



THE CORPORATION OF THE CITY OF MARKHAM
101 Town Centre Boulevard
Anthony Roman Centre
Markham, Ontario
L3R 9W3

REQUEST FOR PROPOSAL

035-R-21

CONSULTING SERVICES FOR NET-ZERO ENERGY EMISSIONS RETROFITS FOR FIRE STATIONS

CLOSING TIME: April 2, 2021 @ 3:00:00 p.m. local time

MANDATORY SITE MEETING: N/A

DOCUMENT PICK-UP

This document is available for purchase at <https://markham.bidsandtenders.ca> for the non-refundable sum of \$50.00 (including H.S.T.).

If you require assistance, please contact 1-800-594-4798 (8:00 a.m. - 5:00 p.m. EST) or support@bidsandtenders.ca.

BID SUBMISSION:

The Corporation of the City of Markham shall **ONLY** accept **ELECTRONIC BID SUBMISSIONS** submitted through the City's Bidding System Website. Bid submissions submitted and/or received by any other method shall be rejected, unless the City has instructed otherwise by published Addendum.

All Bids must be submitted electronically only via the Bidding System, no later than the specified Closing Time. Late Bids will not be accepted by the City's Bidding System.

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

PROCUREMENT REPRESENTATIVE

Flora Chan, Senior Buyer, Procurement Services Department
Phone: 905-477-7000, Ext. 3189 Email: fchan@markham.ca

NOTE: Bid questions and submissions are to be submitted through the Bidding System.

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ATTACHMENTS:

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A. City’s General Terms and Conditions 20

B. City’s Health and Safety (H&S) Documents 18

C. Contractor’s Guide During COVID-19 Pandemic Recovery 38

D. City of Markham Fire Station Building Profiles 2

E. Fire Station 93’s Ground Source Heat Pump System As-Built drawings 19

F. NZEE Retrofit Pilot: Landscape Scan & Preliminary Selection report 19

G. Related Reference Reports, Programs, and Documents 2

SCHEDULE A – BID FORMS

The following sections of the Bid Form are required to be completed by the Bidder:

Schedule of Prices

- **Credit Card Acceptance**
- **Payment Terms**
- **Bid Price (Excluding Taxes)**
- **Summary Table**

Specifications

- **Bidder Profile**
- **Key Personnel List**

References

- **Bidder Past Experience & Reference**
- **Unresolved Litigation**

Sub-Consultant

- **Relevant Sub-Consultant List**

Declarations

Note: Schedule A above is an electronic section that needs to be inputted on <https://markham.bidsandtenders.ca> in order to create a Bid Submission. The inclusion of this section in this Bid Document is for preview purposes only.

1. PROJECT DESCRIPTION / SPECIFICATIONS & SCOPE OF WORK

1.1. Overview

The Corporation of the City of Markham (hereinafter referred to as the “City” or the “City of Markham”) is soliciting Bids for services of a multi-disciplinary Consulting Team with proven design experience related to net-zero carbon retrofits. The purpose of this project is to study, research, and design an archetypal model and actionable retrofit framework that will create pathways for City’s fire stations to achieve Net-Zero Energy Emissions (“NZEE”), NZEE (a.k.a. Net-Zero Carbon) buildings are highly energy efficient with all remaining energy generated from on-site and/or off-site renewable energy sources.

The project scope will include developing an implementation strategy on how to cost-effectively achieve NZEE for an archetype fire station (modelled representation of a “typical” building), as well as customized solutions for the participating fire stations, via energy conservation, energy efficiency (including heat recovery), fuel-switching (electrification), on-site renewable energy, and purchasing local renewable energy credits (RECs) for any remaining outstanding energy balance.

The goal is for the City to lead the community by example, through City’s assets, towards a sustainable future. This project aims to pilot the retrofit design and implementation framework of taking an archetypally modelled building (and selected pilot facilities) towards NZEE.

1.2. Project Objectives

The following objectives will apply to new and existing fire stations:

- **Retrofit (and construct) buildings to NZEE** primarily through significant energy and GHG emission reductions (**environmental**)
- **Reduce utility bills and mitigate capital costs** by identifying and implementing cost-effective GHG reduction solutions and leveraging normal capital renewal timelines (**economic**)
- **Improve building quality, comfort, health and resilience** (**social**)
- **Increase internal communication, awareness, and capacity** that will enable the City to better plan, build, retrofit, operate and maintain NZEE buildings
- **Support sector transformation** by developing zero-over-time retrofit pathways to achieve NZEE by 2050 for the fire station property type

1.3. Approach

The benefit of studying and design for one property type is the City can collect and consolidate information on typical energy and GHG patterns, determine variances between the facilities and major energy drivers, develop a modular plug-and-play model with generic solutions, and create a net-zero retrofit design and framework that can be applied to all buildings in that property type.

The City is interested in leveraging the capital renewal schedule and a Zero-Over-Time approach to retrofit the facilities to NZEE. This approach helps portfolio managers and facility staff right-time deep energy efficiency and renewable energy projects by spreading them out over the life of the building based on “trigger points” in the building’s lifecycle. The approach focuses on long-term planning to deliver a series of cost-effective projects over time that, together, can amount to zero energy emissions for the entire

building portfolio.

Four (4) facilities were identified as good candidates to participate in the pilot study:

- 1) Fire Station 93
- 2) Fire Station 94
- 3) Fire Station 95
- 4) Fire Station 97

The intent is to include all four (4) facilities in the contract award, with Fire Station #93, #95 and #97 as higher priorities, subject to City's budget restrictions, limitations and approvals. For budgeting and RFP evaluation purposes, Bidders shall include the full scope of work in their proposal and as broken down in the Bid Form based on Anticipated Project Schedule in Section 2.

1.4. Summary of Project Deliverables

- 1) **Create present-day baseline and NZEE target archetypal models** using energy, GHG, and cost profiles for a "typical" fire station. Identify variances between facilities and common energy & GHG drivers for local conditions.
 - Additionally, produce baseline and NZEE models for fire stations participating in study
- 2) **Contrast and recommend design standards/certifications** that the City could adopt for fire stations and the City's broader portfolio.
 - **Set performance metrics** using evidence-based data and global best practices
- 3) **Complete energy audits and NZEE studies at each participating pilot facility.** The energy audit will target identifying capital and operational opportunities to achieve desired NZEE energy and GHG reductions.
- 4) **Identify cost-effective solutions** to reduce GHG emissions and energy consumption using readily available products and technologies.
- 5) **Develop a modular net-zero retrofit framework, design, tender spec/language, and analysis tools (financial, energy, GHG)** with generic solutions that can be applied to any fire station.
- 6) **Create customized net-zero retrofit roadmaps** including lifecycle financial analysis for the participating pilot fire stations. The final report will showcase modelled retrofit roadmap options with estimated costs, savings, and ROI separately and bundled to achieve NZEE.
- 7) **Facilitate stakeholder engagement and capacity building** (information, workshops, communication materials, resources) to increase awareness and obtain consensus.

1.5. Specific Project Deliverables

Scope 1: Create archetypal models and models for Fire Stations participating in the study

Purpose

Create present-day baseline and NZEE target archetypal models using energy, GHG, and cost profiles for a "typical" fire station. Identify variances between facilities and common energy & GHG drivers for local conditions.

Additionally, produce custom baseline and NZEE models for fire stations participating in study.

The deliverables for this section include:

- 1) Development of a “present-day” archetypal model of a fire station, using local conditions that will act as the Baseline model for this study.
 - 1.1) Generic retrofit solutions identified throughout this pilot study will be applied to the Baseline model to develop a modular and adaptable NZEE archetypal model, which will act as the Target model and retrofit framework that can be applied to all buildings in this property type.
- 2) Using the insights gained from the archetypal model effort, the City is also seeking custom designed models and solutions for the four (4) fire stations participating in the net-zero pilot. Similar to above, all four (4) fire stations shall have a Baseline model and NZEE Target model as well as actionable retrofit solutions for each facility.
 - 2.1) The Baseline models shall be developed using actual historic energy & GHG utility data, building characteristics, energy end-uses, etc.
 - 2.2) The NZEE Target models shall be developed based on recommended solution outputs from completing the other scope sections in this RFP, and shall be specific to those four (4) buildings.
- 3) Meet with City staff to review and finalize the assumptions, design, and results for each complete model.
- 4) Models shall be developed using accessible and industry-standard software.
 - 3.1) Preferred modelling software: RETScreen Expert. If another software is recommended, please state rationale.
- 5) Models shall contain all relevant key building characteristics for local buildings in this segment that impact energy and GHG end-uses including (but not limited to):

Domestic Hot Water

- Domestic hot water heater type and configuration (central, individual, gas, electric)
- Plumbing fixture (ex. showerheads, sinks) flow rates and typical usage
- Washing machine type and setup
- Domestic hot water typical uses

Heating/Cooling

- Wall, roof, and floor insulation
- Thermal bridging
- Air leakage
- Window type (single/double/triple pane, frame type and insulation)
- Window to wall ratio
- Heating system (furnace, baseboard, radiators, heat pumps)
- Cooling system (heat pump, condensing unit)
- Exhaust capacity and control strategy
- Thermostat type (programmable, manual, smart)
- Mechanical ventilation requirements – local ventilation codes (ASHRAE 62.1)
- Climate zone – energy modelling software will bring in climate data
- Comfort conditions – air quality, temperature, humidity

Plug loads

- Appliances (washer/dryer, dishwasher, fridge)
- Stovetop type and usage (electric, induction, natural gas)
- Miscellaneous other plug loads (TV, computer, personal device chargers, other electronics)

Lighting

- Typical interior lighting type and operation
- Garage and exterior lighting type and operation

Renewable energy generation

- Potential sources of on-site renewable energy
 - Solar (PV, thermal)
 - Biogas or biofuels
 - Wind
- Potential sources of community renewable energy
 - District energy systems (low-carbon)
 - Community solar or wind projects
 - Power Purchase Agreements connecting buildings to new sources of renewable energy

Local Renewable Energy Credits

Scope 2: Contrast and recommend design standards/certifications and performance metrics

Purpose

Contrast and recommend energy and GHG-efficient design standards/certifications that the City could adopt for fire stations and the City's broader portfolio.

Set performance metrics using evidence-based data and global best practices (ex. TEDI, EUI, GHGi).

Energy Design Standards and Certifications

Based on preliminary research, the recommended path to net-zero is to retrofit the facilities to be as energy-efficient as possible prior to adding renewable energy and/or purchasing local RECs. And, there are a variety of building design standards and certifications with increasing adoption in Canada that target the reduction of energy consumption and GHG emissions including (but not limited to):

- Canadian Green Building Council's Zero Carbon Buildings,
- Passive House,
- BC Energy Step Code,
- Toronto Green Standard's Tier 4 or Zero Emissions Building Framework

The City is particularly interested in passive design principles with less reliance on complex mechanical and controls systems to achieve optimum building performance. Passive designs include:

- Passive building envelope – an airtight building envelope with high-performance insulation, windows, and doors ensures that unwanted heat gains, losses, and moisture are minimized.

- Passive heating – improving a building’s ability to harness incoming solar radiation will reduce the need for active mechanical systems that use energy to heat the building.
- Passive cooling – passively prevent unwanted heat gains during cooling season through measures such as window dressings, external features (deciduous trees, vegetation).

Low-maintenance designs and retrofits that improve building envelope and ventilation strategies can not only significantly reduce energy demand, but also enable smaller, lower carbon heating and cooling systems to be installed while increasing building comfort and resilience. A well-insulated and passively designed building can maintain habitable interior temperatures for several days, even in freezing weather without power, and thus provide optimal shelter in emergency situations where other buildings would fail.

With that in mind, the City is seeking recommendations to establish NZEE energy and GHG performance standards and targets that ensure facilities are as energy-efficient as possible prior to offsetting the remaining energy and GHG emissions. Please review and reference Attachment F throughout the project to ensure alignment and enhancements to related reference reports, programs, and documents.

The deliverables for this section include:

- 1.0) Summarize and recommend industry-leading energy and GHG design standards/certifications for Retrofit and New Construction applications, with particular focus on Retrofit. Outline the key similarities and differences.
 - 1.1) Evaluate options with consideration given to local context, climate, and jurisdiction.
 - 1.2) Include the applicability of designs and metrics that encourage less complex, passive design principles.

Energy and GHG Performance Metrics

The deliverables for this section include:

- 2.0) Using evidence-based data and global best practices, recommend energy and GHG performance metrics that will encourage best-in-class building performance. The metrics should symbiotically encourage energy and emission reductions as well as quality building design. Consider including the following metrics:
 - 2.1) Energy-Use-Intensity (EUI). To ensure buildings are operating at lowest overall energy-use and utility costs.
 - 2.2) Thermal Energy Demand Intensity (TEDI). To ensure resilient buildings that improve both occupant comfort and thermal energy performance.
 - 2.3) Greenhouse Gas Emissions Intensity (GHGi). To encourage low-carbon energy sources and reduced building GHG emissions.
 - 2.4) Airtightness (ex. maximum air-leakage rate of 2 ACH @ 50 pascals). To minimize the amount of unwanted heat gains, losses and moisture entering and leaving the building.
 - 2.5) Maximum amount of renewable energy and/or local RECs to offset on-site GHG emissions. To ensure facilities are as energy and GHG-efficient as possible prior to offsetting the remaining GHGs with renewables and/or RECs.
- 3.0) Presentation to City staff summarizing findings and recommendations to finalize design standards and performance metrics.

Scope 3: Complete energy audits and NZEE studies at each participating pilot facility

Purpose

Complete energy audits and net-zero studies at each participating pilot facility. The energy audit will target identifying capital and operational opportunities to achieve desired NZEE energy and GHG reductions.

ASHRAE Level 2 energy and GHG audits will target identifying capital and operational opportunities to achieve agreed upon performance metrics from Scope 2 (ex. at least a 40% energy and GHG reduction to achieve 20 EUI).

Energy and GHG Audit Process

1.0) **Review existing documentation** including:

- 1.1) Utility bill data
- 1.2) Lifecycle planning and equipment details
- 1.3) As-built drawings
- 1.4) Enbridge Run-it-Right program – Findings Summary
- 1.5) Solar PV Preliminary Engineering Studies

2.0) **Perform site surveys**

- 2.1) Conduct Level 2 site audits of existing building condition, systems, processes and equipment
- 2.2) Recommend and install temporary or permanent meters as required to implement diagnostic monitoring, trending, and testing
- 2.3) Interview building operators and tenants to identify areas for improvement
- 2.4) Assess and document the current operating strategies, schedules, set points, ventilation and fresh-air strategies, and sequences of operation
- 2.5) Complete building envelope analysis and testing including air-tightness testing and non-intrusive visual assessments (thermal imaging)

The deliverables for this section include:

1.0) **Produce Audit Report.** Using data collected from above steps, as well as best practices and professional judgement, produce a report containing the following information (at minimum):

- Executive summary, scope of the project, overview of activities
- Breakdown of energy and GHG data by fire station:
 - Benchmark facilities against similar facilities in national databases (ex. EnergySTAR PM)
 - Identify base loads, seasonal variation, and major energy & GHG drivers
 - Total energy by end use
 - Electricity consumption by end use
 - Natural gas consumption by end use
 - GHG emissions by end use
 - Utility cost by end use
- Air-tightness testing results
- Thermal imaging results
- Building conditions and operational characteristics

- All other requirements to meet ASHRAE Level 2 audit criteria
 - Any other relevant audit findings
- 2.0) Meet with City staff to review key audit findings and results.

Separate Price – Fire Station 93 Geothermal System Analysis:

Fire Station 93 is a 10,834 square foot 1-storey fire station built in 2010 with geothermal in-slab radiant heating and cooling. In that time, the geothermal pumps have suffered from mechanical and performance issues, and have been replaced twice in the last 10 years. In addition to the scope included in Scope 3, include separate pricing in your proposal for:

- 1) ASHRAE Level 3 audit of geothermal system at Fire Station 93
- 2) Recommend detailed solutions (operational and/or capital) to improve geothermal performance and reduce pre-mature mechanical failures and performance issues
- 3) Recommend preventative maintenance procedures to ensure equipment is operating at (or better) than design

Scope 4: Identify cost-effective solutions to reduce GHG emissions and energy consumption

Purpose

Identify cost-effective solutions to reduce GHG emissions and energy consumption using readily available products and technologies.

The deliverables for this section include:

Using findings from your research, professional judgement, and scope completed in prior sections of this RFP, identify and recommend cost-effective solutions to reduce GHG emissions and energy consumption that meet the energy and GHG performance targets set in Scope 2. The recommended solutions should be commercially available and have a reasonable expectation of continued cost declines.

Produce a list of ranked and bundled generic retrofit solutions using readily available products and technologies that would be applicable to a “typical” archetype fire station, as well as specific ranked and bundled retrofit recommendations for each of the fire stations participating in this pilot. Preferentially evaluate and recommend solutions that will mitigate disruptions and impacts to service (ex. Energisprong/Quantum Passivhaus) and minimize embodied carbon emissions.

The list of potential solutions should be labelled as one or more of the following categories:

- **Energy conservation and low-cost/no-cost ECMs** (repair, maintenance, behavioural and operational improvements, re-commissioning, demand (kW)/cost management)
- **Capital energy-efficiency ECMs** (higher-efficiency equipment, heat recovery)
- **Fuel-switching ECMs** (electrification to reduce GHG emissions)
- **Renewable energy generation**
- **Carbon offsets** (Include in analysis the price of carbon offsets vs price increase of fuel-switching and/or above ECMs)

Each solution should include:

- **Implementation cost.** If Capital project then use the incremental cost of upgrading to higher efficiency equipment vs like-for-like replacement.
- **Energy savings by fuel source** (ie. Electricity, natural gas)
- **Utility cost savings by fuel source**, including carbon pricing projection of \$170/tonne by 2030
 - **Maintenance cost impacts**
- **GHG savings by fuel source** (ex. tonnes/year and cumulative tonnes reduced over lifespan)
- **Financial and Lifecycle costing analysis.** Determine cost-effectiveness of solutions using common financial decision support tools such as simple payback and net-present value (NPV) over life of equipment. Cost comparisons should be made assuming incremental cost of higher-efficiency building components relative to baseline (like-for-like replacement), and typical equipment lifespans.

Meet with City staff to review and discuss recommended solutions.

Scope 5: Develop a modular net-zero retrofit framework, design, tender specifications/language, and analysis tools

Purpose

Develop a modular net-zero retrofit framework, design, tender specification/language, and analysis tools (financial, energy, GHG) with generic solutions that can be applied to any “typical” fire station.

This section is intended to assist the City with developing an actionable retrofit strategy and framework that takes the Baseline archetype fire station from net-zero conceptual ideas to implementation. The design, model, and retrofit framework should achieve the energy & GHG performance targets (at minimum) as established in Scope 2, and set the fire station portfolio on a course to net-zero carbon.

Inputs

- Scope 1: Baseline modelling
- Scope 2: Energy & GHG performance targets
- Scope 3 and 4: Identified solutions to achieve energy & GHG performance targets and NZEE

The deliverables for this section include:

- 1.0) Using the Inputs above, develop a visual representation (ex. Waterfall chart) that demonstrates how the Baseline archetype model fire station can gradually implement single and/or bundled ECMs to achieve the energy & GHG performance targets and a zero-carbon balance (aka. NZEE).
- 2.0) Produce supporting methodology, assumptions, calculations, modelling, and data illustrating how facilities can achieve NZEE. The summary should include:
 - Baseline annual energy consumption, GHG emissions, and operating costs by fuel source
 - Target performance reductions of annual energy consumption, GHG emissions, and operating costs by fuel source (per Scope 2)
 - Projected Net Performance (Baseline minus Target) annual energy, GHG, and operating cost savings by fuel source
 - Renewable energy generation and/or renewable energy credits (RECs)
 - Validation and demonstration of zero carbon balance for archetype fire station
 - Implementation cost (single and/or bundled ECMs)

- Financial and Lifecycle costing analysis (ex. simple payback, NPV)
 - Include measurement and verification (M&V) costs and Green Building certification costs, if applicable
- 3.0) Produce an optimized list of recommendations that maximize the GHG and energy reductions while offering the most favourable financial returns.
 - Recommend which solutions should be bundled for cost-efficiency and reduced service disruptions.
- 4.0) Recommend “Trigger point” timing (ex. Lifecycle capital renewal schedules) to initiative single and/or bundled solutions.
- 5.0) Create minimum component replacement specifications/RFP language (ex. energy-efficiency minimum requirements, testing) to include in procurements scopes that will ensure all future major building components as outlined in section 4 of Scope 1 meet NZEE targets.
- 6.0) Create business case/analysis tools (financial, energy, GHG) to assist the City with evaluating emerging energy & GHG reduction solutions.
- 7.0) Meet with City staff to present summary of key audit findings and results from Scope 3 & 4 for archetypal fire station, as well results and recommendations through completion of Scope 5.

Scope 6: Create customized net-zero retrofit roadmaps

Purpose

Create customized net-zero retrofit roadmaps including lifecycle financial analysis for the participating pilot fire stations. The final report will showcase modelled retrofit roadmap options with estimated costs, savings, and ROI separately and bundled to achieve NZEE.

This section is intended to deliver customized net-zero retrofit roadmaps for the fire stations participating in the pilot. The design, model, and retrofit framework should achieve the energy & GHG performance targets (at minimum) as established in Scope 2, and set the pilot fire stations on a course to net-zero carbon.

Inputs

- Scope 1: Baseline modelling
- Scope 2: Energy & GHG performance targets
- Scope 3 and 4: Identified solutions to achieve energy & GHG performance targets and NZEE

The deliverables for this section include:

- 1.0) Using the Inputs above, develop a visual representation (ex. Waterfall chart) that demonstrates how each of the pilot fire stations can gradually implement single and/or bundled ECMs to achieve the energy & GHG performance targets and a zero-carbon balance (aka. NZEE).
- 2.0) Produce supporting methodology, assumptions, calculations, modelling, and data illustrating how facilities can achieve NZEE. The summary for each facility should include:
 - Baseline annual energy consumption, GHG emissions, and operating costs by fuel source
 - Target performance reductions of annual energy consumption, GHG emissions, and operating costs by fuel source (per Scope 2)
 - Projected Net Performance (Baseline minus Target) annual energy, GHG, and operating cost savings by fuel source
 - Renewable energy generation and/or RECs

- Measurement and verification strategy
 - Validation and demonstration of zero carbon balance
 - Implementation cost (single and/or bundled ECMs)
 - Class C cost estimate (minimum)
 - Review and recommend available incentives/grants
 - Financial and Lifecycle analysis (ex. simple payback, NPV)
 - Include M&V costs and Green Building certification costs, if applicable
- 3.0) Recommend procurement timeline and key milestone dates per Lifecycle capital renewal analysis.
- 4.0) Produce an optimized list of recommendations that maximize the GHG and energy reductions while offering the most favourable financial returns.
- Recommend which solutions should be bundled for cost-efficiency and reduced service disruptions.
- 5.0) Identify key project risks and mitigation strategies
- 6.0) A standard operating procedure for City staff to update the models
- 7.0) Meeting with City staff to present summary of key audit findings and results from Scope 3 & 4 for each pilot fire station, as well results and recommendations through completion of Scope 6.

Scope 7: Facilitate stakeholder engagement and capacity building

Purpose

Facilitate stakeholder engagement and capacity building (information, workshops, communication materials, resources) to increase awareness and obtain consensus

The deliverables for this section include:

- 1.0) Meet with the City to understand the project requirements and communicate the design concepts and deliverables throughout the project.
- 2.0) Collaborate with the team and Corporate Communications department to produce educational material such as infographics, visualizations, social media, and webpage content, as required.
 - 2.1) Highlight social, economic and environmental benefits of achieving NZEE. Include “Other benefits”, which are benefits above and beyond business-as-usual such as green procurement, building reliability and resilience, job creation, health and indoor air-quality improvements.
- 3.0) Review existing staffing resources; their capacity, awareness, skills, and capabilities. Recommend staffing requirements and/or training to increase awareness/education that will enable staff to effectively implement zero carbon initiatives.
- 4.0) Facilitate stakeholder engagement meetings, design decision meetings (as outlined in Scopes 1 through 6) and bi-weekly project status updates. Include materials to support stakeholder engagement (ex. presentations, meeting minutes, lessons learned).
- 5.0) Prepare a final report & presentation to Council for endorsement of the NZEE strategy, recommendations, financial impact, and implementation plan
- 6.0) Governance improvements: recommend updates to materials that will provide Corporate direction on opportunities to build organizational alignment towards achieving NZEE targets, such as through amendments to:
 - Council report templates,
 - Financial analysis/business case tools (Scope 4, 5),
 - Capital request forms,
 - Procurement processes,

- Lifecycle and asset management systems,
- Changes to governance, policies, or decision making.

1.6. Consulting Team Resources

1.0) Required Skills and Expertise of the Consulting Team (Project Resources)

The Successful Bidder must be able to commit staff resources such that the project goals are met within the timeline described. The Successful Bidder shall not reassign or replace members of the proposed project team without prior consent in writing from the City. The City should have the right to request a project team member replacement and be involved in the Successful Bidders selection process of the new team member.

The Successful Bidder shall have extensive experience in Project Management, Auditing, Design, Modelling, and Engineering related to net-zero projects. The Successful Bidder is expected to be familiar with the latest methods, trends and advances in the area of net-zero retrofits.

2.0) Lead Project Manager

The Proposal must clearly indicate one Project Manager from the consulting team who will be the spokesperson at the meetings mentioned in throughout this RFP. In addition, the proposal should name a substitute who will serve as Project Manager in the absence of the selected Project Manager. The Project Manager should be a Professional Engineer (P.Eng) and have at least ten (10) years of extensive professional experience managing similar projects on budget and within schedule. Additional qualifications such as Project Management Professional (PMP) will be considered an asset.

3.0) Project Team

The Proposal should include a Key Personnel List and Organization Chart showing the names, firms and responsibilities in the hierarchy of the various members of the consulting team.

The Proposal shall demonstrate the Bidder's ability, qualifications, and experience in the areas of engineering (mechanical, electrical, structural), energy auditing, modelling, procurement, construction, environment, and commissioning of net-zero carbon systems. The Bidder shall provide examples of similar projects and the specific scope performed by each Key Personnel relevant to their associated scope for this project. Each member of the Project Team should have at least five (5) years of professional experience and members of the team should demonstrate the following minimum industry-recognized qualifications for their respective Scope areas:

- Building Energy Modeller (ex. Building Energy Modelling Professional (BEMP))
- Energy Auditing and Management Professional (ex. Certified Energy Manager (CEM), Certified Measurement & Verification Professional (CMVP), Certified Energy Auditor (CEA))
- Low-carbon designer (Certified Passive House Designer/Consultant, LEED)

By submitting a Bid in response to this RFP, the Bidder represents and warrants that it has the necessary skill, ability, experience, personnel and other resources to perform the Work and that, if selected as the Successful Bidder, the Bidder will perform the Work:

- With the degree of care, skill and diligence normally applied in the performance of services of a similar nature and magnitude;
- In accordance with sound current professional practices;

- In conformity with the latest standards and codes prescribed by professional and regulatory bodies in the applicable profession, field or discipline; and
- In accordance with the requirements of the Contract, and any requests or instructions of the City’s Project Manager made/given pursuant hereto.

2. ANTICIPATED PROJECT SCHEDULE

The Proposal process will be governed according to the following schedule. Although every attempt will be made to meet all dates, the City reserves the right to modify or alter any or all dates at its sole discretion by notifying all Bidders in writing at the address indicated in the completed Proposal submitted to the City. The following is the proposed schedule:

Description	Date
Release of RFP	Friday, March 12, 2021
Deadline for Submitting Questions	Friday, March 26, 2021 4:00 p.m.
Deadline for Responding to Questions	Tuesday, March 30, 2021 4:00 p.m.
RFP Closing time	Friday, April 2, 2021 @ 3:00 p.m. local time
Anticipated Award Time Frame	April 2021
Estimated Project Initiation	May 1, 2021
Work Completion	November 30, 2021

3. PRICING

3.1. General

- 1.0) All quoted fees via SCHEDULE A – BID FORMS (Schedule of Prices) shall be firm and fixed and considered the maximum upset limit fee for providing all Work and services as detailed herein. Additional costs, over and beyond what is outlined in the Bid Price via SCHEDULE A – BID FORMS (Schedule of Prices) shall be absorbed by the Successful Bidder;
- 2.0) It is the responsibility of the Bidders to ensure the accuracy of their Bid. The Bid shall include ALL applicable costs associated with the Work and all requirements described within this RFP (including but not limited to all disbursements, compensation, travel expenses / mileage / accommodation, administration, handling, reports, overhead, profit and all other costs). Further, the Bidder agrees to provide all necessary labour, material and equipment necessary to complete the Work described in this RFP for the quoted Bid Price via SCHEDULE A – BID FORMS (Schedule of Prices), and agrees to carry out the provisions of this RFP in accordance with the terms hereof.
- 3.0) The City shall NOT be responsible for any additional costs that are not specified in the SCHEDULE A – BID FORMS (Schedule of Prices)
- 4.0) Prices shall be in Canadian dollars ONLY;
- 5.0) COVID 19 – Specific Bid Price Addition: When completing the Bid Form, the City requires that all Bidders incorporate the following into the Bid Price:
 - i any COVID-19 related health and safety measures;
 - ii. anticipated impacts on productivity and overhead costs; and,
 - iii. any other costs related to COVID-19, that can be reasonably anticipated at the time of Bid Submission

- 6.0) All quoted fees via SCHEDULE A – BID FORMS (Schedule of Prices) shall include the Bidders obligations, whether stated or otherwise to ensure their satisfactory performance with the delivery of all Work and services, including (but not limited to):

3.2. Disbursement Fees

- 1.0) Disbursements fees shall be included with the submitted Bid Price via SCHEDULE A – BID FORMS (Schedule of Prices) and shall be considered the maximum upset limit fee permitted under this contract
- 2.0) Without exception, the City will not pay for any disbursements whatsoever, including, but not limited to compensation for: reports, travel expenses / mileage/ accommodations, postage, fax, courier, long distance telephone calls, mobile phone charges, that exceed the amount(s) quoted by the Bidder via SCHEDULE A – BID FORMS (Schedule of Prices), unless expressly agreed to in writing.

3.3. Change in Work

Any changes to the Work shall be mutually agreed to between the City and the Successful Bidder, in writing:

- 1.0) Prior to commencing the work the Successful Bidder shall provide to the City a written estimate for the work and identify that section of work to which the increase or reduction in fees payable shall apply; and,
- 2.0) The Successful Bidder shall not be paid for any work performed by the Successful Bidder outside the Scope of Work identified herein, unless such work has been previously agreed to, in writing, by the City.
- 3.0) The Successful Bidder shall make no changes to the Work without written permission of the City representative.

3.4. Additional Cost & Expense

- 1.0) All fees, costs and expenses as submitted by the Successful Bidder's submitted Bid Price via the SCHEDULE A – BID FORMS (Schedule of Prices) shall constitute the total cost to complete the scope of work identified under this RFP, or as amended by addenda, and fulfilling its obligations under the Contract.
- 2.0) Under no circumstances will the City accept costs or charges for extras or additional work performed outside of the scope of work unless such additional work or charges have been agreed to by the City, in writing, before the work is performed.

4. CONTRACT TERM & WARRANTY

All the Work must be completed by November 30, 2021 (“Contract Time”) unless otherwise specified in the Contract.

Note: It is the successful bidder's responsibility to maintain insurance documentation until the end of the warranty period and forward updates to the Procurement Division prior to the expiry date.

5. CONTRACT

By submitting a completed Bid Form, the Bidder agrees to be bound by the terms and conditions of this RFP and the following: The City's General Terms and Conditions (attached hereto) and the

City's Purchasing By-law # 2017-18, which can be found on the City's website:

<https://www.markham.ca/wps/portal/home/business/bids-tenders/bylaw-terms-and-conditions/05-by-law-terms-and-conditions>

All capitalized terms used herein and not otherwise defined shall have the meanings assigned in the City's *General Terms and Conditions*.

The Bidder agrees that this RFP, the City's *General Terms and Conditions (Parts I and III)*, the Successful Bidder's submission, the Purchase Order, and any other written agreement between the City and the Successful Bidder regarding the Work shall form the Contract between the City and the Successful Bidder.

6. INFORMATION TO BE PROVIDED BY THE CITY

The City will provide the following information to the successful Bidder upon contract award:

- Historic energy consumption and cost data (3 years)
- Capital renewal schedule and Lifecycle Plan
- As-built drawings
- Solar PV Preliminary Engineering Studies
- Enbridge Run-it-Right program – Findings Summary
- Lifecycle Asset Renewal Framework using ASHRAE Standard 90.1
- Corporate Green Procurement Guidelines (ie. Sustainable Purchasing Guide)
- Relevant internal templates (ie. Council report template, Capital Request form, etc)

7. VENDOR PERFORMANCE EVALUATION

The performance of the Successful Bidder will be evaluated at the completion of the Work based on the criteria and metrics outlined in the City of Markham's "Vendor Performance Management" procedures. The City's Project Manager will use a pre-determined scorecard to ensure an objective assessment of a Vendor's or Service Provider's performance, by applying established evaluation criteria such as: Quality, Project Management (Health and Safety, Schedule Management, Communications), cost control (budget management) and performance of product during warranty period.

Performance evaluation may be used to provide feedback to the Vendor/Service Provider; to provide the Vendor/Service Provider with the opportunity to implement performance improvements during the Contract; and to justify an award or non-award of future Contracts by the City in accordance with the terms of the City of Markham's "Vendor Performance Management" procedures. Continued incidence of non-compliance can be reflected in the Vendor/Service Provider's performance evaluation and may affect the ability to work for the City in the future.

8. EVALUATION CRITERIA AND SELECTION PROCESS

Bids will be assessed on the basis of information provided by the Bidder at the time of submission as well as any additional information provided during subsequent communications with the Bidder.

The evaluation of Bids will be conducted by an Evaluation Team comprised of staff members from

the City’s Sustainability & Asset Management Department, facilitated by staff from the City’s Procurement Department. The Evaluation Team shall review all Bids received and score the Bids based on a “consensus” approach. The City reserves the right to engage professional external or internal consultants to assist with the evaluation process.

By submitting a Bid, the Bidder agrees to be bound by the process set out in this RFP regarding the conduct of this RFP and the evaluation process.

Bids meeting the MANDATORY requirements will be assessed against the following evaluation criteria:

Evaluation Criteria			Weight
STAGE I	Qualifications and Technical Proposal	Qualifications and Experience of the Consulting Firm The Bidder will be evaluated based on the responses provided by the Bidder to Section 9.1 and 9.2 of this RFP.	15 points
		Qualifications and Experience of the Project Manager and Project Team (including sub-consultants) The Bidder will be evaluated based on the responses provided by the Bidder to Section 9.3 of this RFP.	15 points
		Project Understanding, Methodology & Delivery Management The Bidder will be evaluated based on the responses provided by the Bidder to Section 9.4 and 9.5 of this RFP.	40 points
	Total – STAGE I		/70 points
STAGE II	Financial Proposal	(Bid Form) The evaluation of the Bid Price , as submitted via the Bid Form	30 points
Total – STAGE II		/30 points	
Total Score – (STAGE I + STAGE II)		/100 points	
STAGE III	Presentation	<i>Note: Stage III is not a mandatory requirement of the evaluation process and will be conducted at the sole discretion of the City.</i>	10 points
Total – STAGE III		/10 points	
Grand Total		110 points	

THREE STAGE PROCESS

Submissions will be evaluated using a **THREE STAGE PROCESS**. Evaluation of Bids will be based on all the above evaluation criteria and any other relevant information provided by the Bidder(s). Bids will be scored based on meeting or exceeding the expectations and requirements of the City with respect to the evaluation criteria.

STAGE I: Technical Proposal

Submissions will be evaluated against the technical criteria set out herein. The total evaluation for Stage I will be scored out of 100 points and those Bidders who score a minimum of 75 points out of 100 will be qualified to continue to Stage II (Financials).

Note: This score will be prorated out of seventy (70) points.

STAGE II: Financial Proposal (Bid Form)

Upon completion of Stage I, the Financial Proposal (Bid Form) provided by those Bidders who are qualified from Stage I, meeting a minimum score of 75 points out of 100 points, will be evaluated. Stage II will consist of a scoring of the submitted financial proposal.

The lowest **Bid Price** will receive the maximum score of 30 points.

The score for the remaining Bids will be calculated as follows:

$$= (1 - [(A - B)/B]) \times 30, \text{ where } A = \text{Bid Price, and } B = \text{Lowest Bid Price}$$

Upon completion of Stage I and Stage II, the highest ranked Bidders will be selected by the City (in its sole discretion) to continue to Stage III of the evaluation.

The City reserves the right, in its sole discretion, to shortlist highest ranked Bidders under Stage I for further evaluation via Stage III - Presentation. If Stage III is not conducted by the City, an award decision will be made by the City after Stage II.

STAGE III – Presentation:

Stage III is not a mandatory requirement of the evaluation process and will be conducted at the sole discretion of the City. An agenda will be provided to those Bidders participating in Stage III of the evaluation process.

Stage III will consist of a scoring by the Evaluation Team of a presentation and/or demonstration to further evaluate the Bidder's Bid submission against the requirements of this RFP, the results of which may alter the final scoring.

The cumulative score of Total score and Presentation will be the Grand Total score.

The “Grand Total” score will be based on the cumulative score of Stage I, Stage II and Stage III.

RIGHT TO NEGOTIATE

The City reserves the right (in its sole discretion) to negotiate with one or more of the highest ranked Bidder(s).

Negotiations will be on a consecutive basis commencing with the highest ranked Bidder. If an acceptable contract cannot be concluded with the highest ranked Bidder, the City reserves the right to negotiate a contract acceptable to the City with the next highest ranked Bidder(s) in succession

All Bids shall be submitted on the understanding that the selection of a Bid for discussion by the Evaluation Committee shall not thereby result in the formation of a Contract, nor shall it create any obligation on the City to enter into further discussions.

The City reserves the right to conduct reference checks on the Bidders, the results of which may affect the award decision. Reference checks may not be limited to those supplied by the Bidder.

Upon conclusion of the evaluation process described above, the City reserves the right (in its sole discretion):

- to cancel this RFP process;
- to accept proposals in whole or in part;
- to award one or more contracts to a single or multiple Proponents.

9. BID SUBMISSION CONTENT AND DELIVERABLES

To facilitate a more uniform and consistent review of all submissions, Bidders are requested to complete the online Bid Form in the Bidding System and upload the documents as detailed below.

The Technical Proposal shall contain the following sections:

9.1. Bidder's Profile

Bidders should have the personnel, organization culture and financial resources to ensure their ongoing ability to deliver and support the proposed project within the stated time period of the Contract. To permit the Bidder to be evaluated fully as a viable and sound enterprise, include the following information with respect to the Bidder.

- Year Established;
 - No. of Years in Business;
 - Legal Structure of Contractor: Corporation/ Sole Proprietor / Partnership / Other
 - Names and Titles of Officers, Partners, Principal:
 - Total number of employees;
 - Major clients;
 - Business partners and the products/services they offer;
 - Core Work: Describe the degree to which the scope of work of this RFP represents the core work of your firm. Include evidence that your firm has the corporate infrastructure, suitability and resources to fulfill the City's requirements and expectations of the project. Include key aspects that distinguishes your firm from others in the marketplace;
- *Complete online form "Bidder Profile"*

Sub-Consultants: The City will only consider Bids submitted by a single Consultant who would act as a prime consultant and then supplies any required specialist expertise via Sub-contractors or Sub-Consultants, as the case may be. If sub-consultants are to be used, provide evidence of their experience in the areas detailed in this RFP.

- *Complete online form "Sub-Consultant List" (if applicable)*

9.2. Relevant Project Experience & References

It is important the Work be undertaken by a Bidder who can demonstrate specific knowledge of and experience in performing similar work for projects of comparable nature, size and scope.

In particular, the Bidder should demonstrate the following in its Bid:

1.0) Past Experience

- Include project portfolio and experience of previous work indicating the competence and track record of your firm in the marketplace with regard to services required by the City.
- Describe your company's experience with blending technologies and approaches to optimize systems in a way that promotes the most GHG and energy efficient systems through innovative and/or unique methods.

- Please indicate firm’s experience on a minimum of three (3) completed projects within last Five (5) years of a similar nature / complexity as identified in this RFP, with details of size, location, owner and the name of the staff that managed the projects.

2.0) References

- Bidder shall select at least three (3) of the submitted past projects identified above (via Past Experience) as references.
 - The references cited must be willing to discuss all the services that were (or are being) provided, and their experience with the service and staff.
- *Complete online form “Bidder Experiences & Reference List”*

9.3. Experience and Qualification of the Proposed Project Team (Key Personnel)

1.0) Project Team – Key Personnel

Bidder shall identify the Lead Project Manager and all key personnel to be involved in the project, including their name, title, project role, summary of experience in similar role and technology, including any sub-consultants (if any).

- *Complete online form “Key Personnel List”*

Note:

- Qualification of any proposed sub-Consultant shall be evaluated based on similar criteria.
- Any changes to Key Personnel will require the prior written approval from the City
- Only team members directly involved in the project will be evaluated and scored based on the criteria.

2.0) Lead Project Manager

Identify who will be assigned as the Lead Project Manager, including credentials, qualifications, achievements, years of experience, roles/responsibilities in past similar projects; highlight years of experience in performing similar work for projects of comparable nature, size and scope to the City’s Work as identified via Section 1 of this RFP. In addition, the proposal should name a substitute who will serve as Project Manager in the absence of the selected Project Manager. Please refer to Section 1.6 for requirements.

- *Upload document (“Resumes”) online*

3.0) Project Team

List and identify the roles and responsibilities of each Key Personnel, including sub-consultants (if any) that would be assigned to this project; including responsibilities related to this project, credentials, qualifications, achievements, years of experience, roles/responsibilities in past similar projects; highlight years of experience in performing similar work for projects of comparable nature, size and scope to the City’s Work as identified via Section 1 of this RFP in a resume format. Please refer to Section 1.6 for requirements.

- *Upload document (“Resumes”) online*

4.0) Organizational Chart

Organizational Chart shall identify the Project Manager and all of the personnel to be involved in the project and how each team member will interact with others. Provide

evidence of sufficient staff structure to ensure dedication to this project. The primary working location of each project member should be included in the Organization Chart.

- *Upload document (“Organization Chart”) online*

9.4. Project Understanding, Methodology, Delivery Management

The purpose of this section is to demonstrate that the Bidder has a thorough understanding of the Work and any potential barriers in the path of completion. The Bidder will provide their methodology and approach for each phase to provide evidence that will assist the City in assessing the best qualified team and project plan to complete the work.

Bidders are requested to provide the following and are encouraged to include as much detail as possible:

1.0) Demonstrated understanding of the project

This should include an indication of the nature of the work involved, approach to meeting the overall objectives and any anticipated conflicts and problems related to the implementation of the Project. The proposal must demonstrate that the Bidder is familiar with the particular requirements of the assignment, and is conversant with normal engineering and contractual practices in addressing them to the satisfaction of the City staff using all possible technologies to show his/her complete skills and capabilities to undertake the tasks of the project and to handle the proposed work plan of the project.

2.0) Methodology and approach

Methodology and approach to meet the stated objectives and deliverables as outlined in the Section 1 of RFP including detailed work plan, phasing, meetings, consultation process, coordination, budget requirements, deliverables and time-frames. This should include, but is not limited to:

- how the Bidder plans to engage the City and stakeholders to ensure a collaborative effort to complete each phase without delay.
- any innovative methods that complement the objectives of the Work or result in recommending the most cost-effective energy and GHG efficient systems and improvements;
- demonstrated familiarity with the project requirements, which include reports, designs and/or other work completed similar in scope (evaluation and design for zero carbon, examples of building retrofits that met energy and carbon reduction targets, energy auditing and modelling, etc); and,
- extent and timing of involvement required by City Staff in the administration of the Work.

3.0) Project Management & Control Measures

Identify management and control methods during the project life cycle, which will be implemented in order to ensure that the upset limit for the consulting fees will not be exceeded. This should include, but is not limited to: pre-project planning, communication, scope management, time management, risk management, staff planning, cost estimation, cost control measures, dispute prevention and resolution and quality management

- 4.0) Quality Assurance & Quality Control (QA/QC)
Provide details of the QA/QC Program to be implemented by the Consultant for this assignment. The Consultant is fully responsible for the quality of all services. The prime Consultant is responsible for the quality control of all specialties, including Sub-consultants, and must take the appropriate actions and corrective measures, in order to ensure the quality of all services. This should include, but is not limited to:
- how deficiencies/complaints/requests and follow-up are addressed/rectified and
 - how project quality, cost, schedule and risks shall be controlled and managed.
- *Upload document “Project Understanding, Methodology and Delivery Management” online*

9.5. Project Schedule

Bidders are to provide a Project Schedule and a Time/ Task/ Cost Matrix as part of the proposal.

- 1.0) Project Schedule (i.e. Gantt Chart)
- Indicate the anticipated duration of each task, key milestones, meetings and presentations together with the start and completion date;
 - Reporting: clearly identify all scheduled or necessary meetings related to reviews, approval processes, responding to comments and revisions, final approvals, project meetings, team meetings, consultation meetings, progress reviews, presentations, follow-up and all project milestones;
 - Indicate consultation with municipal staff, stakeholders and Council outlining specific roles of the Bidder and City Staff.
- *Upload document “Gantt Chart” online*
- 2.0) Time/ Task/ Cost Matrix
- A project fees spreadsheet showing the estimated time in hours to be spent by each project team member on each task, the respective hourly rates, sub-total for each task, reimbursable expenses and disbursements and the total estimated fees excluding taxes. The tasks must be the same as those presented in the project schedule.
- *Upload document “Time/Task/Cost Matrix” online*

10. AMENDMENTS TO THE CITY’S GENERAL TERMS AND CONDITIONS

The following amendments shall apply to the City’s General Terms and Conditions for the purposes of this Request for Proposal:

- 1.0) Delete Part II, Section 3 - Mandatory Site Meeting
- 2.0) Delete: Part II Section 7.7 (Bid Submission) and replaced with the following:

COVID 19 – Specific Irrevocability Period

Due to the COVID 19 Pandemic, the City has the sole discretion to take up to ONE HUNDRED AND TWENTY (120) Business Days from the Closing Time to accept the Bid, or as provided in Section 15 the City may, in its sole discretion, cancel this Quotation. Bids shall be irrevocable for a period of ONE HUNDRED AND TWENTY (120) Business Days from the Closing Time (the “Irrevocability Period”).

- 3.0) Delete Part II, Section 8.2 (Bid Price) and replace with the following:

COVID 19 – Specific Bid Price Addition

When completing the Bid Form, the City requires that all Bidders incorporate the following into the Bid Price:

- i any COVID-19 related health and safety measures;
- ii. anticipated impacts on productivity and overhead costs; and,
- iii. any other costs related to COVID-19, that can be reasonably anticipated at the time of Bid Submission

- 4.0) Delete Part III, Section 20 (Force Majeure) and replace with the following:

20. Force Majeure

Neither the City nor the Contractor shall be liable for default or delay in the performance of obligations under the Contract due to causes beyond the reasonable control of (and not due to the fault or negligence of) the party affected, including, without limitation, natural disasters, plagues, epidemics, war, insurgence, terrorism, and power outages. The Contractor shall give the City prompt written notice when any such cause has or appears likely to prevent or delay deliveries and/or performance of the Work and shall take appropriate action to avoid or minimize such default or delay. For the duration of any default or delay, the Contractor shall keep the City apprised of the effect of the cause on the affected obligation(s) and the actions being taken to avoid or minimize the default or delay.

Written notice under this clause shall include: (i) the obligation(s) that cannot be performed and/or will be delayed because of the cause; (ii) a description of how the cause prevents and/or delays performance of the obligation(s); (iii) a description of the actions the Contractor is taking to avoid or minimize the default or delay; and (iv) an estimate of the time of the delay in performance of the obligations.

If any such default or delay threatens to impair the Contractor’s ability to meet delivery requirements for materials, supplies and/or services, the City shall have the right, without any liability to the Contractor, to terminate the portion or portions of the Contract so affected upon written notice to the Contractor.

COVID-19-Specific Force Majeure Addition

The City and the Contractor acknowledge that in March 2020 the World Health Organization declared a global pandemic of the virus leading to COVID-19. The Governments of Canada and the Province of Ontario responded to the pandemic with legislative amendments, controls, orders, requests of the public, and requests and requirements to the parties to change their activities in various ways (collectively, the “**Governmental Response**”). It is uncertain how long the pandemic, and the related Governmental Response, will continue, and it is unknown whether there may be a resurgence of the virus leading to COVID-19 or any mutation thereof (collectively, the “**Virus**”) and resulting or supplementary renewed Government Response. Without limiting the foregoing paragraphs, neither the City nor the Contractor shall be liable to the other or be deemed to be in breach of this Contract for any default or delay in rendering performance arising out of: (i) the continued spread of the Virus; and (ii) the continuation of or renewed

Governmental Response to control the spread of the Virus.

Dates or times of performance shall be extended to the extent of delays excused by this clause, provided that the party whose performance is affected notifies the other promptly of the existence and nature of such delay shall, so far as practicable, use appropriate efforts to minimize and mitigate the extent, effect and period of any such delay or non-performance.