consultant's review is complete and the mix design is in conformance with specified requirements.
 - .3 Concrete mix designs shall note concrete constituents by weight, the specified properties to be achieved, and the structural elements that the mix is to be used for.
 - .4 Provide concrete to meet the minimum structural design requirements and the minimum durability requirements defined in CSA A23.1-14 or indicated on the Drawings. The most severe exposure requirement governs between the indicated design requirements and those outlined in CSA A23.1-14.
- .2 Concrete Test Results:
 - .1 Testing Agency to provide copies of test results directly to the Consultant, Owner, and the Contractor.
- .3 Transit Mix Delivery Slips and Placing Records:
 - .1 Maintain a record of the time and place of each concrete pour with the transit mix delivery slip that certifies the pour contents. Make the record available for viewing by the Consultant and Owner on request. Provide electronic copies of the record to the Consultant upon completion of the concrete placement work.
- .4 Curing Procedures:
 - .1 Submit proposed methods and details of concrete curing, and provisions for weather protection, to the Consultant for review.
- .5 Construction Joints:
 - .1 Submit planned locations and details of construction joints to the Consultant for review.

2.0 PRODUCTS**2.1 CONCRETE**

- .1 Minimum specified 28-Day strength: 30 MPa.
- .2 Coarse Aggregate: 19.0 mm nominal maximum size.

2.2 EXPANSION JOINT MATERIAL

- .1 Expansion joint filler material shall be asphalt impregnated fibreboard having a minimum of 12 mm thickness and shall be according to OPSS 1308, Type A.
- .2 Hot poured rubberized asphalt joint sealing compound shall be according to OPSS 1212.

2.3 GRANULAR

- .1 Materials used for granular base shall be according to OPSS 1010.

2.4 MIX PROPORTION

- .1 Concrete shall be homogeneous for all parts of the Work and, when hardened, shall have the required strength, resistance to deterioration, durability, abrasion resistance, water-tightness, appearance, and other specified properties.
- .2 Proportioning mixing and delivery to the site shall meet the requirements of CSA Standard CSA-A23.1-14.
- .3 Do not add calcium chloride to concrete.

3.0 EXECUTION**3.1 GENERAL**

- .1 All phases of concrete work shall be in accordance with the standards unless otherwise specified herein or on the Drawings.
- .2 Work shall be undertaken by workers who are skilled and experienced in their trade.
- .3 Notify the Consultant at least 24 hours before concrete placement. No work is to proceed without such notification unless otherwise indicated by the Consultant in order to allow for proper coordination and review of the Work.

3.2 GRANULAR BASE

- .1 Place granular base to lines, widths, and depths as indicated.
- .2 Compact granular base in maximum 150 mm layers to a minimum 98% of maximum density to ASTM D698.

3.3 CONCRETE

- .1 Obtain Consultant's approval of granular and reinforcing steel prior to placing concrete.
- .2 Immediately after floating, give sidewalk surface uniform broom finish to produce regular corrugations not exceeding 2 mm deep, by drawing broom side to side across sidewalk.
- .3 Provide edging with 10 mm radius edging tool.

3.4 EXPANSION AND CONTRACTION JOINTS

- .1 Install tooled contraction joints after floating when concrete stiff, but still plastic, at intervals of 1500 mm.
- .2 Install expansion joints at intervals of 6000 mm.
- .3 When sidewalk adjacent to curb, make joints of curb and sidewalk coincide.

3.5 MIXING AND PLACING

- .1 Concrete shall be machine mixed. Mixing and placing shall be in accordance with CSA Standard CSA-A23.1-14.
- .2 Pre-wet formwork prior to concrete placement. Ponding and standing water shall be removed from the formwork surface prior to concrete placement.
- .3 Convey concrete from the mixer to the place of deposit by methods that ensure the required concrete quality. Equipment for conveying concrete shall be of adequate size and design to ensure a practically continuous flow of concrete at the delivery end without separation of material.
- .4 Deposit concrete in the forms as nearly as practicable to its final position to avoid re-handling. Do not allow vertical free fall of materials to exceed three (3) metres utilizing special precautions that are approved by the Consultant.

- .5 Continuously deposit concrete throughout each division and place and work the concrete to produce a uniform texture.
- .6 Depositing shall be continuous until complete within each unit of operation approved by the Consultant, and shall be sufficiently rapid to ensure bonding of successive layers.
- .7 No concrete shall be placed later than thirty (30) minutes after leaving the mixer. Re-tempered concrete is not permitted.
- .8 The time between batching and complete discharge shall not exceed 120 minutes.

3.6 ADDITION OF WATER

- .1 Addition of water shall conform to CSA-A23.1-14.
- .2 Do not add water after the initial introduction of mixing water at the plant unless the measured slump tested at the onset of discharge is less than specified requirements and less than 60 minutes have elapsed from the time of batching. Water may only be added in this circumstance under the on-site direction of the producer's Quality Control Inspector. In no instance shall more than 16 litres of water be added per cubic metre of concrete. The resulting concrete must satisfy specified requirements. The responsibility for the product will remain with the Contractor.
- .3 Concrete tested at the onset of discharge that has a slump less than specified requirements may be used as long as it is of such slump that, in the opinion of the Consultant, it can be placed and properly consolidated without the addition of any other water to the batch.

3.7 COMPACTION

- .1 All concrete shall be thoroughly consolidated by internal vibration during, and immediately after, depositing. Concrete shall be consolidated using sufficient vibrators of adequate size that are operated by competent workers who have been instructed in their use.
- .2 The use of vibrators to move concrete horizontally shall not be permitted.
- .3 Concrete shall be thoroughly worked around reinforcement, around embedded items and into corners of forms, eliminating all air or stone pockets that may cause honeycombing, pitting or planes of weakness.

3.8 CURING

- .1 Concrete shall be cured using a membrane-curing compound applied according to OPSS 904.
- .2 For the purpose of membrane-curing application, the application rate shall be 0.2 l/m².
- .3 Apply curing compound evenly to form continuous film, in accordance with manufacturer's requirements.

3.9 LOADING

- .1 Do not permit undue loading on new structure by Contractor operations, materials, or equipment. Distribute loads to the approval of the Consultant.

3.10 REJECTION OF DEFECTIVE WORK

- .1 Test portions of the structure where concrete tests do not conform to the requirements of the Contract Documents, or where conditions cause doubt about the safety of the structure in accordance with CSA-A23.1-14 and CSA-A23.2-14. Such tests shall be made at the expense of the Contractor and to the satisfaction of the Consultant.
- .2 Replace or repair work where the Consultant deems that the material or workmanship fails to meet the requirements of the Contract Documents. This work shall be repaired to the approval of the Consultant at no additional cost to the Owner.

3.11 TESTING

- .1 Concrete testing is to be undertaken per CSA-A23.1-14 unless noted otherwise. Testing methods shall conform to CSA-A23.2-14.
- .2 Testing agency will be selected and paid for by the Owner. The Contractor shall arrange and schedule all required testing with the testing agency.
- .3 The Contractor shall notify the Consultant at least 24 hours in advance of concrete placement to allow the Consultant to review the Work.
- .4 Contractor shall provide casual labour to obtain and handle sample materials for the testing agency field personnel. Provide suitable access to the Work for obtaining samples.

- .5 Provide and maintain facilities for storage of concrete test cylinders for the first 24-hours after sampling.
- .6 Take at least one concrete test set consisting of a slump test, air entrainment test, and casting of three (3) concrete cylinders for compressive strength testing for each 60 cubic meters or fraction thereof placed in any one day. Test one moist-cured cylinder in 7 days and two in 28 days.
- .7 Forward concrete test results to the Consultant, Owner, and Contractor. Include the following information:
 - .1 Project name
 - .2 Sampling date
 - .3 Supplier
 - .4 Delivery truck identification number
 - .5 Sampling and testing technician names
 - .6 Precise installation location of the sampled concrete batch
 - .7 Air and concrete temperatures
 - .8 Concrete design strength
 - .9 Admixtures,
 - .10 Cement type
 - .11 Maximum aggregate size.
- .8 Testing agency personnel are not authorized to revoke, relax, enlarge or release any requirements of the Specifications, nor to approve or disprove any portion of the Work.
- .9 The Contractor shall pay the cost of additional testing required to demonstrate the adequacy of any concrete shown to not meet strength requirements during initial testing.
- .10 The Contractor shall pay the cost of additional testing required to demonstrate the adequacy of any concrete member or patch placed before formwork and reinforcement have been reviewed by the Consultant.

END OF SECTION

1.0 GENERAL

1.1 WORK INCLUDED

- .1 Supply and install site built AODA Compliant handrails. Contractor to submit all engineered stamped drawings prior to the fabrication.

1.2 REFERENCE STANDARDS

- .1 Ontario Building Code
- .2 Accessibility for Ontarians with Disabilities Act (AODA)
- .3 ASMT A47 – Standard Specification for Ferritic Malleable Iron Castings.
- .4 ASTM A52 – Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
- .5 ASTM A153 – Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- .6 ASTM A307, Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength.
- .7 Canadian Standards Association (CSA International)
 - .1 CAN/CSA-G164-M92 (R2003): Hot Dip Galvanizing of Irregularly Shaped Articles.

1.3 DESIGN REQUIREMENTS

- .1 Be responsible for the complete design, fabrication and installation of guardrails as detailed on the drawings. The drawings indicate the general arrangement of the assemblies, spacing of members, profile and sizes of members, materials and interface with adjacent construction.
- .2 Design guardrails, handrails and connections to withstand loads prescribed in Part 4.0 of the Ontario Building Code.
- .3 Guardrails are designed to meet the Ontario Building Code requirements for height, size of openings and climability.
- .4 The Consultant's review of any and all items designated in this specification will be done with the understanding and assurance that this Contractor is fully responsible for the installation of all work covered in this section.

1.5 SUBMITTALS

- .1 Submittals to be made in accordance with Section 01 33 00 – Submittals.
- .2 Shop Drawings
 - .1 Engineered shop drawings shall be prepared by a Structural Engineer retained by the Contractor registered to practise in the Province of Ontario. The shop drawing engineer is required to submit a schedule S-B for the purposes of obtaining a Building Permit.
 - .2 Shop drawings shall incorporate plans, all elevations, sections and full size details for all work in this section. Completely detail items indicating all dimensions and methods of fixing, field jointing, attachment to building structure, size, thickness, gauges of metals and fasteners.
 - .3 No work shall be fabricated until the shop drawings and samples have been reviewed by the Consultant. The Consultant's review shall be for conformity to the design concept, for general arrangement only and such review shall not relieve the Contractor of any of their responsibilities.
 - .4 Shop drawings shall be sealed by a Professional Engineer licence to practice structural engineering in the place of the work. Indicate design loads on submitted shop drawings.
 - .5 The Engineer who sealed the shop drawings shall provide periodic field review of the installation and shall provide sufficient reviews in order to provide a letter of professional assurance to verify compliance of the system with the specifications. Written inspection reports of field review shall be submitted to the Consultant promptly as field reviews are made. A minimum two field inspection reports per elevation are required.
 - .6 Provide a full description of the finishing system inclusive of pre-treatment coating.
- .3 Samples
 - .1 Submit duplicate samples of joining and finishes to the Consultant for approval.

1.6 DELIVERY, STORAGE AND HANDLING

- .1 Exercise care in storing, handing and erecting all material and support all materials properly at all times so that no piece will be bent, twisted or otherwise damaged structurally or visually.

- .2 Correct damaged material and where damaged is deemed irreparable by the Consultant, replace the affected item at no additional expense to the Owner.
- .3 Fabricate large assemblies so they can be safely and easily handled to their place of installation.
- .4 Store assemblies above ground.

1.7 MOCK-UP

- .1 Provide a complete mock-up of a guardrail on site for review by the Consultant and Owner. Make revisions to mock-up as required by the Consultant.
- .2 Mock-up shall include all components of the system, including typical joints and connection hardware, and typical tie-ins to adjoining systems, all finished as specified.
- .3 Modify the mock-up at no additional cost to the contract as may be required to meet design and performance requirements.
- .4 Mock-up shall remain on site as finished part of the work.

1.8 SITE CONDITIONS

- .1 Coordinate this work with the remainder of the work and exercise the necessary scheduling to ensure that all work is carried out and all items incorporated during the appropriate construction phase.
- .2 Provide items to be built in to those trades affected, along with dimensioned setting drawings, in time to be installed in the work.
- .3 Protect other sections of the work from damage by this Section.

2.0 PRODUCTS

2.5 SYSTEMS

- .1 Product: AODA Compliant Railing System
 - .1 Railings shall provide a smooth contiguous gripping surface throughout the entire length of the railing.
 - .2 The system shall not require drilling, welding or threading.

- .2 Handrails: Provide pipe, fittings, and accessories as indicates or required to match design indicates on the Drawings.
 - .1 Fittings: Cast Iron
 - .2 Steel Pipe: Schedule 40 galvanized pipe.
 - .3 Handrail Pipe Size: 1-1/4" (32 mm).

2.6 COMPONENTS

- .1 Fittings Material:
 - .1 Galvanized Malleable Cast Iron: Structural pipe fittings, ASTM A447 with ASTM A153 galvanizing.
- .2 Base and Flange:
 - .1 Socket Fittings
 - .2 Palm Fittings
 - .3 Wall Flange
 - .4 Cover Flange
- .3 Fittings: As required.
 - .1 Upright Top Cap
 - .2 Wall Mounted Handrail Bracket.
 - .3 End Post Handrail Return.
 - .4 Wall Mounted End Return.
 - .5 Top Fix Rail Assembly.
 - .6 Variable Angle Elbow.
 - .7 90 Degree Solid Elbow.
 - .8 Handrail Bracket.
 - .9 Twin Handrail Socket.
 - .10 Twin Handrail Socket – Capped.

- .11 Handrail Connector – Internal Coupling.
- .12 Single Handrail Socket.
- .13 Single Handrail Socket – Capped.
- .14 Add-On Single Handrail Socket.

2.7 FINISH

- .1 Finish: Polyester factory applied spray coating.
- .2 Fasteners: Type 304 or 305 stainless steel.

2.8 FABRICATION

- .1 Fabricate guardrails and handrails as shown and detailed on the shop drawings.
- .2 Fit and shop assemble components in largest practical sizes for delivery to site.
- .3 Upright tops shall be plugged with weather resistant material.
- .4 Assemble components with joints tightly fitted and secured. Accurately form components to suit installation. Fabricate anchor plates, support channels, clips and fittings as required for installation. Cap the ends of all extrusions exposed to view.
- .5 Fastenings shall be concealed from view where possible.
- .6 Welded connections to provide proper weathering and grind welds smooth where exposed to view.
- .7 Assemble built-up work in the shop and match-mark for correct field erection. Execute work in accordance with reviewed shop drawings.
- .8 Provide all required holes in metalwork for attaching to other materials.
- .9 Locate holes in structural members for connections or for other purposes so as not to cause appreciable reduction in the strength of members.
- .10 Reinforce all work to suit the purpose for which it is intended and to withstand design loads.
- .11 Fabricate work square, true, straight and accurate to detail with sharply, defined profiles.
- .12 Fabricate curved work to smooth, uniform constant radii as detailed.

- .13 Make joints in materials to form fine hairline joints flush with adjacent surfaces.
- .14 Build items square, true, straight and accurate for required size, with joints fitted closely and secured properly.
- .15 Where possible, fit and shop assemble items, ready for erection.
- .16 Ensure exposed welds are continuous and nonporous for length of each joint. File or grind exposed welds smooth and flush.
- .17 Insulate contact surface to prevent electrolysis due to metal-to-metal contact or between metal and masonry or concrete. Use bituminous paint, butyl tape, building paper or other approved means.

3.0 EXECUTION

3.1 PREPARATION

- .1 Prior to start of erection, examine the work of the other sections upon which the work of this section depends and report to Consultant any unsatisfactory conditions.
- .2 Proceed only after deficiencies, if any, in the work of the other sections has been corrected.
- .3 Examine and obtain all necessary measurements of previously executed work that may affect the work to this Division.

3.2 INSTALLATION

- .1 Install work in accordance with reviewed shop drawings.
- .2 Do cutting, fitting and drilling as required to install the work and the make connections with adjoining work.
- .3 Fit joints accurately and rigidly secured to hairline contacts.

3.3 ANCHORAGE

- .1 Anchor all items securely to supporting members using approved anchorage methods per Engineered Shop Drawings.
- .2 Conceal anchors where possible.
- .3 Locate holes for expansions bolts accurately. Diameter and depth of holes and the methods of anchoring in accordance with the manufacturer's recommendations.

- .4 Fasten work in place so that items will not be distorted, finish will not be impaired, nor fasteners overstressed.
- .5 Provide shims, washers and anchors as required to make installation firm, tight, anchored in true alignment, neatly fitted, without distortions, unsightly fastenings and raw edges.
- .6 Maximum deviation from alignment, level or plumb shall not exceed 1.5mm in 76mm (1/16" in 3").

3.4 FIELD QUALITY CONTROL, TESTING AND INSPECTION

- .1 The Engineer responsible for the preparation of shop drawings shall perform regular field reviews during construction and submit field reports to the Consultant in accordance with this sections requirements.
- .2 Upon completion of the project, complete a load test of the new balcony railing system. Retain services of a designated testing/Engineering Firm to complete load testing of new railing system with an Engineered Report.
- .3 Include the cost of filed reviews and one load test in the Contract Price.

END OF SECTION

1.0 **GENERAL**

1.2 **WORK INCLUDED**

- .1 Supply, spread, compact, and grade backfill in excavation upon completion of demolition of the building.
- .2 If requested, apply lawn seed upon completion of topsoil placement complete with staking and flagging around perimeter to prevent pedestrian access.

1.3 **REFERENCES**

- .1 All referenced standards are to be latest edition.
 - .1 ASTM C117 – 04: Test Method For Materials Finer Than 75 μ m (No. 200) Sieve In Mineral Aggregate By Washing.
 - .2 ASTM C136 – 06: Sieve Analysis of Fine and Coarse Aggregates.
 - .3 ASTM D1557 – 07: Laboratory Compaction Characteristics of Soil Using Modified Effort.

2.0 **PRODUCTS**

2.1 **MATERIALS**

- .1 Fill

To be well graded granular material free from clay lumps, organic, contaminated or other extraneous material and screened to remove all material in excess of a maximum 100 mm diameter. Material to conform to the following grading limits when tested in accordance with ASTM C117, C136.

Sieve Size (mm)	Percent Passing
100	100
50	70-100
25	50-100
4.75	25-85
.300	5-35
.075	2-8

3.0 EXECUTION

3.1 COMPACTION

- .1 Compact by rolling or mechanically tamping with a suitable compaction unit to achieve the required compaction.
- .2 Fill materials to be compacted in uniform, 12” deep, layers for the full depth to a minimum of 97% Modified Proctor Density (ASTM D1557). Place additional fill where settlement occurs and compact.

3.2 FINISH GRADING

- .1 Grade to provide slope to sides of property and away from existing buildings.
- .2 Topsoil to be consolidated to leave surfaces smooth, uniform and firm against deep foot printing.

3.3 SURPLUS MATERIAL

- .1 Remove all surplus materials not required off site.

3.4 INSPECTION AND TESTING

- .1 Contractor to arrange for testing of fills by independent testing laboratory approved by the Owner. Contractor to pay for costs of all testing.
- .2 Compaction tests shall be performed to provide a minimum of five (5) random tests per lift. No subsequent lifts shall be placed until the required compaction levels have been achieved.
- .3 Contractor to submit copies of all compaction test results to Owner and Consultant.

END OF SECTION

1.0 GENERAL

Not applicable.

2.0 PRODUCTS**2.1 MATERIALS**

- .1 Free draining granular shall be in accordance with Ministry of Ontario guideline for Granular “A” material, except that percent finer than 0.075 mm not to exceed 8 % or clear crushed stone.
- .2 Geotextile filter cloth to be Terrafix 200R to fully enclose granular drainage layer. Overlap filter cloth 24” minimum.

3.0 EXECUTION**3.1 SEQUENCE OF OPERATION**

- .1 Remove and dispose existing vegetation (hedges/shrubs) at planters.
- .2 Remove and stockpile granular and soil material removed from planters as directed by Consultant. Stockpile material only at locations approved by Owner.
- .3 Remove from stockpiled material all rocks larger than 75 mm, sticks and other debris not representing granular material, such that re-instated landscaping is free of indicated deleterious items. Remove and dispose of indicated items and debris off site.
- .4 Placing:
 1. Place material using methods, which do not lead to segregation or degradation of aggregate.
 2. Place material in uniform layers not exceeding 150 mm compacted thickness. Consultant may authorize thicker lifts (layers) if specified compaction can be achieved. No subsequent lifts shall be placed until the required compaction levels have been achieved.
 3. Compact each layer to specified density before succeeding layer is placed.
 4. Remove and replace that portion of layer in which material becomes segregated during spreading.

.5 Compaction Equipment:

1. Compaction equipment to be mechanical tampers capable of obtaining required material densities.

.6 Compaction:

1. Compact granular layer to density not less than 95 % standard proctor. Topsoil to be compacted to 85 % standard proctor.
2. Apply water as necessary during compaction to obtain specified density.

.7 Re-Instatement of Plantings:

1. After installation of topsoil, install new plants to match existing and provide all required maintenance, watering, fertilization, support from toppling and other maintenance until final acceptance of installation. Planting acceptance will be evaluated 90 days after re-instatement is complete unless instatement is performed 90 days prior to frost; in such case acceptance will be evaluated 30 days after start of growing season in following year.

3.2 PROTECTION

- .1 Maintain finished base in condition conforming to this section until succeeding materials are applied to complete planter box landscaping.

END OF SECTION

1.0 GENERAL

1.1 WORK INCLUDED

- .1 Preparation of existing subgrade material and the installation of new granular backfill material.

1.2 REFERENCES

- .1 ASTM C117-04: Standard Test Method for Materials Finer than 75um (No. 200) Sieve in Mineral Aggregate by Washing.
- .2 ASTM C136-06: Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- .3 CAN/CGSB-8.1 – 88: Sieve Testing, Woven Wire, Inch Series.
- .4 CAN/CGSB- 8.2-M88: Sieve Testing, Woven Wire, Metric.
- .5 OPPS 501: Compacting
- .6 OPSS 1010 – (Replaced by MTO SP 110F13 for MTO Contracts) – Aggregates: Base, Subbase, Select Subgrade, and Backfill Material.

2.0 PRODUCTS

2.1 MATERIALS

- .1 Granular base material - Granular “A” - OPSS 1010
- .2 Granular sub-base material – Granular “B” – OPSS 1010
- .3 Crushed stone or gravel consisting of hard, durable, angular particles, free from clay lumps, cementation, organic material, frozen material and other deleterious materials.
- .4 Gradations to be within limits specified when tested to ASTM C136 and ASTM C117-04. Sieve sizes to CAN/CGSB-8.1.

3.0 EXECUTION

3.1 SURFACE PREPARATION PRIOR TO INSTALLATION OF NEW MATERIAL

- .1 Verify grade of items set in work area for conformity with elevations and sections before placing granular base material. Compact existing subgrade material.
- .2 Allow for Consultant's review of subgrade before placing granular sub-base and granular base.
- .3 Place granular base materials on clean unfrozen subgrade that is free from snow and ice.
- .4 Place granular base and sub-base material to compacted thicknesses as indicated on Drawings or in Specification. Do not place frozen material.
- .5 Place in layers not exceeding 150 mm compacted thickness. Compact to density not less than 98% of maximum dry density (MDD) determined using the standard proctor test.
- .6 Finished base surface to be within 10 mm of specified grade, but not uniformly high or low. Where grades are not specified on Drawings, confirm requirements with Consultant.
- .7 Ensure all damaged, deteriorated, and unsuitable sections of the existing subgrade have been replaced.

3.2 COMPACTING

- .1 Compact subgrade and granular backfill in accordance with the Ontario Provincial Standard Specifications, using proper equipment to achieve the specified density and complying with OPSS 501.
- .2 Compact subgrade and backfill material to a minimum of 98% of MDD as determined by the standard proctor test method.
- .3 Density is to be measured using a nuclear density gauge.

END OF SECTION

WORK PERFORMANCE REFERENCE

NOTE:

- (1) Reference must be from persons or companies for whom you have performed work within the last twenty-four (24) months. Also reference must be for work of the same nature as that called for in the contract.
- (2) If you have performed work for Kingston & Frontenac Housing Corporation within the past forty-eight months please use them as one of your references. Failure to do so may be cause for disqualification.

1. Name: _____

Address: _____

Telephone: _____

2. Name: _____

Address: _____

Telephone: _____

3. **BANK REFERENCE**

Name of Branch: _____

Address: _____

Telephone: _____

FIRM: _____

ADDRESS: _____

TELEPHONE: _____

Date

Signature