



September 18, 2024

**J. Sidney Forsyth, P.E.**

Director  
City of Cartersville Water Department  
301 Douthit Ferry Road  
PO Box 1390  
Cartersville, GA 30120

**Reference: Water and Sewer Master Plan Proposal**

Dear Sidney,

Thank you for taking time to meet with us. As per the agreement following our discussion, we have compiled a scope for completing a Water and Sewer Master Plan. The scope, schedule, and fee breakdown for Task 1 – Data Review and Evaluation are included in Exhibit A attached to this letter. Task 1 includes a thorough review of available Geographic Information System (GIS) data, operations information (SCADA) and system drawings of ongoing projects, and includes up to four technical meetings with water and wastewater plant operations leads and transmission, distribution and collection system technical leads. This task will also include a summary of any missing information that would assist in completing the Master Plan.

A preliminary “roadmap” of all tasks that our team considers applicable for the City to meet the long-range planning needs to create a capital improvement plan for both the water and sewer systems is provided in Exhibit B. On completion of Task 1, our team will update this roadmap with City input including the timescale for completing the water and sewer Master Plan and submit a proposal.

The fee for completing Task 1 is \$28,840.80 and this task will be completed within 10 weeks of NTP assuming the technical meetings can be scheduled in the given timescale.

We appreciate the opportunity to provide this proposal and to work with the City of Cartersville. Please let me know if you have any questions or need additional information.

Respectfully,

**STANTEC CONSULTING SERVICES INC.**

A handwritten signature in blue ink, reading "Becky Hachenburg", with a long, sweeping flourish extending to the right.

**Becky Hachenburg, PE, PMP**

Vice President  
Phone: (404) 348-2120  
becky.hachenburg@stantec.com

Attachments:

Exhibit A – Task 1 Proposal  
Exhibit B – Preliminary Scope and Schedule - Water and Wastewater Master Plan  
Stantec Terms and Conditions

Reference: Water and Sewer Master Plan Proposal

## **Exhibit A – Water and Sewer Master Plan Task 1 Scope, Schedule and Fee**

### **Task 1 – Data Review and Evaluation**

Currently, The City does not have a sewer collections system model. The goals of this preliminary task are:

1. Compile and review existing information and documents, related to water and wastewater system performance, projects and future planning needs.
2. Assess existing data completeness and adequacy level to develop a sewer collection system model for master planning purpose.

#### **Subtask 1.1 Compile Existing Documents and Data**

Stantec will request available information from the City. Available information requests will be related to (but not limited to) the following:

- WaterGEMS hydraulic model report / summary of model capability.
- GIS information on water network including points of interconnection with Bartow County and pressure zone boundaries.
- GIS information on sewer networks (pipe and manholes).
- Available flow monitoring data (3-yr ADS flow metering study).
- SCADA information of WTP / WWTP for 2023 and 2024.
- Recent condition assessment reports or identification of known problem areas.
- The City's current and future land use and zoning plans (Also, if available, Bartow County plans).
- Bartow County Population growth / density information.
- Customer billing information (if held in GIS) and / or AMI information.
- Current and future street and other transportation plans, and other information that may influence capital projects.
- As-builts for constructed/commissioned projects that are not already incorporated into GIS or the existing model including the proposals for the upgrades to the WTP and WWTP.
- Details of facilities owned and operated by the City including the lift stations and 15 connection points with Bartow County.
- Existing Capital Improvement Plan and supporting information.

**Deliverable:** Data request document.

#### **Subtask 1.2 Technical Meetings**

Stantec will host four, 1-hour technical meetings with key City Staff representing water treatment operations, transmission and distribution operations, wastewater treatment operations and collection system operations. The purpose of the meetings will be to identify any future expenditure needs and any ongoing challenges. The meetings will provide Stantec with additional system understanding and to help inform the master planning process.

**Deliverable:** Meeting minutes with actions and key learning points.

#### **Subtask 1.3 Review Data and Conduct Data Gap Analysis**

Stantec will review the provided information and identify additional data needed to meet the overall project goals. Stantec shall focus the review on the following:

- Completeness of the datasets.
- Adequateness to create a master plan.
- Spot checks of available data sources to highlight potential conflicts / discrepancies.

**Reference:** Water and Sewer Master Plan Proposal

Stantec will assess the impact of the data gaps on completing a master plan and prioritize the additional data needs. Stantec will develop assumptions to be used if collecting additional data is not feasible within an acceptable timeframe.

This task will also include two analytical efforts:

- A preliminary quality data check of the ADS flow data to determine potential I/I hotspots, and
- A statistical review of the data attributes held in GIS.

The findings of both studies will be reported in the Data Review Summary Technical Memorandum.

Stantec shall meet with the City to discuss the data review findings and develop a technical memorandum documenting data inventory, data gaps and its impact, additional data needs and their priority, and suggested assumptions to be used to overcome data gaps.

**Deliverables:** Data Review Summary Technical Memorandum and Presentation Material.

Updated Exhibit B based on the findings of Task 1 following agreement with the City.

#### **Subtask 1.4 Project Management**

Stantec will provide project management services to support this task order including progress updates as needed, monthly invoicing, documentation, and project closeout.

#### **Assumptions:**

Project Kick-off meeting will be virtual.

The technical meetings will be completed in one day and any follow-up will be completed by remote communications. The location will be at the City's discretion.

The findings from Task 1 will be presented to the City at an in-person meeting at the City's discretion.

#### **Schedule:**

Task 1 will be completed within 10 weeks of receiving the first tranche of data from the City based on Stantec's data request.

Reference: Water and Sewer Master Plan Proposal

Fee Estimate: Not to exceed amount of \$28,840.80.



FEE ESTIMATE - Master Plan Data Review and Evaluation

							Project Manager	Project Technical Lead	Quality Control	Engineer	Senior Engineer	Mileage
Name							Hachenburg, Becky	Chan, Carl	Anderson, Nicholas	Hespen, Jessica	Chelupati, Muralikrishna	
Project Billing Rate (T&M)							\$285.00	\$265.00	\$285.00	\$135.00	\$225.00	\$0.67
Total Units (T&M)							14.00	15.00	13.00	51.00	45.00	240.00
Fee (T&M)							\$3,990.00	\$3,975.00	\$3,705.00	\$6,885.00	\$10,125.00	\$160.80
							Project Summary					
							Hours	Labor	Expense	Subs	Total	
Time & Material												
Total							138.00	\$28,680.00	\$160.80	\$0.00	\$28,840.80	
Task Code	Task Name	Units					Task Type	Hours	Labor	Expense	Subs	Total
1.1	Compile Existing Documents and Data		1.00	1.00	8.00	1.00	Time & Material	11.00	\$1,855.00	\$0.00	\$0.00	\$1,855.00
1.2	Technical Meetings	8.00	8.00	8.00	8.00	8.00	Time & Material	40.00	\$9,560.00	\$80.40	\$0.00	\$9,640.40
1.3	Review Data and Conduct Data Gap Analysis		6.00	4.00	35.00	36.00	Time & Material	81.00	\$15,555.00	\$80.40	\$0.00	\$15,635.40
1.4	Project Management	6.00					Time & Material	6.00	\$1,710.00	\$0.00	\$0.00	\$1,710.00

Reference: Water and Sewer Master Plan Proposal

## **Exhibit B – Water and Sewer Master Plan Preliminary Scope and Schedule**

### **Task 2 – Collect Additional Field Data**

The purpose of this task is to capture any key data identified under Task 1 that is considered critical to the successful deliver of the master plan.

#### **Subtask 2.1 - Data Collection**

Stantec will conduct field investigation for up to twenty (20) manhole locations to support the model update and calibration. Examples of these field investigation are sewer networks connectivity confirmation, investigate flow division, obtain inverts at key locations. Site reports will be generated upon completion of the site investigations. The site reports will include a sketch of the general location, physical characteristics and diameters of the proposed monitoring locations, manhole depths, flow measurements, and other comments pertinent to the location such as any special traffic or safety issues. Final site locations to be approved by City.

**Deliverable:** Site records to help update the GIS.

**Assumption:** *The city's GIS and / or records contain more than 90% of trunk sewer asset data to support hydraulic model development.*

### **Task 3 – Hydraulic Modeling**

The purpose of this task is to develop a sewer system hydraulic model from the available GIS data and where necessary some field verification, for the purposes of master planning and to liaise with the city's water system modeling consultant to simulate master planning scenarios.

#### **Subtask 3.1 – Agree Sewer Modeling Software and Build Trunk Sewer Model**

Stantec will review the needs of the hydraulic model with the city and recommend a modeling software that is most appropriate based on the findings from Task 1 and city master planning needs. In addition, Stantec will identify an initial model extent that can meet the overall project goals. Stantec will compare the sewer networks attributes (e.g. pipe and manhole inverts, pipe length and diameters, and connectivity) between the provided GIS database and the existing model. Stantec will incorporate GIS network data (pipes and manholes) update rim elevations for the modeled manholes using DEM information.

**Deliverable:** *GIS map showing model extents and assets included.*

#### **Subtask 3.2 – Calibrate and Verify Sewer Model**

Using the available ADS Flow metering data, Stantec will determine flow characterization at each flow monitoring location. Stanec will establish 24-hour diurnal patterns at each flow monitoring location to ensure the sewer model. Stantec will generate an initial sewer flow for model inputs using the updated land use and population density information.

Stantec will calibrate the sewer system hydraulic model for current dry weather condition using data collected from Task 1. Stantec will recalibrate the model within 10% of the reliable flow monitoring data. Stantec will use depth data as the primary calibration parameter and supplement by velocity and flow data.

**Deliverable:** *Sewer Model Build and Calibration Technical Memo.*

#### **Subtask 3.3 – Water Model Baseline Results**

Stantec will create a short list of current peak hour and peak day demand scenarios for the City's water modeling consultant to and simulate and provide results to create a baseline. Stantec will also request a water model schematic showing the network layout and system demands.

Reference: Water and Sewer Master Plan Proposal

***Deliverable:*** Water Model Demands Request.

## **Task 4 – Future Projections**

### **Subtask 4.1 - Meet with City Planning Staff**

Stantec will hold a meeting with the City and Bartow County to review the land use planning information and obtain input/review prior to completing the modeling. Such feedback may include more specific information on near-term developments; anticipated growth rates and timing of development; area-specific residential densities; projected areas of re-development; potential future changes to planning boundaries; and potential annexations. An agenda will be prepared for each meeting, and City staff will be invited to suggest agenda items and attend the meeting.

***Assumption:*** City will determine appropriate meeting participants.

### **Subtask 4.2 – Develop Future Scenario Models**

Stantec will develop four (4) model to represent 2030, 2040, 2050 and ultimate build out conditions. These models shall be updated based on the population projections, new basin boundaries, new future density information, and future developments. Stantec will utilize Metropolitan North Georgia Water Planning population data, the Stantec will develop population projections for 2030, 2040, 2050, and build-out within the service area.

Stantec will update the sewer model with future development flows for 2030, 2040, 2050, and ultimate build out scenarios. Stantec will also advise the City's water modeling consultant of the future population demands for inclusion in the water model.

***Deliverables:*** Future Scenario Models Results.

## **Task 5 – Perform Hydraulic Analysis and Identify Deficiencies of Existing System**

Under Task 5, the water and sewer hydraulic models will be used to identify deficiencies in the existing system under the baseline condition and future growth horizons and to refine the sizing of future trunk sewers, water mains, storage tanks and pumps stations / booster pumps. The model results will form the basis for system improvement recommendations in the master plan.

### **Subtask 5.1 – Identify System Deficiencies for Existing and Future Conditions**

Stantec will conduct model simulations of the existing trunk sewer system and the future trunk sewer network developed in Task 4. Sewer model simulations will be conducted for dry and wet weather conditions for 2030, 2040, 2050, and built-out horizons. Stantec will request the City's consultant for the water model to simulate the water model for maximum hour and maximum day 2030, 2040, 2050 and build out scenarios.

Stantec will review the model results and identify capacity deficiencies in existing water mains and sewers.

***Assumption:*** All water modeling simulations will be completed by the City's hydraulic modeling consultant.

## **Task 6 – Evaluate Alternative Improvements**

Stantec will develop trunk sewer and water main improvement projects for 2030, 2040, 2050 and build-out growth horizons. Preference will be given to selecting alignments along existing roads or future roads. Other alignment issues such as railroad, freeway, and creek crossings, potential major utility conflicts, wetland areas, and availability of right-of-way, will also be considered.

Stantec will develop estimates of probable construction costs for purposes of alternative comparison and discussion.

Reference: Water and Sewer Master Plan Proposal

### **Subtask 6.1 – Establish Screening Criteria and Conduct Initial Screening**

Stantec will work with the City to develop alternative criteria that can be used to screen out projects that are not worth further consideration. Possible screening criteria categories include technical, permitting, institutional and cost. Stantec will first identify potential projects and will conduct initial screening to determine which projects will be analyzed further. Then, a workshop will be held to review the screening process, revise the results as needed, and gain agreement on which projects will be analyzed further through hydraulic modeling, assessment, cost estimating, and other subsequent more detailed studies.

***Deliverables:*** Workshop, Alternatives to be evaluated.

### **Subtask 6.2 – Create Water and Sewer Project Alternatives**

Stantec will develop additional capital projects to address capacity deficiencies identified in the updated models. Stantec will develop up to three sewer project alternatives for alignments of new trunk sewers required to serve future development. In addition, Stantec will develop up to three water distribution alternatives for review.

### **Subtask 6.3 – Develop Cost Estimates**

Stantec will develop preliminary opinions of probable construction costs and estimated capital costs for the recommended water main and trunk sewer projects. The estimates will be based on the cost criteria updated in Task 7 and will be presented in 2025 dollars. Opinions of probable construction cost (OPCC) will be considered conceptual planning level estimates with a Class 4 level of accuracy (minus 30 percent to plus 50 percent). This level of estimate is considered appropriate for system master planning and represents a “reconnaissance grade” cost opinion as specified by the Association for the Advancement of Cost Engineering International.

***Deliverables:*** Planning level estimates of probable construction costs and capital costs for recommended improvement projects.

### **Subtask 6.4 – Establish Hydraulic-Based Project Triggers.**

Stantec will determine the criteria of project trigger(s) for each water and sewer project. Examples of hydraulic based project triggers are population census data and the associated demands and d/D of 0.75 or peaking factor at permanent flow meter locations.

### **Subtask 6.5 – Summarize Project Descriptions**

Stantec will summarize the up to 20 key individual improvement projects for incorporation into the Master Plan. The 1-page per project summaries will mainly focus on near term and strategic projects and will include maps showing preliminary project alignments and locations, project descriptions (alignment, pipe sizes, design flows), the specific deficiencies to be corrected by each project, project cost estimates, and estimated design and construction durations.

***Deliverables:*** Project descriptions summary on up to 20 key Recommended Improvement Projects for the Existing Trunk Sewer System and Water Distribution System Projects.

## **Task 7 – Capital Improvement Plan**

A Capital Improvement Program schedule will be developed for projects. Projects will fall into two categories: (1) those related to capacity problems within the existing water and sewer systems, and (2) those projects needed to serve future population.

### **Subtask 7.1 – Prioritize and Schedule Capital Improvement Projects**

Stantec will develop a methodology for prioritizing projects and develop a preliminary schedule for the Capital Improvement Plan. Stantec will first develop a preferred implementation schedule for the capital improvement projects that will be based on capacity and sewer condition needs, time required for design/permitting/construction, and interdependencies between projects (e.g., Project A must be completed

**Reference:** Water and Sewer Master Plan Proposal

before Project B). The preferred timeline for implementing capital improvement projects will be subject to change when integrated with City's financial capability.

Stantec will coordinate Capital Improvement Program recommendations with those recommendations developed by the City under their Rehabilitation activities. Projects will be prioritized based on the severity of the problem and its potential impact on City customers.

***Deliverables:*** Preliminary Prioritized Schedule / Timing / Sequencing for Capital Improvement Program.

### **Subtask 7.3 – Develop Capital Improvement Program**

Stantec will develop a dynamic capital improvement program for the planning horizons 2030, 2040, 2050 and future build out. Stantec will create an automated Excel spreadsheet containing a list of project descriptions, costs, duration, hydraulic trigger, project dependence, and schedule. This spreadsheet will spread costs over time to create the Capital Improvement Program. Upon agreement with the City, an assumed uniform cash flow distribution (e.g., bell shaped curve) over the project duration will be used within the spreadsheet.

***Deliverable:*** Capital Improvement Plan summary spreadsheet for future planning efforts.

### **Task 8 – Prepare Water and Wastewater Master Plan Update**

The Master Plan Update report will summarize and present the results and recommendations of the City per the above tasks.

#### **Subtask 8.1 – Prepare Draft Water and Wastewater Master Plan Update**

Stantec will prepare a draft Water and Wastewater Master Plan Update summarizing the evaluation methodology, the results and recommendations of the above tasks. TMs prepared within the Master Plan Update scope will form the basis for relevant report sections.

***Deliverable:*** Report outline; draft Master Plan Update Report

#### **Subtask 8.2 – Prepare Final Water and Wastewater Master Plan Update.**

Stantec will prepare a final Water and Wastewater Master Plan Update summarizing the evaluation methodology, the results and recommendations of the above tasks. TMs prepared within this scope will form the basis for relevant report sections.

***Deliverable:*** Final Water and Wastewater Master Plan Update Report, native model files, GIS files and Excel spreadsheets. This report will also contain a one-page writeup for each project along with a map and project schedule.

### **Task 9 – Project Management**

Project Management includes monitoring, administration, attendance at regularly scheduled progress meetings with City staff and the project Technical Review Committee, and project quality assurance/quality control (QA/QC) activities. The scope of this task assumes a 15-month project schedule.

#### **Subtask 9.1 – Conduct Kickoff Meeting**

Stantec will distribute the project work plan to City project team members. The work plan will include the project scope, schedule, and deliverables; identify team member roles, responsibilities, and lines of communication; and list the members of the project user groups and Technical Review Committee with addresses, telephone numbers, and email addresses. Stantec will conduct a project kickoff meeting with City staff to review the draft work plan. The final work plan will be distributed to team members following the kickoff meeting. Updates to the schedule and revisions to the work plan will be provided to team members during the project.

***Deliverables:*** Project Work Plan, kickoff meeting agenda and minutes.



Reference: Water and Sewer Master Plan Proposal

### Subtask 9.2 – Project Monitoring, Administration, and Status Reporting

Stantec will establish internal project controls to monitor project status, budget, staffing, and schedule on an on-going basis. Budget and schedule status will be reviewed weekly. Stantec will prepare monthly status reports. The status reports will describe the work completed during the previous month, anticipated work for the following month, current budget and schedule status, and project issues requiring discussion or resolution. This subtask also includes preparation of monthly invoices to the City.

**Deliverables:** Budget and schedule updates, monthly invoices.

### Subtask 9.3 – Project Status Meetings.

Stantec will meet with City staff on the average of once every month to review project status and discuss project issues. Informal meeting minutes (bulleted format) will be prepared to document key decisions. A total of 15 project status meetings over the duration of the project are assumed.

**Deliverables:** Monthly meeting agenda and minutes.

### Schedule:

The estimated schedule for completing the water and wastewater masterplan is 15 months from NTP following completion of Task 1. Figure B.1 shows an example schedule using the tasks listed above.

Master Planning Tasks	Months																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Task 1 – Data Review and Evaluation																		
Subtask 1.2 Technical Meetings																		
Subtask 1.3 Review Data and Conduct Data Gap Analysis																		
Task 2 – Collect Additional Field Data																		
Subtask 2.1 - Data Collection																		
Task 3 – Hydraulic Modeling																		
Subtask 3.1 – Agree Sewer Modeling Software and Build Trunk Sewer Model																		
Subtask 3.2 – Calibrate and Verify Sewer Model																		
Subtask 3.3 – Water Model Baseline Results																		
Task 4 – Future Projections																		
Subtask 4.1 - Meet with City Planning Staff																		
Subtask 4.2 – Develop Future Scenario Models																		
Task 5 – Perform Hydraulic Analysis and Identify Deficiencies of Existing System																		
Subtask 5.1 – Identify System Deficiencies for Existing and Future Conditions																		
Task 6 – Evaluate Alternative Improvements																		
Subtask 6.1 – Establish Screening Criteria and Conduct Initial Screening																		
Subtask 6.2 – Create Water and Sewer Project Alternatives Projects																		
Subtask 6.3 – Develop Cost Estimates																		
Subtask 6.4 – Establish Hydraulic-Based Project Triggers.																		
Subtask 6.5 – Summarize Project Descriptions																		
Task 7 – Capital Improvement Plan																		
Subtask 7.1 – Prioritize and Schedule Capital Improvement Projects																		
Subtask 7.3 – Develop Capital Improvement Program																		
Task 8 – Prepare Master Plan Update																		
Subtask 8.1 – Prepare Draft Master Plan Update																		
Subtask 8.2 – Prepare Final Master Plan Update.																		
Task 9 – Project Management																		
Subtask 9.1 – Conduct Kickoff Meeting																		
Subtask 9.2 – Project Monitoring, Administration, and Status Reporting																		
Subtask 9.3 – Project Status Meetings.																		

Figure B.1 – Water and Wastewater Masterplan Example Schedule

### Fee Estimate:

To be developed on completion of Task 1.



The following Terms and Conditions are attached to and form part of a proposal for services to be performed by Consultant and together, when the Client authorizes Consultant to proceed with the services, constitute the Agreement. Consultant means the Stantec entity issuing the Proposal.

**DESCRIPTION OF WORK:** Consultant shall render the services described in the Proposal (hereinafter called the "Services") to the Client.

**TERMS AND CONDITIONS:** No terms, conditions, understandings, or agreements purporting to modify or vary these Terms and Conditions shall be binding unless hereafter made in writing and signed by the Client and Consultant. In the event of any conflict between the Proposal and these Terms and Conditions, these Terms and Conditions shall take precedence. This Agreement supercedes all previous agreements, arrangements or understandings between the parties whether written or oral in connection with or incidental to the Project.

**COMPENSATION:** Payment is due to Consultant upon receipt of invoice. Failure to make any payment when due is a material breach of this Agreement and will entitle Consultant, at its option, to suspend or terminate this Agreement and the provision of the Services. Interest will accrue on accounts overdue by 30 days at the lesser of 1.5 percent per month (18 percent per annum) or the maximum legal rate of interest. Unless otherwise noted, the fees in this agreement do not include any value added, sales, or other taxes that may be applied by Government on fees for services. Such taxes will be added to all invoices as required. The Client will make payment by Electronic Funds Transfer when requested by Consultant.

**NOTICES:** Each party shall designate a representative who is authorized to act on behalf of that party. All notices, consents, and approvals required to be given hereunder shall be in writing and shall be given to the representatives of each party.

**TERMINATION:** Either party may terminate the Agreement without cause upon thirty (30) days notice in writing. If either party breaches the Agreement and fails to remedy such breach within seven (7) days of notice to do so by the non-defaulting party, the non-defaulting party may immediately terminate the Agreement. Non-payment by the Client of Consultant's invoices within 30 days of Consultant rendering same is agreed to constitute a material breach and, upon written notice as prescribed above, the duties, obligations and responsibilities of Consultant are terminated. On termination by either party, the Client shall forthwith pay Consultant all fees and charges for the Services provided to the effective date of termination.

**ENVIRONMENTAL:** Except as specifically described in this Agreement, Consultant's field investigation, laboratory testing and engineering recommendations will not address or evaluate pollution of soil or pollution of groundwater. Consultant is entitled to rely upon information provided by the Client, its consultants, and third-party sources provided such third party is, in Consultant's opinion, a reasonable source for such information, relating to subterranean structures or utilities. The Client releases Consultant from any liability and agrees to defend, indemnify and hold Consultant harmless from any and all claims, damages, losses and/or expenses, direct and indirect, or consequential damages relating to subterranean structures or utilities which are not correctly identified in such information.

**PROFESSIONAL RESPONSIBILITY:** In performing the Services, Consultant will provide and exercise the standard of care, skill and diligence required by customarily accepted professional practices normally provided in the performance of the Services at the time and the location in which the Services were performed.

**INDEMNITY:** The Client releases Consultant from any liability and agrees to defend, indemnify and hold Consultant harmless from any and all claims, damages, losses, and/or expenses, direct and indirect, or consequential damages, including but not limited to attorney's fees and charges and court and arbitration costs, arising out of, or claimed to arise out of, the performance of the Services, excepting liability arising from the sole negligence of Consultant.

**LIMITATION OF LIABILITY:** It is agreed that, to the fullest extent possible under the applicable law, the total amount of all claims the Client may have against Consultant under this Agreement, including but not limited to claims for negligence, negligent misrepresentation and/or breach of contract, shall be strictly limited to the lesser of professional fees paid to Consultant for the Services or \$50,000.00. No claim may be brought against Consultant more than two (2) years after the cause of action arose. As the Client's sole and exclusive remedy under this Agreement any claim, demand or suit shall be directed and/or asserted only against Consultant and not against any of Consultant's employees, officers or directors.

Consultant's liability with respect to any claims arising out of this Agreement shall be absolutely limited to direct damages arising out of the Services and Consultant shall bear no liability whatsoever for any consequential loss, injury or damage incurred by the Client, including but not limited to claims for loss of use, loss of profits and/or loss of markets.

In no event shall Consultant's obligation to pay damages of any kind exceed its proportionate share of liability for causing such damages.

**DOCUMENTS:** All of the documents prepared by or on behalf of Consultant in connection with the Project are instruments of service for the execution of the Project. Consultant retains the property and copyright in these documents, whether the Project is executed or not. These documents may not be used for any other purpose without the prior written consent of Consultant. In the event Consultant's documents are subsequently reused or modified in any material respect without the prior consent of Consultant, the Client agrees to defend, hold harmless and indemnify Consultant from any claims advanced on account of said reuse or modification.

Any document produced by Consultant in relation to the Services is intended for the sole use of Client. The documents may not be relied upon by any other party without the express written consent of Consultant, which may be withheld at Consultant's discretion. Any such consent will provide no greater rights to the third party than those held by the Client under the contract and will only be authorized pursuant to the conditions of Consultant's standard form reliance letter.

Consultant cannot guarantee the authenticity, integrity or completeness of data files supplied in electronic format ("Electronic Files"). Client shall release, indemnify and hold Consultant, its officers, employees, Consultant's and agents harmless from any claims or damages arising from the use of Electronic Files. Electronic files will not contain stamps or seals, remain the property of Consultant, are not to be used for any purpose other than that for which they were transmitted, and are not to be retransmitted to a third party without Consultant's written consent.



**FIELD SERVICES:** Consultant shall not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with work on the Project, and shall not be responsible for any contractor's failure to carry out the work in accordance with the contract documents. Consultant shall not be responsible for the acts or omissions of any contractor, subcontractor, any of their agents or employees, or any other persons performing any of the work in connection with the Project. Consultant shall not be the prime contractor or similar under any occupational health and safety legislation.

**GOVERNING LAW/COMPLIANCE WITH LAWS:** The Agreement shall be governed, construed and enforced in accordance with the laws of the jurisdiction in which the majority of the Services are performed. Consultant shall observe and comply with all applicable laws, continue to provide equal employment opportunity to all qualified persons, and to recruit, hire, train, promote and compensate persons in all jobs without regard to race, color, religion, sex, age, disability or national origin or any other basis prohibited by applicable laws.

**DISPUTE RESOLUTION:** If requested in writing by either the Client or Consultant, the Client and Consultant shall attempt to resolve any dispute between them arising out of or in connection with this Agreement by entering into structured non-binding negotiations with the assistance of a mediator on a without prejudice basis. The mediator shall be appointed by agreement of the parties. The Parties agree that any actions under this Agreement will be brought in the appropriate court in the jurisdiction of the Governing Law, or elsewhere by mutual agreement. Nothing herein however prevents Consultant from any exercising statutory lien rights or remedies in accordance with legislation where the project site is located.

**ASSIGNMENT:** The Client shall not, without the prior written consent of Consultant, assign the benefit or in any way transfer the obligations under these Terms and Conditions or any part hereof.

**SEVERABILITY:** If any term, condition or covenant of the Agreement is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions of the Agreement shall be binding on the Client and Consultant.

**FORCE MAJEURE:** Any default in the performance of this Agreement caused by any of the following events and without fault or negligence on the part of the defaulting party shall not constitute a breach of contract, labor strikes, riots, war, acts of governmental authorities, unusually severe weather conditions or other natural catastrophe, disease, epidemic or pandemic, or any other cause beyond the reasonable control or contemplation of either party. Nothing herein relieves the Client of its obligation to pay Consultant for services rendered.

**COVID-19:** The parties acknowledge the ongoing COVID-19 pandemic and agree that the fee and schedule in the proposal is based on what is currently understood. Where conditions change, the parties may have further discussions to manage and mitigate the impact of this evolving situation on the Project.

**CONTRA PROFERENTEM:** The parties agree that in the event this Agreement is subject to interpretation or construction by a third party, such third party shall not construe this Agreement or any part of it against either party as the drafter of this Agreement.

**BUSINESS PRACTICES:** Each Party shall comply with all applicable laws, contractual requirements and mandatory or best practice guidance regarding improper or illegal payments, gifts, or gratuities, and will not pay, promise to pay or authorize the payment of any money or anything of value, directly or indirectly, to any person (whether a government official or private individual) or entity for the purpose or illegally or improperly inducing a decision or obtaining or retaining business in connection with this Agreement or the Services.