

# Cross Connection Control Program

Complete Program

## Proposal

Prepared for:

# City of Charlotte

November 20, 2018

Prepared by:

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# Table of Contents

<b>1. Identification.....</b>	<b>3</b>
<b>2. Qualifications .....</b>	<b>3</b>
2.1. Background .....	3
2.2. Related Project Experience and Familiarity with Local Standards and Requirements .....	3
2.3. Project Team .....	5
<b>3. Scope of Services:.....</b>	<b>6</b>
4. XC2® Backflow Prevention Management Software .....	10
<b>5. Project Approach.....</b>	<b>11</b>
5.1. Understanding of the Requested Services.....	11
5.2. Contractors Summary .....	11
5.3. Quality Control.....	12
<b>6. Cross Connection Control Program Fee .....</b>	<b>12</b>
<b>7. Authority to Execute.....</b>	<b>13</b>

## 1. Identification

H2O Compliance Services, Inc.  
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Parker Brown – Municipal Director  
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## 2. Qualifications

### 2.1. Background

Thank you for the invitation to present our proposal to you. H2O Compliance Services is proud to have the opportunity to discuss our capabilities with you and how our services will meet your needs.

Founded in 2001 and headquartered in Owosso Michigan, H2O Compliance Services is highly-recognized in the water industry for the quality of services and our customer service. Our primary focus is assisting communities with protection of their potable water distribution system through our Cross Connection Control (CCC) Program Management. Our staff has over 45 years combined experience with CCC program development/management and the cross connection industry. We utilize XC2® Software water management program as the engine for managing CCC program data and notifications. Our aim is to provide a complete CCC program management service which enables our clients to concentrate on their mainstream activities.

**Our Mission** is to provide superior services and responsive, friendly and attentive support to our customers so that they may be most effective in their work to provide clean, safe drinking water and related services to the public.

### 2.2. Related Project Experience and Familiarity with Local Standards and Requirements

H2O Compliance services works closely with the Michigan Department of Environmental Quality to assure our program management complies with State requirements.

H2O Compliance Services is currently providing complete cross connection control (CCC) program management and services to the municipalities listed below:

**City of Greenville**

Tom Pollock – Director of Public Works  
(616) 835-1210

**City of East Lansing**

Scott House - Director of Public Works  
(517) 337-9459

**City of Eastpointe**

Carol Apley – Supervisor Public Works and Service  
(586) 445-5053 ext 6005

**City of St. Johns**

Justin Smith Water Supervisor  
(517) 749-8793

**City of Owosso**

David Haut – Water Operator  
(989) 725-0599

**Charter Township of Allendale**

Jon Currier – Operator  
(616) 895-5142

**City of Saint Clair Shores**

Russ Miller – Water Department Supervisor  
(586) 445-5374 ext. 207

**Village of Lake Odessa**

Jesse Trout – Department of Public Works  
(616) 374-7228

### 2.3. Project Team

#### **Michael Brown – Owner/Master Plumber**

Mr. Brown has been in the plumbing industry since 1976 and a business owner since 1981. As the owner of H2O Compliance Services, Mr. Brown is responsible for business development and overseeing day to day operations. He has worked extensively with Ford, Chrysler, GM, Michigan Dairy and numerous municipalities within the State of Michigan. Not only responsible for daily operations, Mr. Brown is entrenched in the day to day field services and has gained a thorough understanding of the intimate details of how to work with and develop long term relationships with our customers, backflow testers and your water customers.

#### ***Credentials:***

- **Licensed Master Plumber since 1982**
- **Licensed Plumbing Contractor**
- **American Society of Sanitary Engineering (ASSE) Series 5000 Certified Tester-28306**
- **American Society of Sanitary Engineering (ASSE) Testing Proctor**
- **Michigan Plumbing & Mechanical Contractors Association and Michigan Board of Plumbing**
  - o *Certified Backflow Tester 1992*
- **University of Southern California Foundation for Cross-Connection Control and Hydraulic Research**
  - o *Cross Connection Control Program Specialist 2004*
- **University of Florida – TREEO Center**
  - o *Introduction to Backflow Prevention 2007*
  - o *Cross Connection Control: Survey and Inspection 2007*
  - o *Cross Connection Control: Ordinance and Organization 2007*
  - o *Cross Connection Control Program Manager 2007*
  - o *Backflow Prevention Tester Training and Certification 2007*

**Parker Brown – Municipal Director/Field Inspector**

Mr. Brown has spent the past six years as one of H2O Compliance Services lead inspectors. Mr. Brown is responsible for performing technical and program administration work in support of the Municipal Department. He coordinates and performs on-site inspections at individual water customers to evaluate each water connection for cross connection hazards. He also assists with developing educational and training material and assists with developing training sessions.

**Credentials:**

- **University of Florida – TREEO Center**
  - o *Cross Connection Control: Survey and Inspection 2014*
  - o *Cross Connection Control: Ordinance and Organization 2014*
  - o *Cross Connection Control Program Manager 2014*
- **American Society of Sanitary Engineering (ASSE) Series 5000 Certified Tester-31406**
- **Michigan State University**
  - o Bachelor’s Degree in Education – 2010

**3. Scope of Services:**

1. Provide complete cross connection control inspections and data management including:
  - A. Perform a Utility Cross Connection Control Program review. Items for review include the following:
    - ) Review State and local regulations.
    - ) Review and recommend any required changes in the Cross Connection Ordinance. H2O Compliance Services will assist in the writing of this.
    - ) Review working and timelines for program, notices (Inspection Notice, Compliance Notice, Non-Compliance Notices 1-2, Penalty Notices).
    - ) Special Program Notices.
    - ) Prioritize inspections.
    - ) Review procedures and protocol for addressing specific hazards.
    - ) Review program reporting procedures.
    - ) Review educational and public awareness brochures.
    - ) Obtain updated facility listing and address information.
    - ) Establish facility inspection schedule.
    - ) Review high hazard and large industrial facility inspection/containment procedures.
  - B. Complete inspection (initial inspections, re-inspections, compliance inspections) of up to one hundred sixty-seven (167) commercial, industrial, institutional facilities and miscellaneous water customers per year within the City of Charlotte using the containment and isolation review approach as supported by the State of Michigan Department of Environmental Quality (MDEQ). Unless otherwise specified, all inspections will be of the entire potable water system. Inspectors will survey all exposed piping



and/or use the point-of-use inventory method of inspection. There are an estimated three hundred sixty (360) total commercial/industrial accounts in the City. Sixty-seven (67) accounts are high hazard. New inspections shall include first time inspections of new accounts not previously included in the cross connection program. Re-inspections shall include the annual inspection of high hazard accounts annually, and the periodic (every two to five years) inspection of low hazard accounts. Compliance inspections shall consist of inspections at accounts of corrective actions completed to confirm correction of previously noticed non-compliance conditions.

- ) Completing the required number of inspections is contingent upon receipt of water customer information pertinent to this proposal.
- C. Complete inspection (initial inspections, re-inspections, compliance inspections) of up to five hundred one (501) water customers over a 3 year period.
- D. Determine the inspection schedules, obtain City approval of the schedules, and coordinate the schedules.
- E. Coordinate and notify customers of testing requirements and inspections and/or re-inspections in writing.
- F. Provide up to six (6) ASSE approved hose bibb vacuum breakers or anti-frost hose bibb vacuum breakers per facility as required, in order to place the facility into immediate compliance at the time of inspection, incidental to the inspection fees.
- G. All testable and non-testable backflow prevention devices, program requirements and relevant code violations will be documented during the on-site inspections.
- H. All existing backflow prevention devices, (i.e. testable and non-testable) must be inspected, inventoried and documented. Records shall be maintained of the account owner's device test results. All testable devices are required to be tested at a frequency determined by the City.
- I. Generate all program notifications for users failing initial inspections and/or re-inspections informing them of installation requirements and/or testing requirements.
- J. Perform compliance inspections for each non-compliant location upon notification of completion of compliance requirements. All compliance inspections will be scheduled and completed as required.
- K. Provide full-time phone support for customer questions staffed by a trained individual. The Contractor's phone will be staffed during normal business hours Monday through Friday. After hour calls shall be answered by a professionally staffed answering service.
- L. Contractor will provide detailed phone logs for all incoming calls. Date in and response dates are to be included.



- M. Coordinate, manage and track the testing of all testable backflow prevention devices in accordance with MDEQ requirements. Services to include testing notification, requirements, receipt of executed test report, and maintenance of all testing data. All testing results will be maintained for a period of seven (7) years.
- N. Submit comprehensive management reports to the City of Charlotte. Status reports include the number of inspections completed, notices sent, tests overdue, inspections overdue, a listing of inspections and re-inspections scheduled for the upcoming period, upcoming notifications, a list of facilities in, or not in, compliance.
- O. Provide comprehensive reports for each calendar year of the Contract and obtain any required approval of the annual report from the MDEQ.
- P. Provide comprehensive annual reports that include a program summary, copy of the annual MDEQ report, a detailed listing of all inspection locations, and individual listing of those facilities in, or not in compliance, inspections completed, sites never inspected, and notifications sent.
- Q. Provide progress review meetings with the City's designated representative to discuss program status and specific recommendations as requested. The City may revise the Contractor's proposed work plan to concentrate on new and/or higher priority and non-compliant cross connection locations, provided that the total number of annual inspections shall not be changed except by mutual agreement, or contract amendment.
- R. The inspector will check-in/out with the City of Charlotte's contact person on a daily basis or as requested during the inspection period. The check in will include a list of inspections scheduled for the day. The check-out will include a verbal summary and the number of inspections completed for the day.
- S. All expenses related to "time and travel" for completion of job scope are to be included in unit prices for inspections.
- T. Contractor will help to coordinate and participate in a Public Information Meeting and Tester Meeting to explain the City of Charlotte's Cross-Connection Control Program, if required.
- U. The contractor shall not be required to enter confined spaces.
- V. In the event that the City of Charlotte requests and the Contractor consents to perform additional services, inspections or other changes in the scope of services involving consulting, management, operation, maintenance, and repair of the utility delivery system or private water service or cross connection device, both shall agree on the terms and compensation prior to performing such extra work





2. Provide any required revisions to the existing Cross Connection Control Plan specific to City of Charlotte as required by the MDEQ. The Plan must include code adaptation, references, program intent, standard operational procedures (including daily, monthly and annually), backflow prevention devices including detailed installation schematics, piping identification and preference standards.

The plan must include a detailed re-inspection schedule for all facilities. The frequency for re-inspection of each facility will be influenced by the degree of hazard existing within the facility. The re-inspection frequency of each facility will be based on a 1 to 5 year time period. Contractor must work with City of Charlotte and the MDEQ to get plan approved. Contractor must submit plan to the MDEQ for approval.

3. The contractor will use a cross connection control software package for program management.

The software package will be able to produce at a minimum the following reports and notices:

- A. Standard notices and reports to include inspection, re-inspection, testing, non-compliance and compliance notices.
  - B. Produce management reports for notices, inventory of devices, device tests, inspection schedules, device test schedules, overdue inspections, and device test forms.
  - C. Schedule inspection and device testing notices from internal records, standard procedures, and timing as required by the MDEQ approved City of Charlotte CCC Plan.
  - D. Track testable and non-testable devices and compliance requirements.
  - E. Automatically access all data relevant to a particular facility or period of time.
  - F. Generate the Annual MDEQ Water Supply Cross Connection Control Report and supporting documents.
  - G. The Contractor will provide the entire data base for the cross connection program from program inception through the end of the calendar year in a mutually agreeable electronic format.
  - H. The Contractor will utilize commercially available cross connection program software package.
  - I. The Contractor will provide written report on specific events or accounts upon request.
4. The Contractor will conduct an on-site annual year-end review meeting each year of the Contract to discuss the overall program status and specific program recommendations.
  5. The Contractor agrees to and shall hold the City of Charlotte, its elected and appointed officials, and employees harmless from any liability for claims and damages for personal injury or property damage which is caused by or arises from the sole negligence of the Contractor in the performance of its services under this agreement. The City of Charlotte agrees to and shall hold the Contractor, its officers and employees harmless from any liability for claims and damages for personal injury or property damage which is caused by or arises from the sole negligence of the City of Charlotte in the performance of its services under this agreement. In the event that both are the found by a fact finder to be negligent and the negligence of both are the proximate cause of such claim for damage, then in such event each party shall be responsible for the portion of the liability equal to its comparative share

of the total negligence. The Contractor's liability to the City of Charlotte for any loss, damage, claim, or expense of any kind or nature caused directly or indirectly by the performance or non-performance of obligations pursuant to this scope of services, and mutually agreed changes in the scope of services, shall be limited to general money damages in an amount not to exceed or within the limits of the insurance coverage provided herein. The Contractor shall in no event be liable for indirect or consequential damages, including but not limited to, loss of revenue, or loss of facilities, based upon the approved scope of services, negligence, or any other cause of action. Nothing in this scope of services or resulting contract shall limit the decisions or damages of a competent court of jurisdiction.

6. The Contractor's relationship to the City of Charlotte shall be that of an independent contractor and not one of an employee. For the purposes of all federal, state and local laws and regulations, the City of Charlotte shall exercise primary management, operational and financial decision making authority.

#### **4. XC2® Backflow Prevention Management Software**

The foundation behind the scenes for managing your data is XC2. XC2 was founded in 1989 and is considered a leading company serving water and wastewater utilities with industry specific applications. Software capabilities include but not limited to:

- ) Backflow assembly inventory
  - o Assembly information: type, size, manufacturer, model, serial number
  - o Record location, hazard type and level
  - o Test history: last test date and tester, next test date
- ) Automatic reminders
  - o Inspections due, follow-up notices, tests due, tester certification, failed/pass assembly tests, requirements due
- ) Compliance reporting
  - o One-click reporting for MDEQ Water Supply Cross Connection Report
  - o Summary reports or detail of all activity in a date range
  - o Summary reports of on-site inspection reports
  - o User-definable reports allow creating whatever reports are necessary
- ) Send notices automatically
  - o Import City logo/letterhead
  - o Test due notices and follow-up notices
  - o Pre-printed test report forms
  - o Certified tester list
- ) Track test results history
  - o Complete test results or pass/fail only
  - o Next test dates are automatically calculated
  - o Maintain unlimited history of test records
- ) Cross connection surveys and inspections
  - o Record and track surveys and inspections
  - o Schedule and record inspection dates and compliance status
  - o Non-compliance notices and follow-up notices

## 5. Project Approach

### 5.1. Understanding of the Requested Services

We have designed our proposal to be responsive to what we know of your needs.

1. Conduct a program start-up meeting to establish, review and/or update current program procedures.
2. Review/update written CCC plan and Ordinance as required by MDEQ.
3. Conduct up to one hundred sixty-seven (167) inspections (initial inspections and/or re-inspection) annually for a term of three (3) years totaling five hundred one (501) inspections. Options to extend the contract for an additional two (2) years are included. Inspections include industrial facilities, institutional facilities and miscellaneous water customers serviced by the City of Charlotte. Inspections will be conducted using the isolation/containment approach as supported by the MDEQ.
4. Manage all program data using the XC2 software® water management program:
  - ) Generate and mail all associated program notices e.g. inspection, non-compliance and backflow assembly testing notices.
5. Provide quarterly status reports to include: Inspections completed, Compliance Status, Inspection Notices Sent, Testing Notices Sent and Number of backflow assemblies tested.
6. Program Status Meeting(s) – Conduct a yearly meeting at the contract anniversary date or as necessary to review program progress.
7. Provide up to six (6) A.S.S.E. #1011 approved hose bibb vacuum breakers or anti-frost hose bibb vacuum breakers per facility in order to achieve compliance.
8. MDEQ Water Supply Cross Connection report – Generate and meet with you to review the required annual report.
9. Provide water customer service and support, education and awareness information via brochures, phone, fax or email.
10. Provide detailed phone logs for all incoming calls.
11. Assist with coordinating and participate in a Public Information Meeting and Tester Meeting to explain the Cross-Connection Control Program, if required.

### 5.2. Contractors Summary

Our cross connection control program services, based on years of successful / practical experience, ensures that your program will be managed the way I would personally expect:

- ) Our primary focus is to assure we provide the highest level of professional yet personal attentive service to you and your water customers.
- ) Consistent interpretation of codes and guidelines.
- ) Familiarity with all codes and regulations will assure a smooth transition, including documentation and data.
- ) We have designed our proposal assuming that we would start work immediately.
- ) We always look at more than one way to have a water customer achieve compliance keeping cost in mind, but not compromising the integrity of the program.
- ) Data is backed-up daily on-site and weekly data back-up is maintained at an off-site location.

) It is agreed that this contract can be terminated by either party without cause of any kind upon thirty (30) day written notice by Certified Mail – Return Receipt Requested.

### 5.3. Quality Control

The quality control program for our services is headed up by Parker Brown, Municipal Director of H2O Compliance Services. His responsibility is continuously reviewing our operating procedures, in-field inspection review and behind the scene documentation e.g. inspection field forms and subsequent follow-up notifications. In addition the XC2 data management software has several built in checks and balances, to assure the most accurate information is being processed.

## 6. Cross Connection Control Program Fee

Perform up to five hundred one (501) inspections over a three (3) year period. Beginning January 1, 2019 and ending December 31, 2021.

Year 1: 01-01-2019 – 12-31-2019 Program implementation / administration	\$14,612.40
Year 2: 01-01-2020 - 12-31-2020 Program implementation / administration	\$14,612.40
Year 3: 01-01-2021 - 12-31-2021 Program implementation / administration	\$14,612.40
<b>Total Program Cost</b>	<b>\$43,837.20</b>

We will bill in monthly increments of \$1217.70

#### Optional

*\*To exercise year 4 & 5 you must do so within 30 days of the completion of the original contract date. This can be done via email or letter.*

Year 4: 01-01-2022 - 12-31-2022 Program administration	\$14,612.40
Year 5: 01-01-2023 - 12-31-2023 Program administration	\$14,612.40

## 7. Authority to Execute

The parties agree that the signatures appearing below have the authority and are duly authorized to execute this Agreement on behalf of the party to the Agreement.

### City of Charlotte

By: \_\_\_\_\_ Title: \_\_\_\_\_  
*Accepted Name*

\_\_\_\_\_  
*Accepted Signature* *Date*

**H2O Compliance Services**  
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Owosso, MI

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By: Parker Brown 11/20/18  
*Parker Brown, Municipal Director* *Date*