

**AGENDA  
CITY OF ST. CHARLES, IL  
GOVERNMENT SERVICES COMMITTEE MEETING  
RITA PAYLEITNER, CHAIRMAN**

**MONDAY, OCTOBER 23, 2017, 7:00 P.M  
CITY COUNCIL CHAMBERS  
2 E. MAIN STREET, ST. CHARLES, IL 60174**

**1. CALL TO ORDER**

**2. ROLL CALL**

**3. ADMINISTRATIVE**

- a. Electric Reliability Report – Information only.
- b. Active River Project Update – Information only.

**4. COMMUNITY DEVELOPMENT DEPARTMENT**

- a. Plan Commission recommendation to approve a revised PUD Preliminary Plan for First Street PUD Building #2.
- b. Recommendation to approve an Amendment to the Redevelopment Agreement with First Street Development II, LLC regarding First Street PUD Building #2.
- c. Presentation of a Conceptual Layout for Streetscape and Riverwalk Improvements adjacent to First Street Building #3.

**5. PUBLIC WORKS DEPARTMENT**

- a. Presentation of St. Charles Bob Leonard Walkway Memorial Planter Plaque Program by the River Corridor Foundation.
- b. Recommendation to approve Resolution Authorizing Application to Illinois Transportation Enhancement Program Grant.
- c. Recommendation to approve Budget Addition to the 7<sup>th</sup> Avenue Creek Project.
- d. Recommendation to award the Bid for the Demolition of Nine Residential Structures.

- e. Recommendation to award the Bid for Century Station HVAC Controls Improvements.
- f. Recommendation to approve Acceptance of Electric Easement at Metro Self Storage (2623 Lincoln Hwy).
- g. Recommendation to award Purchase Order with Eaton for Turnkey Replacement of Relays at Peck Road Substation.
- h. Recommendation to award the Water Utility Master Plan Study Proposal.
- i. Recommendation to award Proposal for Design Engineering for Dunham Road Force Main Replacement.
- j. Recommendation to award Proposal for SCADA Program Management – Phase 1 to Concentric Integration.

**6. FIRE DEPARTMENT**

- a. Recommendation to approve the Illinois Emergency Management Mutual Aid System Agreement.

**7. POLICE DEPARTMENT**

- a. Recommendation to approve Modifications to City Ordinance Title 2 “Administration and Personnel”, Chapter 2.32 “Police Department”, Section 2.32.020 “Appointments, Promotion, and Vacancy Filling”.

**8. EXECUTIVE SESSION**

- Personnel –5 ILCS 120/2(c)(1)
- Pending Litigation – 5 ILCS 120/2(c)(11)
- Probable or Imminent Litigation – 5 ILCS 120/2(c)(11)
- Property Acquisition – 5 ILCS 120/2(c)(5)
- Collective Bargaining – 5 ILCS 120/2(c)(2)
- Review of Executive Session Minutes – 5 ILCS 120/2(c)(21)

**9. ADDITIONAL ITEMS FROM MAYOR, COUNCIL, STAFF OR CITIZENS**

**10. ADJOURNMENT**

*ADA Compliance*

Any individual with a disability requesting a reasonable accommodation in order to participate in a public meeting should contact the ADA Coordinator, Jennifer McMahon, at least 48 hours in advance of the scheduled meeting. The ADA Coordinator can be reached in person at 2 East Main Street, St. Charles, IL, via telephone at 630 377 4446 or 800 526 0844 (TDD), or via e-mail at [jmcmahon@stcharlesil.gov](mailto:jmcmahon@stcharlesil.gov). Every effort will be made to allow for meeting participation. Notices of this meeting were posted consistent with the requirements of 5 ILCS 120/1 et seq. (Open Meetings Act).



**AGENDA ITEM EXECUTIVE SUMMARY**

Agenda Item number: 3.a

Title: Electric Reliability Report – Information Only

Presenter: Tom Bruhl

Meeting: Government Services Committee

Date: October 23, 2017

Proposed Cost: \$

Budgeted Amount: \$

Not Budgeted:

**Executive Summary** *(if not budgeted please explain):*

For Information Only.

**Attachments** *(please list):*

\* September 2017 Outage Report \* September 2017 Streetlight Repair Report

**Recommendation/Suggested Action** *(briefly explain):*

For information only.



## Streetlight Repair Report

Expectation: Streetlights will be repaired within 10 days of notification

<b>Month Light Was Repaired</b>	<b>Number of Lights Repaired</b>	<b>Average Days to Repair</b>
April	48	30.3
May	45	10.5
June	22	4.0
July	166	6.1
August	63	4.4
September	41	4.3

### September repair exceptions:

There were no lights that took longer than 10 days to fix due in September.



**AGENDA ITEM EXECUTIVE SUMMARY**

Agenda Item number: 3.b

Title: Active River Project Update – Information Only  
Presenter: Chris Adesso

Meeting: Government Services Committee Date: October 23, 2017

Proposed Cost: \$ N/A Budgeted Amount: \$ N/A Not Budgeted:

**Executive Summary** *(if not budgeted please explain):*

The Active River Task Force wishes to provide the Council Committee updates on the status of topics pertaining to the Active River Project/Concept. The Task Force offers the attached information to the Committee. A member of the Task Force will be available at each of the Government Services Committee meetings to respond to any questions or comments that the Council Committee may have.

**Attachments** *(please list):*

\* September 18, 2017 – Task Force Meeting Minutes

**Recommendation/Suggested Action** *(briefly explain):*

None – For information only.

**MINUTES  
ACTIVE RIVER TASK FORCE MEETING  
ST. CHARLES  
JOHN RABCHUK, CHAIRMAN  
SEPTEMBER 18, 2017**

**Members Present:** Chair. John Rabchuk, Chris Adesso, Trish Beckjord, Rick Brems,  
Holly Cabel

**Members Absent:** Chris Bong, Jim Enck, Monica Meyers, John Wessel

**Others Present:** Phil Held, Ed Werneke, Tony Zehnder, Isabel Soderlind

**1. Call Meeting to Order**

The meeting was convened by John Rabchuk at 8:03 a.m.

**2. Minutes Review and Approval**

Motion was made to accept and place on file the minutes of the August 21, 2017 Active River Task Force meeting minutes.

Motion by Trish Beckjord second by Chris Adesso, to accept and place the minutes on file.

Voice vote: Ayes: unanimous; Nays – None Absent: C. Bong, J. Enck, M. Meyers, J. Wessel

Motion carried at 8:05 a.m.

**3. Planning For Delegation to Greenville, South Carolina**

**A. Members Attending the Delegation:**

John Rabchuk gave a brief update on the delegation members attending the Greenville site. In addition to City of St. Charles and St. Charles Park District personnel, Craig Larsen, President of the Chamber of Commerce will be joining the group as another civic/business leader. Tom Anderson however will be unable to attend. (See August 21, 2017 meeting minutes for a detailed list of all those attending the delegation.)

**B. Site Visit**

The site visit is scheduled for October 4-5, 2017. The delegation will arrive to Greenville on the evening of Wednesday, October 4. There will be a three hour meeting on Thursday morning, October 5, with Greenville's city staff, park district and civic/business leaders. Mayor Knox White will give a guided tour of Falls Park immediately following the meeting.

Discussion with Greenville will include the following:

- How the project was funded?
- Who owns and maintains the project? Is it a newly created entity versus City or Park District?
- What has been the economic impact to the city?
- How was the financing of the project supported?
- Who is in charge of operations and maintenance and how is this funded?

The Active River Project task force members discussed organizing a conference call with another similar river project after the Greenville site visit. All agreed the Columbus, Georgia, river project and Uptown Columbus, Inc. would be a worthy source of information. Columbus' project was similar in size, very creative and involved various entities in their project. They may offer alternative options and thoughts to consider.

John Rabchuk mentioned he had already given Chris Minick & Cathy Camm the contact information to other similar river projects around the country; they would be contacting them.

Previous Active River Project meeting minutes have included web links to the Greenville site. John mentioned that he has received some very positive comments from various people that have viewed the sites.

- Ted-Talk from Mayor White concerning Falls Park project  
<https://youtu.be/2L8HPajQ730>
- See new Greenville City website  
<https://gis.greenville.gov/downtownreborn/index.html>

Rick Brems was just there a month ago and mentioned the city and the project is very impressive.

#### **4. Marketing, Publicity and Community Outreach**

##### **A. Update and Presentation of New River Corridor and Active River Websites**

Phil Held, Tony Zehnder and Rick Brems have met several times with John Arends from Arends Inc. regarding the new websites. There are two websites being developed (1) for the River Corridor Foundation (RCF); and (2) for the Active River Project. The City is covering the \$2,300 cost for the Active River Project website.

The new RCF website is very colorful and interactive. Users will be able to click on a variety of images that will open a frame with more detailed information regarding the activity, event or component. Rick Brems hopes to give a preview of the website at the next Active River Project meeting.

In addition, the River Corridor Foundation has been discussing hiring a drone pilot to get current pictures and aerial video footage of the river with the expectation that these can be added to the website. The concept of a 2 ½ minute aerial video montage with still pictures would capture the current topographical status of the river, activities that currently draw the community to the river and highlight the potential designs and activities the Active River Project is proposing.

A library of footage would also be included in the Active River Project website regarding various components of the river: ecology, wetlands, flora, recreation, etc.

Several drone pilots were interviewed and quotes for aerial videos were received from three of the vendors. Quotes ranged from \$1,300 up to \$3,000 depending on the scope of work, i.e. raw footage versus creating a video montage and a library of footage. Robert Rydin, from Robert Rydin Photography, had the lowest quote. He is a very accomplished and artistic drone pilot that has exhibited his projects at high end art fairs around the area. In addition, Robert expressed an interest in being a long-term partner in this project.

The River Corridor will discuss and vote on approving the cost of hiring a drone pilot to take aerial video footage and complete a 2 ½ minute video.

Rick mentioned there have been many discussions the last two weeks regarding the video. Discussions have included the following:

- What is the intention of the video footage and what should it include?
- What should be emphasized or promoted on the website and in the video?
- What items would emphasize the branding “Destination St. Charles”?
- Do we include St. Charles events that may not be involved directly to the river or the Active River Project, e.g., Scarecrow Fest?
- Include proposed designs of the project, e.g., concept design work of the park, island, and some of the proposed activities, etc. that may be included in the project.
- Is the video a promotion of St. Charles or should it focus on the Active River Project?
- If it is a marketing film for the city, should others also contribute to the cost of this project?
- View existing versus proposed; e.g., walking paths and bike paths with computer generated imaginary.
- View elements of what St. Charles “is” versus “what it can be”.
- Begin to collect a library of “before” and “after” pictures.

## **B. Presentation to St. Charles Exchange Club**

Several Active River Project presentations have been given this past month. Rick Brems gave a presentation to the Chamber of Commerce. John conducted one for the St. Charles Exchange Club and another one for the Pottawatomie Garden Club.

## **C. Press Releases**

John Rabchuk distributed a draft of a press release regarding the water quality testing program by the local high school students. This effort was organized by the River Corridor Foundation. The high school students recently took their first samples and they also supplied some pictures.

Discussion ensued on whether the press release should be released through the RCF or through the umbrella of the Active River Project. It was determined the River Corridor Foundation initiated the program with the high school students; therefore the press release should be released under the RCF umbrella.

John Rabchuk will make the corrections on the draft and it will be distributed through Karen Muehlfelt from the River Corridor Foundation. The River Corridor will post it on Facebook and a copy will be sent to Arends, Inc. the website developer.

## **5. Member Organization Updates**

### **A. St. Charles Park District Updates**

#### **i. Shoreline Restoration and Stabilization Project**

The St. Charles Park District will be requesting the approval of a contract for the Pottawatomie Golf Course Shoreline Restoration and Stabilization project in October. This will be a costly ongoing project, with many phases, but necessary to remedy this erosion issue. In 2018, the Park District will discuss the implementation of the phases for this project.

#### **ii. Boy Scout Island Project**

Additional funds will also be discussed for Boy Scout Island. The Boy Scout Island parking lot will be completed this year, but additional funds will be requested in 2018 to fix the boat launch at Boy Scout Island.

Discussions with Union Pacific are still ongoing.

### **B. City of St. Charles Upcoming Budgeted Projects**

At this time, the City is only in its fifth month of the current budget year. So far Chris Adesso has not heard of any projects related to Active River Project for next year. Budget discussions will start in November/December and go into early January. The finalized budget for FY18/19 will not be approved until mid-April or early May.

Chris added he will be re-budgeting for the Key Sculpture next year if they are unable to complete the project this fiscal year.

### **C. River Corridor Foundation**

John Rabchuk received a book published in 1962 from the State of Illinois Public Works Department titled, *Survey Report for Development of Fox River Ottawa to McHenry*. The book was donated by the project manager working on the Fox Chase development years ago in St. Charles. He is currently 94 years old and a current member of the Exchange Club. The book will be donated to the Historical Society if anyone is interested in any historical information regarding the Fox River.

## **6. Update on Potential Corporate/Philanthropic Funding Sources**

### **A. Dunham Foundation Meeting Update**

John Rabchuk attended the Dunham Foundation meeting on Wednesday, September 6, 2017. There were approximately 40 to 50 non-for-profit organizations represented at the meeting. The Foundation introduced a different

mode of raising funds explaining how the event works and how to promote your group.

November 28 is known as “National Day of Giving”. Non-profit organizations can participate and raise funds by registering for donations at #ILGIVE, [www.ilgive.com](http://www.ilgive.com). The Dunham Foundation will be publicizing and promoting this event and they will match the donations (up to a certain amount) to specific organizations that meet their criteria. It is an easy and accessible way for everyone to donate without having to hold an actual event. This may be a fundraising method the Active River Project may be interested in participating in the future.

People donating can go to the website and search for a specific cause and/or geographical location. The software will list non-profit organizations that meet those field requirements. Last year the site raised \$12,000,000.

John Rabchuk raised the question, “Should the Active River Project make that switch sometime in the future and encourage donations just to support the Active River Project instead of hosting an event to raise the funds?” It is something to consider.

Over the years, the Dunham Foundation has donated over \$3,000,000 to River Edge Park in Aurora. They have encouraged the Active River Project to apply for a \$250,000 grant due in February, with another grant giving in June. The Active River Project has been invited for another follow up meeting in October.

Holly Cabel left the meeting at 8:57 a.m.

**B. Update on Other Potential Corporate Funding Source**

No updates at this time.

**7. Other**

**A. Administrative Support for the Active River Project**

Chris Adesso mentioned the Active River Project has been utilizing the City administrative staff exclusively for the last five months. Originally, the task was shared both by the City of St. Charles and the St. Charles Park District. Due to the administrative time this requires, Chris Adesso proposed this group go back to “self” minute taking unless the Park District has someone that can share the load with this task again?

The group determined to discuss this at the next meeting as a separate agenda item.

**8. Adjourn**

The next meeting is scheduled for October 16th at 8:00 a.m. at the Baker Community Center. Motion to adjourn by Trish Beckjord, 2nd by Tony Zehnder.

Voice vote: Ayes: unanimous; Nays – None Absent: C. Bong, J. Enck, M. Meyers, J. Wessel

Meeting was adjourned at 9:05 a.m.



**AGENDA ITEM EXECUTIVE SUMMARY**

Agenda Item number: 4.a

Title:

Plan Commission recommendation to approve a Revised PUD Preliminary Plan for First Street Building #2.

Presenter:

Russell Colby

Meeting: Government Services Committee

Date: October 23, 2017

Proposed Cost: N/A

Budgeted Amount: N/A

Not Budgeted:

**Executive Summary** *(if not budgeted please explain):*

In March 2015, the City approved PUD plans and a Redevelopment Agreement for the overall First Street Phase 3 site, which includes the riverfront property located north of Illinois Street and east of First Street. Preliminary Plans for Building #2 were also approved at that time.

The developer, First Street Development II, LLC, is proposing modifications to Building #2:

- No change to the building footprint (however the building lot will need to be re-platted to slightly adjust the building line along the First Street sidewalk)
- Building increasing from 4 floors to 5 floors
- First floor remains retail/restaurant use
- Second floor is proposed as office use
- Third to fifth floors are proposed as residential condominiums- 14 total units (the 2015 plan included 36 rental residential units)
- New building architectural design.

The changes require approval of a Revised PUD Preliminary Plan, which includes approval of architectural elevations and an update to the Development Data for the project (which lists square footages and uses within the buildings).

Architectural elevations were reviewed by the Historic Preservation Commission on 9/6/17 and the Commission recommended approval of the design. The Plan Commission reviewed the Preliminary Plan on 10/17/17 and recommended approval, 9-0.

Redevelopment Agreement:

The property is subject to a Redevelopment Agreement between the City and First Street Development II, LLC. An amendment to this agreement will be necessary to incorporate the Revised Preliminary Plan for Building #2. This is listed as a separate agenda item.

**Attachments** *(please list):*

Plan Commission Resolution, Staff Memo, Application, 2017 Proposed Plans, 2015 approved plans

**Recommendation/Suggested Action** *(briefly explain):*

Plan Commission recommendation to approve a Revised PUD Preliminary Plan for First Street Building #2.

**City of St. Charles, Illinois**  
**Plan Commission Resolution No. 17-2017**

**A Resolution Recommending Approval of a PUD Preliminary Plan for  
First Street Redevelopment PUD-Phase 3, Building #2  
(First Street Development II, LLC)**

**Passed by Plan Commission October 17, 2017**

WHEREAS, it is the responsibility of the St. Charles Plan Commission to review PUD Preliminary Plans; and

WHEREAS, the Plan Commission has reviewed the PUD Preliminary Plan for First Street Redevelopment PUD-Phase 2, Building #2 (First Street Development II, LLC); and

WHEREAS, the Plan Commission finds said PUD Preliminary Plan to be in conformance with the applicable PUD and the Zoning Ordinance requirements, subject to resolution of any outstanding staff review comments.

NOW, THEREFORE, be it resolved by the St. Charles Plan Commission to recommend to City Council approval of a PUD Preliminary Plan for First Street Redevelopment PUD-Phase 2, Building #2 (First Street Development II, LLC), contingent upon the resolution of all staff comments prior to City Council action.

Roll Call Vote:

Ayes: Kessler, Pretz, Holderfield, Schuetz, Wallace, Vargulich, Funke, Pietryla, Purdy

Nays: None

Absent:

Motion carried: 9 - 0

PASSED, this 17th day of October 2017.

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Chairman  
St. Charles Plan Commission

Community & Economic Development  
 Planning Division

Phone: (630) 377-4443

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ST. CHARLES  
 SINCE 1834

**STAFF MEMO**

**TO:** Chair Rita Payleitner  
 And the Members of the Government Services Committee

**FROM:** Russell Colby  
 Planning Division Manager

**RE:** First Street Phase 3, Buildings #2: Revised PUD Preliminary Plan

**DATE:** October 11, 2017

**APPLICATION INFORMATION:**

**Project Name:** First Street Phase 3 – Buildings # 2

**Applicant:** First Street Development II, LLC

**Purpose:** Review Revised PUD Preliminary Plans for Building #2

<b>General Information:</b>		
<b>Site Information</b>		
Location	Between First St. & the Fox River, north of Illinois St.	
Application:	PUD Preliminary Plan for Building #2	
Applicable City Code Sections	First St. PUD Ords. 2006-Z-26 & 2008-Z-22 Title 17, Chapter 17.06 Design Review Standards & Guidelines, Chapter 17.14 – Business & Mixed Use Districts	
<b>Existing Conditions</b>		
Land Use	Vacant building lot (being utilized for construction staging)	
Zoning	CBD-1 Central Business District - PUD	
<b>Zoning Summary</b>		
North	CBD-1 Central Business District - PUD	Vacant land (planned East Plaza)
East	CBD-1 Central Business District	Parking deck and Riverwalk
South	CBD-1 Central Business District	First St. Building #1
West	CBD-1 Central Business District - PUD	First Street and Building #4 (multi-story building with parking deck)
<b>Comprehensive Plan Designation</b>		
Mixed Use		

## **II. OVERVIEW**

### **A. BACKGROUND ON FIRST STREET PROJECT**

The First Street Redevelopment PUD was approved in 2006 as a five-phase, mixed-use downtown redevelopment project spanning a 7.6 acre area of properties along First Street between Prairie St. and Main St.

Phases 1 and 2 were constructed from 2007 to 2009 and included: New utility and road infrastructure; Relocation of the Blue Goose store; Building 7A-BMO Harris Bank & 16 affordable rental units; Building 4- The Plaza Parking Deck; and the western portion of the First Street Plaza.

Phase 3 is the site of the current construction activity. Phase 3 includes the riverfront property located between Main & Illinois Streets. The original 2006 plan for the site included:

- Public plaza opposite the existing plaza and a bi-level walkway along the riverfront
- A four-story building at the corner of Main St. and First St.
- Three, five-story buildings wrapped around a parking garage on the remainder of the site.

### **B. 2015-2017 PLANS FOR PHASE 3 SITE**

In March 2015, the City approved a revised PUD Preliminary Plan for the overall Phase 3 site that included the following:

- Public plaza and bi-level Riverwalk in the locations per the original 2006 plan
- Three mixed-use buildings and a public parking deck within the previously planned building footprint areas.
- Preliminary architectural plans were approved for Buildings 1, 2 and the parking deck.

Building #1 and the parking deck were completed in 2016.

Building #3 is under construction and will be completed in spring or early summer 2018.

Construction on Building #2 is scheduled to begin in early spring 2018.

### **C. CURRENT PROPOSAL**

First Street Development II, LLC has filed an application requesting approval of a revised PUD Preliminary Plan approval for Building #2. The developer is proposing to modify:

- The building program, in terms of uses, unit counts and square footages
- Revise the exterior building architecture.

No changes are proposed to the planned public spaces around the Phase 3 site. The building will be within approximately the same footprint as the previously approved Building #2.

### III. ANALYSIS

#### A. HISTORIC PRESERVATION COMMISSION REVIEW

The subject property is located within the Central Historic District, requiring review of the PUD Preliminary Plan by the Historic Preservation Commission regarding its potential impact on the historic district.

The Historic Preservation Commission reviewed the proposal for Building #2 on 9/6/17. The Commission unanimously voted to recommend to the Plan Commission approval of the plans as presented, and offered a number of positive comments on the architectural design.

#### B. ZONING REVIEW:

The 2006/2008 First Street PUD ordinance established zoning parameters for the project. For the Phase 3 site, deviations to the underlying CBD-1 Central Business zoning district were granted to permit building sizes in excess of 40,000 square feet and building height in excess of 50 ft.

The table below lists the development data for: the current approved plan for Buildings 1, 2, and 3; the proposed Building 2; and the maximum deviations granted by the PUD ordinance.

<b>Per building Development Data for Phase 3</b>					
	<b>Current Approved Plan</b>			<b>Proposed Building #2</b>	<b>PUD Ordinance- Maximum Deviations</b>
	<b>Building #1 (Complete)</b>	<b>Building #3 (Under construction)</b>	<b>Building #2 (Approved 2015)</b>		
<b>Building Footprint</b>	11,865 sf	13,092 sf	11,846 sf	12,251 sf	20,056 sf.
<b>Building Square footage</b>	47,460 sf	65,369 sf	47,384 sf	60,543 sf	89,196 sf.
<b>Building Floors</b>	4	5	4	5	5+ mezzanine
<b>Building Height</b>	54 ft. (67 ft. to tower peak)	67 ft. to parapet	50 ft. to parapet	70 ft. to parapet (81 ft. to tower peak)	75 ft. to parapet
<b>Ground floor uses</b>	Retail & Restaurant	Bank & Office per Downtown Overlay criteria	Retail & Restaurant	Retail & Restaurant	-
<b>Upper level uses</b>	Office	Residential & Office	Residential	Floor #2: Office Floor #3-5: Residential	-

**Changes to the Building Program for Building #2 vs. the 2015 Plan:**

- An additional floor has been added to the building.
- The second floor is proposed as office use.
- Residential unit count has been reduced from 36 units (planned as rental units) down to 14 units (planned as condominium units).

The table below compares the combined development data for Buildings 1, 2, and 3 for the current approved 2015-2017 plan and the 2017 plan with the proposed modifications to Building #2.

<b>Combined development data for Phase 3- Buildings 1, 2 &amp; 3</b>			
		<b>Current Approved Plan</b>	<b>Proposed Plan with revised Building #2</b>
<b>Total Building Square footage</b>	Restaurant/Retail/Service	23,763 sf	24,116 sf
	Bank/Office	67,532 sf	79,847 sf
	Residential	69,432 sf	69,409 sf
	<b>Total</b>	<b>160,727 sf</b>	<b>173,372 sf</b>
<b>Residential Units</b>	Studio	12	-
	1 BR	12	2
	2 BR	20	20
	3 BR	4	-
	4 BR	-	-
	TBD	-	-
	<b>Total</b>	<b>48</b>	<b>22</b>
<b>Parking Provided</b>		79 Private 110 Public	82 Private 110 Public
<b>Parking ratio with Phase 3 vs. CBD-1 ordinance requirement*</b>		59%	54%

*\*For locations within the CBD-1 zoning district that are within Downtown Special Service Areas 1A (parking) and 1B (revitalization), there is no on-site parking requirement. These calculations are provided for comparison purposes.*

**C. FIRST FLOOR USE RESTRICTIONS**

Although the Phase 3 site is located within the Downtown Overlay District, more limited restrictions on first floor uses were included in the 2006 First Street PUD Ordinance. The PUD restrictions control the ground floor uses within the entire First Street project.

In addition to restricting the individual business types that can occupy first floor spaces, the PUD also imposes a limitation on certain uses as a percentage of all first floor space in the PUD, which would include all phases of the project.

**First Floor permitted use list (per Ord. 2006-Z-26):**

*Only the following uses are permitted on the first floor of enclosed buildings within the First Street Project:*

1. *Art Gallery/Studio*
2. *Coffee or Tea Room*
3. *Cultural Facility\**
4. *Indoor Recreation and Amusement\**
5. *Live Entertainment*
6. *Personal Services\**
7. *Restaurant*
8. *Retail Sales*
9. *Tavern/Bar*
10. *Theater\**
11. *Utility, Local\**
12. *Accessory uses to the preceding uses 1 through 11.*

*\*Not more than 25% of the total gross leasable floor area on the first floor of all enclosed buildings within the Project, exclusive of ground floor parking areas, the Blue Goose and Building 7A, may be occupied by these uses.*

**D. SITE LAYOUT AND ENGINEERING**

The site layout and engineering is consistent with the plan approved for the entire Phase 3 property in 2015:

- The planned east plaza and bi-level public riverwalk will be located adjacent to Building #2 to the north and east.
- A private outdoor dining area is planned on the remainder of the Building #2 lot adjacent to the Riverwalk.
- Private parking within the basement level of the building will be accessed through the lower level of the adjacent public parking deck (accessed from Illinois Street).
- Pedestrians walking from Building #2 to the public parking deck can use the First Street sidewalk (to the upper and lower level ramp) or the pedestrian ramp and stairs located at the northeast corner of the parking deck, along the future riverwalk. (This path will be accessible once the east plaza and Riverwalk are completed.)
- A location for a refuse enclosure serving Building #2 has been planned inside the southeast corner of the building. Refuse may also be stored behind the building in the private alleyway between the building and the parking deck.

**Future plans to be reviewed:**

- Plans for the First Street streetscape adjacent to Building #2 were approved based on the previous plan for the building. Some minor revisions may be needed based on the current proposed building design.
- A revised Plat of Subdivision will be required to modify the First Street right-of-way line along Building #2. The current lot line is based upon the footprint of the previously planned building.
- Plans for the east plaza and Riverwalk will be prepared later. The improvements are to be installed after Building #2 is completed.

#### **E. BUILDING ARCHITECTURE**

The proposal is in compliance with the applicable Design Standards in the Zoning Ordinance and the First Street Design Guidelines. Elements include:

- Scale and proportion that is complementary to surrounding buildings
- Façade broken into sections to reduce the visual scale of the building.
- 360 degree building architecture, meaning that architectural design elements are consistent on all sides of the buildings.
- Use of traditional architectural materials, including brick as the primary wall material, cornices, stone lintels, and parapets.
- High level of first floor window transparency. Storefront windows wrap the public facades of the building.
- The ground floor scaled to the pedestrian.
- Attention to architectural details (sills, lintels, cornices, awnings, parapets, etc.)
- Balconies for the residential units overlooking the river (east elevation only).

#### **F. INCLUSIONARY HOUSING**

The First Street PUD was approved in 2006, prior to the City adopting an Inclusionary Housing Ordinance in 2008. As a part of the 2006 PUD and Redevelopment Agreement, 16 affordable rental units were provided in Building 7A (the BMO Harris Bank building). These units were constructed in Phases 1 and 2 of the project.

The current code exempts PUD developments that pre-date February 2016. Therefore, there is no requirement to provide any additional affordable units (or the equivalent fee-in-lieu thereof) over and above what was required at the time of the 2006 PUD approval.

#### **G. SCHOOL AND PARK FEE-IN-LIEU CONTRIBUTIONS**

School and Park Land Cash Fees will be due at the time of building permit. Land-Cash worksheets have been completed and submitted, but will be subject to change based on final unit and bedroom counts prior to the time of building permit.

### **IV. SUGGESTED ACTION**

Review the PUD Preliminary Plan.

Staff has found the application materials to be complete and the plan to be in conformance with the applicable PUD and Zoning Ordinance requirements.

### **V. ATTACHMENTS**

- PUD Preliminary Plan application
- Location/Site Plan
- Proposed Building Elevations and Floor Plans for Building #2
- Previously approved 2015 Building Elevations and Streetscape Plan (for reference)

**CITY OF ST. CHARLES**  
TWO EAST MAIN STREET  
ST. CHARLES, ILLINOIS 60174-1984

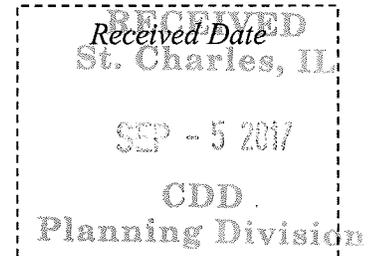


COMMUNITY & ECONOMIC DEV./PLANNING DIVISION

PHONE: (630) 377-4443 FAX: (630) 377-4062

**PUD PRELIMINARY PLAN APPLICATION**

<b>For City Use</b>	
Project Name:	<u>First Street Phase 3 - Building #2</u>
Project Number:	<u>2013</u> -PR- <u>018</u>
Application Number:	<u>2017</u> -AP- <u>031</u>



*To request approval of a PUD Preliminary Plan, complete this application and submit it with all required plans and attachments to the Planning Division. Normally this application will track with an application for Special Use for a PUD, unless a Special Use for a PUD has previously been granted and no amendment is necessary.*

*When the application is complete staff will distribute the plans to other City departments for review. When the staff has determined that the plans are ready for Plan Commission review, we will place the PUD Preliminary Plan on a Plan Commission meeting agenda.*

*The information you provide must be complete and accurate. If you have a question please call the Planning Division and we will be happy to assist you.*

<b>1. Property Information:</b>	Location: Vacant lot for First Street Building #2	
	Parcel Number (s): 09-34-127-014	
	Proposed PUD Name: First Street Redevelopment PUD, Phase 3, Building #2	
<b>2. Applicant Information:</b>	Name First Street Development II, LLC	Phone 630-443-9393
	Address 409 Illinois Ave #1C St. Charles, IL 60174	Fax
		Email
<b>3. Record Owner Information:</b>	Name City of St. Charles	Phone 630-377-4400
	Address 2 E. Main St. St. Charles, IL 60174	Fax
		Email

**Please check the type of application:**

- New proposed PUD- Planned Unit Development** (Special Use Application filed concurrently)
- Existing PUD-Planned Unit Development**
  - PUD Amendment Required for proposed plan (Special Use Application filed concurrently)

**Subdivision of land:**

(To be determined- Minor adjustments to building lot boundaries may be needed based upon proposed building footprints)

- Proposed lot has already been platted and a new subdivision is not required.
- New subdivision of property required:
  - Final Plat of Subdivision Application filed concurrently
  - Final Plat of Subdivision Application to be filed later

**Attachment Checklist:**

*If multiple zoning or subdivision applications are being submitted concurrently, do not submit duplicate checklist items or plans. Fee must be paid for each application.*

*Note: The City Staff, Plan Commission, or City Council, may request other pertinent information during the review process.*

\*  **APPLICATION FEE:** Application fee in accordance with Appendix B of the Zoning Ordinance. (\$500)

\*  **REIMBURSEMENT OF FEES AGREEMENT:**

An original, executed Reimbursement of Fees Agreement and deposit of funds in escrow with the City, as provided by Appendix B of the Zoning Ordinance.

\*  **REIMBURSEMENT OF FEES INITIAL DEPOSIT:**

Deposit of funds in escrow with the City. Required deposit is based on review items (number of applications filed) and the size of the site:

Number of Review Items	Under 5 Acres	5-15 Acres	16-75 Acres	Over 75 Acres
1	\$1,000	\$2,000	\$3,000	\$4,000
2 or 3	\$2,000	\$4,000	\$5,000	\$7,000
4 or more	\$3,000	\$5,000	\$7,000	\$10,000

\*  **PROOF OF OWNERSHIP and DISCLOSURE:** Ownership Disclosure for Applicant LLC

- a) a current title policy report; or
- b) a deed and a current title search.

If the owner is not the applicant, an original letter of authorization from the owner permitting the applicant to act on his/her behalf is required. If the owner or applicant is a Trust, a disclosure of all beneficiaries; if the owner or applicant is a Partnership, a disclosure of all partners; if the owner or applicant is a Corporation, a disclosure of all owners with an interest of at least ten percent (10%).

*NOTE: Private covenants and deed restrictions can limit private property rights with respect to the use of land even though the City's Zoning Ordinance may authorize the use or a less restrictive use. We strongly advise that you perform a title search on the property to determine if there any private covenants containing use restrictions or other deed restrictions. As those private covenants and deed restrictions may conflict with the City's Zoning Ordinance, it is further recommended that you consult with an attorney to obtain an opinion with respect to whether your intended use is compatible with those restrictions.*

- ❑ **LEGAL DESCRIPTION:** For entire subject property, on 8 ½ x 11 inch paper On file
- ❑ **PLAT OF SURVEY:** On file

A current plat of survey for the Subject Realty showing all existing improvements on the property, prepared by a registered Illinois Professional Land Surveyor.

- ❑ **SOIL AND WATER CONSERVATION DISTRICT APPLICATION:** N/A

Copy of completed Land Use Opinion application as required by state law, as submitted to The Kane-Dupage Soil and Water Conservation District. <http://www.kanedupageswcd.org/>

*Submit the application form and fee directly to the Kane-DuPage Soil and Water Conservation District. Provide a copy with this application.*

- ❑ **ENDANGERED SPECIES REPORT:** N/A

Copy of Endangered Species Consultation Agency Action to be filed with the Illinois Department of Natural Resources. <http://dnr.illinois.gov/EcoPublic/>

*Fill out the online form, print the report and submit with this application.*

- ❑ **PLANS:**

All required plans shall be drawn on sheets no larger than 24" x 36", unless the Director of Community Development permits a larger size when necessary to show a more comprehensive view of the project. All required plans shall show north arrow and scale, and shall be drawn at the same scale (except that a different scale may be used to show details or specific features). All plans shall include the name of the project, developer or owner of site, person or firm preparing the plan, and the date of plan preparation and all revisions.

**Copies of Plans:**

Initial Submittal - Ten (10) full size copies for non-residential projects OR Twelve (12) full size copies for residential projects; Three (3) 11" by 17"; and a PDF electronic file (On a CD-ROM or may be emailed to the Project Manager). For subsequent submittals, please contact the Project Manager to determine how many copies are required.

- \* ❑ **SITE/ENGINEERING PLAN:** Site Plan showing building footprint on the lot, outdoor dining area, utility services

**PRELIMINARY ENGINEERING PLANS – DRAWING REQUIREMENTS/CHECKLIST:**

Complete the attached checklist and ensure that all required information is included on the Preliminary Engineering Plans:

1. Accurate boundary lines with dimensions
2. Existing and proposed easements: location, width, purpose
3. Streets on and adjacent to the tract: Name and right-of-way width, center line elevation, and culverts
4. Location, size, shape, height, and use of existing and proposed structures
5. Location and description of streets, sidewalks, and fences
6. Surrounding land uses
7. Legal and common description
8. Date, north point, and scale
9. Existing and proposed topography
10. All parcels of land intended to be dedicated for public use or reserved for the use of all property owners with

the proposal indicated

11. Location of utilities
12. Building/use setback lines
13. Location of any significant natural features
14. Location of any 100-year recurrence interval floodplain and floodway boundaries
15. Location and classification of wetland areas as delineated in the National Wetlands Inventory
16. Existing zoning classification of property
17. Existing and proposed land use
18. Area of property in square feet and acres
19. Proposed off-street parking and loading areas
20. Number of parking spaces provided, and number required by ordinance
21. Angle of parking spaces
22. Parking space dimensions and aisle widths
23. Driveway radii at the street curb line
24. Width of driveways at sidewalk and street curb line
25. Provision of handicapped parking spaces
26. Dimensions of handicapped parking spaces
27. Depressed ramps available to handicapped parking spaces
28. Location, dimensions and elevations of freestanding signs
29. Location and elevations of trash enclosures
30. Provision for required screening, if applicable
31. Provision for required public sidewalks
32. Certification of site plan by a registered land surveyor or professional engineer
33. Geometric plan showing all necessary geometric data required for accurate layout of the site
34. Grading plans showing paving design, all storm sewers, and detention/retention facilities including detention/retention calculations) and erosion control measures
35. Utility plans showing all storm sewers, sanitary sewers, watermains, and appropriate appurtenant structures
36. Exterior lighting plans showing:
  - Location, height, intensity and fixture type of all proposed exterior lighting
  - Photometric information pertaining to locations of proposed lighting fixtures
37. Typical construction details and specifications
38. Certification of site engineering plans by a registered professional engineer
39. Proof of application for Stormwater Management Permit

□ **SKETCH PLAN FOR LATER PHASES OF PUD:** N/A

For phased PUD's, where a sketch plan is permitted, it shall include, at minimum, the following:

- General location of arterial and collector streets
- Location of any required landscape buffers
- Location of proposed access to the site from public streets
- Maximum number of square feet of floor area for nonresidential development
- Maximum number of dwelling units for residential development
- Open space and storm water management land

\* □ **ARCHITECTURAL PLANS:**

Architectural plans and data for all principal buildings shall be submitted in sufficient detail to permit an understanding of the exterior appearance and architectural style of the proposed buildings, the number, size and type of dwelling units, the proposed uses of nonresidential and mixed use buildings, total floor area and total building coverage of each building.

□ **TREE PRESERVATION PLAN: N/A**

Tree Preservation Plan when required in accordance with Chapter 8.30 of the St. Charles Municipal Code. The information required for this plan may be included as part of the Landscape Plan set. See attachment, “Tree Preservation Requirements for Preliminary Plans”.

□ **LANDSCAPE PLAN: N/A**

Landscape Plan showing the following information:

1. Delineation of the buildings, structures, and paved surfaces situated on the site and/or contemplated to be built thereon
2. Delineation of all areas to be graded and limits of land disturbance, including proposed contours as shown on the Site/Engineering Plan.
3. Accurate property boundary lines
4. Accurate location of proposed structures and other improvements, including paved areas, berms, lights, retention and detention areas, and landscaping
5. Site area proposed to be landscaped in square feet and as a percentage of the total site area
6. Percent of landscaped area provided as per code requirement
7. Dimensions of landscape islands
8. Setbacks of proposed impervious surfaces from property lines, street rights-of-way, and private drives
9. Location and identification of all planting beds and plant materials
10. Planting list including species of all plants, installation size (caliper, height, or spread as appropriate) and quantity of plants by species
11. Landscaping of ground signs and screening of dumpsters and other equipment

□ **STORMWATER MANAGEMENT: N/A**

Written information (reports, calculations, etc.) as described in the Stormwater Management Requirements for Preliminary Plans (attached)

□ **SUBDIVISION PLAT DRAWING REQUIREMENTS/CHECKLIST: N/A**

If the PUD Preliminary Plan involves the subdivision of land, a completed Subdivision Plat Drawing Requirements Checklist must be submitted.

**PUBLIC BENEFITS, DEPARTURES FROM CODE:** N/A

A description of how the PUD meets the purposes and requirements set out in Section 17.04.400 of the Zoning Ordinance. Any requests for departures from the requirements of Title 16, "Subdivisions and Land Improvement," and Title 17, "Zoning," shall be listed and reasons for requesting each departure shall be given.

**SCHEDULE:** Construction schedule indicating: N/A

- a. Phases in which the project will be built with emphasis on area, density, use and public facilities, such as open space, to be developed with each phase. Overall design of each phase shall be shown on the plat and through supporting material.
- b. Approximate dates for beginning and completion of each phase.
- c. If different land use types are to be included within the PUD, the schedule must include the mix of uses to be built in each phase.

\*  **PARK AND SCHOOL LAND/CASH WORKSHEETS**

For residential developments, Park and School land/cash worksheets in accordance with Title 16 of the St. Charles Municipal Code with population projections establishing anticipated population and student yields.

**INCLUSIONARY HOUSING SUMMARY** N/A

For residential developments, submit information describing how the development will comply with the requirements of Title 19, "Inclusionary Housing" of the St. Charles Municipal Code.

**I (we) certify that this application and the documents submitted with it are true and correct to the best of my (our) knowledge and belief.**

City of St. Charles - See attached authorization form.

\_\_\_\_\_  
Record Owner

\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Applicant or Authorized Agent

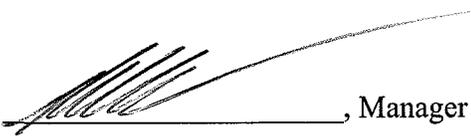
9/5/17  
\_\_\_\_\_  
Date

**OWNERSHIP DISCLOSURE FORM  
LIMITED LIABILITY COMPANY (L.L.C.)**

STATE OF ILLINOIS     )  
DUPAGE                 ) SS.  
~~KANE COUNTY~~         )

I, Robert Rasmussen, being first duly sworn on oath depose and say that I am  
Manager of First Street Development II, LLC, an Illinois Limited Liability  
Company (L.L.C.), and that the following persons are all of the members of the said L.L.C.:

- AVM Investments LLC \_\_\_\_\_
- DEKED LLC \_\_\_\_\_
- DRJ Investments, LLC \_\_\_\_\_
- Wolande Investments, LLC \_\_\_\_\_
- Philcorp Investments, LLC \_\_\_\_\_
- W6, LLC \_\_\_\_\_
- \_\_\_\_\_

By: , Manager

Subscribed and Sworn before me this 5<sup>TH</sup> day of  
SEPTEMBER, 2017.





# PARK LAND/CASH WORKSHEET

City of St. Charles, Illinois

Name of Development First Street Development  
 Date Submitted: 9/5/17 Phase #3 Bldg #2  
 Prepared by: [Signature]



Type of Dwelling	# Dwelling Units (DU)	Population Generation per Unit	Estimated Population
<b>Detached Single Family</b>			
➤ 3 Bedroom		DU x 2.899	=
➤ 4 Bedroom		DU x 3.764	=
➤ 5 Bedroom		DU x 3.770	=
<b>Attached Single Family</b>			
➤ 1 Bedroom		DU x 1.193	=
➤ 2 Bedroom		DU x 1.990	=
➤ 3 Bedroom		DU x 2.392	=
➤ 4 Bedroom		DU x 3.145	=
<b>Apartments</b>			
➤ Efficiency		DU x 1.294	=
➤ 1 Bedroom	2	DU x 1.758	= 3,516
➤ 2 Bedroom	12	DU x 1.914	= 22,968
➤ 3 Bedroom		DU x 3.053	=
<b>Totals</b>	<u>14</u>		<u>26,484</u>
	Total Dwelling Units		Estimated Total Population

## Park Site Requirements

Estimated Total Population 26,484 x .010 Acres per capita = 0.265 Acres

## Cash in lieu of requirements -

Total Site Acres 0.265 x \$240,500 (Fair Market Value per Improved Land) = \$ 63,732.50

# SCHOOL LAND/CASH WORKSHEET

City of St. Charles, Illinois

Name of Development: First Street Development  
 Date Submitted: 9/5/17 Phase #3 Bldg #2  
 Prepared by: [Signature]



ST. CHARLES  
SINCE 1834

## Estimated Student Yield by Grades

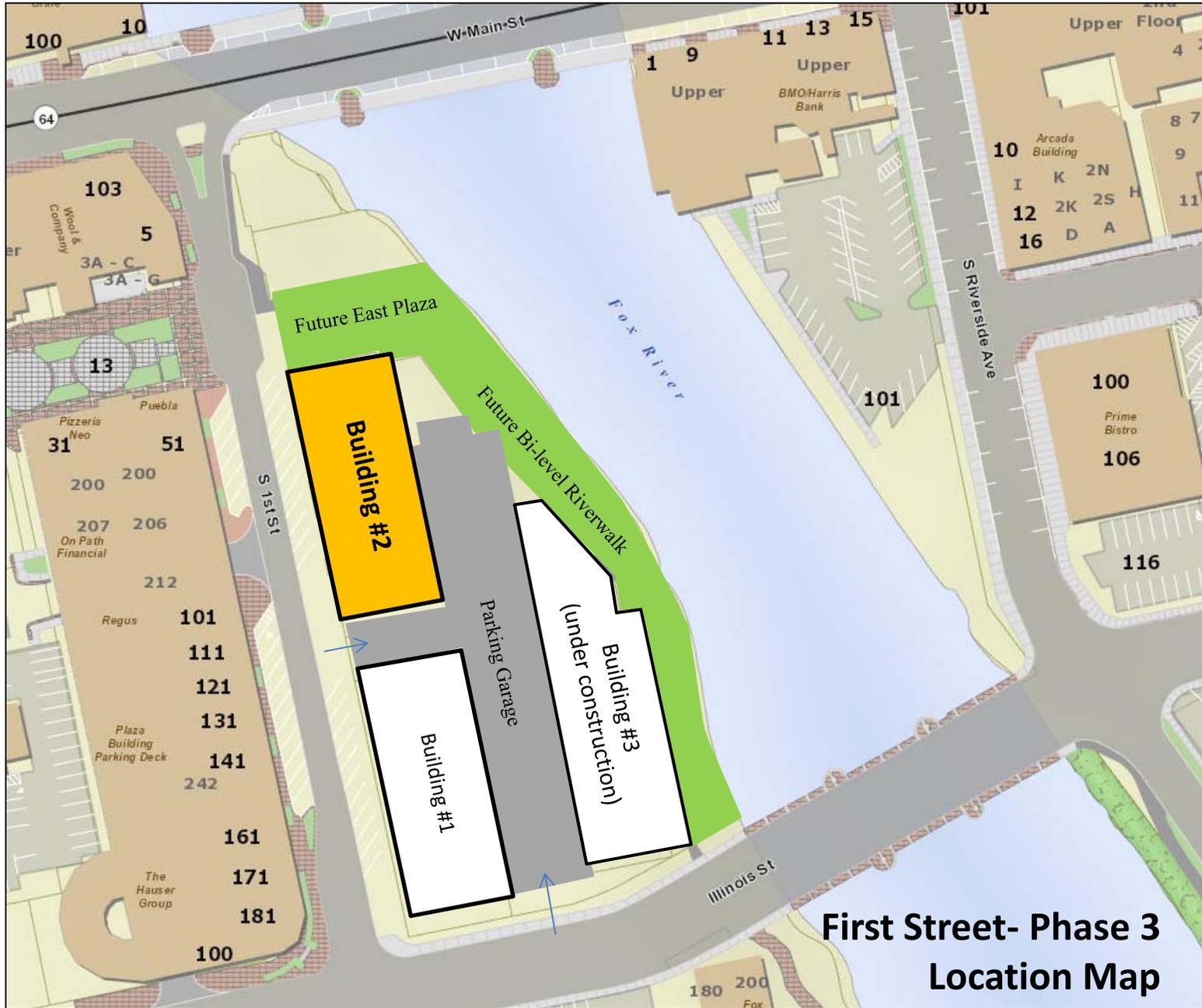
Type of Dwelling	# of dwelling Units (DU)	Elementary (Grades K to 5)	Middle (Grades 6 to 8)	High (Grades 9 to 12)
<b>Detached Single Family</b>				
➤ 3 Bedroom		DU x .369 =	DU x .173 =	DU x .184 =
➤ 4 Bedroom		DU x .530 =	DU x .298 =	DU x .360 =
➤ 5 Bedroom		DU x .345 =	DU x .248 =	DU x .300 =
<b>Attached Single Family</b>				
➤ 1 Bedroom		DU x .000 =	DU x .000 =	DU x .000 =
➤ 2 Bedroom		DU x .088 =	DU x .048 =	DU x .038 =
➤ 3 Bedroom		DU x .234 =	DU x .058 =	DU x .059 =
➤ 4 Bedroom		DU x .322 =	DU x .154 =	DU x .173 =
<b>Apartments</b>				
➤ Efficiency		DU x .000 =	DU x .000 =	DU x .000 =
➤ 1 Bedroom	2	DU x .002 = .004	DU x .001 = .002	DU x .001 = .002
➤ 2 Bedroom	12	DU x .086 = 1.032	DU x .042 = .504	DU x .046 = .552
➤ 3 Bedroom		DU x .234 =	DU x .123 =	DU x .118 =
<b>Totals</b>		<u>1,036</u> TE	<u>.506</u> TM	<u>.554</u> TH

## School Site Requirements

Type	# of students	Acres per student	Site Acres
Elementary (TE)	1,036	x .025	= 0.026
Middle (TM)	.506	x .0389	= 0.020
High (TH)	.554	x .072	= 0.040
<b>Total Site Acres</b>			<u>0.086</u>

## Cash in lieu of requirements -

0.086 (Total Site Acres) x \$240,500 (Fair Market Value per Improved Land) = \$ 20,683.00



**First Street- Phase 3  
Location Map**



## First Street Building 2 - Preliminary Building Summary 9-1-17

5 stories with a roof deck for residents only (no commercial occupancy on roof deck) with parking in the basement for residents.

60,543 sf gross above grade plus 12,100 sf below grade parking.

Type 2B construction (steel frame) with masonry veneer and insulated aluminum panels

### Lower Level:

Size: 12,251 sf gross

Uses: 28 parking stalls including (2) accessible parking spaces

### First floor:

Size: 12,251 sf gross, 11,062 net leasable (inside of exterior wall and common area walls)

Uses: Commercial including restaurant

### Second floor:

Size: 12,315 sf gross, 11,116 net leasable (including 758 sf of potential corridor)

Uses: Office

### Third floor:

Size: 12,378 sf gross, 10,998 net leasable (not including common area corridor)

Uses: Residential Condominiums – (4) 2-bedroom units, (1) 1-bedroom unit

### Fourth floor:

Size: 12,441 sf gross, 11,080 net leasable (not including common area corridor)

Uses: Residential Condominiums – (4) 2-bedroom units, (1) 1-bedroom unit

### Fifth floor:

Size: 11,158 sf gross, 9,853 net leasable (not including common area corridor)

Uses: Residential Condominiums – (4) 2-bedroom units

### Occupied Roof:

Size: 942 sf elevator and stair vestibules, 735 sf roof deck

Use: Common area roof deck for residential unit use only



WEST ELEVATION 8-28-17

1/16" = 1'-0" FIRST STREET BUILDING TWO

FIRST STREET II LLC • MARSHALL ARCHITECTS, INC.

• RIVER LOFT • ST. CHARLES, IL.



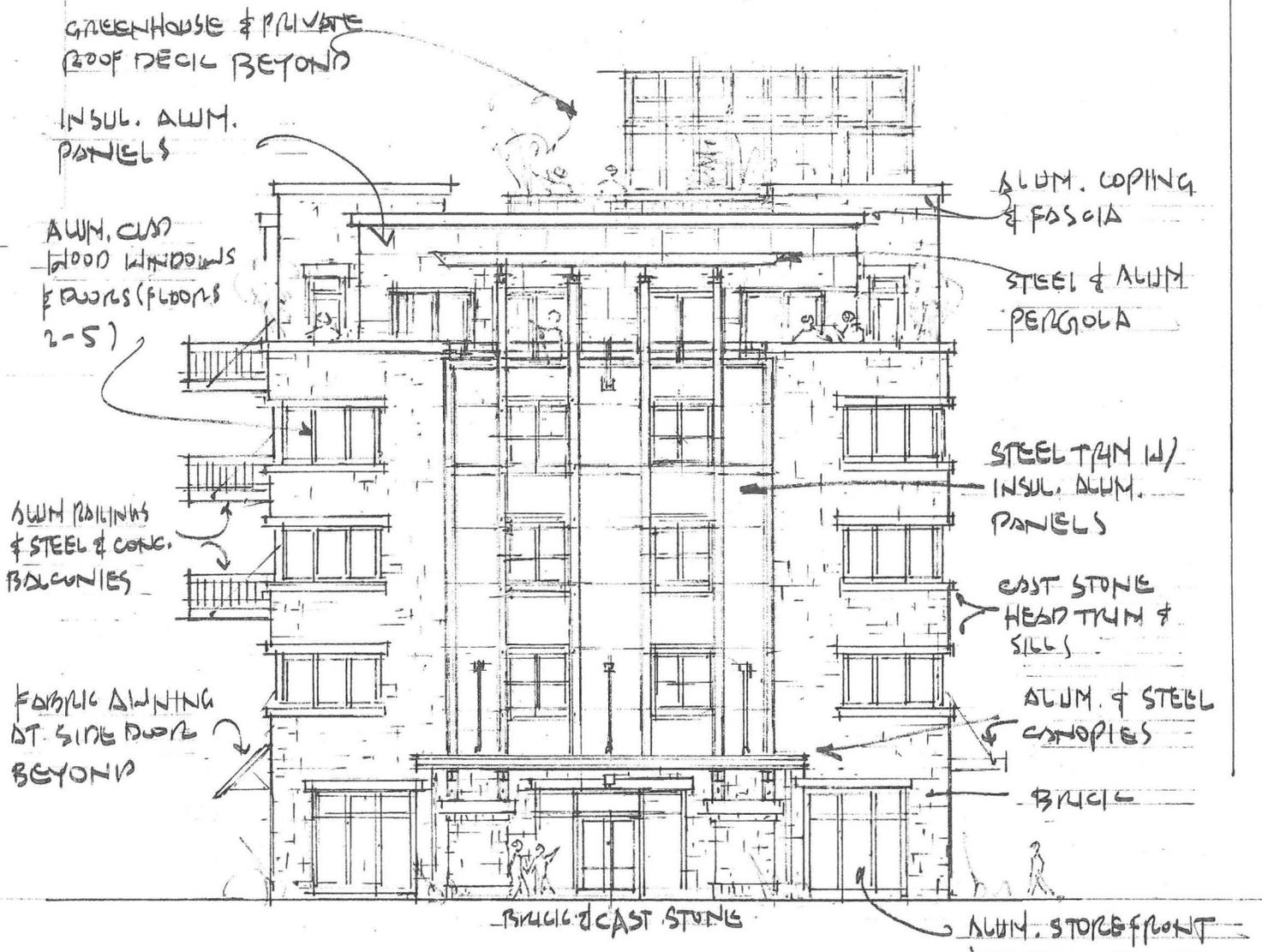
NORTH ELEVATION 8.28.17  
146" x 100" FIRST STREET BUILDING TWO  
FIRST STREET LLC. MARSHALL ARCHITECTS, INC.  
RIVER LOFT ST. CHARLES, IL



WEST ELEVATION 8-28-17

1/16" = 1'-0" FIRST STREET BUILDING TWO

FIRST STREET II LLC · MARSHALL ARCHITECTS, INC.  
 · RIVER LOFT · ST. CHARLES, IL.



NORTH ELEVATION 8.28.17  
 1/16" = 1'-0" FIRST STREET BUILDING TWO  
 FIRST STREET 1166. MARSHALL ARCHITECTS, INC.  
 RIVER LOFT ST. CHARLES, IL

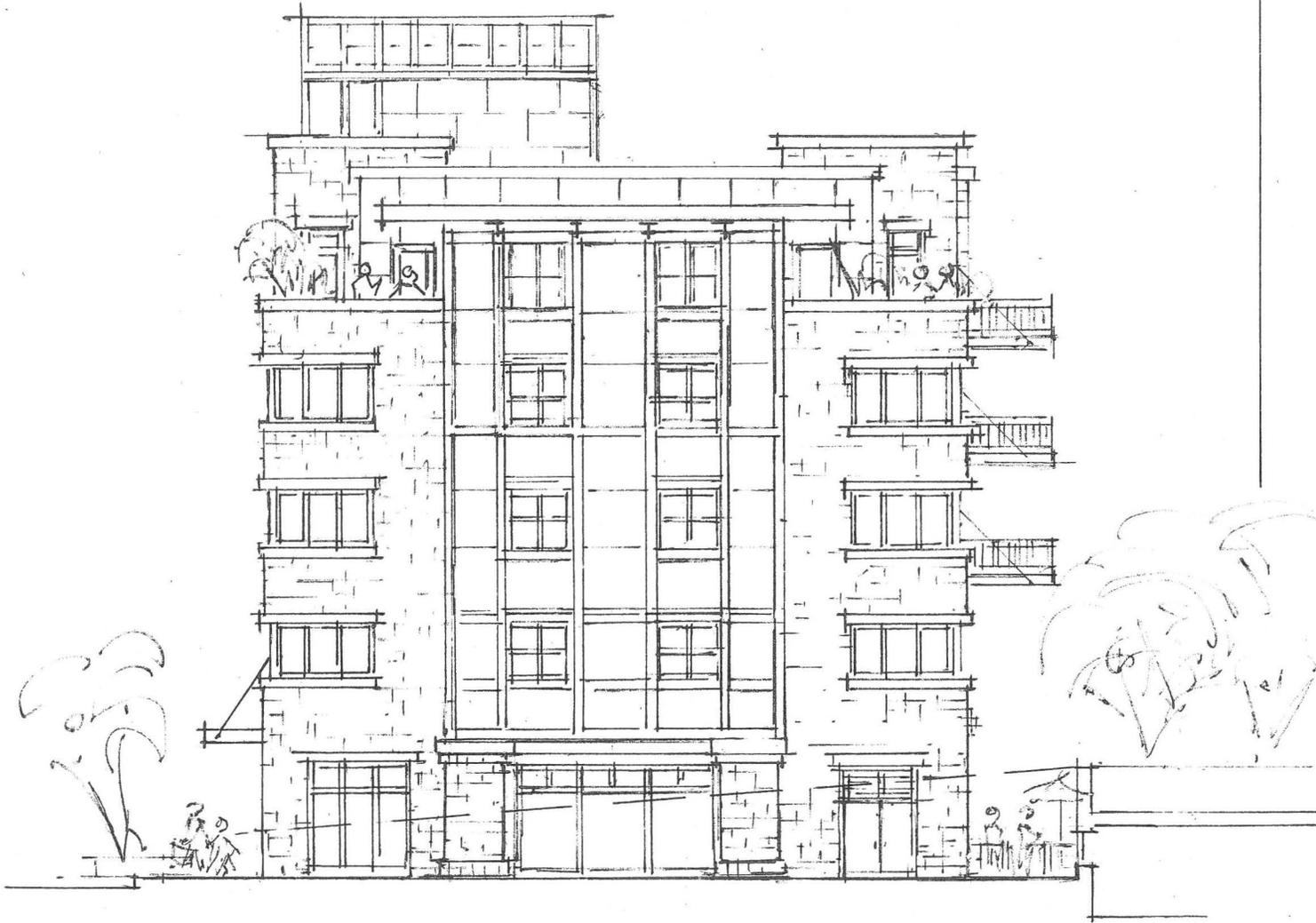


EAST ELEVATION 8.28.17

1/16" = 1'-0" FIRST STREET BUILDING TWO

FIRST STREET LLC. MARSHALL ARCHITECTS, INC.

RIVER LOFT, ST. CHARLES, IL.



SOUTH ELEVATION

8.28.17

FIRST STREET BUILDING TWO

1/16" = 1'-0"

FIRST STREET II, LLC • MARSHALL ARCHITECTS, INC.

RIVER LOFT • ST. CHARLES, IL.



BUILDING 2   RAMP



BUILDING 1

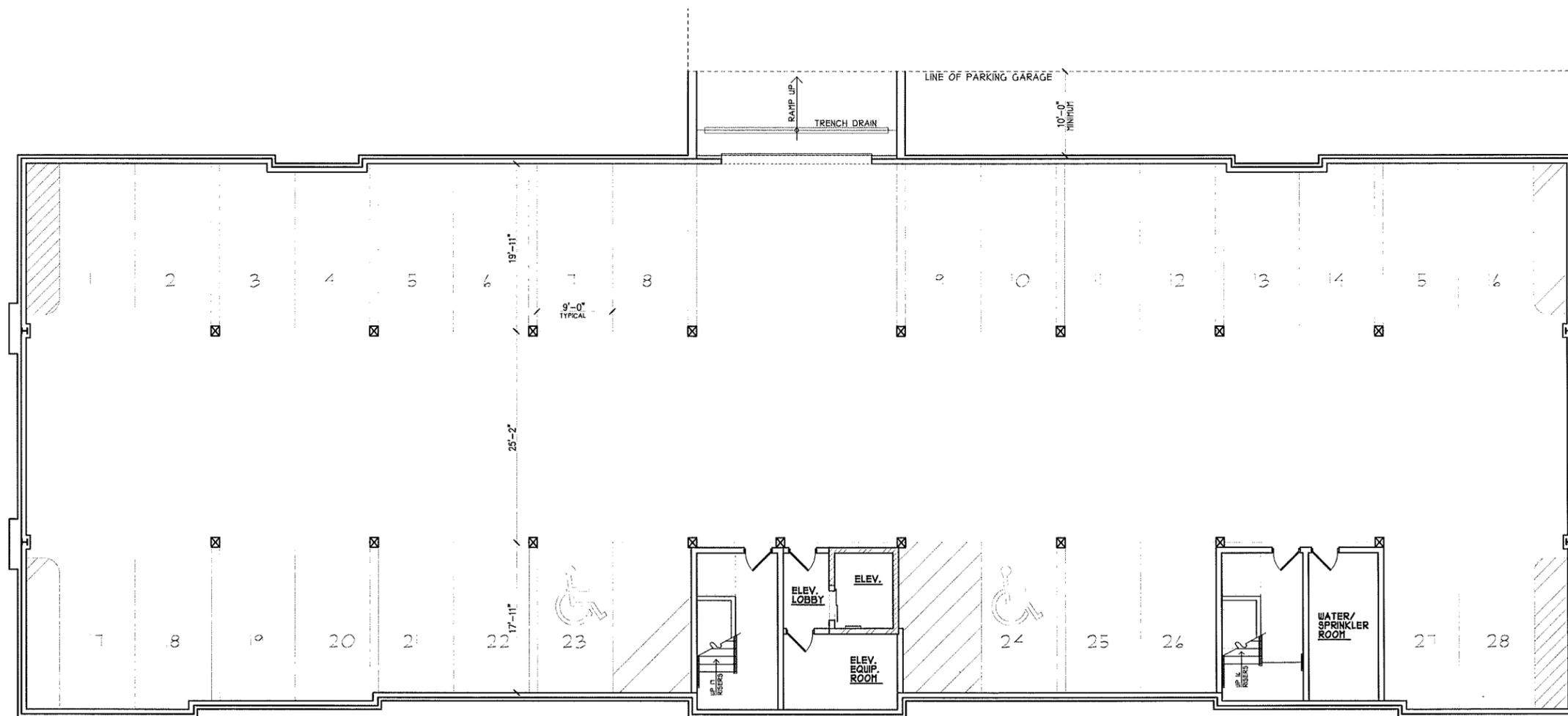
STREET SCENE · 8.28.17

FIRST STREET · ST. CHARLES, IL.

PROPOSED MIXED-USE BUILDING:  
FIRST STREET BUILDING 2 "RIVER LOFT"

ST. CHARLES, ILLINOIS 60174  
FIRST STREET DEVELOPMENT II, LLC  
MARSHALL ARCHITECTS, INC

PLOTTED: 9/26/2017



LOWER LEVEL PLAN

SCALE: 1/16" = 1'-0"

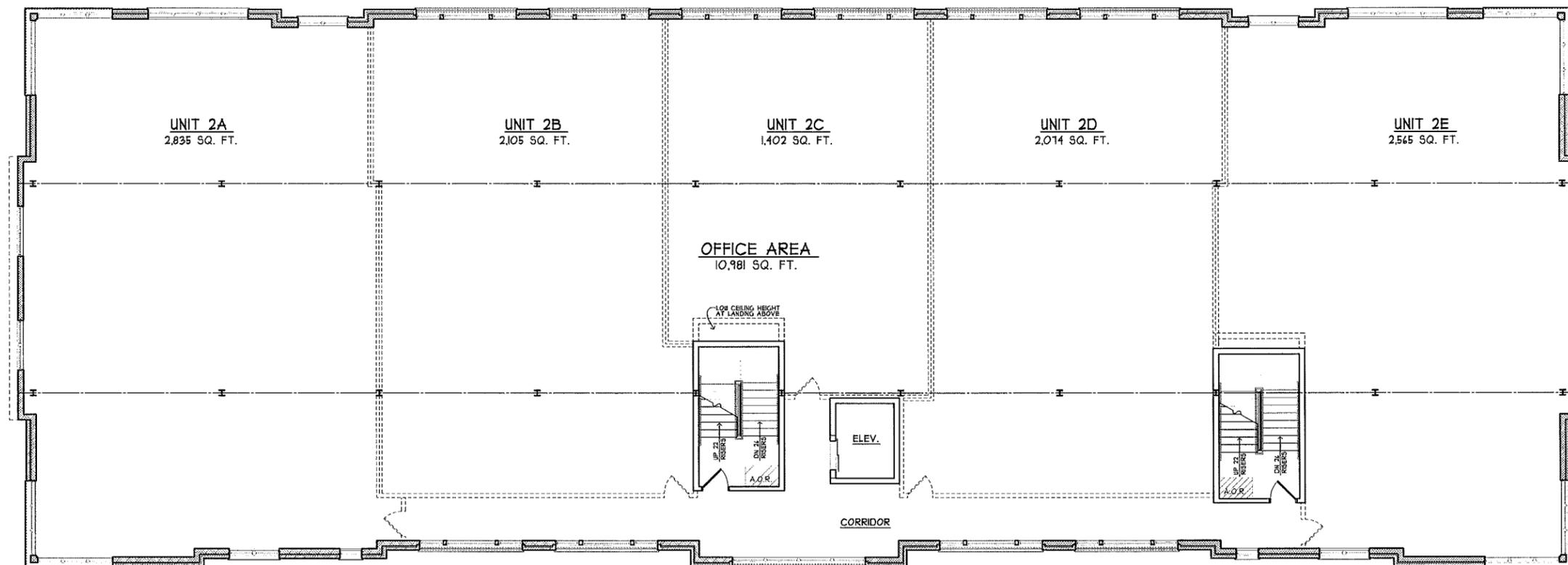




PROPOSED MIXED-USE BUILDING:  
FIRST STREET BUILDING 2 "RIVER LOFT"

ST. CHARLES, ILLINOIS 60174  
FIRST STREET DEVELOPMENT II, LLC  
MARSHALL ARCHITECTS, INC

PLOTTED: 9/26/2017



SECOND FLOOR PLAN

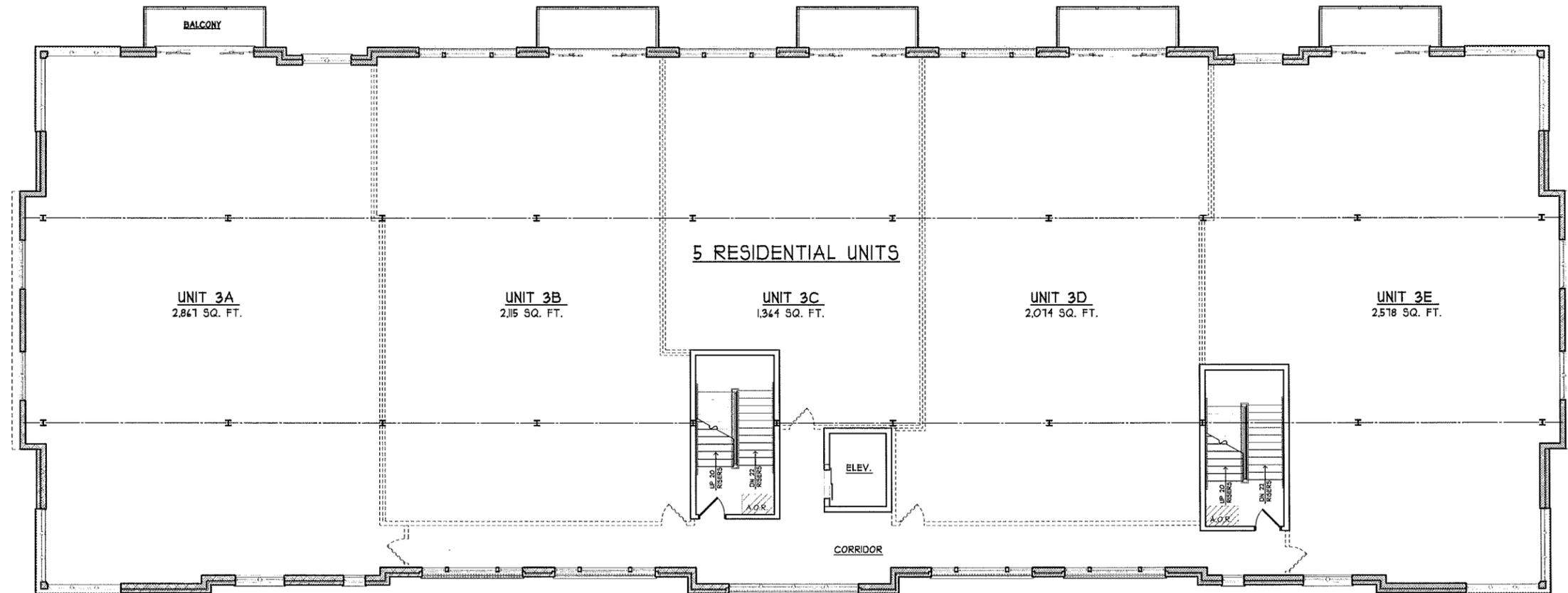
SCALE: 1/16" = 1'-0"



PROPOSED MIXED-USE BUILDING:  
FIRST STREET BUILDING 2 "RIVER LOFT"

ST. CHARLES, ILLINOIS 60174  
FIRST STREET DEVELOPMENT II, LLC  
MARSHALL ARCHITECTS, INC

PLOTTED: 9/26/2017



THIRD FLOOR PLAN

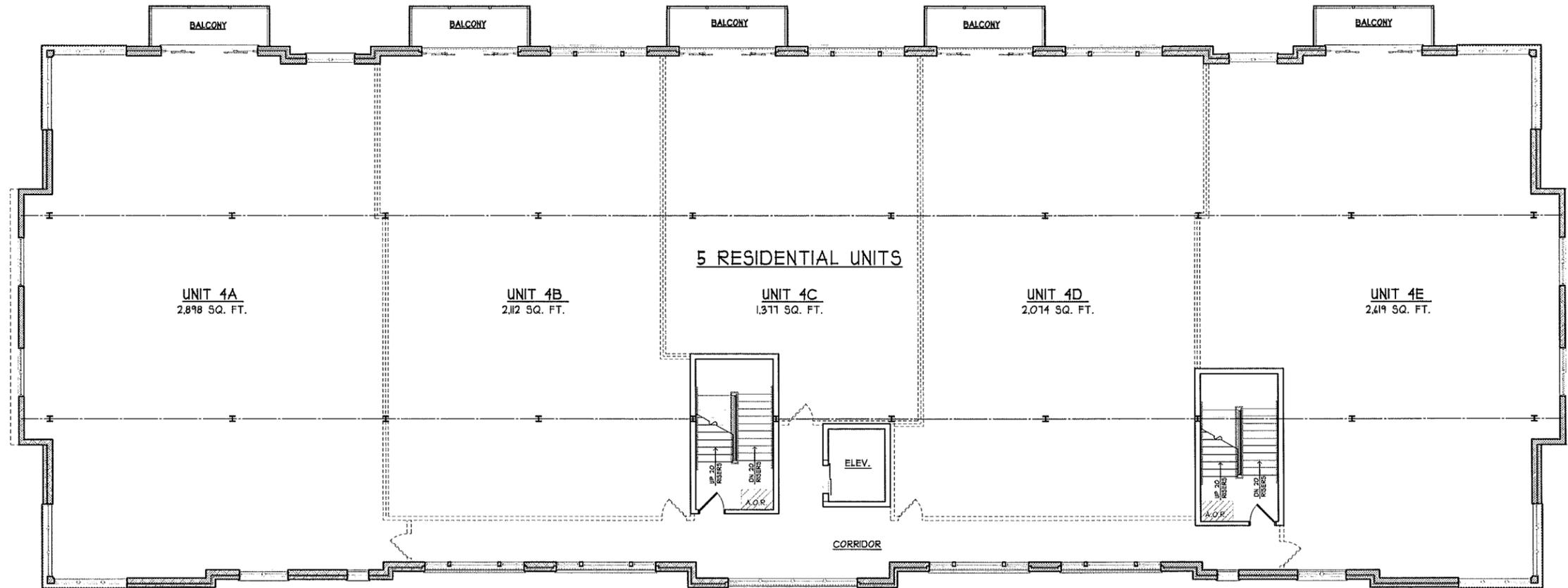
SCALE: 1/16" = 1'-0"



PROPOSED MIXED-USE BUILDING:  
FIRST STREET BUILDING 2 "RIVER LOFT"

ST. CHARLES, ILLINOIS 60174  
FIRST STREET DEVELOPMENT II, LLC  
MARSHALL ARCHITECTS, INC

PLOTTED: 9/26/2017



FOURTH FLOOR PLAN

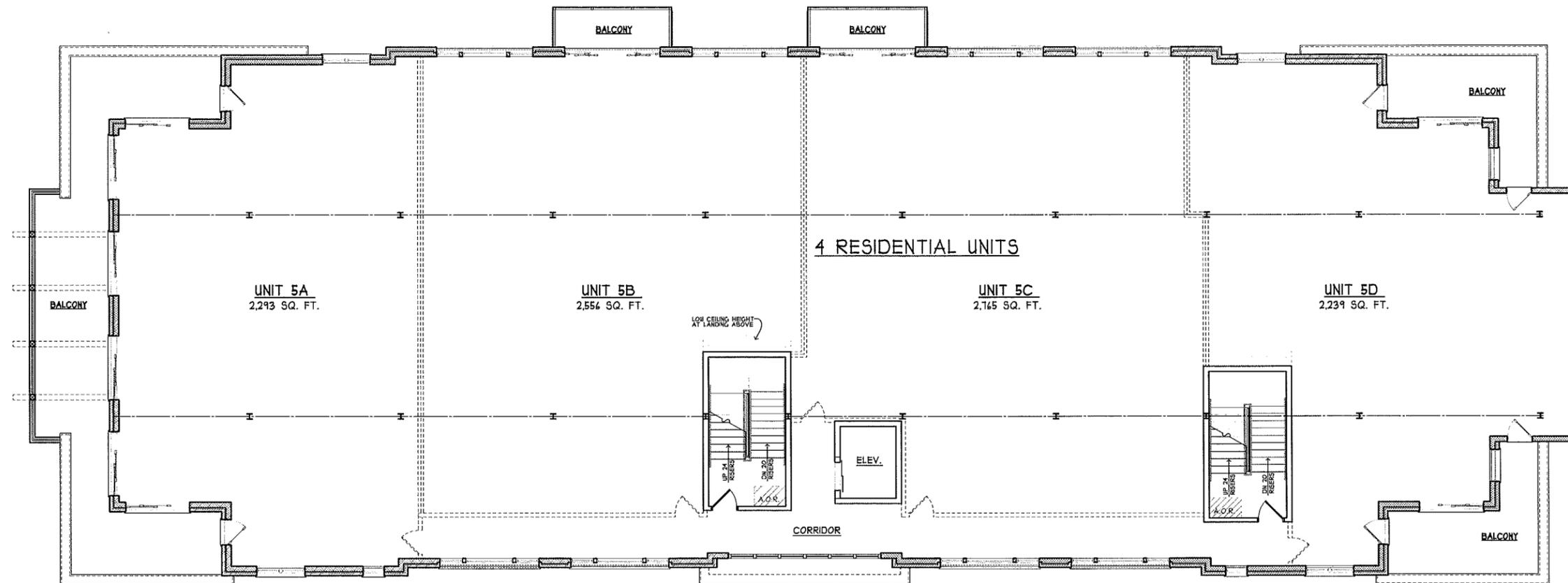
SCALE: 1/16" = 1'-0"



PROPOSED MIXED-USE BUILDING:  
FIRST STREET BUILDING 2 "RIVER LOFT"

ST. CHARLES, ILLINOIS 60174  
FIRST STREET DEVELOPMENT II, LLC  
MARSHALL ARCHITECTS, INC

PLOTTED: 9/26/2017



FIFTH FLOOR PLAN

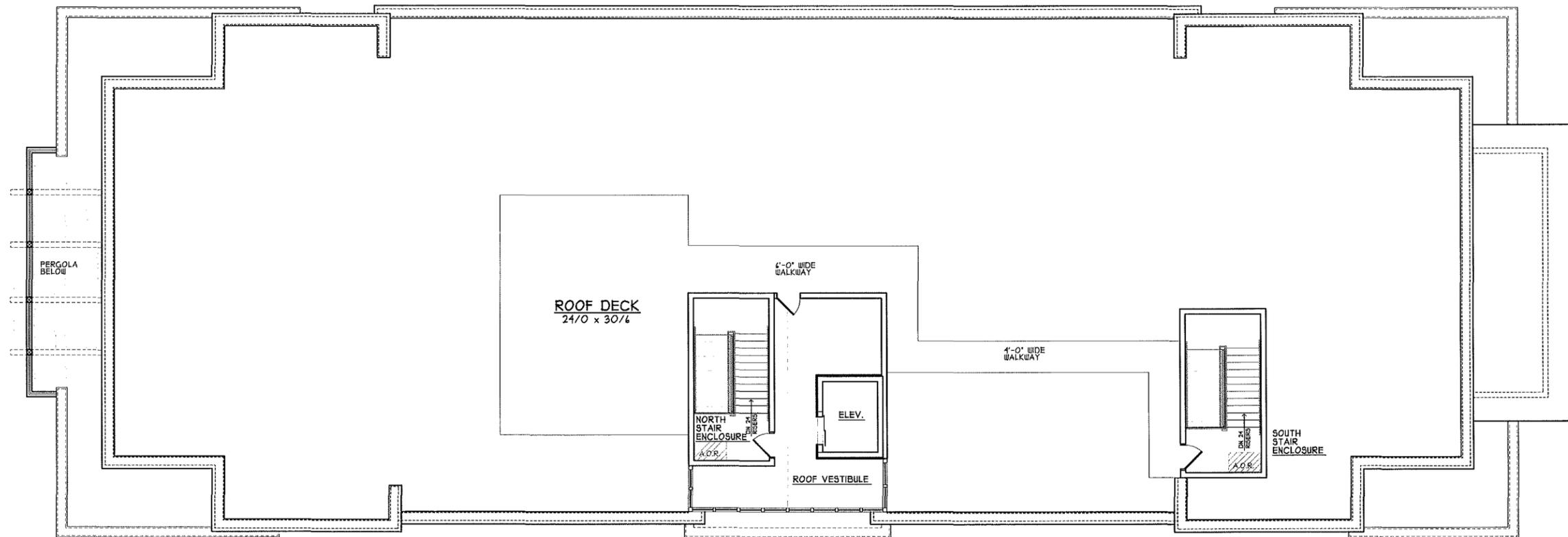
SCALE: 1/16" = 1'-0"



PROPOSED MIXED-USE BUILDING:  
**FIRST STREET BUILDING 2 "RIVER LOFT"**

ST. CHARLES, ILLINOIS 60174  
FIRST STREET DEVELOPMENT II, LLC  
MARSHALL ARCHITECTS, INC

PLOTTED: 9/26/2011



**ROOF PLAN**  
SCALE: 1/16" = 1'-0"





2015 Approved Elevations for Building #2







ALUMINUM LOUVER

**SOUTH ELEVATION BUILDING TWO 2-2-15**  
FIRST STREET - PHASE THREE - ST. CHARLES, IL  
FIRST STREET DEVELOPMENT II, LLC & MARSHALL ARCHITECTS



**NORTH ELEVATION BUILDING TWO 2-2-15**  
FIRST STREET - PHASE THREE - ST. CHARLES, IL  
FIRST STREET DEVELOPMENT II, LLC & MARSHALL ARCHITECTS

**AGENDA ITEM EXECUTIVE SUMMARY**

Agenda Item number: 4.b

Title:

Recommendation to approve an Amendment to the Redevelopment Agreement with First Street Development II, LLC regarding First Street PUD Building #2.

Presenter:

Russell Colby

Meeting: Government Services Committee

Date: October 23, 2017

Proposed Cost: N/A

Budgeted Amount: N/A

Not Budgeted: **Executive Summary** *(if not budgeted please explain):*

The First Street Phase 3 site is subject to a Redevelopment Agreement between the City and First Street Development II, LLC, which was entered in March 2015. The agreement was subsequently amended in 2016 and early 2017 to incorporate plans for Building #3, which is now under construction.

An amendment to this agreement will be necessary to incorporate the Revised Preliminary Plan for Building #2. Changes to two exhibits are required: an update to the "Scope of the Project" (which lists building square footages and uses) and an addition to the "Governmental Requirements" (to incorporate the PUD Preliminary Plan approval ordinance into the agreement, along with the previous PUD ordinances).

No other changes to the agreement are proposed.

The Property Conveyance Schedule for Building #2 is unchanged. The developer is to open a construction escrow for the building no later than 4/30/18 and begin construction no later than 5/31/18.

A draft of the proposed Redevelopment Agreement revisions is attached.

**Attachments** *(please list):*

Draft Redevelopment Agreement amendment

**Recommendation/Suggested Action** *(briefly explain):*

Recommendation to approve an Amendment to the Redevelopment Agreement with First Street Development II, LLC regarding First Street PUD Building #2.

**THIRD AMENDMENT TO CITY OF ST. CHARLES CENTRAL DOWNTOWN  
TAX INCREMENT FINANCING REDEVELOPMENT AGREEMENT  
(FIRST STREET PROJECT)**

THIS THIRD AMENDMENT TO CITY OF ST. CHARLES TAX INCREMENT FINANCING REDEVELOPMENT AGREEMENT, (the “Third Amendment”) is made and entered into and effective \_\_\_\_\_, 2017 by and between the City of St. Charles, an Illinois municipal corporation (“City”), and First Street Development II, LLC, an Illinois limited liability company (the “Developer”).

**RECITALS**

- A. The City and the Developer are parties to that certain City of St. Charles Central Downtown Tax Increment Financing Redevelopment Agreement, dated as of March 5, 2015, First Amendment to City of St. Charles Central Downtown Tax Increment Financing Development Agreement, dated as of September 6, 2016, and Second Amendment to City of St. Charles Central Downtown Tax Increment Financing Development Agreement, dated February 21, 2017 (collectively referred to as the “Agreement”).
- B. The City and the Developer desire to amend the Agreement, as set for and stated below.

IN CONSIDERATION of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

- 1. Incorporation of Recitals. The foregoing recitals are hereby incorporated as if fully rewritten.
- 2. Definitions; Amendment Controls. Capitalized terms used, but not defined herein, shall have the same meaning ascribed to such terms in the Agreement. To the extent any of the terms and conditions set forth in this Third Amendment shall conflict with any of the terms and conditions of the Agreement, the terms and conditions set forth in this Third Amendment shall at all times supersede, govern and control. In all other respects, this Third Amendment shall supplement the terms and conditions of the Agreement.
- 3. Scope of Project. Exhibit D-2, entitled “Scope of Project,” of the Agreement is hereby deleted in its entirety and in lieu thereof insert new Exhibit D-2, attached hereto as and made a part hereof.
- 4. Governmental Requirements. Exhibit D-3, entitled “Governmental Requirements,” of the Agreement is hereby amended to incorporate the PUD Preliminary Plan ordinance attached as Exhibit D-3, attached hereto as and made a part hereof.
- 5. Ratification of Agreement. Except as supplemented, amended or modified herein by this

Third Amendment, the Agreement is hereby ratified to be in full force and effect.

6. Counterparts. This Third Amendment may be executed in any number of counterparts, each of them appending all necessary signatures to constitute one and the same instrument.

IN WITNESS WHEREOF, this Third Amendment has been duly executed by the parties hereto as of the date first written above.

CITY OF ST. CHARLES,  
an Illinois municipal corporation

FIRST STREET DEVELOPMENT II, LLC,  
an Illinois limited liability company

By: \_\_\_\_\_  
Its Mayor

By: \_\_\_\_\_

Attest: \_\_\_\_\_  
Its Clerk

Its: \_\_\_\_\_

**EXHIBITS****Revision**

---

A.	REDEVELOPMENT PROJECT AREA	No revision
A-1.	MAP OF REDEVELOPMENT PROJECT AREA	No revision
B.	LEGAL DESCRIPTION - CITY PROPERTY	No revision
B-1.	MAP OF CITY PROPERTY	No revision
C.	LEGAL DESCRIPTION – CONVEYED PROPERTY	No revision
C-1.	MAP OF CONVEYED PROPERTY	No revision
D-1.	SITE PLAN	No revision
<b>D-2.</b>	<b>SCOPE OF PROJECT</b>	<b>Deleted &amp; Replaced</b>
<b>D-3.</b>	<b>GOVERNMENTAL REQUIREMENTS</b>	<b>Add to Exhibit D-3</b>
E.	CONSTRUCTION PHASING SCHEDULE	No revision
F-1.	DEVELOPER PUBLIC IMPROVEMENTS	No revision
F-2.	CITY DEVELOPMENT PUBLIC IMPROVEMENTS	No revision
F-3.	CITY PUBLIC IMPROVEMENTS	No revision
G.	PROPERTY CONVEYANCE SCHEDULE	No revision
H.	REIMBURSEMENT APPLICATION	No revision
I.	CERTIFICATE OF SUBSTANTIAL COMPLETION	No revision

**EXHIBIT D-2**

**SCOPE OF PROJECT**

<b>Private Development Program</b>				
<b>Phase</b>	<b>Timing</b>	<b>Buildings</b>	<b>Development Program Summary</b>	
<u>1</u>	<u>Construction</u> 7/1/15-12/31/16	Building #1-Retail/Office	Retail/Commercial	11,865 SF
			Office	35,595 SF
			Underground Private Parking	27 Spaces
			City-Owned Public Parking Deck	Public Parking Spaces
<u>2</u>	<u>Construction</u> 10/31/16-12/31/17	Building #3- Commercial/Condominium	Bank/office	31,937 SF
			For-Sale Residential	33,432SF 12 to 20 Units
			Underground Private Parking Spaces	27 Total Spaces
<u>3</u>	<u>Construction</u> 4/30/18-10/31/19	Building #2-Retail/Office/Condo.	Retail/Commercial	12,251 SF
			Office	12,312 SF
			Residential Condominium	35,977 sf 14 Units
			Underground Private Parking Spaces	28 Total Spaces

**EXHIBIT D-3**

**GOVERNMENTAL REQUIREMENTS**

**Ordinance Approving Revised PUD Preliminary Plan for Building #2**

**City of St. Charles, Illinois**  
**Ordinance No. 2017-Z-**

**An Ordinance Granting Approval of a Revised PUD Preliminary Plan for  
First Street Building #2**

WHEREAS, on or about September 5, 2017, First Street Development II, LLC (the "Applicant") filed an application for PUD Preliminary Plan for Lot 2 of First Street Redevelopment PUD Phase 3, said realty being legally described on Exhibit "A" attached hereto and incorporated herein (the "Subject Realty"); and,

WHEREAS, the Plan Commission recommended approval of the PUD Preliminary Plan on or about October 17, 2017; and,

WHEREAS, the Government Services Committee of the City Council recommended approval of the PUD Preliminary Plan on or about October 23, 2017; and,

WHEREAS, the City Council of the City of St. Charles has received the recommendations of the Plan Commission and Government Services Committee and has considered the same.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ST. CHARLES, KANE AND DUPAGE COUNTIES, ILLINOIS, as follows:

1. The preambles set forth hereinabove are incorporated herein as substantive provisions of this Ordinance as though fully set out in this Section 1.

2. That passage of this Ordinance shall constitute approval of the PUD Preliminary Plan, incorporated herein as Exhibit "B", such that the following documents and illustrations are hereby approved, reduced copies of which are attached hereto, subject to satisfactory resolution of all outstanding staff review comments and compliance with such conditions, corrections, and modifications as may be required by the Director of Community & Economic Development and the Director of Public Works to comply with the requirements of the St. Charles Municipal Code:

- Development Data for Phase 3, dated \_\_\_\_\_
- Architectural Elevations, prepared Marshall Architects, dated \_\_\_\_\_

3. That the subject property may be developed and used only in accordance with all ordinances of the City now in effect or hereafter amended or enacted.

4. That after the adoption and approval hereof, the Ordinance shall (i) be printed or published in book or pamphlet form, published by the authority of the Council, or (ii) within thirty (30) days after the adoption and approval hereof, be published in a newspaper published in and with a general circulation within the City of St. Charles.

PRESENTED to the City Council of the City of St. Charles, Kane and DuPage Counties,

Illinois this 6th day of November, 2017.

PASSED by the City Council of the City of St. Charles, Kane and DuPage Counties,  
Illinois this 6th day of November, 2017.

APPROVED by the Mayor of the City of St. Charles, Kane and DuPage Counties,  
Illinois this 6th day of November, 2017.

---

Raymond P. Rogina, Mayor

Attest:

---

Charles Amenta, City Clerk

Vote:

Ayes:

Nays:

Absent:

Abstain:

Date: \_\_\_\_\_

APPROVED AS TO FORM:

---

City Attorney

DATE: \_\_\_\_\_

**EXHIBIT "A"**

**LEGAL DESCRIPTION**

LOT 2 OF RESUBDIVISION OF THE RESUBDIVISION OF THE PHASE III FIRST STREET REDEVELOPMENT SUBDIVISION, BEING A RESUBDIVISION IN THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 27 AND THE EAST HALF OF THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 40 NORTH, RANGE EIGHT EAST OF THE THIRD PRINCIPAL MERIDIAN, IN THE CITY OF ST. CHARLES, KANE COUNTY, ILLINOIS, AS RECORDED WITH THE KANE COUNTY RECORDER'S OFFICE AS DOCUMENT NO. 2016K053789.

**EXHIBIT "B"**

**PUD PRELIMINARY PLANS**

- Development Data for Phase 3, dated \_\_\_\_\_
- Architectural Elevations, prepared Marshall Architects, dated \_\_\_\_\_

**FIRST STREET PHASE 3 DEVELOPMENT DATA**

**DATE: \_\_\_\_\_**

<b>Building No.</b>	<b>Type</b>	<b>Floor Level</b>	<b>Area/Units</b>
<b>Building 1</b>	Parking	Basement	29 spaces
	Retail/Commercial	1 <sup>st</sup> level	11,865 sf
	Office	2 <sup>nd</sup> level	11,865 sf
	Office	3 <sup>rd</sup> level	11,865 sf
	Office	4 <sup>th</sup> level	11,865 sf
	<i>Total Office</i>		
<b><u>Total Building area</u></b>			<b><u>47,460 sf</u></b>
<b>Parking Deck</b>	Parking	1 <sup>st</sup> level	57 spaces
	Parking	2 <sup>nd</sup> level	53 spaces
	<b><u>Total Parking Count</u></b>		
<b>Building 2</b>	Parking	Basement	28 spaces
	Retail/Commercial	1 <sup>st</sup> level	12,251 sf
	Office	2 <sup>nd</sup> level	12,312 sf
	Residential	3 <sup>rd</sup> level	12,378 sf
	Residential	4 <sup>th</sup> level	12,441 sf
	Residential	5 <sup>th</sup> level	11,158 sf
	Total Residential (2 1-Bedroom, 12 2-Bedroom)		
<b><u>Total Building area</u></b>			<b><u>60,543 sf</u></b>
<b>Building 3</b>	Parking	Basement	28 spaces
	Bank/office	1 <sup>st</sup> level	13,092 sf
	Office/residential*	2 <sup>nd</sup> level	12,542 sf
	Office/residential*	3 <sup>rd</sup> level	13,245sf
	Office/residential*	4 <sup>th</sup> level	13,245sf
	Office/residential*	5 <sup>th</sup> level	13,245 sf
	Total Residential (Bedroom Count TBD)		
<b><u>Total Building area</u></b>			<b><u>65,369 sf</u></b>

*\*Split between office/residential square footage as shown on Architectural Plans dated 12/22/16*



**AGENDA ITEM EXECUTIVE SUMMARY**

Agenda Item number: 4.c

Title:

Presentation of a Conceptual Layout for Streetscape and Riverwalk Improvements adjacent to First Street Building #3.

Presenter:

Russell Colby

Meeting: Government Services Committee

Date: October 23, 2017

Proposed Cost: TBD

Budgeted Amount: \$362,500  
(per the First Street Redev. Agrmt.)

Not Budgeted:

**Executive Summary** (if not budgeted please explain):

First Street Building #3 (Sterling Bank building) is currently under construction. Per the Redevelopment Agreement (RDA) for the project, the City is to design and construct pedestrian streetscape and Riverwalk improvements adjacent to Building #3 upon completion of the building in spring 2018. The developer, First Street Development II, LLC, has the right to construct these improvements per a plan approved by the City.

Staff has developed the attached conceptual layout and is presenting the plan for feedback from the Committee prior to preparing more detailed engineering plans. The final engineering plans will be brought back before the Committee for approval at a later date. The proposed cost will be determined based upon the final plans.

The Conceptual Layout generally follows the same design theme as the streetscape improvements completed along Building #1. Significant features of the plan:

- Concrete as the primary walking surface, with paver brick for accent areas
- A minimum open walking path width of 10 ft.
- Planter islands located based upon the building design, taking into account first floor entrances/windows/storefronts and upper level balconies
- Seating integrated into the planter beds (similar to the existing First Street plaza)
- Use of the First Street style pedestrian street lighting and bollard lighting along the Riverwalk
- Metal railing along the top of the upper level riverwall

The improvements will extend around the north end of Building #3, with a temporary walkway provided to the northeast pedestrian entrance of the parking deck.

Per the RDA, the remaining pedestrian improvements at the Phase 3 site, including the rest of the upper level Riverwalk, the lower level Riverwalk and the East Plaza (north of Building #2) will be designed and constructed as a part of the next phase of improvements to be completed after Building #2.

**Plan Commission review, 10/17/17: Significant comments on the Building #3 streetscape/Riverwalk plan:**

- Additional greenspace can be added at the southeast corner of the building by enlarging the planter beds.
- Some member felt that more brick pavers should be considered along the Riverwalk. Staff explained that for the streetscape improvements along Building #1, the Council Committee requested that paver brick not be used for the main walking surfaces. This could be revisited for the Riverwalk, but more extensive use of pavers could have a significant budget impact.
- The City should evaluate the potential for a pedestrian crossing on Illinois Street to link the First Street Riverwalk to the Bob Leonard Riverwalk to the south. Staff explained that if directed by Council Committee, this could be studied. An engineering analysis would need to be conducted to determine if a crossing could be safely accommodated in this location.

**Attachments** (please list):

Concept Design; Building #3 building elevation (for reference)

**Recommendation/Suggested Action** (briefly explain):

Provide feedback and comments on the Conceptual Layout.

The final engineering plans will be brought back before the Committee for approval at later date.



**Client:**  
 City of St. Charles  
 2 East Main Street  
 St. Charles, Illinois 60174  
 T: (630) 377-4400



**Planner:**  
 WBK Engineering, LLC.  
 116 West Main Street  
 St. Charles, Illinois  
 T: (630) 443-7755  
 www.wbkengineering.com

# St. Charles Riverwalk - Concept Design

St. Charles, Illinois

Project Number | 17-0205  
 Date | 09/15/17

DEC. 22, 2016 - REVISED FOR CONSTRUCTION



STATE OF ILLINOIS  
REGISTERED ARCHITECT  
REGISTRATION NUMBER  
04-002454

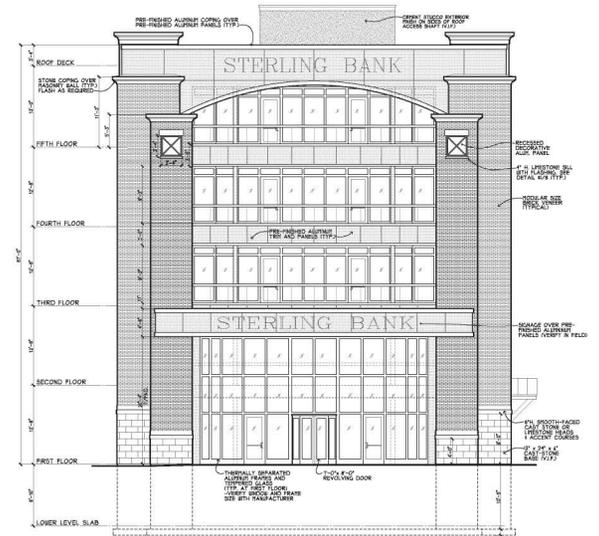
PROPOSED NEW OFFICE/RESIDENTIAL CONDOMINIUMS:  
**FIRST STREET - BLDG. 3**  
ST. CHARLES, ILLINOIS 60184  
FIRST STREET DEVELOPMENT, LLC

BLDG. 3

Revisions:

1	GENERAL CLIENT REV. 0-2-2016

Commission: 2606  
Issue Date: 8-8-2016  
Drawn By: CBY  
SOUTH AND EAST  
ELEVATIONS



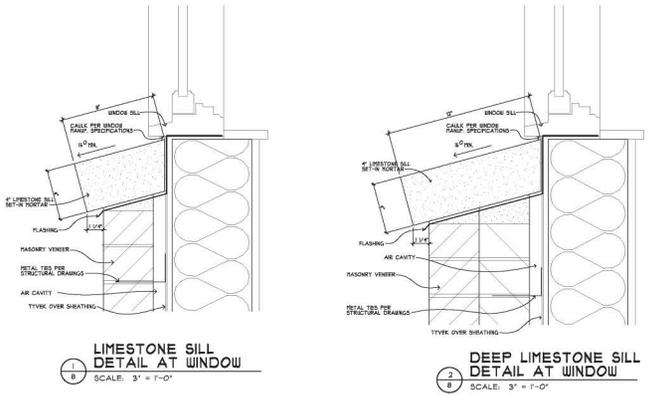
**SOUTH ELEVATION**  
SCALE: 1/8" = 1'-0"

**WINDOW FALL PROTECTION:**  
ALL WINDOWS TO FOLLOW SECTION 05100 OF THE 2012 IBC. REFER TO THE 2012 IBC FOR HEIGHTS OF FALL PROTECTION. ALL FALL PROTECTION SHALL BE INSTALLED TO THE TOP OF THE WINDOW SILL. ALL FALL PROTECTION SHALL BE INSTALLED TO THE TOP OF THE WINDOW SILL. ALL FALL PROTECTION SHALL BE INSTALLED TO THE TOP OF THE WINDOW SILL.

**NOTE:**  
WINDOWS ARE WEATHER SHIELD ENDOS (I.N.O.) VERIFY AVAIL SIZES BY MANUFACTURER AS REQUIRED. VERIFY WINDOW NAME, 4 GRID PATTERN BY OWNER AND INSTALL PER MANUFACTURER'S SPECIFICATIONS.  
CONTRACTOR TO VERIFY ALL WINDOW HEIGHTS  
GLAZED PENETRATION TO PROVIDE A MAXIMUM 1/4" FACTOR PER JOSE IBC:  
18 FIXED PENETRATION  
18 OPERABLE PENETRATION  
T = FULLY TEMPERED GLASS

**NOTE:**  
INSTALL ALL FLASHING & SEALANT AS REQUIRED FOR WEATHERTIGHT EXTERIOR - ALL FLASHING INSTALLATION TO FOLLOW DETAILS FROM SHEET METAL & AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION INC ARCHITECTURAL SHEET METAL MANUAL. TOP OF FLASHING TO BE INSTALLED UNDER TYPE.

**NOTE:**  
ALL MASONRY DETAILS TO FOLLOW RECOMMENDED PRACTICES BY THE MASONRY ADVISORY COUNCIL EXPANSION JOINT INCLUDING FLASHING, TIES, AND EXPANSION JOINT BULB UNITS. SAND AND SEAL MASONRY MORTAR STONE 1 CENT AT PARAPET DALLS AS REQUIRED FOR WATER-TIGHT FINISH.



**LIMESTONE SILL DETAIL AT WINDOW**  
SCALE: 3" = 1'-0"

**DEEP LIMESTONE SILL DETAIL AT WINDOW**  
SCALE: 3" = 1'-0"



**EAST ELEVATION**  
SCALE: 1/8" = 1'-0"

DATE: 12/22/2016



**AGENDA ITEM EXECUTIVE SUMMARY**

Agenda Item number: 5.a

Title: Presentation of St. Charles Bob Leonard Walkway Memorial Planter Plaque Program by the River Corridor Foundation

Presenter: Chris Adesso/John Rabchuk

Meeting: Government Services Committee

Date: October 23, 2017

Proposed Cost: N/A

Budgeted Amount: N/A

Not Budgeted:

**Executive Summary** (if not budgeted please explain):

The River Corridor Foundation (RCF) will be presenting the details of a new fundraising program they would like to engage in called the Memorial Planter Plaque Program. The RCF will be soliciting donations from donors in exchange for a memorial plaque which will be placed on the concrete planter(s) adjacent to the If I Could but Fly sculpture along the Bob Leonard Walk, just east of the Brownstones.

Details of the size and location of the plaques are included in the Mock-up attachment(s) to this agenda item.

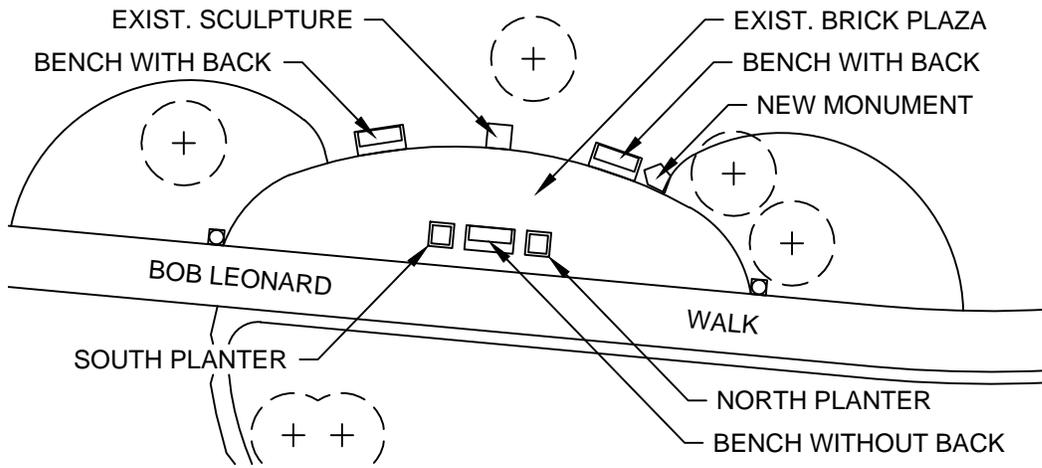
In addition, the RCF would like to request permission to install “marketing” signage along the Bob Leonard Walk to raise awareness for the existing Memorial Brick Program and the future Memorial Plaque program. Details of the locations of the proposed signs and a description of the information that will be displayed on the signs will be provided by Mr. John Rabchuk during the presentation.

**Attachments** (please list):

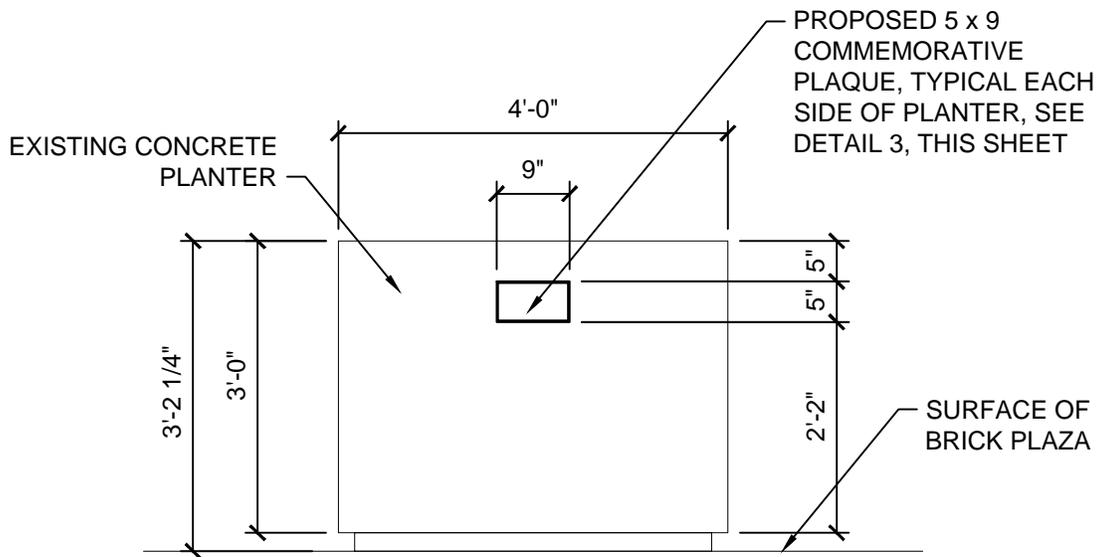
\*Mock-up of Plaque locations

**Recommendation/Suggested Action** (briefly explain):

Recommendation to approve the Memorial Plaque Program and Marketing Signs for the River Corridor Foundation of St. Charles.



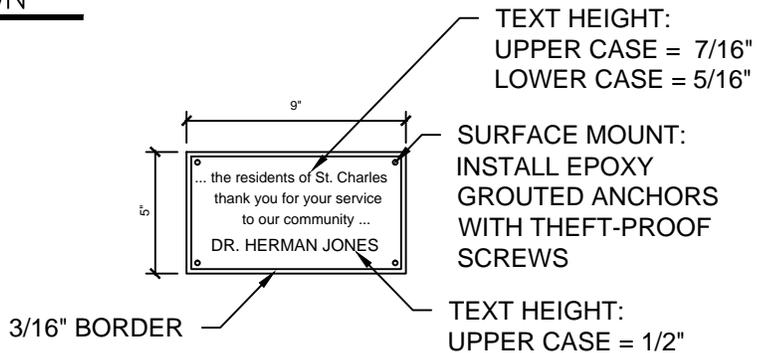
**1** PLANTER LOCATION PLAN  
 $1/32" = 1' = 0"$



**SUMMARY OF PLAQUE SIZES AT MOUNT ST. MARY PARK:**  
 4" x 6"  
 4" x 12"  
 5" x 8"  
 5" x 9"  
 8" x 10"  
 10" x 12"

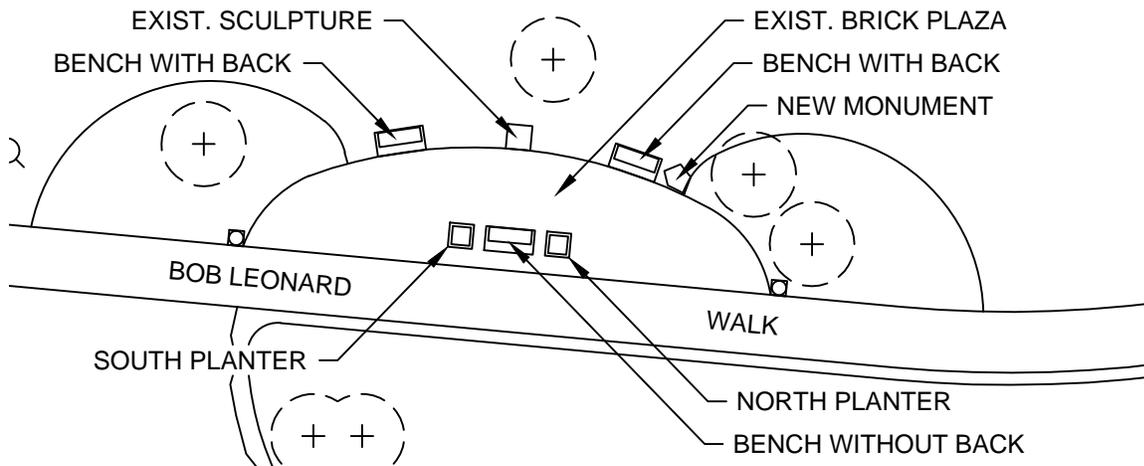
**SUMMARY OF PLAQUE SIZES ALONG BOB LEONARD WALK**  
 5" x 9"

**2** TYPICAL PLANTER ELEVATION  
 $1/2" = 1' = 0"$

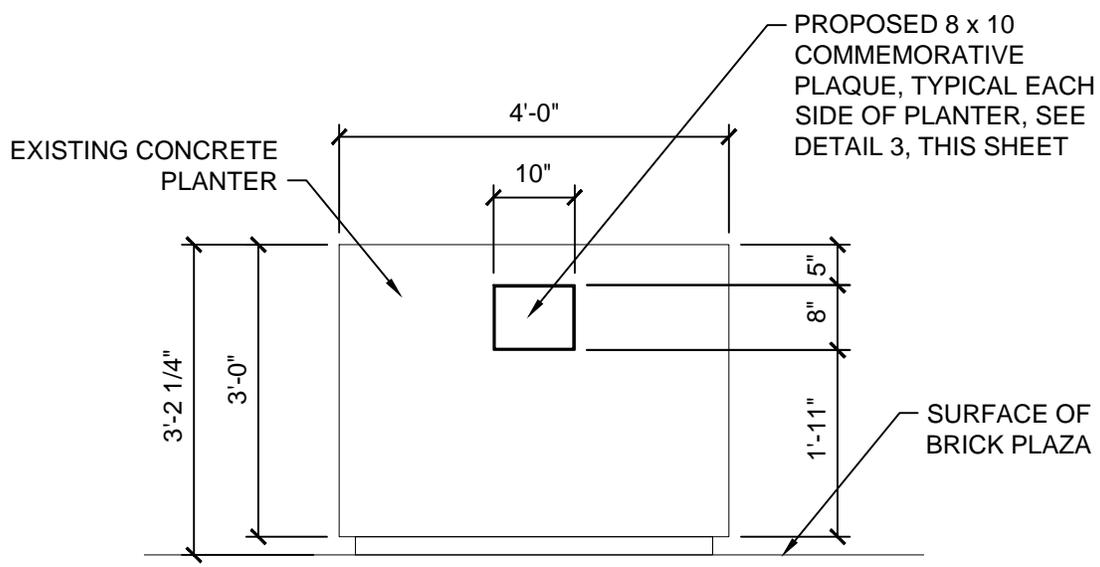


**3** TYPICAL 5" x 9" PLAQUE  
 $1-1/2" = 1' = 0"$

<b>RIVER CORRIDOR          FOUNDATION OF          ST. CHARLES</b>	Subject:	<b>PROPOSED PLANTER PLAQUES</b>		Date:	<b>9/07/17</b>	Revision:	<b>OPTION 'A'</b>
	Project:	<b>BOB LEONARD WALK</b>		Scale:	<b>SEE PLAN</b>	Drawing No.:	

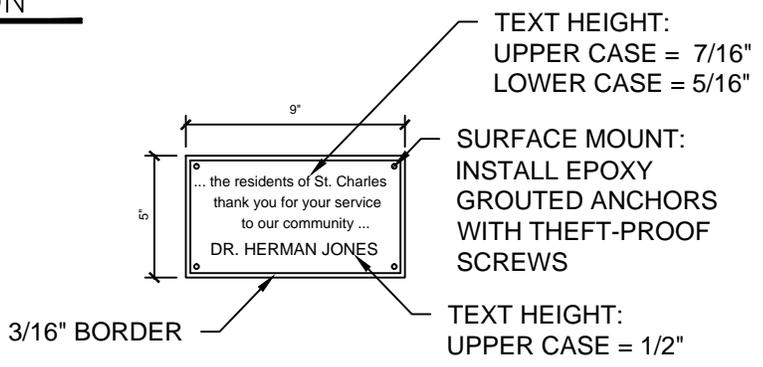


**1** PLANTER LOCATION PLAN  
 1/32" = 1'-0"



- SUMMARY OF PLAQUE SIZES AT MOUNT ST. MARY PARK:**
- 4" x 6"
  - 4" x 12"
  - 5" x 8"
  - 5" x 9"
  - 8" x 10"
  - 10" x 12"
- SUMMARY OF PLAQUE SIZES ALONG BOB LEONARD WALK**
- 5" x 9"

**2** TYPICAL PLANTER ELEVATION  
 1/2" = 1'-0"



**3** TYPICAL 8" x 10" PLAQUE  
 1-1/2" = 1'-0"

<b>RIVER CORRIDOR          FOUNDATION OF          ST. CHARLES</b>	Subject: <b>PROPOSED PLANTER PLAQUES</b>	Date: 9/07/17	Revision:	<b>OPTION 'B'</b>
	Project: <b>BOB LEONARD WALK</b>	Scale: SEE PLAN	Project No.:	

**AGENDA ITEM EXECUTIVE SUMMARY**

Agenda Item number: 5.b

Title:

Recommendation to Approve Resolution Authorizing Application to Illinois Transportation Enhancement Program Grant

Presenter:

Karen Young

Meeting: Government Services Committee

Date: October 23, 2017

Proposed Cost: \$

Budgeted Amount: \$

Not Budgeted: **Executive Summary** *(if not budgeted please explain):*

The Illinois Department of Transportation has issued a notification of available grant funding through the Illinois Transportation Enhancement Program (ITEP). This grant provides funding for community based projects that expand travel choices and enhance the transportation experience by improving the cultural, historic, aesthetic and environmental aspects of our transportation infrastructure. ITEP funding is designed to promote and develop alternative transportation options, including bike and pedestrian travel, along with streetscape beautification. In order to be eligible for enhancement funding, a project must demonstrate a relationship to surface transportation.

Staff reviewed the funding requirements and determined that the Indiana (Piano Factory) Pedestrian Bridge Project would be a good fit for this grant and is also currently proposed in City's 4-year Capital plan. It has been determined through the City's annual bridge inspection program that the Indiana Pedestrian Bridge will require major rehabilitation or replacement in the future. This project will require at a minimum Phase 1 Preliminary Engineering, Phase 2 Design Engineering, Construction and Construction Engineering. The Phase 1 Engineering process will help identify the design of the bridge, environmental items, permitting requirements and full scope of the future construction. The budget as proposed for this project is approximately \$2 million and phased over a three year timeline.

The ITEP Grant is federal funding and will require the project to be processed through IDOT and meet all federal funding requirements. The maximum available funding for any one project is \$2 million with a funding split of 80% ITEP Funding (\$1,600,000) and 20% Local Share (\$400,000) for all phases of engineering and construction.

As part of the application submittal to IDOT, approval of the attached resolution is required to allow for the application of the grant and to allow staff to execute all documents upon receipt of grant funding.

**Attachments** *(please list):*

\* Resolution Authorizing Application to Illinois Transportation Enhancement Program Grant

**Recommendation/Suggested Action** *(briefly explain):*

Recommendation to approve a Resolution Authorizing Application to Illinois Transportation Enhancement Program Grant and that the City Administrator be authorized to execute all necessary documents for the Indiana Pedestrian Bridge Project.

**City of St. Charles, Illinois**  
**Resolution No. \_\_\_\_\_**

**A Resolution Authorizing Application for Illinois Transportation  
Enhancement Program and Execution of all Necessary Documents**

**Presented & Passed by the  
City Council on \_\_\_\_\_**

WHEREAS, the City of St. Charles has determined that it is in its best interests to submit an application for Illinois Transportation Enhancement Program Funds for the Indiana Pedestrian Bridge Project, and;

WHEREAS, said project will include design engineering, construction and construction engineering for the Indiana Pedestrian Bridge, and;

WHEREAS, the Illinois Department of Transportation must approve said application and will require the City of St. Charles to execute a Funding Agreement and other necessary documents upon approval.

NOW THEREFORE, be it resolved by the Mayor and City Council of the City of St. Charles, Kane and DuPage Counties, Illinois, as follows:

SECTION ONE: That Mark Koenen, City Administrator, is hereby authorized to execute an application for Illinois Transportation Enhancement Program Funds, a Funding Agreement and other necessary documents upon approval of the application by the Illinois Department of Transportation, and any requests for payment and documentation required to be submitted by the City of St. Charles to Kane County requesting the dispersal of funds.

SECTION TWO: That any changes to the above-stated project description must be approved by the City of St. Charles.

SECTION THREE: This Resolution shall be in full force and effect upon its passage and approval.

PRESENTED to the City Council of the City of St. Charles, Illinois, this \_\_\_\_\_ day of \_\_\_\_\_ 2017.

PASSED by the City Council of the City of St. Charles, Illinois, this \_\_\_\_\_ day of \_\_\_\_\_ 2017.

APPROVED by the Mayor of the City of St. Charles, Illinois, this \_\_\_\_\_ day of \_\_\_\_\_ 2017.

Resolution No. \_\_\_\_\_

Page 2

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Ray P. Rogina, Mayor

ATTEST:

---

City Clerk

COUNCIL VOTE:

Ayes:

Nays:

Absent:

Abstain:



**AGENDA ITEM EXECUTIVE SUMMARY**

Agenda Item number: 5.c

Title: Recommendation to Approve Budget Addition to the 7<sup>th</sup> Avenue Creek Project

Presenter: Karen Young

Meeting: Government Services Committee

Date: October 23, 2017

Proposed Cost: \$214,586

Budgeted Amount: \$

Not Budgeted:

**Executive Summary** (*if not budgeted please explain*):

The following properties have been purchased by the City and are scheduled for demolition as part of the 7<sup>th</sup> Avenue Creek Project:

- 304 S. 7<sup>th</sup> Avenue
- 112 S. 8<sup>th</sup> Avenue
- 116 S. 8<sup>th</sup> Avenue
- 15 9<sup>th</sup> Avenue
- 107 S. 10<sup>th</sup> Avenue
- 904 Fern Avenue
- 801 Illinois Avenue
- 718 Indiana Avenue
- 804 Indiana Avenue

A budget addition of \$188,999 is required to complete this work.

**Attachments** (*please list*):

- \* Budget Addition Form

**Recommendation/Suggested Action** (*briefly explain*):

Recommendation to approve a Budget Addition for the 7<sup>th</sup> Avenue Creek Project in the amount of \$214,586 for property acquisition.

# BUDGET REVISION REQUEST FORM

Department: PW Engineering Date Requested: October 23, 2017

## Purpose of Request/Comments (Attach additional pages if necessary)

Add funds to the 7th Avenue Creek Property Acquisition line item for the demolition of property related to this project.

## Equal Dollar Transfer

Amount \_\_\_\_\_

### Account Numbers

From: \_\_\_\_\_ To: \_\_\_\_\_

Ref #: \_\_\_\_\_ Proj # \_\_\_\_\_ Ref #: \_\_\_\_\_ Proj # \_\_\_\_\_

## Addition (or Decrease) to Department Budget

Account # 513501-56100-CP5704 Amount \$214,586

Ref #: \_\_\_\_\_ Proj # CP5704

Originator: Karen Young October 23, 2017  
Date

Department Head: \_\_\_\_\_  
Date

Dir. Of Finance/Administration: \_\_\_\_\_  
Date

### For Finance Use Only

Revision entered and updated \_\_\_\_\_  
Date

By: \_\_\_\_\_



**AGENDA ITEM EXECUTIVE SUMMARY**

Agenda Item number: 5.d

Title:

Recommendation to Award the Bid for the Demolition of Nine Residential Structures

Presenter:

AJ Reineking

Meeting: Government Services Committee

Date: October 23, 2017

Proposed Cost: \$247,999

Budgeted Amount: \$0

Not Budgeted:

**Executive Summary** *(if not budgeted please explain):*

Item 5.c includes a budget addition to fully fund the 7<sup>th</sup> Avenue Creek Demolition as proposed below.

Throughout the summer, the City's Engineering Division has acquired nine strategic properties adjacent to the 7<sup>th</sup> Avenue Creek for the purposes of mitigating flooding issues and for future capital improvements.

On October 6, 2017, the City publicly opened and read aloud bids received for the demolition of the residential dwellings at the following addresses:

- 15 South 9<sup>th</sup> Avenue
- 107 South 10<sup>th</sup> Avenue
- 112 South 8<sup>th</sup> Avenue
- 116 South 8<sup>th</sup> Avenue
- 304 South 7<sup>th</sup> Avenue
- 718 Indiana Avenue
- 801 Illinois Avenue
- 804 Indiana Avenue
- 904 Fern Avenue

These properties are each located within the 7<sup>th</sup> Avenue Creek project limits and the proposed Federal Emergency Management Agency (FEMA) Floodplain map modification area.

This project includes the complete demolition and removal of all structures, fences, foundations, and driveways, as well as the subsequent restoration of the sites with clean fill, dirt and seed to restore the sites to an original, pre-development state. No additional grading will be performed on-site outside of the grading required to fill the foundation areas to the level of the adjacent grade.

The City received eight qualified bids to perform this work with KLF Enterprises of Markham, IL being the lowest responsive, responsible bidder.

**Attachments** *(please list):*

\* Bid Tabulation \* Bid Specifications \* KLF Enterprises Bid Sheet

**Recommendation/Suggested Action** *(briefly explain):*

Recommendation to award the bid for the Demolition of Nine Residential Structures to KLF Enterprises in the amount not to exceed \$247,999.



**City of St. Charles  
Invitation to Bid  
Residential Demolition Services**

The City of St. Charles [City] is seeking a Contractor to perform demolition services to nine (9) residential dwellings located within St. Charles, Illinois. The projects shall consist of demolishing the all structures located on the subject properties, disposing of all debris, and restoring the sites to a pre-developed state. The project shall include all permitting, preparation, utility coordination, labor, materials, equipment and supplies necessary to complete the project.

**Mandatory Pre-Bid Meeting**

There will be a mandatory Pre-Bid Meeting in the field to review the sites and existing conditions. Proposers are to meet at the Public Works Complex located at 200 Devereaux Way on **Monday, September 25, 2017 at 1:00 PM.**

**Timeline**

The City anticipates the following timeline for award.

Bids Due	Friday, October 6, 2017 at 2:00 PM
Government Services Committee Consideration	Monday, October 25, 2017
City Council Approval	Monday, November 6, 2017
Notice to Proceed	Wednesday, November 6, 2017

**Demolition**

**1. Project Sites & Conditions**

The City has assumed ownership of the following properties, which are the subject properties of this bid.

- a) 112 South 8th Avenue
- b) 904 Fern Avenue
- c) 718 Indiana Avenue
- d) 107 10th Avenue
- e) 15 9th Avenue
- f) 801 Illinois Avenue
- g) 804 Indiana Avenue
- h) 304 7th Avenue
- i) 116 8th Avenue

The properties are vacant, and the buildings are within the controls of the City. Prior to issuance of notice to proceed for this demolition project, each structure may be utilized for training by emergency services staff, and the City disclaims any responsibility that representations made by the City regarding conditions or quantities of materials will remain as they were when reviewed by the bidders during the bidding period, prior to

award of the contract, or during the course of the work. The City disclaims any responsibility for any such changes.

**2. Summary of Scope of Work**

a. Permitting, Notifications, and Landfill Approvals.

The Contractor shall procure and pay for all permits necessary to carry out the work, including those necessary while the streets or alleys are obstructed either by operations or by the storage of equipment or materials.

The contractor will determine whether any state or local permits or notifications are necessary to perform this work, and will be responsible for any associated fees. A City of St. Charles demolition permit will be required, but the City fees will be waived, as the work is being done for the City.

A Kane County Stormwater Permit will be required. The City of St. Charles Public Works Department will submit the permit for these properties and no fees will be charged to the contractor for this permit. The Contractor shall be responsible for complying with all requirements of this permit.

Proper disposal of materials is required, including the hauling and disposal at a licensed subtitle D landfill. The contractor is responsible for obtaining landfill approval and for paying the landfill tipping fees, as well as any Clean Construction Debris Disposal (CCDD) testing.

b. Erosion Control shall be provided in accordance with all local, county and State requirements. These sites are adjacent to a creek and within the floodplain and/or floodway.

c. Site Security – The Contractor shall install a fence around the perimeter of each work zone to prevent unauthorized access.

d. Utility Termination

Contractor shall remove all utilities at each site.

- Gas disconnect will be completed by Nicor. Work is not permitted to commence until Nicor has completed this work.
- City Water shall be disconnected at the B-box.
- Private Storm Sewer services shall be cut and capped on the resident side of the sidewalk.
- Private Sanitary Services shall be cut and capped on the resident side of the sidewalk.
- Electric will be disconnected to the utility pole by the City.

**AS AN ALTERNATE, The City is also requesting line item pricing for the disconnection of all City utilities at the main (water, sanitary sewer, storm**

sewer). **This pricing should include appropriate couplings, materials, roadway repairs and restorations. This option will be exercised at the sole discretion of the City.**

e. Demolition

This contract calls for the demolition of nine (9) wood framed construction residential dwellings, as well as any and all garages, outbuildings, concrete foundation footings and pads, driveways, residential sidewalks, and all other hardscapes on the properties. Upon completion, each property shall be restored to a pre-developed state. All public sidewalks are to remain undisturbed, intact.

The contractor shall haul and properly discard all materials that require landfill disposal. Asbestos and lead containing materials will be removed from the property independent of this contract, prior to demolition commencing. The contractor will line up landfill pricing and approvals, and the price must include payment of all landfill tipping fees and taxes. The price sheet includes a requirement to indicate the quantity of material the contractor estimates will require disposal at the landfill. This information will be used to help interpret bids.

Structures, such as fence posts, existing on the creek bank may be cut down to grade and left in place to prevent the erosion of the bank.

Fencing that provides a mutual benefit to adjacent property owners shall be left in place at the City's discretion. Prior to removal, the designated City representative shall make a determination if a fence stays or is removed.

The contractor shall mobilize all necessary material and labor for the job. Equipment can be left at the job site at the contractor's sole risk. The City will not be responsible for lost, stolen, damaged, or vandalized equipment. The contractor may stage equipment at the Public Works Garage where access is restricted, at the contractor's sole risk.

f. Disposal of Materials

All materials removed from the buildings, including fixtures and appurtenances shall be the property of the Contractor and shall be entirely removed from the premises. The entire premises shall be cleared of all junk, refuse, debris, and materials resulting from the removal of the buildings and contents, down to the building floor. Upon completion of the work, the site shall be left in orderly condition.

The contractor shall follow all applicable local, state, and federal laws, regulations and requirements for the disposal of lead, asbestos, and other routinely encountered hazardous substances.

With the contractor invoices, documentation of the quantities of materials handled and their destination will be provided. Copies of landfill disposal load listing will be provided with the contractor invoices, with a breakdown by waste type (asbestos demolition debris or lead containing brick/block). An estimate of the quantity of material (cubic yards or tons) removed for beneficial reuse will be provided with each contractor invoice. A summary of the scrap metal pounds recovered by type (copper, iron, etc.) will be provided with the contractor final invoice.

- g. Backfill all work site depressions with clean mixed clay to drain. \*(Source ticket required).
- h. Restoration shall include a cap of clean, pulverized black dirt, seed, and erosion control blanket. Restored ground shall be free of all large rocks as well as any and all demolition debris.
- i. Disturbance of the site shall be limited to the area of the structures being removed. No additional grading shall be performed.

### **3. Work Progress & Completion**

- a. The work schedule shall be coordinated by the City and the Contractor.
- b. A written work schedule shall be agreed upon by the City and the Contractor prior to the notice to proceed.
- c. All specified work shall be completed no later than sixteen (16) weeks from the issuance of the City's Notice to Proceed to the Contractor.
- d. The Contractor may not commence work before 7:00 AM Monday through Friday.
- e. All work must be completed by 6:00 PM. \*(Additional hours prior to 7 AM and after 6 PM must be approved in advance by the designated City representative).
- f. The Contractor may be restricted with respect to work hours each day depending on special events in the area and/or weather events.
- g. Weekend hours [Saturday and Sunday] must be approved in advance by the designated City representative.
- h. Upon commencement of the work specified herein, the Contractor shall work in consecutive regular work days, without delay, until completion of the specified work.

- i. The public streets and sidewalks shall be kept free of debris, litter, and mud throughout the performance of work under this contract.
- j. The public sidewalks and curbs that may serve as access for heavy equipment shall be planked with suitable timbers or plywood sheeting to prevent any damages from occurring.
- k. Any damage to public streets, sidewalks and curbs shall be repaired or replaced at the expense of the Contractor in accordance with the City of St. Charles construction specifications.
- l. Equipment use shall be limited to the footprint of the structure(s) and the most direct path to the structure from the road. Any additional earth disturbance shall be kept to the minimal amount required to perform the work.

**4. Custody of the Properties, Buildings**

Upon receipt of written order by the City to commence work, the buildings and their surroundings shall be under the custody of the Contractor.

**5. Supervision & Documentation**

- a. The City of St. Charles reserves the right to supervise the Demolition site however they see fit.
- b. The contractor will perform work to the satisfaction of the City and their designated representatives.

**6. Asbestos Abatement**

Asbestos abatement services will occur prior to demolition as part of another contract, independent of the scope of this project. All material containing friable asbestos will be removed and properly disposed of.

**7. Site and Traffic Control**

- a. Pedestrian and vehicular traffic shall be maintained on the streets adjacent to the premises through the life of this Contract.
- b. The Contractor shall provide and maintain the necessary barricades and traffic control necessary for the protection of the public during the progress of this work.
- c. The site shall remain secure at all times through the utilization of construction fencing.
- d. Erosion control in accordance with State and County specifications shall be utilized and inspected daily to protect all on-site catch basins, public storm sewer inlets and the creek located near these sites, eliminating contamination from soil run-off and demolition debris.

- e. Silt collecting fabric or baskets shall be installed in all open grate storm sewer structures near the selected job sites and are to be removed by the contractor upon completion of the demolition work once all other equipment and materials have been removed.

**8. Courteous Neighbor**

- a. Site cleanliness is absolutely necessary at all times. The Contractor shall be responsible for maintaining a clean work-site.
- b. Keep the property adjacent to buildings clean and free of debris.
- c. Do not store or permit removed materials and equipment to accumulate at the site.
- d. All materials and construction debris shall be removed as it is generated.
- e. The City will reserve the right to routinely inspect the job-site conditions and make recommendations based on observations and site conditions. These recommendations shall be mitigated immediately.
- f. Maintain fencing so that it is safe and functions as intended.
- g. Utilize water to keep the job-site free from dirt and dust.
- h. The Contractor shall not track spoils or demolition materials beyond the fenced in work zone. The roadway adjacent to the work-sites shall remain clean at all times.
- i. The contractor shall notify adjacent property owners of the work to be performed by letter or door hanger prior to mobilization. The notification shall include the address of the work to be performed as well as an anticipated start and end timeframe.

**9. Liquidated Damages**

- a. After notice to proceed had been granted to the contractor, work shall commence within two weeks of permit issuance.
- b. Once temporary fencing has been installed around a property work shall commence within 48 hours and continue until demolition, seeding/blanketing is completed.
- c. Demolition work shall be continuous on the property such to not leave a partially demolished home. If left uncomplete for a period greater than 72 hours, there will be liquidated damages assessed in the amount of \$500 per day that each property is left uncomplete from non-continuous work.

**Coordination with Police & Fire Training Exercises**

The Contractor shall be accommodating to Police and Fire training schedules if requested. It is the City's intention to not allow any training once Notice to Proceed has been issued.

**Work Delay – Cost of Labor and Materials**

Any change in the above-referenced work schedule must be agreed upon by both parties. The contract price will remain fixed from the execution of the contract by the City and the Contractor through the completion of the specified work.

**Professional Standard**

The Contractor is required to have at least five (5) years of experience in demolition industry. They shall provide no less than five references for similar projects in other communities in the past two years, and have a demonstrated safety record.

**Safety Officer**

The Contractor shall provide a designated Safety Officer contact for the City Inspector to address any safety related concerns that arise on the job. The Safety Officer will be required to respond and address such concerns in a timely manner or within at least one (1) business day.

**Job Show Up**

The City's Public Works facility, upon request, may be utilized as a job show up location. Utility trucks and private cars may be parked within the Public Works fenced-in yard. The City reserves the right to revoke this privilege. The Public Works yard is open Monday through Friday from 6:00 a.m. until 5:00 p.m. and locked at all other times.

**Prevailing Wages**

The Contractor shall abide by the Illinois Prevailing Wage Act, 820 ILCS 130, and must submit certified payroll records with all payment requests. Any request for payment submitted without certified payroll records will not be processed by the City Accounts Payable Department.

CITY OF ST. CHARLES  
2 E. MAIN STREET  
ST. CHARLES, ILLINOIS 60174

**Bid Opening: Friday, October 6, 2017 at 2:00 PM**

**Bidder Information**

Company Name: \_\_\_\_\_ Telephone: \_\_\_\_\_  
Address: \_\_\_\_\_ Fax: \_\_\_\_\_  
City, State, Zip: \_\_\_\_\_ Email: \_\_\_\_\_  
Contact Person: \_\_\_\_\_

**BID PRICE:** Residential Dwelling Demolition

*\*The pricing submitted for the addresses below shall include all permitting, preparation, utility coordination, labor, materials, equipment and supplies, as well as any items listed, or not listed, in the above scope of work necessary to successfully complete the demolition projects.*

1. **112 South 8<sup>th</sup> Avenue** ..... \$ \_\_\_\_\_  
OPTIONAL City Utilities Termination at Main ..... \$ \_\_\_\_\_  
Anticipated tons of material removed from site: \_\_\_\_\_ tons
  
2. **904 Fern Avenue** ..... \$ \_\_\_\_\_  
OPTIONAL City Utilities Termination at Main ..... \$ \_\_\_\_\_  
Anticipated tons of material removed from site: \_\_\_\_\_ tons
  
3. **718 Indiana Avenue** ..... \$ \_\_\_\_\_  
OPTIONAL City Utilities Termination at Main ..... \$ \_\_\_\_\_  
Anticipated tons of material removed from site: \_\_\_\_\_ tons
  
4. **107 10<sup>th</sup> Avenue** ..... \$ \_\_\_\_\_  
OPTIONAL City Utilities Termination at Main ..... \$ \_\_\_\_\_

Anticipated tons of material removed from site: \_\_\_\_\_ tons

5. **15 9<sup>th</sup> Avenue** ..... \$ \_\_\_\_\_

OPTIONAL City Utilities Termination at Main ..... \$ \_\_\_\_\_

Anticipated tons of material removed from site: \_\_\_\_\_ tons

6. **801 Illinois Avenue** ..... \$ \_\_\_\_\_

OPTIONAL City Utilities Termination at Main ..... \$ \_\_\_\_\_

Anticipated tons of material removed from site: \_\_\_\_\_ tons

7. **804 Indiana Avenue** ..... \$ \_\_\_\_\_

OPTIONAL City Utilities Termination at Main ..... \$ \_\_\_\_\_

Anticipated tons of material removed from site: \_\_\_\_\_ tons

8. **304 7<sup>th</sup> Avenue** ..... \$ \_\_\_\_\_

OPTIONAL City Utilities Termination at Main ..... \$ \_\_\_\_\_

Anticipated tons of material removed from site: \_\_\_\_\_ tons

9. **116 8<sup>th</sup> Avenue** ..... \$ \_\_\_\_\_

OPTIONAL City Utilities Termination at Main ..... \$ \_\_\_\_\_

Anticipated tons of material removed from site: \_\_\_\_\_ tons

List any and all deviations from minimum specifications:

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I certify that I am acting as an agent for the firm designated below and that the firm will sell to the City of St. Charles the product(s) described herein for the amount specified above. Further, I certify that all exceptions or deviations from the attached detailed specifications are clearly stated in writing and the price quoted shall include all terms specified unless otherwise noted.

---

Signature of Authorized Representative

PLEASE TYPE OR NEATLY PRINT THE FOLLOWING INFORMATION

---

Name of Authorized Representative

Title

---

Company Name

---

Street Address

---

City

State

Zip Code

---

(Area Code) Phone Number



# House Demolition Locations



Data Source:  
 City of St. Charles, Illinois  
 Kane County, Illinois  
 DuPage County, Illinois  
 Projection: Transverse Mercator  
 Coordinate System: Illinois State Plane East  
 North American Datum 1983  
 Printed on: September 15, 2017 02:01 PM



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 Projection: Transverse Mercator  
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Utilities: Blue = Water Main, Green = Sanitary Sewer

Note: Locations of service lines are approximate.

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Utilities: Blue = Water Main, Green = Sanitary Sewer

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Utilities: Blue = Water Main, Green = Sanitary Sewer

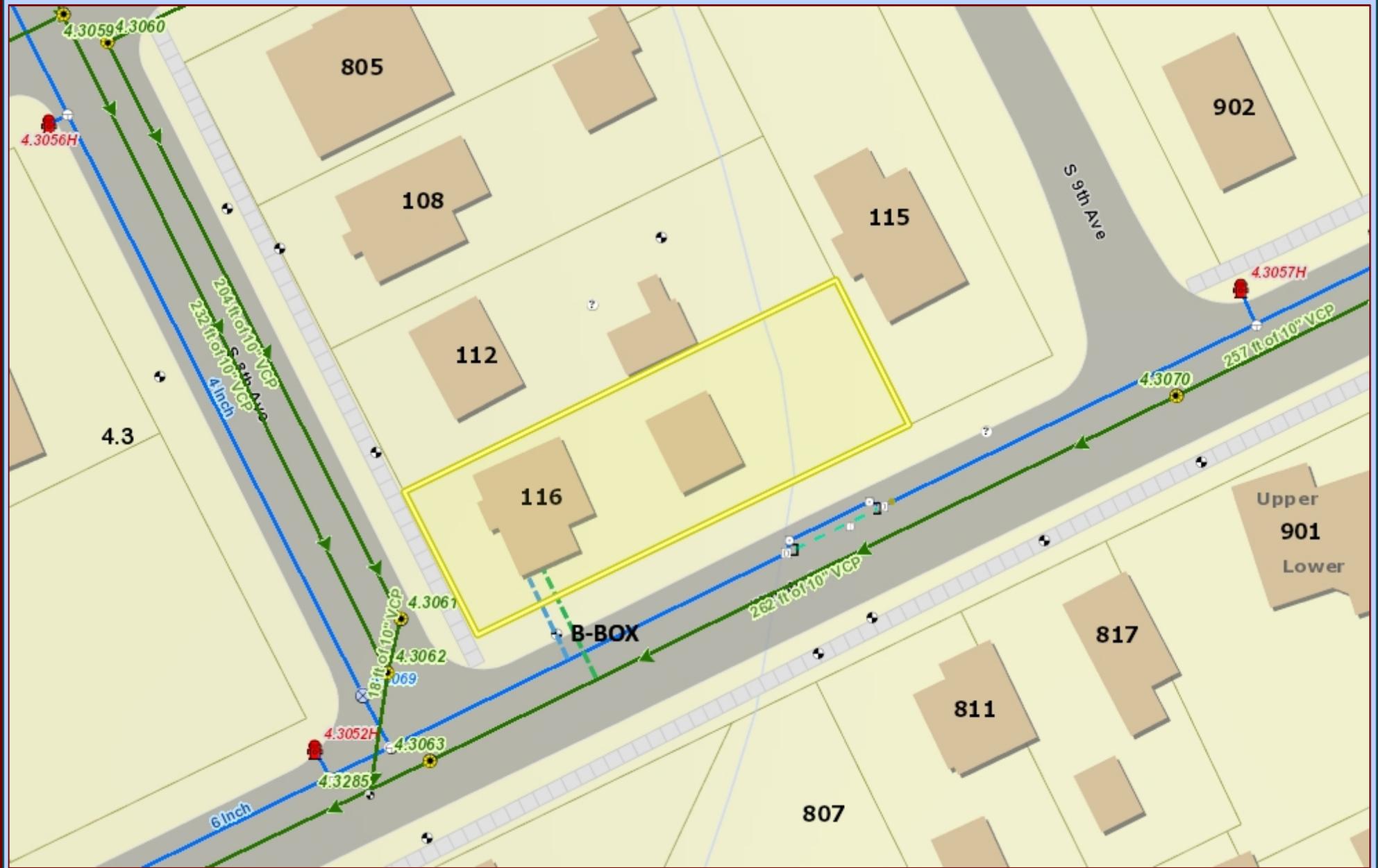
Note: Locations of service lines are approximate.



Data Source:  
 City of St. Charles, Illinois  
 Kane County, Illinois  
 DuPage County, Illinois  
 Projection: Transverse Mercator  
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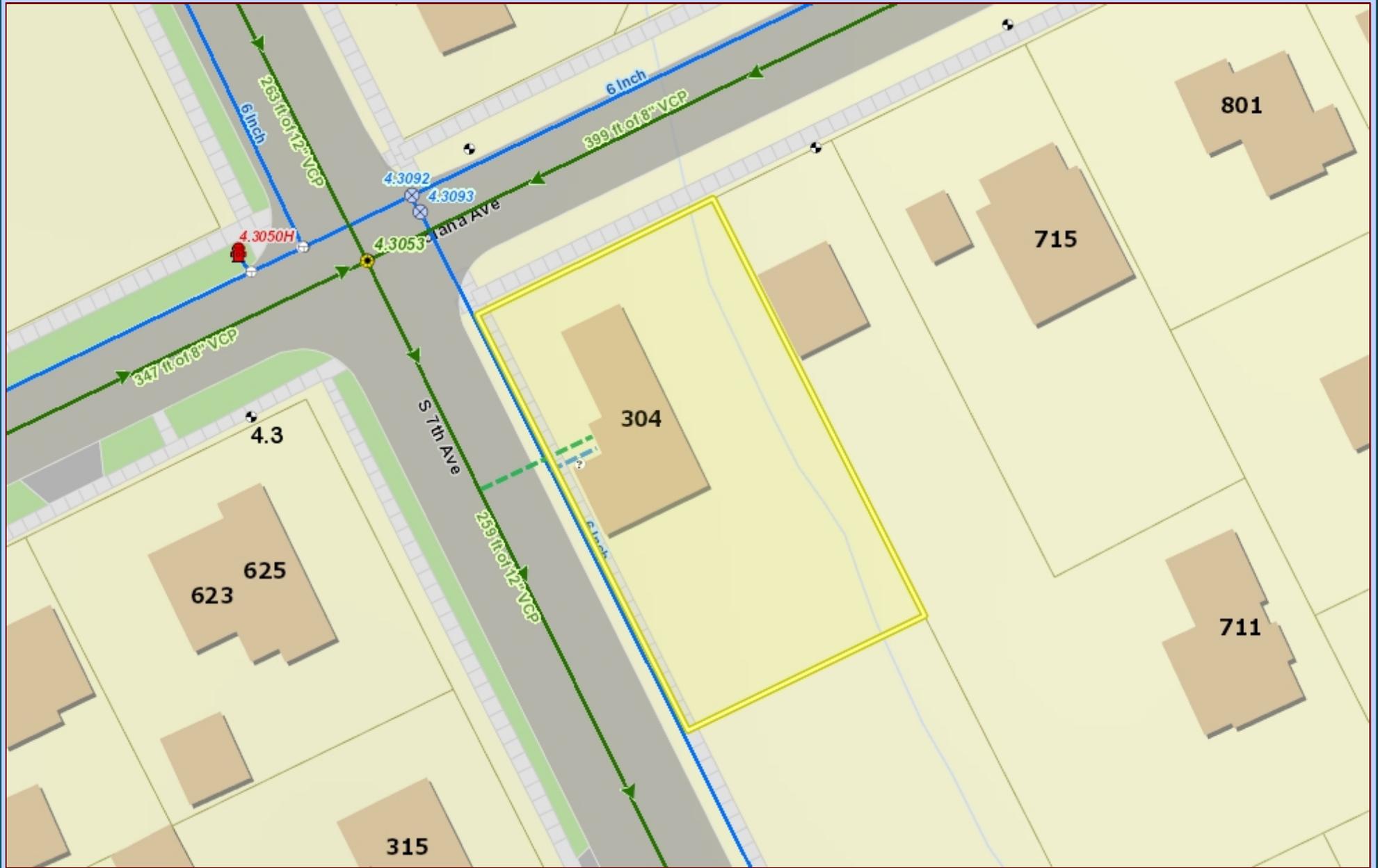


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City of St. Charles, Illinois  
Kane County, Illinois  
DuPage County, Illinois  
Projection: Transverse Mercator  
Coordinate System: Illinois State Plane East  
North American Datum 1983  
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Utilities: Blue = Water Main, Green = Sanitary Sewer  
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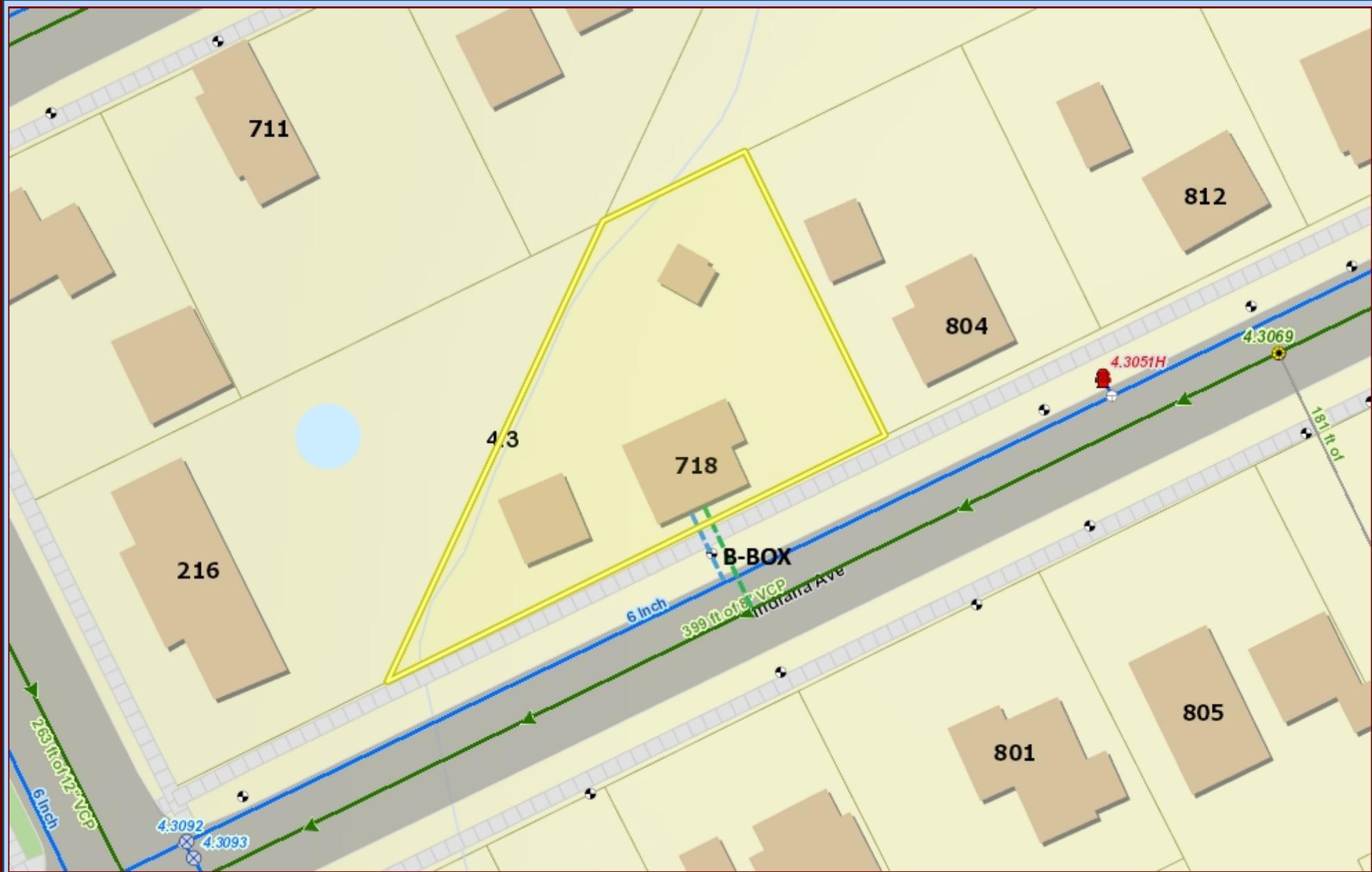
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 Kane County, Illinois  
 DuPage County, Illinois  
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Utilities: Blue = Water Main, Green = Sanitary Sewer

Note: Locations of service lines are approximate.

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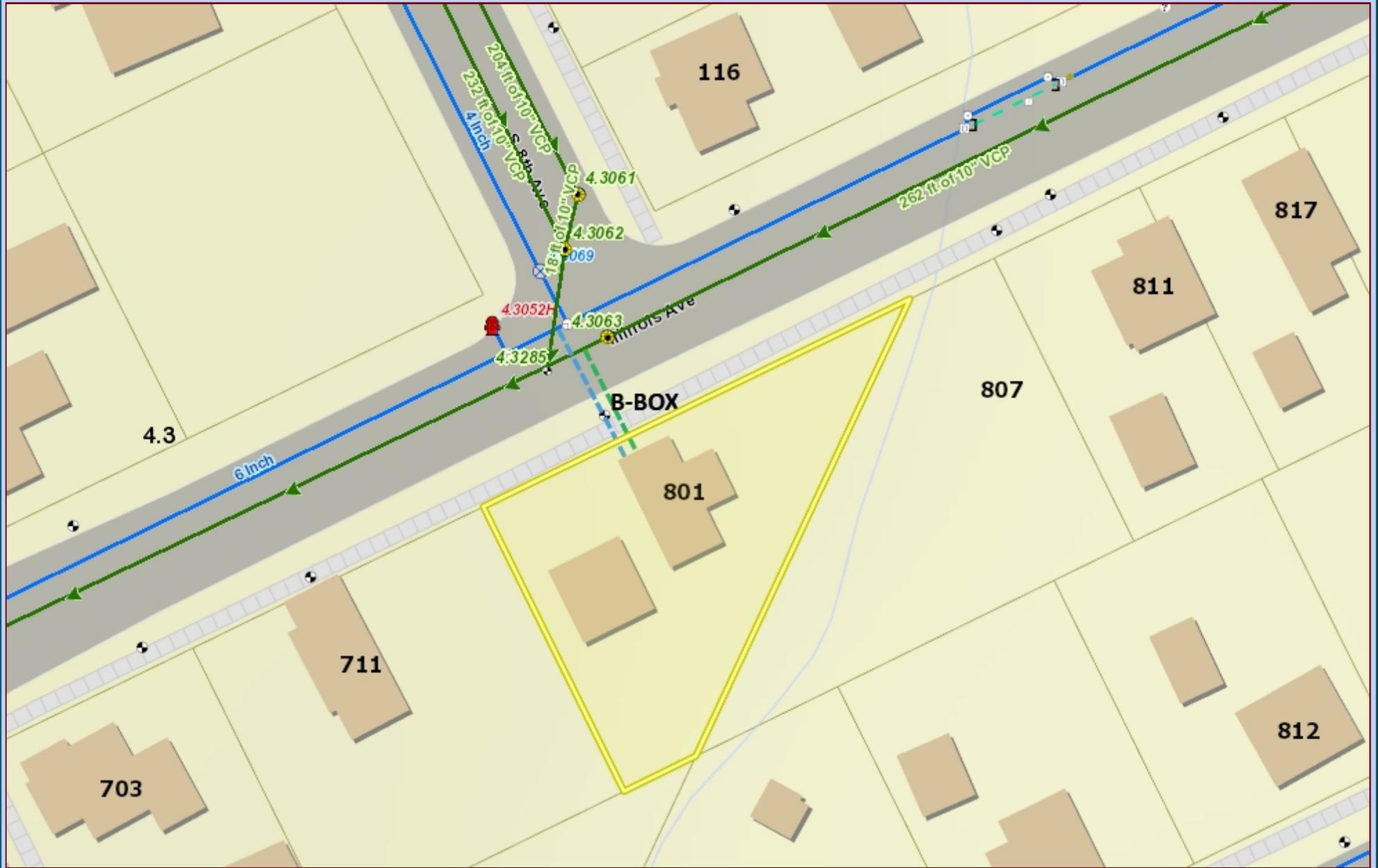
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Utilities: Blue = Water Main, Green = Sanitary Sewer

Note: Locations of service lines are approximate.

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Utilities: Blue = Water Main, Green = Sanitary Sewer

Note: Locations of service lines are approximate.



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Utilities: Blue = Water Main, Green = Sanitary Sewer

Note: Locations of service lines are approximate.

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Utilities: Blue = Water Main, Green = Sanitary Sewer

Note: Locations of service lines are approximate.

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# CITY OF ST. CHARLES

## INVITATION TO BID:

### Residential Demolition Services

Bids Due: Friday, October 6, 2017 at 2:00 p.m.

### **ADDENDUM #1 – Wednesday, September 27, 2017**

**Please Note:**

**The following clarification points as discussed at the 9/25/17 pre-bid meeting:**

1. The concrete retaining wall west of the driveway at 804 Indiana shall be removed.
2. Bushes and shrubbery adjoining to the structure to be demolished are to be removed; all other bushes and shrubbery shall remain.
3. Enclosing two adjacent properties with the same fencing is permitted.
4. Shared concrete driveway at 107 South 10th Avenue shall be saw cut at the lot line as part of the home demo.
5. Driveway aprons shall be removed along with the driveways.
6. Existing curbs/gutters shall remain as-is unless removal is required for the Optional Utility removal at the main. Should the City choose to exercise that option, curbs/gutters shall be removed and replaced to match the existing curb line on the roadway (i.e. v-back, high back, etc.).
7. Estimated tonnage will be used only to compare bids.
8. The September 25<sup>th</sup> Pre-Bid Meeting Sign-in Sheet is attached.

**The following changes to the scope:**

9. Asbestos and lead abatement shall be included within the scope of this contract. The successful bidder shall remove all materials, including those containing asbestos, mold, and lead as part of this work. Environmental reports from each property requiring remediation prepared by Midwest Environmental Consulting Services, Inc. are attached. Properties included in this bid that are not contained in the attached report do not require remediation.

Paragraph 2 of Section e. "Demolition" of the Scope of Work section shall be amended as follows:

~~"The contractor shall haul and properly discard all materials that require landfill disposal. Asbestos and lead containing materials will be removed from the property independent of this contract, prior to demolition commencing. The contractor will line up landfill pricing and approvals, and the price must include payment of all landfill tipping fees and taxes..."~~

Section 6. "Asbestos Abatement" shall be amended as follows:

~~"Asbestos abatement services will occur prior to demolition as part of another contract, independent of the scope of this project. All material containing friable asbestos will be removed and properly disposed of. Contractor shall provide asbestos abatement services as part of this contract. All material containing friable asbestos shall be removed and properly disposed of. Refer to property reports from Midwest Environmental Consulting Services, Inc. Upon completion of the asbestos remediation, Contractor shall provide written certification to the City that all asbestos containing materials have been removed."~~

***THIS ADDENDUM MUST BE INCLUDED WITH THE SUBMITTED PROPOSAL***

*Providing Quality Service  
Since 1994*



# **Midwest Environmental Consulting Services, Inc.**

**Consultants ◀ Engineers ◀ Scientists**

Wednesday, August 30, 2017

City of St. Charles  
200 Devereaux Way  
St. Charles, IL 60174-1984

## **Scope of Work—804 Indiana Avenue**

Removal of approximately 6 linear feet of asbestos containing window glazing from the basement window and approximately 50 linear feet of asbestos containing window glazing from the garage windows from the residence at 804 Indiana Avenue.

EPA Notification Requirement:	Yes
Project Duration:	1 shift
Licensed Contractor Required:	Yes
Background Air Monitoring Included:	Yes

Estimated Contractor Fees:  
Air Quality Testing & Project Management:

\*Estimated project cost includes one (1) regular shift on site. No overtime or weekend work is included in this budget proposal. Additional time required on site will be billed accordingly.

**Scope of Work—718 Indiana Avenue**

Removal of asbestos containing exterior window glazing from 5 windows and approximately 100 square feet of asbestos containing exterior caulk from the exterior windows and doors of the residence at 718 Indiana Avenue.

EPA Notification Requirement:	Yes
Project Duration:	1 shift
Licensed Contractor Required:	Yes
Background Air Monitoring Included:	Yes

Estimated Contractor Fees:  
Air Quality Testing & Project Management:

\*Estimated project cost includes one (1) regular shift on site. No overtime or weekend work is included in this budget proposal. Additional time required on site will be billed accordingly.

**Scope of Work—801 Illinois Avenue**

Removal of approximately 2,000 square feet of asbestos containing exterior siding and approximately 2 square feet of asbestos containing thermal canvas duct tape from the east, 2<sup>nd</sup> floor bedroom inside the vent in the residence at 801 Illinois Avenue.

EPA Notification Requirement:	Yes
Project Duration:	2 shifts
Licensed Contractor Required:	Yes
Background Air Monitoring Included:	Yes

Estimated Contractor Fees:  
Air Quality Testing & Project Management:

\*Estimated project cost includes up to two (2) regular shifts on site. No overtime or weekend work is included in this budget proposal. Additional time required on site will be billed accordingly.

**Scope of Work—112 South 8<sup>th</sup> Avenue**

Removal of approximately 50 square feet of asbestos containing linoleum from the basement stairs and approximately 100 square feet of asbestos containing duct tape from the basement of the residence at 112 South 8<sup>th</sup> Avenue.

EPA Notification Requirement:	Yes
Project Duration:	1 shift
Licensed Contractor Required:	Yes
Background Air Monitoring Included:	Yes

Estimated Contractor Fees:  
Air Quality Testing & Project Management:

\*Estimated project cost includes one (1) regular shift on site. No overtime or weekend work is included in this budget proposal. Additional time required on site will be billed accordingly.

*Midwest Environmental Consulting Services, Inc. will provide an electronic copy of the final reports. No hard copies of the report will be provided unless requested by the Client.*

*Providing Quality Service  
Since 1994*

# Midwest Environmental Consulting Services, Inc.

Consultants ◀ Engineers ◀ Scientists

Wednesday, September 20, 2017

City of St. Charles  
2 East Main Street  
St. Charles, IL 60174-1984

:

:

## **Scope of Work—116 South 8<sup>th</sup> Avenue**

Removal of approximately 120 square feet of asbestos containing sheet flooring from the kitchen; approximately 8 linear feet of asbestos containing canvas pipe wrap from the basement storage room; approximately 5 square feet of asbestos containing duct tape from the 2<sup>nd</sup> floor bedroom, bathroom vents, and basement ducts; approximately 5,000 square feet of asbestos containing plaster from throughout the 1<sup>st</sup> and 2<sup>nd</sup> floor; and asbestos containing exterior window glazing from 34 exterior house and garage windows at 116 South 8<sup>th</sup> Avenue.

EPA Notification Requirement:	Yes
Project Duration:	10 shifts
Licensed Contractor Required:	Yes
Background Air Monitoring Included:	Yes

Project Design & Contractor Bidding:  
Estimated Contractor Fees:  
Air Quality Testing & Project Management:

\*Estimated project cost includes up to ten (10) regular shifts on site. No overtime or weekend work is included in this budget proposal. Additional time required on site will be billed accordingly.

4 Bonnie Lane  
Yorkville, IL 60560  
P: 630 · 553 · 3989  
F: 630 · 553 · 3990

3100 N. Knoxville Ave.  
Suite 204  
Peoria, IL 61603  
P: 309 · 621 · 4680  
F: 309 · 621 · 4690

[www.mec-us.com](http://www.mec-us.com)

**Scope of Work—304 South 7<sup>th</sup>  
Avenue**

Removal of asbestos containing exterior window caulk from 12 windows; asbestos containing window glazing from 3 exterior basement windows; and asbestos containing door caulk from 4 exterior doors at 304 South 7<sup>th</sup> Avenue.

EPA Notification Requirement:	Yes
Project Duration:	2 shifts
Licensed Contractor Required:	Yes
Background Air Monitoring Included:	Yes

Estimated Contractor Fees:  
Air Quality Testing & Project Management:

\*Estimated project cost includes up to two (2) regular shifts on site. No overtime or weekend work is included in this budget proposal. Additional time required on site will be billed accordingly.

## 7th Avenue Creek - Demolishing of 9 Residential Dwellings

<i>Name</i>	<i>Company</i>	<i>Phone</i>	<i>Email</i>
Russ Stoltz	American Demolition Corp.	(847) 608-0010	<a href="mailto:khigh@adc-il.com">khigh@adc-il.com</a>
Rhiannon Smith	RLS Services	(847) 305-0135	<a href="mailto:rhiannon.smith0614@gmail.com">rhiannon.smith0614@gmail.com</a>
Charles Smith	CAS Mobile Systems	(847) 417-1795	<a href="mailto:casmobile59@gmail.com">casmobile59@gmail.com</a>
Jacob Parsons	Ground Crew Inc.	(773) 899-6248	<a href="mailto:jacob@groundcrewinc.com">jacob@groundcrewinc.com</a>
Christine Swanson	A-1 Fowler, Inc.	(847) 931-1257	<a href="mailto:fowerservices@sbcglobal.net">fowerservices@sbcglobal.net</a>
Bill Baxa	K Com Demolition	(312) 888-1081	<a href="mailto:bbaxa@kcomenvironmental.com">bbaxa@kcomenvironmental.com</a>
Liz Aderton	Martam Construction	(847) 608-6820	<a href="mailto:liz@martam.com">liz@martam.com</a>
Michael Schuckert	Fox Excavating	(630) 689-8203	<a href="mailto:michaelschuckert@foxdig.com">michaelschuckert@foxdig.com</a>
Johnathon Coyne	Asbestos Control and Demolition	(630) 853-4777	<a href="mailto:jgcinspections@gmail.com">jgcinspections@gmail.com</a>
Dan Edmier	Grand Slam Construction	(630) 267-7435	<a href="mailto:dan.edmier@grandslamllc.com">dan.edmier@grandslamllc.com</a>
Barb Hogan	Kendall Excavating	(630) 774-9914	<a href="mailto:manager@kendallexcavating.com">manager@kendallexcavating.com</a>
Joe Masterson	Bechstein Wrecking	(708) 532-3500	<a href="mailto:bechsteinwrecking@yahoo.com">bechsteinwrecking@yahoo.com</a>
Kim Bolanowski	Copenhaver Construction	(847) 428-6696	<a href="mailto:copenhaverkb@gmail.com">copenhaverkb@gmail.com</a>
Sergio Zepeda	KLF Enterprises	(773) 640-1104	<a href="mailto:sergiozbbox@yahoo.com">sergiozbbox@yahoo.com</a>



**AGENDA ITEM EXECUTIVE SUMMARY**

Agenda Item number: 5.e

Title:

Recommendation to Award the Bid for Century Station HVAC Controls Improvements

Presenter:

AJ Reineking

Meeting: Government Services Committee

Date: October 23, 2017

Proposed Cost: \$59,500

Budgeted Amount: \$65,000

Not Budgeted:

**Executive Summary** *(if not budgeted please explain):*

Century Station’s heating, venting and air conditioning sensors and equipment are currently controlled by an obsolete Alerton system. This system does not communicate with modern parts, provide trouble alarms to remote facilities, or allow control from a centralized location. This makes monitoring of the system very difficult as all conditions must be reported by building occupants, rather than controlled centrally by Public Works. As a result, small issues are often exacerbated to extremes of hot, cold, or humid.

Public Services Division recently issued a bid for improvements to the Control system, incorporating Johnson Controls Metasys equipment to allow for remote monitoring and control, as well as more advanced programming and alarms. The scope includes running new wiring and installing new sensors and controls. Once installed, Century Station will have the same controls capabilities as the Public Works and the Municipal building.

The City received two bids to perform this work with Grace Power & Control of Geneva, Illinois being the lowest responsive, responsible bidder. Grace has performed similar wiring and control installation work in the past and they have the experience, equipment and expertise to perform the work within guidelines of the bid.

**Attachments** *(please list):*

\* Bid Tabulation \* Grace Power & Control Bid Sheet

**Recommendation/Suggested Action** *(briefly explain):*

Recommendation to award the bid for the Century Station HVAC Controls Improvements to Grace Power & Control, not to exceed the amount of \$59,500.

Contractor	Addendum 1	Total	Address
Grace Power and Control	x	<b>\$59,500.00</b>	05077 N. Mathewson Lane Geneva, IL 60134
All Tech Energy	x	<b>\$60,877.92</b>	1000 E. State Parkway, Suite C Schaumburg, IL 60173

CITY OF ST. CHARLES  
2 E. MAIN STREET  
ST. CHARLES, ILLINOIS 60174

**Bid Opening: Monday, October 9, 2017 at 2:00 PM**

**Bidder Information**

**Company Name:** Grace Power and Control      **Telephone:** (630) 559-4077  
**Address:** 0s077 N Mathewson Lane      **Fax:** (630) 208-9313  
**City, State, Zip:** Geneva, IL 60134      **Email:** mike.renda@gracepowercontrol.net  
**Contact Person:** Mike Renda

**BID PRICE:** Century Station Johnson Controls Upgrade Project

*The pricing submitted for the addresses below shall include all permitting, preparation, labor, materials, equipment and supplies, as well as any items listed, or not listed, in the above scope of work necessary to successfully complete the project.*

**Total Price for Century Station Johnson Controls Upgrade**      \$ 59,500.00

Submit a list of any and all deviations from minimum specifications with your bid.

I certify that I am acting as an agent for the firm designated below and that the firm will sell to the City of St. Charles the product(s) described herein for the amount specified above. Further, I certify that all exceptions or deviations from the attached detailed specifications are clearly stated in writing and the price quoted shall include all terms specified unless otherwise noted.

  
\_\_\_\_\_  
Signature of Authorized Representative

PLEASE TYPE OR NEATLY PRINT THE FOLLOWING INFORMATION

<u>Mike Renda</u>		<u>Estimator</u>
Name of Authorized Representative		Title
<u>Grace Power and Control</u>		
Company Name		
<u>0s077 N Mathewson Lane</u>		
Street Address		
<u>Geneva</u>	<u>IL</u>	<u>60134</u>
City	State	Zip Code
<u>(630) 559-4077</u>		
(Area Code) Phone Number		



**AGENDA ITEM EXECUTIVE SUMMARY**

Agenda Item number: 5.f

Title:

Recommendation to Approve Acceptance of Electric Easement at Metro Self Storage (2623 Lincoln Hwy)

Presenter:

Tom Bruhl

Meeting: Government Services Committee

Date: October 23, 2017

Proposed Cost: \$0

Budgeted Amount: \$0

Not Budgeted:

**Executive Summary** *(if not budgeted please explain):*

The Electric Utility recently extended the City's electrical system onto the Metro Self Storage property. The developer has provided an easement for the new underground lines and equipment to give the City the right to own and operate the utility infrastructure.

**Attachments** *(please list):*

\* Plat of Easement

**Recommendation/Suggested Action** *(briefly explain):*

Recommendation to Authorize Mayor and City Clerk to Execute Electric Utility Easement at Metro Self Storage (2623 Lincoln Hwy).

# PLAT OF EASEMENT GRANT

TO  
THE CITY OF ST. CHARLES, ILLINOIS  
FOR UTILITY PURPOSES

LINCOLN

(ILLINOIS RT. 38)

HIGHWAY



1" = 40'

LOT 1  
METRO STORAGE ST. CHARLES SUBDIVISION  
RECORDED SEPTEMBER 30, 2016 AS DOC. 2016K053063

3 STORY SELF STORAGE BUILDING

EASEMENT PREMISES

P.O.C. SE CORNER OF LOT 1

E. LINE OF LOT 1

19.75  
N83°21'38"W  
25.47  
N86°07'54"W  
64.70  
89.39  
S86°07'54"E  
18.58  
N09°09'18"E  
43.38  
N09°09'18"E

MAYOR

CITY CLERK

STATE OF ILLINOIS )  
COUNTY OF KANE ) SS

I, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE COUNTY AND STATE AFORESAID, DO HEREBY CERTIFY THAT \_\_\_\_\_ PERSONALLY KNOWN TO ME TO BE THE MAYOR OF THE CITY OF ST. CHARLES, A MUNICIPAL CORPORATION

AND \_\_\_\_\_ THE CITY CLERK BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT, APPEARED BEFORE ME THIS DAY IN PERSON AND SEVERALLY ACKNOWLEDGED THAT AS SUCH MAYOR AND CITY CLERK OF SAID CORPORATION, AND CAUSED THE CORPORATE SEAL OF SAID CORPORATION TO BE AFFIXED THERETO, PURSUANT TO AUTHORITY, GIVEN BY THE COUNCIL OF THE CITY OF ST. CHARLES AS THEIR FREE AND VOLUNTARY ACT, AND AS THE FREE AND VOLUNTARY ACT AND DEED OF SAID CORPORATION, FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND OFFICIAL SEAL THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D. 2017  
MY COMMISSION EXPIRES: \_\_\_\_\_

NOTARY PUBLIC

BY LIMITED LIABILITY COMPANY  
CITY OF ST. CHARLES, ILLINOIS  
UTILITY EASEMENT

THIS INDENTURE, MADE IN THE CITY OF ST. CHARLES, STATE OF ILLINOIS BY AND BETWEEN METRO STORAGE ST CHARLES LLC, (HEREINAFTER REFERRED TO AS "LIMITED LIABILITY COMPANY") AND THE CITY OF ST. CHARLES, A MUNICIPAL CORPORATION, ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF ILLINOIS, OF KANE AND DUPAGE COUNTIES, ILLINOIS (HEREINAFTER REFERRED TO AS "CITY")

WITNESSETH: THAT LIMITED LIABILITY COMPANY IN CONSIDERATION OF THE SUM OF TEN(\$10.00) DOLLARS AND OTHER GOOD AND VALUABLE CONSIDERATION PAID TO HIM BY CITY. THE RECEIPT AND SUFFICIENCY OF WHICH IS HEREBY ACKNOWLEDGED DOES HEREBY GRANT AND GIVE UNTO THE CITY A PERPETUAL EASEMENT OVER, UNDER AND UPON THE FOLLOWING DESCRIBED REAL ESTATE FOR THE CONSTRUCTION, RECONSTRUCTION, RESTORATION, MAINTENANCE, REVIEW, ACCESS AND REPAIR OF PUBLIC ELECTRIC UTILITY FACILITIES INCLUDING, BUT NOT LIMITED TO POLES, COMMUNICATION EQUIPMENT, CABLE TELEVISION, SERVICE CONNECTIONS, AND SUCH APPURTENANCES AND ADDITIONS THERETO AS SAID CITY MAY DEEM NECESSARY, TOGETHER WITH THE RIGHT OF ACCESS THERETO FOR THE NECESSARY PERSONNEL AND EQUIPMENT TO DO ANY OR ALL OF THE ABOVE WORK PROVIDED, THE RIGHT IS ALSO HEREBY GRANTED TO THE CITY TO CUT DOWN, TRIM OR REMOVE ANY TREES, SHRUBS OR OTHER PLANTS THAT INTERFERE WITH THE OPERATION OF OR ACCESS TO SAID INSTALLATIONS IN, ON, UPON, ACROSS, UNDER, OR THROUGH SAID EASEMENT. THE REAL ESTATE DESCRIBED HEREAFTER MAY BE USED BY LIMITED LIABILITY COMPANY FOR SHRUBS, LANDSCAPING, AND OTHER PURPOSES THAT DO NOT THEN OR LATER INTERFERE WITH THE AFORESAID USES AND RIGHTS.

EASEMENT PREMISES HEREIN GRANTED:

THAT PART OF LOT 1 IN METRO STORAGE ST. CHARLES SUBDIVISION, BEING A SUBDIVISION OF PART OF THE SOUTHEAST QUARTER OF SECTION 32, TOWNSHIP 40 NORTH, RANGE 8, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 30, 2016 AS DOCUMENT NO. 2016K053063, DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF SAID LOT 1; THENCE NORTH 09 DEGREES 09 MINUTES 18 SECONDS EAST ALONG THE EASTERLY LINE OF SAID LOT 1, A DISTANCE OF 48.58 FEET TO A POINT OF BEGINNING OF THE EASEMENT PREMISES HEREIN DESCRIBED; THENCE CONTINUING NORTH 09 DEGREES 09 MINUTES 18 SECONDS EAST ALONG THE EASTERLY LINE OF SAID LOT 1, A DISTANCE OF 18.58 FEET; THENCE NORTH 86 DEGREES 07 MINUTES 54 SECONDS WEST, A DISTANCE OF 64.70 FEET TO THE SOUTHEAST CORNER OF A BUILDING; THENCE NORTH 83 DEGREES 21 MINUTES 38 SECONDS WEST ALONG THE SOUTHERLY FACE OF SAID BUILDING, A DISTANCE OF 25.47 FEET; THENCE SOUTH 06 DEGREES 38 MINUTES 22 SECONDS WEST, A DISTANCE OF 19.75 FEET; THENCE SOUTH 86 DEGREES 07 MINUTES 54 SECONDS EAST, A DISTANCE OF 89.39 FEET TO THE POINT OF BEGINNING, IN KANE COUNTY, ILLINOIS.

THE PROPERTY IS COMMONLY KNOWN AS: 2623 LINCOLN HIGHWAY, ST. CHARLES, ILLINOIS

THAT LIMITED LIABILITY COMPANY HEREBY RETAINS THE RIGHT TO ENJOY SAID EASEMENT AND RIGHT OF WAY FOR ITS OWN PURPOSES, PROVIDED THAT SUCH PURPOSES SHALL NOT INTERFERE WITH THE USES AND RIGHT-OF-WAY GRANTED TO THE CITY HEREIN. ALL CONSTRUCTION BY THE CITY SHALL BE DONE IN A GOOD WORKMANLIKE MANNER AND THE CITY ALSO AGREES THAT THE PREMISES WILL BE LEFT IN A NEAT AND PRESENTABLE CONDITION.

WITNESS OUR HANDS AND SEALS THIS 26<sup>TH</sup> DAY OF SEPT., A.D. 2017

NAME OF LIMITED LIABILITY COMPANY: METRO STORAGE ST CHARLES LLC

BY: [Signature] PRESIDENT  
ATTEST: [Signature] VP OF DEVELOPMENT

NOTARY PUBLIC CERTIFICATE

STATE OF ILLINOIS )  
COUNTY OF LAKE ) SS

I, KATHY KETUROCKEY, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT MARTIN J. GALLAGHER AND ROBERT M. HELLMAN PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNERS, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY SIGNED AND DELIVERED THE ANNEXED PLAT AS THEIR OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND OFFICIAL SEAL THIS 26<sup>TH</sup> DAY OF SEPT., A.D. 2017  
MY COMMISSION EXPIRES: 8-30-19

Kathryn L. Keturockey  
NOTARY PUBLIC  
"OFFICIAL SEAL"  
KATHRYN L. KETUROCKEY  
Notary Public, State of Illinois  
My Commission Expires 08/30/19

SURVEYOR'S CERTIFICATE

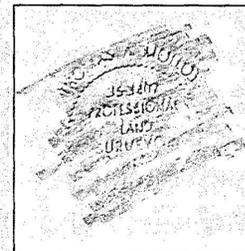
STATE OF ILLINOIS )  
COUNTY OF DUPAGE ) SS

I, THOMAS A. MOLLOY, AN ILLINOIS PROFESSIONAL LAND SURVEYOR HEREBY CERTIFY THAT THE PLAT HEREON DRAWN HAS BEEN PREPARED UNDER MY DIRECTION FROM EXISTING SURVEYS AND INSTRUMENTS OF PUBLIC RECORD FOR THE USES AND PURPOSES THEREIN SET FORTH AND THAT THE PLAT HEREON DRAWN IS A CORRECT REPRESENTATION OF THE PROPERTY DESCRIBED HEREON. DIMENSIONS ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF.

SIGNED AT BENSENVILLE, ILLINOIS THIS 21<sup>ST</sup> DAY OF SEPTEMBER, A.D. 2017

EDWARD J. MOLLOY AND ASSOCIATES, A DIVISION OF THOMAS A. MOLLOY, LTD.  
AN ILLINOIS PROFESSIONAL DESIGN FIRM - LICENSE NO. 184-004840

[Signature]  
THOMAS A. MOLLOY  
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-3409  
(EXPIRES NOVEMBER 30, 2018 AND IS RENEWABLE)



VALID ONLY WITH EMBOSSED SEAL

TAX PARCEL PERMANENT INDEX NUMBER: 09-32-400-030-0000

DRAFTED BY: BJE  
PAGE: 1 OF 1  
ORDER NO.: 170198  
FILE: 32-40-8  
PROJECT NO.: 2275

PREPARED BY:  
**EDWARD J. MOLLOY & ASSOCIATES**  
A DIVISION OF THOMAS A. MOLLOY, LTD. - PROFESSIONAL LAND SURVEYING  
1236 MARK STREET, BENSENVILLE, ILLINOIS 60106 (630) 595-2600 FAX:(630) 595-4700  
E-MAIL: TMOLLOY@EJMOLLOY.COM



**AGENDA ITEM EXECUTIVE SUMMARY**

Agenda Item number: 5.g

Title:

Recommendation to Award Purchase Order with Eaton for Turnkey Replacement of Relays at Peck Road Substation

Presenter:

Tom Bruhl

Meeting: Government Services Committee

Date: October 23, 2017

Proposed Cost: \$89,397

Budgeted Amount: \$155,000

Not Budgeted:

**Executive Summary** *(if not budgeted please explain):*

Electric Engineering developed a comprehensive specification, Purchasing went out for bids, and the City received five (5) qualified bids for a design and construct turnkey replacement of the relays at Peck Road Substation. Peck Road Substation was commissioned in 2002 with microprocessor based protection relays, which are no longer being supported. These relays are responsible for a variety of critical functions that include interrupting the circuit when there is a fault on the line and communicating to our SCADA system with how much load each circuit is serving. Peck Road Substation is the only location we have these relays installed within metal gear. Since the metal cabinet doors need to be modified and there are eight relays to replace, this project was determined to be out of the normal scope of our engineering and construction staff. Additionally, time will be of the essence once the project starts as the station will have to be taken out of service. The low bid was evaluated by Electric Engineering. Eaton met all bid spec requirements and Eaton has capable engineering and field service staff to complete the project.

**Attachments** *(please list):*

\* Bid Tabulation

**Recommendation/Suggested Action** *(briefly explain):*

Recommendation to Award Purchase Order with Eaton for Turnkey Replacement of Relays at Peck Road Substation.

Bidder	Eaton	SEL ES	Amped I	Michels	BHMG
Contact info	Justin W Melroy	Erik Hannson	Dan Reilly	Chris Brickham	Jason Jackson
	<a href="mailto:JustinWMelroy@Eaton.com">JustinWMelroy@Eaton.com</a>	<a href="mailto:Erik@astareg.com">Erik@astareg.com</a>	<a href="mailto:dreilly@ampedi.com">dreilly@ampedi.com</a>	N/A	N/A
Lump Sum Cost	\$69,397.00	\$117,500.00	\$228,000.00	\$122,314.00	\$151,000.00
Contingency	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00
Total	<b>89,397.00</b>	137,500.00	248,000.00	142,314.00	171,000.00
Exemptions	None	None	None	None	None

**AGENDA ITEM EXECUTIVE SUMMARY**

Agenda Item number: 5.h

Title:

Recommendation to Award the Water Utility Master Plan Study Proposal

Presenter:

Tim Wilson

Meeting: Government Services Committee

Date: October 23, 2017

Proposed Cost: \$ 88,500

Budgeted Amount: \$125,000

Not Budgeted: **Executive Summary** *(if not budgeted please explain):*

The City of St. Charles Public Works Environmental Services Division prepares a Water Utility Master Plan Report every 10 years. The last plan was completed in 2007 and needs to be updated to the current infrastructure and standards. It is also required by the IEPA to qualify for low interest loan applications.

This updated Master Plan will provide a comprehensive evaluation and study of the City's water system. It will be used to establish the community's current and future water production and infrastructure needs. In addition, it will include: an implementation plan to meet the city's needs, a blueprint for future improvements, routine maintenance schedule, expansion phasing, and capital improvement projects for the next ten years. The new plan will also provide water quality improvement options.

In the need of a new updated ten year plan, The Public Works Environmental Services Division conducted a Request for Quote/Proposal (RFQ/P) for the City of St. Charles Water Utility Master Plan. It was distributed to various qualified firms and received five responses. The RFQ's were reviewed and scored.

The Environmental Services Division and Public Works Department is recommending Trotter and Associates Engineering at a cost not to exceed \$88,500 to conduct the 2018 Water Utility Master Plan. Trotter and Associates has significant experience with water utility engineering and master plans studies, having performed several for local and regional communities. They are familiar with municipal water utilities and their operations and have performed studies for the following:

Village of Fox Lake (2010 & 2015)  
Wynstone POA (2016)  
Village of Oak Brook (2017)  
City of North Chicago (2017)

**Attachments** *(please list):*

\* Scoring Summary Sheet

**Recommendation/Suggested Action** *(briefly explain):*

Recommendation to award the Water Utility Master Plan study to Trotter and Associates in the not to exceed amount of \$88,500

**2017-2019 Water Utility Master Plan RFQ/P SUMMARY EVALUATOR FORM**

Engineering Firm	Max Points	SELECTION CRITERIA						Total Points	Percent Rank	Overall Rank	Cost
		Compliance of Request	Quality of Response	Completeness	Capability	Competence	Proposal Cost				
		10	20	20	20	20	10		100%		
<b>Baxter and Woodman Inc.</b>		44	85	89	90	91	45	444	50%	3	114,000.00
<b>CMT</b>		37	78	82	93	95	35	420	17%	5	159,100.00
<b>EEI</b>		46	91	94	99	99	30	459	67%	2	166,622.00
<b>HRGreen</b>		39	82	88	86	90	40	425	33%	4	139,453.00
<b>Trotter and Associates</b>		48	95	96	99	100	50	488	83%	1	88,500.00

Name of Compiling Evaluator:                     Tim Wilson                    

Date:                     10/16/2017



**AGENDA ITEM EXECUTIVE SUMMARY**

Agenda Item number: 5.i

Title:

Recommendation to Award Proposal for Design Engineering for Dunham Road Force Main Replacement

Presenter:

Tim Wilson

Meeting: Government Services Committee

Date: October 23, 2017

Proposed Cost: \$30,300

Budgeted Amount: \$70,000

Not Budgeted:

**Executive Summary** (if not budgeted please explain):

The Dunham Road Sanitary Sewer Force Main has experienced 3 pipe line breaks due to pipe corrosion over the last three years. The force main starts at Royal Fox Lift Station #2 near Muirfield Ct and runs south crossing Dunham Road to the east. The main then transitions to a gravity line in front of St Charles East High School.

A complete evaluation of the force main was conducted in August of 2016 by Crawford, Murphy and Tilly (CMT). The study listed several options for maintenance and replacement of the force main. Due to the cost and the expected life of each option, it was determine a full line replacement was the most cost efficient solution for the City. The project will abandon approximately 2,800 feet of 8” force main, currently located within the Dunham Road right-of-way. The project will run adjacent to a 12” gas main, and near a residential area. Considering the sensitivity of the location and safety factors, low disturbance construction methods will need to be explored.

In September the City conducted an RFP for the engineering design phase of this project. The City received six responses for the project. The proposals submitted were equal in scope of work and met all the criteria of the project timeline. The proposals received were as follows:

- Trotter and Associates : \$30,300
- Ruekert – Mielke : \$41,300
- Gerald Heinz & Ass. : \$45,500
- Christopher Burke : \$53,020
- CMT : \$67,790
- HR Green – Decline submittal work load issues

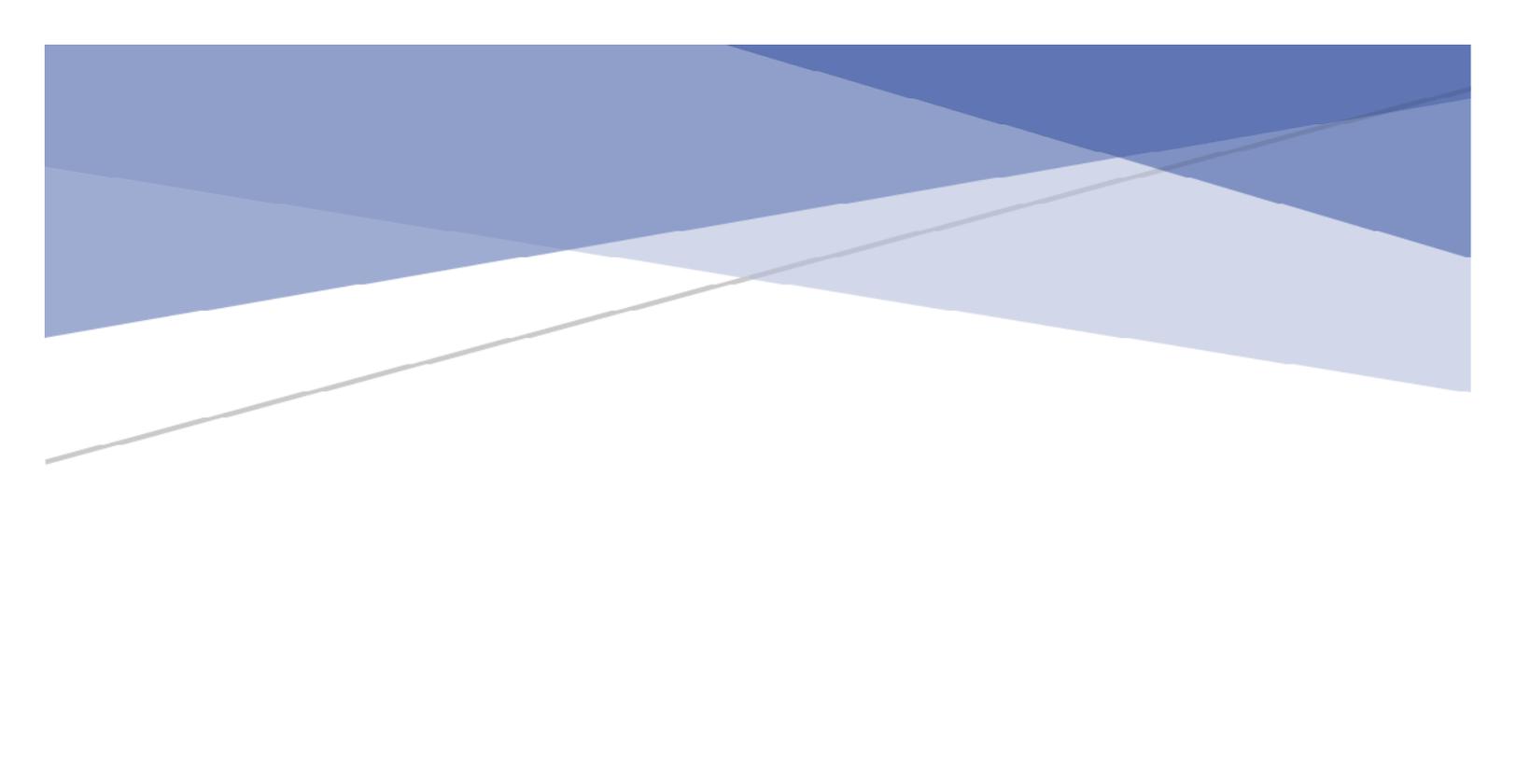
Upon review, Trotter and Associates submitted the lowest proposal for the design project. In addition, they have completed similar projects in comparable communities making them the most qualified for the project.

**Attachments** (please list):

- \* CMT- Dunham Road Force Main Evaluation August 2016
- \* Trotter and Associates Proposal
- \* Trotter and Associates Similar Projects List

**Recommendation/Suggested Action** (briefly explain):

Recommendation is to Award the Proposal for Design Engineering Dunham Road Force Main Replacement to Trotter and Associates for the not to exceed amount of \$30,300.



# CITY OF ST. CHARLES, IL

Dunham Road Force Main Evaluation



By Crawford, Murphy and Tilly, Inc.  
August 2016

ABL FC S

Introduction ..... 2

Dunham Road Force Main ..... 2

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    History of Failures ..... 2

    Force Main Failure Analysis ..... 4

    Project Approach ..... 4

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    Test Results ..... 7

    Preliminary Recommendations ..... 8

    PIPE wall thickness ..... 9

    Conclusion ..... 9

Cost Estimate – Pipe Replacement ..... 11

## I R C I

The city of St. Charles is located along the Fox River in central Kane County approximately 35 miles west of downtown Chicago. The city is bordered by the village of South Elgin to the north, the city of West Chicago to the east, the city of Geneva to the south and the village of Campton Hills to the west.

The city owns and operates a sanitary sewer collection system and two wastewater treatment facilities. The collection system tributary to the Main Wastewater Treatment Facility consists of 152 miles of sanitary sewers, 5 miles of force main and 13 lift stations. The Royal Fox II Lift Station is located on Dunham Road, north of St. Charles East High School. The discharge force main from Royal Fox II has had a recent history of breaks, which is the focus of the evaluation.

## A R A F R C A I SCRIP I

The Dunham Road Force Main is an eight-inch ductile iron main, discharging from the Royal Fox Lift Station II wet well to a point approximately 2,760 feet downstream, just north of Dunham Place where it transitions to a gravity sewer. The force main is approximately thirty years old. Its alignment travels through a dense suburban area located near St. Charles middle and high schools. Generally, it is located west of the sidewalk on the west side of Dunham Road with many sections located directly under the sidewalk. The top of force main is approximately six feet below grade and surrounded by a myriad of utilities like gas, electric, communication, water and storm.

## IS R F FAIL R S

The Dunham Road Force Main experienced 3 breaks in the past 5 years, with 2 of them occurring at the same location. The first break occurred in August 2011, approximately 300 feet south of the Royal Fox II Lift Station. The second break in June 2015 reoccurred at the same location as the first, followed by a third break in July 2015, closer to the point of transition to gravity.



[Figure 1 - Force Main Repair Clamp](#)

On excavating the locations of the failed pipe, heavy pitting and large holes were observed at the points of failure. A hole as large as 2-inches in diameter was observed at the bottom of the pipe during the July 2015 failure following which a steel clamp was put in place to stop the leak, as shown in Figure 1. Figure 2 shows the location of previous force main failures.



Figure 1 - Location of Past Repairs

## FORCE MAIN FAILURE ANALYSIS

CMT understands that force mains typically do not deteriorate or fail systematically along their full length. Rather, pipe condition is related to localized problems due to design, manufacturing, installation, environmental, operational or maintenance factors. Often, it is a combination of several of these factors that lead to force main failures. Common causes of force main failure include:

- Blockage/restriction
- Pressure surge
- Interior hydrogen sulfide (H<sub>2</sub>S) corrosion
- Exterior corrosion due to corrosive soils or stray currents
- Structural failure/collapse
- Third party damage
- Service life expiration

Internal corrosion on ductile iron sanitary sewer pipe can occur if the sewage goes septic and that septic sewage comes in contact with air. This may result in generating sulfuric acid which can deteriorate standard cement mortar lining and/or the ductile iron. In force mains, where pipe is full, this is not a concern since there is no air present. If this problem does occur, it may occur at high points where air is trapped or where the main acts as gravity pipe.

The presence of heavy pitting on the outside pointed towards external factors contributing towards the pipe failures, rather than any internal corrosion. Also, a well maintained ductile iron force main like this one can survive up to 100 years, whereas it was only 30 years old when it first failed.

Given this, it was proposed to evaluate the force main externally, prior to conducting any internal condition assessment, which is very expensive. External evaluation would include non-destructive testing like soil corrosion and/or checking for pipe thickness.

## PROBLEM APPRAISAL

Following a kick-off meeting with the city, CMT received the following data from the city:

- Record drawings of 8" force main (plan and profile)
- GIS data on location of nearby utilities (water, storm, electric, communication)
- Location of past failures

Historical pump operation data was not reviewed. It was learned that there is also a 6" PVC pipe that runs parallel to the lower half of the existing 8" force main. A televising video of the 6" PVC was shared as well.

CMT's first step was to understand the profile of the force main and look for any areas along the main that could potentially impact the interior of the pipe, such as downhill gradient. A downhill gradient would mean that the force main acts like a gravity pipe and could potentially lead to emptying out of pipe and trapping of air. This in turn could lead to corrosion at the crown. Based on a close study of the force main profile, nothing unusual was observed. Also, since the failure was observed at the bottom of the pipe, this form of failure was ruled out.

## S I L S A P L I

CMT then proceeded with conducting soil analysis. This was part of the external evaluation to check for the presence of any corrosive soils along the force main. Samples were collected at 6 locations and sent for testing to DIPRA (Ductile Iron Pipe Research Association). The soil was tested using the 10-point soil evaluation procedure, for 5 different parameters, with each parameter having a maximum score as shown:

- Resistivity (Max Score 10)
- Redox potential (Max Score 5)
- pH (Max Score 5)
- Sulfides/Chlorides (Max Score 3.5)
- Moisture Content (Max Score 2)

Each of these parameters can be described as follows:

- Resistivity: Soil resistivity is a measure of how much the soil resists the flow of electricity. Resistivity is highly dependent on the moisture content. Higher the moisture content, lower the soil resistivity and higher the potential for corrosion.
- Redox Potential: Commonly known as oxygen-reducing potential, a high redox potential indicates high oxygen concentration, low electron activity and oxidizing conditions and vice versa.
- Level of Acidity: pH indicates the levels of acidity. pH levels lower than 5 or below indicate faster corrosion rates as well as early pitting.
- Sulfides/Chlorides: Presence of chlorides contributes to more electrolyte in the soil, thus reducing soil resistivity. Similarly, sulfates when reduced to sulfides by the anaerobic bacteria, contribute to corrosion.
- Moisture Content: As explained above, more the moisture content, more the electrolyte, thus more the corrosion.

When scores for each parameter are added, a sum of 10 or more indicates the soil to be corrosive. Figure 3 that follows shows the location of the soil samples that were tested.

Table 1 shows the results from the soil sampling analysis with the associated total score in ().

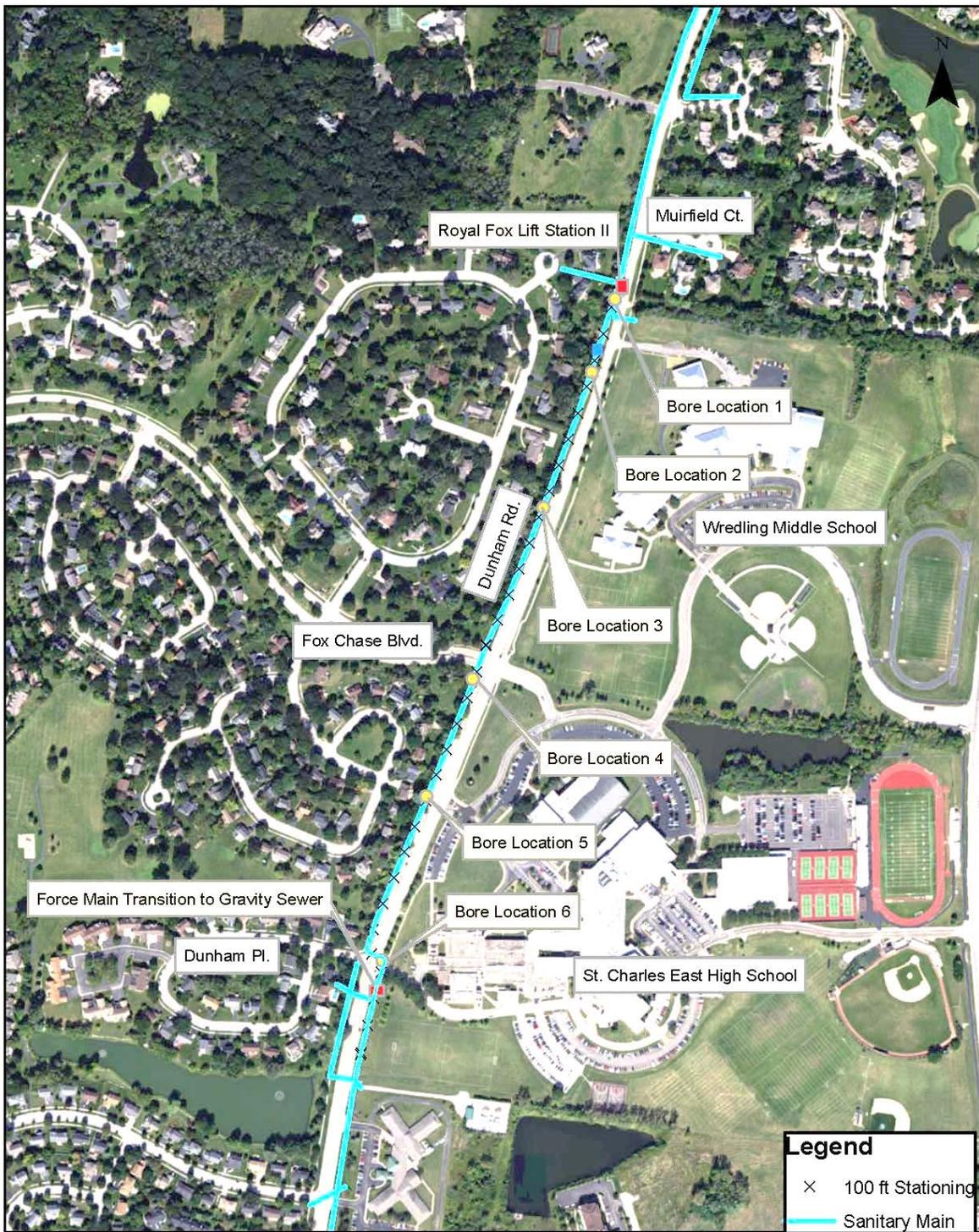


Figure 3- Location of Soil Borings

**S R S L S**Table 1- Soil Analysis Results

Bore Location	Resistivity ohm-cm	Redox Mv	pH	Sulfides	Chlorides	Soil Description	Total Score
1	1,120 (10)	+185 (0)	6.8 (0)	Neg	Neg	Brown silty moist clay (1)	11
*2	960 (10)	+245 (0)	6.7 (0)	Neg	Neg	Dark Brown silty, saturated clay (2)	12
3	1,120 (10)	+200 (0)	7.2 (0)	Neg	Neg	Brown silty saturated clay (2)	12
4	1,920 (8)	-50 (5)	7.3 (0)	Neg	Trace (2)	Black silty saturated clay (2)	17
*5	600 (10)	+210 (0)	7.0 (0)	Neg	Trace (2)	Brown and grey silty saturated clay (2)	14
6	1,440 (10)	+270 (0)	7.1 (0)	Neg	Neg	Dark brown silty saturated clay (2)	12

## Notes:

- \* Indicates Location of past repairs.
- DIPRA considers soils to be corrosive if the Total Score is 10 or more.

The soil sampling results pointed towards highly corrosive soils in the areas of the past force main failures. Resistivity values less than 1,500 ohm-cm are considered corrosive, with values less than 1,000 being severely corrosive.

Other factors like impressed currents in the surroundings, that could potentially corrode the ductile iron force main were also considered. Following a meeting between CMT and the representative from Nicor gas, it was concluded that the only gas mains in the immediate vicinity of the force main were small distribution lines that had cathodic protection (not using impressed currents for corrosion control). There is a 12-inch gas main on the east side of Dunham Road that is well isolated from the distribution system and the Dunham Road force main. None of these appeared to contribute towards the corrosion of the force main.

## PR L I A R R C                      A I S

Based on the test results, it can be concluded that the force main failed in the past primarily due to external corrosion. Given this, the city can consider the following options to rectify the problem and avoid failures in future.

1. Cathodic Protection of Force Main – Cathodic protection is a technique used to control the corrosion of a metal surface by making it the cathode of an electrochemical cell. A simple method of protection connects the metal to be protected to a more easily corroded "sacrificial metal" to act as the anode. The sacrificial metal then corrodes instead of the protected metal. Before applying this technique, one would have to excavate at all joints in order to bond them, without which this technique will not be effective. It is also recommended to assess the pipe wall condition to gauge the thickness loss, before applying this rehabilitation technique. Although this option is very effective, it requires regular maintenance and replacement of anodes every 20 years.
2. Pipe lining – A resin based "cured-in-place-pipe" or a slip-liner is a trenchless rehabilitation method used to repair pipe lines. It is a jointless, seamless, pipe within a pipe technique, however, given the length and alignment of the 8" force main, a few excavation pits will be needed at approximately every 800 feet, especially at the bends and air release valves. It would require flow through the 8" force main to be by-passed while the liner is put in place. This option is very popular and effective but can be considered only after evaluating the hydraulic capacity of the force main with reduced flow area, due to the increase in pipe wall thickness due to the liner.
3. Force Main Replacement – Replace the 8" ductile iron pipe completely with a new pipe. A more economic option would be to replace only part of the pipe around the area of past failures, in lieu of the entire length of the force main.

A conceptual level construction cost estimate for the three alternatives was developed for 2016 and is presented in Table 2.

Table 2- Probable Construction Costs

Repair Method	Budget Cost	Extends Life by*
Cathodic Protection	\$ 250,000	20 yrs
Pipe Lining	\$ 500,000	50 yrs
Force Main Replacement	\$700,000	50 – 100 yrs

\* Typically recommended by manufacturer

### PIP WALL IC SS

CMT measured pipe wall thickness at a location between borings 2/3 and just north of Fox Chase Boulevard. Generally, a pipe wall loss of more than 30% would directly indicate the unsuitability of cathodic protection due to excessive thinning of the pipe wall and loss of durability. Though the pipe loss didn't appear to be greater than 30% at this time, thickness measurements were only feasible at two locations. Since these are limited data points, CMT does not recommend considering Option 1 – Cathodic Protection.

### C CL SI

Based on the soil sampling results, the soils are considered corrosive along the entire length of the force main. Specifically, the two soil samples in the vicinity of past repairs have a much lower resistivity (higher rate of corrosion) compared to the other four locations, therefore exterior pipe corrosion appears to be the likely reason for premature failure of the pipe. In addition, based on the general corrosivity of the soils along the pipe alignment, the entire length of pipe is at a risk and corrosion may deteriorate the pipe to a point where it needs to be replaced.

Additional information on pipe wall thickness can be obtained utilizing electronic sensing technologies such "Smartball". Wall thicknesses obtained by such technologies are for a given point in time, and are not an indication of future conditions. Keeping in mind that the soils are corrosive in nature, CMT does not recommend any additional testing and all funds be utilized to replace the force main pipe in its entirety.

Partial pipe replacement was also evaluated by CMT; only replace segments of pipe in the vicinity of previous break locations. However, due to the corrosive nature of the soils, partial replacement does not mitigate the possibility of future breaks. Based on all of the above, CMT recommends replacing the entire length of pipe.

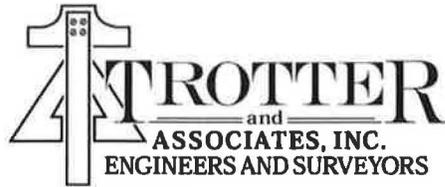
Evaluating materials for pipe replacement will occur during the design phase. Options include PVC, HDPE and ductile iron pipe. St. Charles traditionally uses ductile iron pipe. If ductile iron pipe is used, at minimum polyethylene wrap would be needed to protect against corrosion. As polyethylene wrap has in our experience a high reliance (and failure) based on proper installation, we would suggest considering other coatings, thicker pipe or bonding pipe for protection as options to counteract corrosion.

**C S S I A PIP R PLAC**

<b>SCRIP I</b>	<b>I</b>		<b>C S</b>	<b>AL</b>
Force Main - 8"	LF	2,800	\$150	\$420,000
Trench Backfill	CU YD	1,400	\$27	\$37,800
Sidewalk Rem and Replace	SQ YD	1,600	\$7	\$11,200
Roadway Pavement	SQ YD	350	\$60	\$21,000
Traffic Control	LS	1	\$25,000	\$25,000
Combination Air /Vacuum Valves	EACH	2	\$15,000	\$30,000
Bypass Pumping	LS	1	\$15,000	\$15,000
<b>Subtotal</b>				<b>\$560,000</b>
25% Budget Level Contingency				\$140,000
<b>AL</b>				<b>700,000</b>

Note:

1. Assume trench backfill and sidewalk replacement for entire length for planning level costs.



September 29, 2017

Honorable Raymond Rogina  
Mayor of St. Charles  
City of St. Charles  
2 E. Main Street  
St. Charles, Illinois 60174

Re: Dunham Road Sanitary Force Main Replacement Project  
Professional Services Agreement

Dear Mayor Rogina:

We sincerely appreciate this opportunity to offer our services. Enclosed for your review is the engineering services agreement for the referenced project. Please contact us if there are any questions or changes to the listed scope of services. If you would like to proceed with the contract, please sign and return one copy of the agreement.

Sincerely,

TROTTER & ASSOCIATES, INC.

Jerry Ruth, P.E.  
Project Engineer

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September 29, 2017

Honorable Raymond Rogina  
Mayor of St. Charles  
City of St. Charles  
2 E. Main Street  
St. Charles, Illinois 60174

**Re: Dunham Road Sanitary Force Main Replacement Project**  
Professional Services Letter Agreement and Exhibits

Dear Mayor Rogina,

Trotter and Associates, Inc. (ENGINEER) is pleased to provide professional services to the City of St. Charles, IL (CLIENT) for the Dunham Road Sanitary Force Main Replacement Project (hereinafter referred to as the "PROJECT").

### **Project Background**

In 2011, Trotter and Associates, Inc. completed a Facility Plan Update which included a summary of the City's wastewater infrastructure, including the sixteen lift stations. In the 2011 Facility Plan Update, Royal Fox Lift Stations I and II were recommended for future rehabilitation or replacement due to their declining condition. In May of 2012, the City requested further evaluation of the existing infrastructure, more specifically Royal Fox Lift Stations I and II. These lift stations were rehabilitated in 2013 and 2014, respectively.

The service area for Royal Fox Lift Station II contains approximately 1,884 PE and also receives the discharge from Royal Fox Lift Station I. The original lift station was located where the cul-de-sac for Muirfield Court now resides – directly west of the Royal Fox II Lift Station.

Within the last four years, the 8" ductile iron pipe force main from this lift station that runs on the west side of Dunham Road has had several main breaks. Two of these breaks occurred directly west of the back entrance to Wredling Middle School within twenty feet of each other. A third break occurred last July 4th at the entrance to the Norris Cultural Arts Center. Investigation of the pipe completed by the City in 2016 after the main breaks showed deterioration primarily due to external corrosion.

### **Project Understanding**

The proposed improvements include replacement of the existing force main. The City requested several items to be considered in the design. This list has been included and expanded upon below. Special attention will be given to determining which if any of the alternatives below will be implemented in design:

1. Replace all or portions of the force main using directional drilling or jack and bore. This would involve use of a low disturbance means of replacing the force main. TAI has utilized this technology for small-diameter services, gas lines, water mains and force mains using this approach. This method would be desirable for the road crossings on Dunham Road, Fox Chase and Dunham Place / Fighting Saint Lane, as well as in areas of the right-of-way where existing utilities or trees would make an open-cut installation difficult. TAI will pre-qualify contractors for this work if it is determined to be the best method of construction.

2. Extend the length of the force main to a different receiving manhole. In discussions with City staff, the current receiving manhole conveys flow to a 12" sewer that is flat or possibly back-pitched. This causes the gravity lines that flow into the manhole to surcharge, namely the sewer from the St. Charles East High School to the east. TAI will extend the topographic survey and sanitary sewer inspection south to determine if a longer force main to sanitary manhole 3.4-096 or 3.4-095 would alleviate this issue.
3. Modify the route of the force main. This alternative would consider a different location for crossing Dunham Road, as well as keeping the force main completely on the west side of the roadway. The existing force main crosses Dunham Road immediately north of the entrance to a residential area to the west and the entrance to the St. Charles East High School to the east. TAI will evaluate discharging to sanitary manhole 3.4-099 on the west side of Dunham Road, which flows to a 12" gravity sewer for the Dunham Road crossing.
4. Add clean-out structures along the force main. The City has issues with not being able to clean this force main, and ideally would have a clean-out location every three hundred feet. The addition of clean-outs to the force main will increase capital costs but provide the City the ability to maintain this asset.
5. Avoid bypass pumping entirely. The design team recognizes that the City is requesting a bypass pumping plan in this proposal. Bypass pumping is expensive, especially if it must be in place and monitored for an extended period of time. In our experience with this lift station, the system may be bypassed using vacuum trucks in rotation between the lift station wet well and the downstream manhole. This method could be used during the transition to the new force main.
6. Running adjacent to the active DIP force main is an abandoned 8" PVC force main that has been partially investigated by the City. 1,800 linear feet has been televised from just north of Dunham Place to the north side of Fox Chase. The investigation determined that this segment of the abandoned force main is in excellent shape, and may be considered for incorporation into this design.

### **Project Schedule**

The design will adhere to the following implementation schedule based on an effective date of November 1<sup>st</sup>, 2017:

<b>TASK</b>	<b>DATE</b>
Notice to Proceed	November 1, 2017
Complete Topographic Survey	November 15, 2017
Complete 50% Plans and EOPC	December 8, 2017
Receive City Comments on 50% Plans and EOPC	December 22, 2018
Complete 90% PS&E and Submit to IEPA	January 5, 2018
Complete 100% PS&E	January 26, 2018

The City and TAI will work closely to make sure that the permitting of this project will be in to the IEPA with ample time for review prior to entering the bidding phase in April of 2018.

**Scope of Services**

Our services will consist of customary civil engineering and surveying services and related engineering services incidental thereto, described as follows;

1. Preliminary Engineering Report – Completed
2. Preparation of IEPA Low Interest Loan Application – N/A
3. Preliminary Design Phase
  - a. Attend kick-off meeting with City Staff.
  - b. Topographic survey and base sheet development.
    - i. Make necessary field surveys and topographic for design purposes.
    - ii. Make measured drawings of and investigate existing conditions or facilities, or to verify the accuracy of as-built drawings or other information furnished by the City.
    - iii. Advise City if additional reports, data, information, or testing services are necessary and assist City in obtaining such reports, data, information, or services.
  - c. Prepare Preliminary Engineering Plans to show the scope, extent and character of the work to be furnished and performed by the Contractor for the proposed force main. Include the following but is not limited to these drawings:
    - i. Cover Sheet
    - ii. General Construction Details and Notes
    - iii. 50% Site Civil Drawings showing existing conditions, process piping plan and profiles, site grading and landscaping, erosion control plan, and traffic control details, if applicable.
    - iv. 50% Demolition drawings showing existing structures and utilities to be removed or abandoned in place.
    - v. 50% Process drawings including bypass pumping plan and details if applicable.
  - d. Based on the information contained in the Preliminary Design Phase documents, submit a revised opinion of probable Construction Cost and any adjustments to Total Project Costs known to Engineer
  - e. Meet with City Staff to discuss preliminary design and opinion of probable cost.

**PRELIMINARY DESIGN  
 MANPOWER ESTIMATE AND FEE SUMMARY**

TASK	PM	QC	CAD	PLS	SC	TOTAL MANHOURS
Kick-Off meeting with City staff	2	1				3
Topographic survey and base sheet development	2		24	8	56	90
Preliminary design drawings	10	1	24			35
Opinion of probable construction cost	4	1				5
Meet with City staff to review and discuss the preliminary design	2	1				3
<b>TOTAL - PRELIMINARY DESIGN</b>	<b>20</b>	<b>4</b>	<b>48</b>	<b>8</b>	<b>56</b>	<b>136</b>

\*PM = Jerry Ruth; QC = Scott Trotter; CAD = Gary Cooper; PLS = James McKenzie, SC = John Pfortmiller

4. Final Design Phase

- a. Coordinate geotechnical investigations.
- b. Permit design documents. Prepare Engineering Plans to show the scope, extent and character of the work to be furnished and performed by the Contractor for the proposed force main. Include the following but is not limited to these drawings:
  - i. Cover Sheet
  - ii. General Construction Details and Notes
  - iii. 90% Site Civil Drawings showing existing conditions, process piping plan and profiles, site grading and landscaping, erosion control plan, and traffic control details, if applicable.
  - iv. 90% Demolition drawings showing existing structures and utilities to be removed or abandoned in place.
  - v. 90% Process drawings including bypass pumping plan and details if applicable.
  - vi. 90% Project specifications with all process equipment selected in accordance with the 32 / 64 Division CSI Format.
  - vii. Submit engineering plans and specifications to Illinois EPA for construct and operate permit.
  - viii. Submit Kane County Stormwater Permit if applicable.
- c. Prepare an updated opinion of probable cost, based on the Final Engineering Plans.
- d. Meet with City Staff to discuss 90% design and opinion of probable cost.
- e. Final design documents. Prepare Engineering Plans for bidding that show the scope, extent and character of the work to be furnished and performed by the Contractor for the proposed force main.

**FINAL DESIGN  
 MANPOWER ESTIMATE AND FEE SUMMARY**

TASK	PM	QC	CAD	PLS	SC	TOTAL MANHOURS
Coordinate Geotechnical Investigations	2					2
Permit Drawings and Specifications	28	1	18			47
Engineer's Opinion of Probable Construction Costs	4	1				5
Meet with City staff to review the final design documents	3	1				4
Final Drawings and Specifications	6		12			18
<b>TOTAL - FINAL DESIGN</b>	<b>43</b>	<b>3</b>	<b>30</b>			<b>76</b>

\*PM = Jerry Ruth; QC = Scott Trotter; CAD = Gary Cooper; PLS = James McKenzie, SC = John Pfortmiller

5. Bidding and Negotiating Phase – Not Included
6. Construction Phase – Not Included
7. Contractor's Completion Documents – Not Included

Changes to the scope of services outlined in this agreement shall be authorized through execution of an Exhibit D - Contract Addendum.

### Compensation

An amount equal to the cumulative hours charged to the Project by each class of ENGINEER's employees times Standard Hourly Rates for each applicable billing class for all services performed on the Project, plus Reimbursable Expenses and ENGINEER's Consultant's charges, if any. ENGINEER's Reimbursable Expenses Schedule and Standard Hourly Rates are attached to this Exhibit B. The total compensation for services is estimated to be \$30,300.00 based on the following assumed distribution of compensation:

Preliminary Design Phase	\$19,600
<u>Final Design Phase</u>	<u>\$10,700</u>
	Not to Exceed: \$30,300

ENGINEER may alter the distribution of compensation between individual phases of the work noted herein to be consistent with services actually rendered, but shall not exceed the total estimated compensation amount unless approved in writing by CLIENT. The total estimated compensation for ENGINEER's services included in the breakdown by phases incorporates all labor, overhead, profit, and ENGINEER's Consultant's charges.

The amounts billed for ENGINEER's services will be based on the cumulative hours charged to the PROJECT during the billing period by each class of ENGINEER's employees times Standard Hourly Rates for each applicable billing class, plus Reimbursable Expenses and ENGINEER's Consultant's charges. The Standard Hourly Rates and Reimbursable Expenses Schedule will be adjusted annually as of January 1<sup>st</sup> to reflect equitable changes in the compensation payable to ENGINEER.

**Soils Analysis for CCDD Forms.** OWNER will contract directly with a geotechnical engineering company to obtain the appropriate CCDD form. ENGINEER will coordinate with the geotechnical engineering company as necessary to obtain this form.

**Soils Borings for Directional Drilling, if selected.** Directional drilling is dependent upon the selected method of installation. If necessary, OWNER will contract directly with a geotechnical engineering company to obtain soil borings to facilitate directional drilling. ENGINEER will coordinate with the geotechnical engineering company as necessary to facilitate the borings.

**Reimbursable Expenses.** OWNER should budget \$200 for Reimbursable Expenses, including printing, plotting and shipping required for the completion of the work. Actual expenses will be compensated for based on actual cost as a pass-through without mark-up.

**Miscellaneous**

This Agreement constitutes the entire agreement between the parties and supersedes any prior oral or written representations. This agreement may not be changed, modified, or amended except in writing signed by both parties. In the event of any conflict among the exhibits, the exhibit of the latest date shall control.

ENGINEER may have portions of the Services performed by its affiliated entities or their employees, in which event ENGINEER shall be responsible for such services and CLIENT shall look solely to ENGINEER as if ENGINEER performed the Services. In no case shall CLIENT'S approval of any subcontract relieve ENGINEER of any of its obligations under this Agreement. However, ENGINEER is not responsible whatsoever for any obligations its subcontractors might have to its [subcontractors'] employees, including but not limited to proper compensation of its employees.

In the event CLIENT uses a purchase order form or other CLIENT developed document to administer this Agreement, the use of such documents shall be for the CLIENT's convenience only, and any provisions, terms or conditions within the CLIENT developed document shall be deemed stricken, null and void. Any provisions, terms or conditions which the CLIENT would like to reserve shall be added to Exhibit C – Supplemental Conditions and agreed to by both parties.

ENGINEER acknowledges that this project and the scope of work performed thereto will require ENGINEER and all lower tiered subcontractors of ENGINEER to comply with all obligations under and pursuant to the any applicable local, state and/or federal prevailing wage laws (e.g. Davis-Bacon Act, Illinois Prevailing Wage Act, etc.), including but not limited to all wage, notice and/or record keeping requirements to the extent applicable, necessitated and required by law.

If during negotiations or discussion with a Client it becomes clear that Client has determined prevailing wages are not applicable to the work performed by Trotter & Associates, it is best to confirm that understanding in writing with appropriate indemnification language. The following is draft language to consider:

Trotter & Associates' services performed is based on its understanding through the actions, statements and/or omissions of CLIENT that this project [identify] and the work performed relating thereto is professional in nature and not subject to prevailing wage requirements (federal, state or local). If Trotter & Associates' understanding is incorrect, CLIENT agrees and acknowledges that it shall immediately notify Trotter & Associates in writing within forty-eight (48) hours from receiving this notice so that Trotter & Associates may submit a revised proposal and/or invoice reflecting the additional costs associated with applicable prevailing wage laws. If at any time it is determined that this project is or was subject to prevailing wage requirements under federal, state or local law, then CLIENT agrees and acknowledges that it shall reimburse and make whole Trotter & Associates for any back wages, penalties and/or interest owed to its employees or any other third party, including any appropriate governmental agency. CLIENT also agrees that prices, costs and/or applicable fees will also be increased prospectively as required by the increase in wage payments to Trotter & Associates' employees. CLIENT understands and acknowledges that it shall notify Trotter & Associates of any prevailing wage requirements or obligations under applicable laws relating to the work or services performed by Trotter & Associates. CLIENT also agrees to indemnify and hold Trotter & Associates harmless from any error, act or omission on its part with regard to prevailing wage notification that causes any claim, cause of action, harm or loss upon Trotter & Associates, including but not limited to prompt reimbursement to Trotter & Associates of any and all back wages, penalties and/or interest owed to its employees or any other third party, including reasonable attorneys' fees and costs associated with such claim, cause of action, harm or loss.

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**Contents of Agreement**

This Letter Agreement and the Exhibits attached hereto and incorporated herein, represent the entire understanding with respect to the Project and may only be modified in writing signed by both parties.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement.

CLIENT:

Trotter and Associates, Inc.:

\_\_\_\_\_

\_\_\_\_\_

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Effective Date: \_\_\_\_\_

Date Signed: \_\_\_\_\_

Address for giving notices:

Address for giving notices:

Designated Representative

Designated Representative

Title:

Title:

Phone Number:

Phone Number:

Facsimile Number:

Facsimile Number:

E-Mail Address:

E-Mail Address:

**ATTACHMENTS:**

EXHIBIT A – STANDARD TERMS AND CONDITIONS

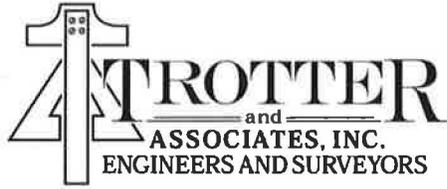
EXHIBIT B – SCHEDULE OF HOURLY RATES AND REIMBURSIBLE EXPENSES

EXHIBIT C – SUPPLEMENTAL GENERAL CONDITIONS

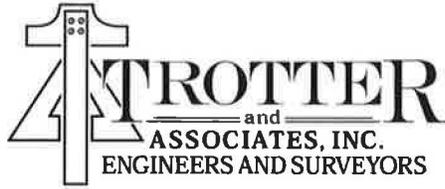
EXHIBIT D – CONTRACT ADDENDUM

CLIENT Initial \_\_\_\_\_

TAI Initial \_\_\_\_\_



CLIENT Initial \_\_\_\_\_  
 TAI Initial \_\_\_\_\_



**EXHIBIT A - STANDARD TERMS AND CONDITIONS**

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**ARTICLE 1 - SERVICES OF ENGINEER**

**1.01 Scope**

A. ENGINEER shall provide the Professional Services set forth herein and in the Letter Agreement.

B. Upon this Agreement becoming effective, ENGINEER is authorized to begin Services.

**ARTICLE 2 - CLIENT'S RESPONSIBILITIES**

**2.01 General**

A. Provide ENGINEER with all criteria and full information as to CLIENT's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility, and expandability, and any budgetary limitations; and furnish copies of all design and construction standards which CLIENT will require to be included in the Drawings and Specifications; and furnish copies of CLIENT's standard forms, conditions, and related documents for ENGINEER to include in the Bidding Documents, when applicable.

B. Furnish to ENGINEER any other available information pertinent to the Project including reports and data relative to previous designs, or investigation at or adjacent to the Site.

C. Following ENGINEER's assessment of initially-available Project information and data and upon ENGINEER's request, furnish or otherwise make available such additional Project related information and data as is reasonably required to enable ENGINEER to complete its Basic and Additional Services. Such additional information or data would generally include the following:

1. Property descriptions.
2. Zoning, deed, and other land use restrictions.
3. Property, boundary, easement, right-of-way, and other special surveys or data, including establishing relevant reference points.
4. Explorations and tests of subsurface conditions at or contiguous to the Site, drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site, or hydrographic surveys, with appropriate professional interpretation thereof.
5. Environmental assessments, audits, investigations and impact statements, and other relevant environmental or cultural studies as to the Project, the Site, and adjacent areas.
6. Data or consultations as required for the Project but not otherwise identified in the Agreement or the Exhibits thereto.

D. Give prompt written notice to ENGINEER whenever CLIENT observes or otherwise becomes aware of a Hazardous Environmental Condition or of any other development that affects the scope or time of performance of ENGINEER's services, or any defect or nonconformance in ENGINEER's services or in the work of any Contractor.

E. Authorize ENGINEER to provide Additional Services as set forth in Exhibit D - Addendum of the Agreement as required.

- F. Arrange for safe access to and make all provisions for ENGINEER to enter upon public and private property as required for ENGINEER to perform services under the Agreement.
- G. Examine all alternate solutions, studies, reports, sketches, Drawings, Specifications, proposals, and other documents presented by ENGINEER (including obtaining advice of an attorney, insurance counselor, and other advisors or consultants as CLIENT deems appropriate with respect to such examination) and render in writing timely decisions pertaining thereto.
- H. Provide reviews, approvals, and permits from all governmental authorities having jurisdiction to approve all phases of the Project designed or specified by ENGINEER and such reviews, approvals, and consents from others as may be necessary for completion of each phase of the Project.
- I. Provide, as required for the Project:
1. Accounting, bond and financial advisory, independent cost estimating, and insurance counseling services.
  2. Legal services with regard to issues pertaining to the Project as CLIENT requires, Contractor raises, or ENGINEER reasonably requests.
  3. Such auditing services as CLIENT requires to ascertain how or for what purpose Contractor has used the moneys paid.
  4. Placement and payment for advertisement for Bids in appropriate publications.
- J. Advise ENGINEER of the identity and scope of services of any independent consultants employed by CLIENT to perform or furnish services in regard to the Project, including, but not limited to, cost estimating, project peer review, value engineering, and constructability review.
- K. Furnish to ENGINEER data as to CLIENT's anticipated costs for services to be provided by others for CLIENT so that ENGINEER may make the necessary calculations to develop and periodically adjust ENGINEER's opinion of Total Project Costs.
- L. If CLIENT designates a manager or an individual or entity other than, or in addition to, ENGINEER to represent CLIENT at the Site, the duties, responsibilities, and limitations of authority of such other party shall be disclosed to the ENGINEER and coordinated in relation to the duties, responsibilities, and authority of ENGINEER.
- M. If more than one prime contract is to be awarded for the Work designed or specified by ENGINEER, designate a person or entity to have authority and responsibility for coordinating the activities among the various prime Contractors, and define and set forth the duties, responsibilities, and limitations of authority of such individual or entity and the relation thereof to the duties, responsibilities, and authority of ENGINEER is to be mutually agreed upon and made a part of this Agreement before such services begin.
- N. Attend the pre-bid conference, bid opening, pre-construction conferences, construction progress and other job related meetings, and Substantial Completion and final payment inspections.
- O. Provide the services of an independent testing laboratory to perform all inspections, tests, and approvals of Samples, materials, and equipment required by the Contract Documents, or to evaluate the performance of materials, equipment, and facilities of CLIENT, prior to their incorporation into the Work with appropriate professional interpretation thereof.
- P. Provide inspection or monitoring services by an individual or entity other than ENGINEER (and disclose the identity of such individual or entity to ENGINEER) as CLIENT determines necessary to verify:
1. That Contractor is complying with any Laws and Regulations applicable to Contractor's performing and furnishing the Work.
  2. That Contractor is taking all necessary precautions for safety of persons or property and complying with any special provisions of the Contract Documents applicable to safety.
- Q. Provide ENGINEER with the findings and reports generated by the entities providing services pursuant to paragraphs 2.01.O and P.

### ARTICLE 3 - TIMES FOR RENDERING SERVICES

#### 3.01 General

- A. ENGINEER's services and compensation under this Agreement have been agreed to in anticipation of the orderly and continuous progress of the Project through completion. Unless specific periods of time or specific dates for providing services are specified in this Agreement, ENGINEER's obligation to render services hereunder will be for a period which may reasonably be required for the completion of said services.
- B. If in this Agreement specific periods of time for rendering services are set forth or specific dates by which services are to be completed are provided, and if such periods of time or dates are changed through no fault of ENGINEER, the rates and amounts of compensation provided for herein shall be subject to equitable adjustment. If CLIENT has requested changes in the scope, extent, or character of the Project, the time of performance of ENGINEER's services shall be adjusted equitably.
- C. For purposes of this Agreement the term "day" means a calendar day of 24 hours.

#### 3.02 Suspension

- A. If CLIENT fails to give prompt written authorization to proceed with any phase of services after completion of the immediately preceding phase, or if ENGINEER's services are delayed through no fault of ENGINEER, ENGINEER may, after giving seven days written notice to CLIENT, suspend services under this Agreement.
- B. If ENGINEER's services are delayed or suspended in whole or in part by CLIENT, or if ENGINEER's services are extended by Contractor's actions or inactions for more than 90 days through no fault of ENGINEER, ENGINEER shall be entitled to equitable adjustment of rates and amounts of compensation provided for elsewhere in this Agreement to reflect, reasonable costs incurred by ENGINEER in connection with, among other things, such delay or suspension and reactivation and the fact that the time for performance under this Agreement has been revised.

#### ARTICLE 4 - PAYMENTS TO ENGINEER

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##### 4.01 Methods of Payment for Services and Reimbursable Expenses of ENGINEER

- A. *For Basic Services.* CLIENT shall pay ENGINEER for Basic Services performed or furnished under as outlined in the Letter Agreement
- B. *For Additional Services.* CLIENT shall pay ENGINEER for Additional Services performed or furnished as outlined in Exhibit D.
- C. *For Reimbursable Expenses.* CLIENT shall pay ENGINEER for Reimbursable Expenses incurred by ENGINEER and ENGINEER's Consultants as set forth in Exhibit B.

##### 4.02 Other Provisions Concerning Payments

- A. *Preparation of Invoices.* Invoices will be prepared in accordance with ENGINEER's standard invoicing practices and will be submitted to CLIENT by ENGINEER, unless otherwise agreed.
- B. *Payment of Invoices.* Invoices are due and payable within 30 days of receipt. If CLIENT fails to make any payment due ENGINEER for services and expenses within 30 days after receipt of ENGINEER's invoice therefor, the amounts due ENGINEER will be increased at the rate of 1.0% per month (or the maximum rate of interest permitted by law, if less) from said thirtieth day. In addition, ENGINEER may, after giving seven days written notice to CLIENT, suspend services under this Agreement until ENGINEER has been paid in full all amounts due for services, expenses, and other related charges. Payments will be credited first to interest and then to principal.
- C. *Disputed Invoices.* In the event of a disputed or contested invoice, only that portion so contested may be withheld from payment, and the undisputed portion will be paid.
- D. *Payments Upon Termination.*
  - 1. In the event of any termination under paragraph 6.06, ENGINEER will be entitled to invoice CLIENT and will be paid in accordance with Exhibit B for all services performed or furnished and all Reimbursable Expenses incurred through the effective date of termination.
  - 2. In the event of termination by CLIENT for convenience or by ENGINEER for cause, ENGINEER, in addition to invoicing for those items identified in subparagraph 4.02.D.1, shall be entitled to invoice CLIENT and shall be paid a reasonable amount for services and expenses directly attributable to termination, both before and after the effective date of termination, such as reassignment of personnel, costs of terminating contracts with ENGINEER's Consultants, and other related close-out costs, using methods and rates for Additional Services as set forth in Exhibit B.
- E. *Records of ENGINEER's Costs.* Records of ENGINEER's costs pertinent to ENGINEER's compensation under this Agreement shall be kept in accordance with generally accepted accounting practices. To the extent necessary to verify ENGINEER's charges and upon CLIENT's timely request, copies of such records will be made available to CLIENT at cost.

- F. *Legislative Actions.* In the event of legislative actions after the Effective Date of the Agreement by any level of government that impose taxes, fees, or costs on ENGINEER's services or other costs in connection with this Project or compensation therefore, such new taxes, fees, or costs shall be invoiced to and paid by CLIENT as a Reimbursable Expense to which a Factor of 1.0 shall be applied. Should such taxes, fees, or costs be imposed, they shall be in addition to ENGINEER's estimated total compensation.

#### ARTICLE 5 - OPINIONS OF COST

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##### 5.01 Opinions of Probable Construction Cost

- A. ENGINEER's opinions of probable Construction Cost provided for herein are to be made on the basis of ENGINEER's experience and qualifications and represent ENGINEER's best judgment as an experienced and qualified professional generally familiar with the industry. However, since ENGINEER has no control over the cost of labor, materials, equipment, or services furnished by others, or over the Contractor's methods of determining prices, or over competitive bidding or market conditions, ENGINEER cannot and does not guarantee that proposals, bids, or actual Construction Cost will not vary from opinions of probable Construction Cost prepared by ENGINEER. If CLIENT wishes greater assurance as to probable Construction Cost, CLIENT shall employ an independent cost estimator.

##### 5.02 Designing to Construction Cost Limit

- A. If a Construction Cost limit is established between CLIENT and ENGINEER, such Construction Cost limit and a statement of ENGINEER's rights and responsibilities with respect thereto will be specifically set forth in Exhibit C - Supplemental General Conditions.

##### 5.03 Opinions of Total Project Costs

- A. ENGINEER assumes no responsibility for the accuracy of opinions of Total Project Costs.

#### ARTICLE 6 - GENERAL CONSIDERATIONS

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##### 6.01 Standards of Performance

- A. The standard of care for all professional engineering and related services performed or furnished by ENGINEER under this Agreement will be the care and skill ordinarily used by members of ENGINEER's profession practicing under similar circumstances at the same time and in the same locality. ENGINEER makes no warranties, express or implied, under this Agreement or otherwise, in connection with ENGINEER's services.
- B. ENGINEER shall be responsible for the technical accuracy of its services and documents resulting therefrom, and CLIENT shall not be responsible for discovering deficiencies therein. ENGINEER shall correct such deficiencies without additional compensation except to the extent such action is directly attributable to deficiencies in CLIENT-furnished information.
- C. ENGINEER shall perform or furnish professional engineering and related services in all phases of the Project to which this Agreement applies. ENGINEER shall serve as CLIENT's prime professional for the Project. ENGINEER may employ such ENGINEER's Consultants as ENGINEER deems necessary to assist in the performance or furnishing of the services.

ENGINEER shall not be required to employ any ENGINEER's Consultant unacceptable to ENGINEER.

- D. ENGINEER and CLIENT shall comply with applicable Laws or Regulations and CLIENT-mandated standards. This Agreement is based on these requirements as of its Effective Date. Changes to these requirements after the Effective Date of this Agreement may be the basis for modifications to CLIENT's responsibilities or to ENGINEER's scope of services, times of performance, or compensation.
- E. CLIENT shall be responsible for, and ENGINEER may rely upon, the accuracy and completeness of all requirements, programs, instructions, reports, data, and other information furnished by CLIENT to ENGINEER pursuant to this Agreement. ENGINEER may use such requirements, reports, data, and information in performing or furnishing services under this Agreement.
- F. CLIENT shall make decisions and carry out its other responsibilities in a timely manner and shall bear all costs incident thereto so as not to delay the services of ENGINEER.
- G. Prior to the commencement of the Construction Phase, CLIENT shall notify ENGINEER of any other notice or certification that ENGINEER will be requested to provide to CLIENT or third parties in connection with the Project. CLIENT and ENGINEER shall reach agreement on the terms of any such requested notice or certification, and CLIENT shall authorize such Additional Services as are necessary to enable ENGINEER to provide the notices or certifications requested.
- H. ENGINEER shall not be required to sign any documents, no matter by whom requested, that would result in the ENGINEER's having to certify, guarantee or warrant the existence of conditions whose existence the ENGINEER cannot ascertain. CLIENT agrees not to make resolution of any dispute with the ENGINEER or payment of any amount due to the ENGINEER in any way contingent upon the ENGINEER's signing any such certification.
- I. During the Construction Phase, ENGINEER shall not supervise, direct, or have control over Contractor's work, nor shall ENGINEER have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected by Contractor, for safety precautions and programs incident to the Contractor's work in progress, nor for any failure of Contractor to comply with Laws and Regulations applicable to Contractor's furnishing and performing the Work.
- J. ENGINEER neither guarantees the performance of any Contractor nor assumes responsibility for any Contractor's failure to furnish and perform the Work in accordance with the Contract Documents.
- K. ENGINEER shall not be responsible for the acts or omissions of any Contractor(s), subcontractor or supplier, or of any of the Contractor's agents or employees or any other persons (except ENGINEER's own employees) at the Site or otherwise furnishing or performing any of the Contractor's work; or for any decision made on interpretations or clarifications of the Contract Documents given by CLIENT without consultation and advice of ENGINEER.
- L. The General Conditions for any construction contract documents prepared hereunder are to be the "Standard General Conditions of the Construction Contract" as prepared by the Engineers Joint Contract Documents Committee (Document No. 1910-8, 1996 Edition) unless both parties mutually agree to use other General Conditions.

#### 6.02 Authorized Project Representatives

- A. Contemporaneous with the execution of this Agreement, ENGINEER and CLIENT shall designate specific individuals to act as ENGINEER's and CLIENT's representatives with respect to the services to be performed or furnished by ENGINEER and responsibilities of CLIENT under this Agreement. Such individuals shall have authority to transmit instructions, receive information, and render decisions relative to the Project on behalf of each respective party.

#### 6.03 Design without Construction Phase Services

- A. Should CLIENT provide Construction Phase services with either CLIENT's representatives or a third party, ENGINEER's Basic Services under this Agreement will be considered to be completed upon completion of the Final Design Phase or Bidding or Negotiating Phase as outlined in the Letter Agreement.
- B. It is understood and agreed that if ENGINEER's Basic Services under this Agreement do not include Project observation, or review of the Contractor's performance, or any other Construction Phase services, and that such services will be provided by CLIENT, then CLIENT assumes all responsibility for interpretation of the Contract Documents and for construction observation or review and waives any claims against the ENGINEER that may be in any way connected thereto.

#### 6.04 Use of Documents

- A. All Documents are instruments of service in respect to this Project, and ENGINEER shall retain an ownership and property interest therein (including the right of reuse at the discretion of the ENGINEER) whether or not the Project is completed.
- B. Copies of CLIENT-furnished data that may be relied upon by ENGINEER are limited to the printed copies (also known as hard copies) that are delivered to the ENGINEER. Files in electronic media format of text, data, graphics, or of other types that are furnished by CLIENT to ENGINEER are only for convenience of ENGINEER. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk.
- C. Copies of Documents that may be relied upon by CLIENT are limited to the printed copies (also known as hard copies) that are signed or sealed by the ENGINEER. Files in electronic media format of text, data, graphics, or of other types that are furnished by ENGINEER to CLIENT are only for convenience of CLIENT. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk.
- D. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the party delivering the electronic files. ENGINEER shall not be responsible to maintain documents stored in electronic media format after acceptance by CLIENT.
- E. When transferring documents in electronic media format, ENGINEER makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating

systems, or computer hardware differing from those used by ENGINEER at the beginning of this Project.

- F. CLIENT may make and retain copies of Documents for information and reference in connection with use on the Project by CLIENT. Such Documents are not intended or represented to be suitable for reuse by CLIENT or others on extensions of the Project or on any other project. Any such reuse or modification without written verification or adaptation by ENGINEER, as appropriate for the specific purpose intended, will be at CLIENT's sole risk and without liability or legal exposure to ENGINEER or to ENGINEER's Consultants. CLIENT shall indemnify and hold harmless ENGINEER and ENGINEER's Consultants from all claims, damages, losses, and expenses, including attorneys' fees arising out of or resulting therefrom.
- G. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- H. Any verification or adaptation of the Documents for extensions of the Project or for any other project will entitle ENGINEER to further compensation at rates as defined in Exhibit B.

#### 6.05 Insurance

- A. ENGINEER shall procure and maintain insurance as set forth below:
1. Workers Compensation & Employer's Liability
    - a. Each Occurrence: \$1,000,000
  2. General Liability
    - a. Each Occurrence: \$1,000,000
    - b. General Aggregate: \$2,000,000
  3. Excess or Umbrella Liability
    - a. Each Occurrence: \$5,000,000
    - b. General Aggregate: \$5,000,000
  4. Automobile Liability
    - a. Combined Single Limit (Bodily Injury and Property Damage):  
Each Accident \$1,000,000
  5. Professional Liability
    - a. Each Occurrence: \$2,000,000
    - b. General Aggregate: \$2,000,000
- B. CLIENT shall cause ENGINEER and ENGINEER's Consultants to be listed as additional insureds on any general liability or property insurance policies carried by CLIENT which are applicable to the Project.
- C. CLIENT shall require Contractor to purchase and maintain general liability and other insurance as specified in the Contract Documents and to cause ENGINEER and ENGINEER's Consultants to be listed as additional insureds with respect to such liability and other insurance purchased and maintained by Contractor for the Project.
- D. CLIENT and ENGINEER shall each deliver to the other certificates of insurance evidencing the coverage.
- E. All policies of property insurance shall contain provisions to the effect that ENGINEER's and ENGINEER's Consultants' interests are covered and that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder.

- F. At any time, CLIENT may request that ENGINEER, at CLIENT's sole expense, provide additional insurance coverage, increased limits, or revised deductibles that are more protective. If so requested by CLIENT, with the concurrence of ENGINEER, and if commercially available, ENGINEER shall obtain and shall require ENGINEER's Consultants to obtain such additional insurance coverage, different limits, or revised deductibles for such periods of time as requested by CLIENT.

#### 6.06 Termination

A. The obligation to provide further services under this Agreement may be terminated:

1. *For cause,*

a. By either party upon 30 days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party.

b. By ENGINEER:

1) upon seven days written notice if ENGINEER believes that ENGINEER is being requested by CLIENT to furnish or perform services contrary to ENGINEER's responsibilities as a licensed professional; or

2) upon seven days written notice if the ENGINEER's services for the Project are delayed or suspended for more than 90 days for reasons beyond ENGINEER's control.

3) ENGINEER shall have no liability to CLIENT on account of such termination.

c. Notwithstanding the foregoing, this Agreement will not terminate as a result of such substantial failure if the party receiving such notice begins, within seven days of receipt of such notice, to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt thereof; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30 day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein shall extend up to, but in no case more than, 60 days after the date of receipt of the notice.

2. *For convenience,*

a. By CLIENT effective upon the receipt of notice by ENGINEER.

B. The terminating party under paragraphs 6.06.A.1 or 6.06.A.2 may set the effective date of termination at a time up to 30 days later than otherwise provided to allow ENGINEER to demobilize personnel and equipment from the Site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble Project materials in orderly files.

#### 6.07 Controlling Law

A. This Agreement is to be governed by the law of the state in which the Project is located.

#### 6.08 Successors, Assigns, and Beneficiaries

A. CLIENT and ENGINEER each is hereby bound and the partners, successors, executors, administrators and legal representatives of CLIENT and ENGINEER (and to the extent permitted by paragraph 6.08.B the assigns of CLIENT and ENGINEER) are hereby bound to the other party to this Agreement and to the partners, successors, executors, administrators and legal representatives (and said assigns) of

such other party, in respect of all covenants, agreements and obligations of this Agreement.

B. Neither CLIENT nor ENGINEER may assign, sublet, or transfer any rights under or interest (including, but without limitation, moneys that are due or may become due) in this Agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.

C. Unless expressly provided otherwise in this Agreement:

1. Nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by CLIENT or ENGINEER to any Contractor, Contractor's subcontractor, supplier, other individual or entity, or to any surety for or employee of any of them.

2. All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of CLIENT and ENGINEER and not for the benefit of any other party. The CLIENT agrees that the substance of the provisions of this paragraph 6.08.C shall appear in the Contract Documents.

#### 6.09 Dispute Resolution

A. CLIENT and ENGINEER agree to negotiate all disputes between them in good faith for a period of 30 days from the date of notice prior to exercising their rights under provisions of this Agreement, or under law. In the absence of such an agreement, the parties may exercise their rights under law.

B. If and to the extent that CLIENT and ENGINEER have agreed on a method and procedure for resolving disputes between them arising out of or relating to this Agreement, such dispute resolution method and procedure is set forth in Exhibit C, "Supplemental Conditions."

#### 6.10 Hazardous Environmental Condition

A. CLIENT represents to Engineer that to the best of its knowledge a Hazardous Environmental Condition does not exist.

B. CLIENT has disclosed to the best of its knowledge to ENGINEER the existence of all Asbestos, PCB's, Petroleum, Hazardous Waste, or Radioactive Material located at or near the Site, including type, quantity and location.

C. If a Hazardous Environmental Condition is encountered or alleged, ENGINEER shall have the obligation to notify CLIENT and, to the extent of applicable Laws and Regulations, appropriate governmental officials.

D. It is acknowledged by both parties that ENGINEER's scope of services does not include any services related to a Hazardous Environmental Condition. In the event ENGINEER or any other party encounters a Hazardous Environmental Condition, ENGINEER may, at its option and without liability for consequential or any other damages, suspend performance of services on the portion of the Project affected thereby until CLIENT: (i) retains appropriate specialist consultant(s) or contractor(s) to identify and, as appropriate, abate, remediate, or remove the Hazardous Environmental Condition; and (ii) warrants that the Site is in full compliance with applicable Laws and Regulations.

- E. CLIENT acknowledges that ENGINEER is performing professional services for CLIENT and that ENGINEER is not and shall not be required to become an "arranger," "operator," "generator," or "transporter" of hazardous substances, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act of 1990 (CERCLA), which are or may be encountered at or near the Site in connection with ENGINEER's activities under this Agreement.
- F. If ENGINEER's services under this Agreement cannot be performed because of a Hazardous Environmental Condition, the existence of the condition shall justify ENGINEER's terminating this Agreement for cause on 30 days notice.

#### 6.11 Allocation of Risks

##### A. Indemnification

1. To the fullest extent permitted by law, ENGINEER shall indemnify and hold harmless CLIENT, CLIENT's officers, directors, partners, and employees from and against any and all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) caused solely by the negligent acts or omissions of ENGINEER or ENGINEER's officers, directors, partners, employees, and ENGINEER's Consultants in the performance and furnishing of ENGINEER's services under this Agreement.
2. To the fullest extent permitted by law, CLIENT shall indemnify and hold harmless ENGINEER, ENGINEER's officers, directors, partners, employees, and ENGINEER's Consultants from and against any and all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) caused solely by the negligent acts or omissions of CLIENT or CLIENT's officers, directors, partners, employees, and CLIENT's consultants with respect to this Agreement or the Project.
3. To the fullest extent permitted by law, ENGINEER's total liability to CLIENT and anyone claiming by, through, or under CLIENT for any cost, loss, or damages caused in part by the negligence of ENGINEER and in part by the negligence of CLIENT or any other negligent entity or individual, shall not exceed the percentage share that ENGINEER's negligence bears to the total negligence of CLIENT, ENGINEER, and all other negligent entities and individuals.
4. In addition to the indemnity provided under paragraph 6.11.A.2 of this Agreement, and to the fullest extent permitted by law, CLIENT shall indemnify and hold harmless ENGINEER and its officers, directors, partners, employees, and ENGINEER's Consultants from and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) caused by, arising out of or resulting from a Hazardous Environmental Condition, provided that (i) any such cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than completed Work), including the loss of use resulting therefrom, and (ii) nothing in this paragraph 6.11.A.4. shall obligate CLIENT to indemnify any individual or entity

from and against the consequences of that individual's or entity's own negligence or willful misconduct.

5. The indemnification provision of paragraph 6.11.A.1 is subject to and limited by the provisions agreed to by CLIENT and ENGINEER in Exhibit C, "Supplemental Conditions," if any.

#### 6.12 Notices

- A. Any notice required under this Agreement will be in writing, addressed to the appropriate party at its address on the signature page and given personally, or by registered or certified mail postage prepaid, or by a commercial courier service. All notices shall be effective upon the date of receipt.

#### 6.13 Survival

- A. All express representations, indemnifications, or limitations of liability included in this Agreement will survive its completion or termination for any reason.

#### 6.14 Severability

- A. Any provision or part of the Agreement held to be void or unenforceable under any Laws or Regulations shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon CLIENT and ENGINEER, who agree that the Agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

#### 6.15 Waiver

- A. Non-enforcement of any provision by either party shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Agreement.

#### 6.16 Headings

- A. The headings used in this Agreement are for general reference only and do not have special significance.

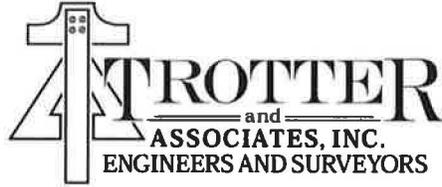
#### 6.16 Definitions

- A. Defined terms will be in accordance with EJCDC No. 1910-1 (1996 Edition)

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CLIENT Initial \_\_\_\_\_

TAI Initial \_\_\_\_\_



**EXHIBIT B  
SCHEDULE OF HOURLY RATES AND REIMBURSABLE EXPENSES**

2017 Schedule of Hourly Rates		2017 Reimbursable Expenses		
Classification	Billing Rate	Item	Unit	Unit Price
Principal	\$224.00	Engineering Copies 1- 249 Sq. Ft.	Sq. Ft.	\$0.29
Senior Project Manager	\$214.00	Engineering Copies 250-999 Sq. Ft.	Sq. Ft.	\$0.27
Project Manager	\$189.00	Engineering Copies 1000-3999 Sq. Ft.	Sq. Ft.	\$0.25
Professional Land Surveyor	\$179.00	Engineering Copies 3999 Sq. Ft. & Up	Sq. Ft.	\$0.23
Project Coordinator	\$179.00	Mylar Engineering Copies up to 24" by 36"	Each	\$8.00
Senior Project Engineer	\$179.00	Color Presentation Grade Large Format Print	Sq. Ft.	\$5.15
Engineer Level IV	\$166.00	Comb Binding > 120 Sheets	Each	\$4.75
Engineer Level III	\$149.00	Comb Binding < 120 Sheets	Each	\$3.50
Engineer Level II	\$130.00	Binding Strips ( Engineering Plans)	Each	\$1.00
Engineer Level I	\$110.00	5 Mil Laminating	Each	\$1.25
Engineering Intern	\$51.00	Copy 11" x 17" - Color	Each	\$0.50
Senior Technician	\$155.00	Copy 11" x 17" - Black and White	Each	\$0.25
Technician Level IV	\$134.00	Copy 8.5" x 11" - Color	Each	\$0.25
Technician Level III	\$122.00	Copy 8.5" x 11" - Black and White	Each	\$0.12
Technician Level II	\$109.00	Recorded Documents	Each	\$25.00
Technician Level I	\$96.00	Plat Research	Time and Material	
Clerical Level II	\$75.00	Per Diem	Each Day	\$30.00
Clerical Level I	\$63.00	Field / Survey Truck	Each Day	\$45.00
Survey Crew Chief	\$151.00	Postage and Freight		Cost
Survey Technician Level II	\$80.00	Mileage	Per Mile	Federal Rate
Survey Technician Level I	\$65.00			
Prevailing Wage Survey Foreman**	\$181.00			
Prevailing Wage Survey Worker**	\$176.00			
Sub Consultants	Cost Plus 5%			

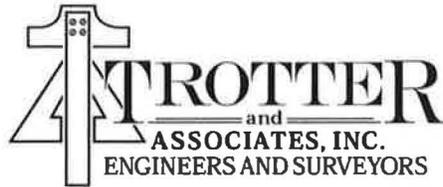
*\*\*Rates will be escalated for Overtime & Holiday Pay to adjust for Premium Time based on the current Illinois Department of Labor Rules*

*Note: On January 1<sup>st</sup> of each year, the fees and hourly rates may be escalated by an amount not to exceed five (5) percent.*

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CLIENT Initial \_\_\_\_\_

TAI Initial \_\_\_\_\_



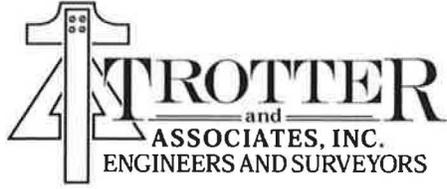
**EXHIBIT C  
SUPPLEMENTAL CONDITIONS**

Engineer hereby agrees to incorporate and accept the following provisions to be included in the aforementioned Agreement at no additional compensation:

- A. The Engineer agrees to take affirmative steps to assure that disadvantaged business enterprises are utilized when possible as sources of supplies, equipment, construction and services in accordance with the Clean Water Loan Program rules as required by the award conditions of USEPA's Assistance Agreement with the IEPA. The Engineer acknowledges that the fair share percentages are 5% for MBE's and 12% for WBE's.
- B. The Engineer shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The Engineer shall carry out applicable requirements of 40 CFR Part 33 in the award and administration of contracts awarded under EPA financial assistance agreements. Failure by the contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract or other legally available remedies.
- C. Audit and access to records clause:
1. Books, records, documents and other evidence directly pertinent to performance of PWSLP loan work under this agreement shall be maintained consistent with generally accepted accounting standards in accordance with the American Institute of Certified Public Accountants Professional Standards. The Agency or any of its authorized representatives shall have access to the books, records, documents and other evidence for the purpose of inspection, audit and copying. Facilities shall be provided for access and inspection.
  2. Audits conducted pursuant to this provision shall be in accordance with generally accepted auditing standards.
  3. All information and reports resulting from access to records pursuant to the above section C.1 shall be disclosed to the Agency. The auditing agency shall afford the engineer an opportunity for an audit exit conference and an opportunity to comment on the pertinent portions of the draft audit report. The final audit report shall include the written comments, if any, or the audited parties.
  4. Records under the above section C.1 shall be maintained and made available during performance of project services under this agreement and for 3 years after the final loan closing. In addition, those records that relate to any dispute pursuant to Section 365.650 (Disputes) of Illinois Administrative Code, Title 35, litigation, the settlement of claims arising out of project performance, costs or items to which an audit exception has been taken shall be maintained and made available for 3 years after the resolution of the appeal, litigation, claim or exception.
- D. Covenant Against Contingent Fees:
- The Engineer warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bonafide employees. For breach or violation of this warranty, the Owner shall have the right to annul this agreement without liability or in its discretion to deduct from the contract price or consideration or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

CLIENT Initial \_\_\_\_\_

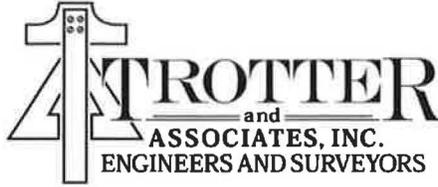
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**EXHIBIT D  
CONTRACT ADDENDUM**

Project Name: Dunham Road Sanitary Force Main Replacement

Project No. STC-109

Addendum No. \_\_\_\_\_

This is an addendum attached to, made part of and incorporated by reference into the Agreement between CLIENT and ENGINEER for modification of scope and compensation for the PROJECT. All other terms and conditions of the original Agreement between CLIENT and ENGINEER are unchanged by this Contract Addendum and shall remain in full force and effect and shall govern the obligations of both CLIENT and ENGINEER, including obligations created by this Contract Addendum.

The contract modifications are described below:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

CONTRACT SUMMARY

Original Contract Amount	\$ _____
Changes Prior to This Change	\$ _____
Amount of This Change	\$ _____
Revised Contract Amount:	\$ _____

For purposes of expediency, ENGINEER and CLIENT agree that an executed electronic version of this Contract Addendum shall suffice. The original of this Contract Addendum shall be returned to ENGINEER after execution.

CLIENT:

ENGINEER:

CITY OF ST. CHARLES

TROTTER AND ASSOCIATES, INC.

SIGNED:

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

TITLE

TITLE

Exhibit D  
Contract Addendum  
Page 2

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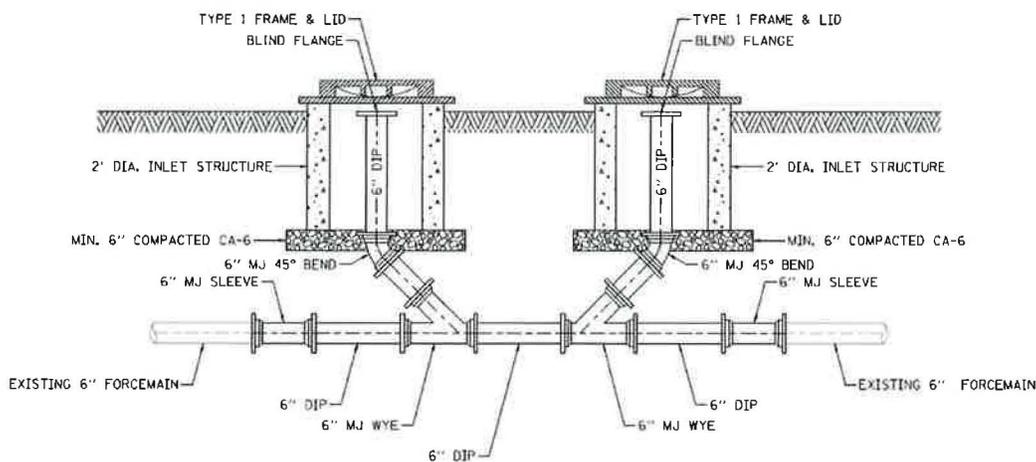
## SIMILAR PROJECTS

### Royal Fox Lift Stations I and II

Trotter and Associates, Inc. completed a Facility Plan Update in 2011 which included a summary of the City of St. Charles' wastewater infrastructure including the fifteen lift stations. Within the Facility Plan, Royal Fox Lift Stations I and II were recommended for future rehabilitation or replacement. This project began with a conditions assessment of both lift stations to prioritize the rehabilitation work. The assessment recommended that the lift stations be lined with a fast curing structural material instead of replacing the structures. It was recommended that Royal Fox No. II be rehabilitated first due to the severity of corrosion within the structure.

The **Royal Fox Lift Station No. II Rehabilitation** included the replacement of the pumps, pipe, appurtenances, and electrical control panel, as well as the structural lining of the wet well and valve vault. The lining work required the isolation of the lift station, and a bypass pumping system was utilized for several weeks. In order to provide the lining material with proper adherence, the surface must be dry and clean. This required the installation of a dewatering well to lower the groundwater near the wet well. The project was completed in 2013.

The **Royal Fox Lift Station No. I Rehabilitation** included replacement of the pumps, pipe, appurtenances, and electrical control panel, as well as the structural lining of the wet well and valve vault and *installation of cleanout structures on the discharge force main (see below)*. *The cleanouts were located at regular intervals and at 90-degree bends in the small-diameter forcemain, which will facilitate cleaning by traditional methods. During the lift station lining, a bypass pumping system was utilized. During installation of the clean out structures, vacuum trucks were used to transport wastewater from upstream of the lift station to downstream of the force main.* The project was completed in 2014.





### Fox River Water Reclamation District – Taly Park Pump Station Rehabilitation

James Kerrigan, P.E., Senior Project Engineer  
1957 N. LaFox (Route 31)  
(847) 742-2068

Taly Park Pump Station is a triplex submersible pump station originally constructed in 2003. An inspection performed in 2016 revealed failure of the coatings on piping, valves, and other metallic components in the wet well and valve vault. The District retained Trotter and Associates, Inc. to provide design engineering services and prepare design documents for the rehabilitation of the pump station.



The rehabilitation includes: replacement of all pump discharge piping, including the wall pipes, if necessary; surface preparation and recoating of all piping; retrofit of the existing access hatches with fall-through protection grates; incorporation of bypass capabilities in the existing surge relief valve vault; and reconfiguration of the existing odor control system. Rehabilitation of the pump station is anticipated to be completed in January 2018.

### Fox River Water Reclamation District – Pump Station 40 Replacement and Force Main Repair

James Kerrigan, P.E., Senior Project Engineer  
1957 N. LaFox (Route 31)  
(847) 742-2068

Pump Station 40 was constructed in the 1960's and is a prefabricated wet pit-dry pit buried steel can station. Pumps, valves and controls are contained within a dry-well vault approximately 16 feet below ground. The existing dry-well vault is experiencing corrosion of the underground steel structure and requires replacement. **The existing 6-inch diameter cast iron force main (1,150 feet in length) serving Pump Station No. 40 and was also constructed in the 1960's. The District televised the force main in July 2016 and found that the downstream end has experienced significant corrosion.**



The District retained Trotter and Associates, Inc. to provide design engineering services for the replacement of the pump station and repair of the existing force main.

The existing pump station will be replaced with precast concrete structures, including a new wet well, valve vault, and meter vault. Construction of the new structures will be adjacent to the existing pump station in order to connect the existing wet well to the proposed wet well during start up and decommission the existing steel lift station. The existing wet well will remain and become a junction manhole. The pumping system will include two submersible pumps, isolation valves, and a by-pass connection for a portable pump. A magnetic flow meter will be located in a separate vault for flow measurement. Level control will be monitored by a submersible pressure transducer with back-up floats for operation as well as alarms. The electrical system will be housed in suitable NEMA 4X enclosures and include a pump control panel and starters. The design also incorporates the District provided PLC to provide SCADA communications in a similar way to the current system. The design also includes provisions to allow for the connection of a portable generator for emergency use.

**A 20-foot section of corroded cast iron force main will be removed at the discharge manhole and replaced with PVC.** Construction is anticipated to be completed in March 2018.





### DeKalb Sanitary District - Lions Park Lift Station Improvements

Mike Holland, P.E., District Engineer  
(815) 758-3513

TAI provided planning, design, and construction phase engineering services related to the replacement of a regional lift station located in Lions Park (DeKalb Park District) for the DeKalb Sanitary District. The project included the construction of a new cast-in-place wet well and valve room structure with a brick and block building which houses the electrical/control room and generator room. The 10 MGD lift station included four VFD controlled submersible pumps, magnetic flow meter, SCADA communication, and back-up generator.



### DeKalb Sanitary District - Country Club Lift Station Improvements

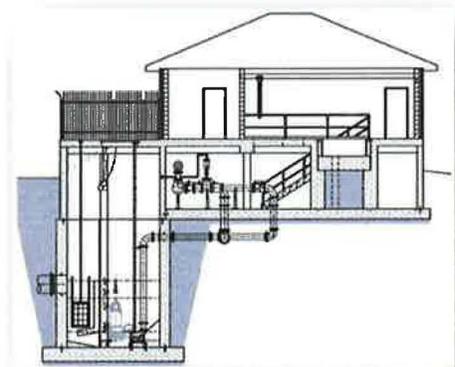
Mike Holland, P.E., District Engineer  
(815) 758-3513

TAI provided planning, design, and construction phase engineering services related to the replacement of a regional lift station on Buena Vista Golf Course (DeKalb Park District) for the DeKalb Sanitary District. The project included the construction of a new cast-in-place wet well and valve room structure with a brick and block building which houses the electrical/control room and generator room. The lift station was design for phased expansion to meet the community's long-term needs and includes room for four VFD controlled submersible pumps. The first phase included two submersible pumps, magnetic flow meter, SCADA communication, and back-up generator.



The project was funded through the **ARRA program**. The improvements were substantially completed in December 2010 and final restoration was completed in April 2011.

**2011 APWA Environmental Project of the Year  
(Under \$5 Million)**





## City of St. Charles - East Side Pump Station

Tim Wilson, Environmental Services Manager  
(630) 377-4918

East Side Lift Station was originally constructed in 1973. Prior to construction of this lift station the service area was tributary to the Riverside Pump Station via an interceptor along Seventh Avenue Creek. The interceptor is currently maintained as an emergency overflow in the event that the East Side Lift Station is unable to handle the peak flow during storm events.

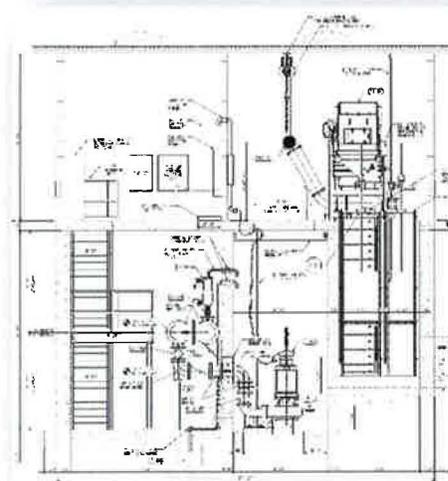
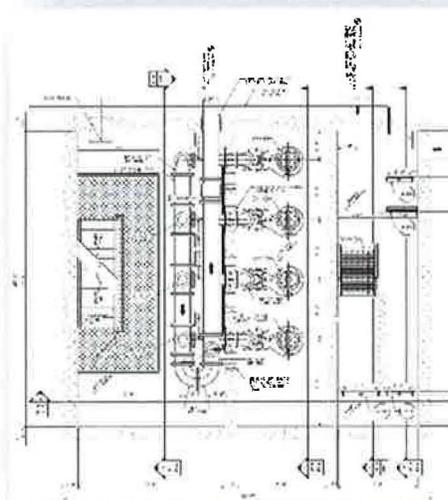
The original lift station included a wet well and dry pit design with influent screening and a by-pass channel. The existing pumps, controls, and mechanical screen were nearing the end of their service life. Rehabilitation of this lift station had been identified during the 2002 Facility Plan and was part of the City's Capital Improvements Plan.

Trotter and Associates provided planning, design and construction engineering for the rehabilitation. The City and TAI developed several alternative designs and selected to rehabilitate the lift station with submersible pumps. Furthermore, the original design average flow to East Side Lift Station was 4.0 MGD and the design maximum flow was 8.0 MGD. However, the estimated flow to this lift station during a 10-year rainfall event is 13.3 MGD. Therefore, the new submersible pumps were designed to meet 14.0 MGD with three of the four proposed pumps running.

The project included:

- new fine screen & washer compactor
- new gates and operators
- four 100 Hp submersible pumps
- flow meters, piping and valves
- new auto-transfer switch & MCC
- installation of VFD's, PLC, and back-up controls
- rehabilitation of the structure interior and exterior

The project was combined with the Riverside Pump Station Rehabilitation Project and funded through the Illinois EPA Low Interest Loan and ARRA Stimulus Program. The \$2,042,000 contract was awarded in October of 2009 and completed in August of 2010.





### City of St. Charles - Riverside Pump Station

Tim Wilson, Environmental Services Manager  
(630) 377-4405

Riverside Pump Station was originally constructed in the 1930's and has been expanded and rehabilitated on several occasions. The existing mechanical fine screens were reaching the end of their service life and slated for replacement as part of the City's Capital Improvements Plan. When the USEPA announced the creation of the 2009 Stimulus Program, the City elected to move this project forward.

Trotter and Associates provided planning, design and construction engineering for the improvements. The project scope originally included installation of two mechanical fine screens, a washer/compactor, and a breakwater system. During the bidding phase the lift station experienced a major electrical strike which resulted in failure of variable frequency drives, broken piping, and failure of a 75 horsepower pump motor. The scope of the project and loan amount were increased to address these issues.

The project was combined with the East Side Pump Station Rehabilitation Project and funded through the Illinois EPA Low Interest Loan and ARRA Stimulus Program. The \$2,042,000.00 contract was awarded in October of 2009 and completed in August of 2010.





## Village of Algonquin – Intermediate Pumping Station

*Ed Brown, Executive Director*  
(847) 658-2754

Constructed as part of a larger wastewater treatment plant expansion project, the Algonquin WWTP Intermediate Pumping Station lifts primary clarifier effluent and return activated sludge to the head of the 5-stage phosphorous and nitrogen removal process. The station is configured with three screw centrifugal horizontal dry pit pumps, each capable of pumping 10 MGD. The station is designed to ultimately house 6 pumps, bringing the ultimate pumping capacity to 50 MGD with one pump out of service.

Each pump is equipped with a dedicated force main and flow meter, properly sized for the full range of flow for the individual pump, resulting in more accurate flow information at low flows than would be possible from a single large meter. In addition, the dedicated force main for each pump solves lower flow velocity issues while allowing higher flow rates at lower horsepower than combined force main systems. An additional advantage is that meters can be isolated and serviced one at a time while the other pumps remain in service.

The pumps, 75 hp Wemco Hidrostal screw centrifugals, were chosen for their overall efficiency and reliable operation. The pumps are equipped with VFD's for flow paced operation.

The project was completed and placed into service in February 2008.





### Northern Moraine WRD - Rehabilitation of Lakemoor Lift Stations 1,2,3,4 & 5 and Plant Lift Station

Eric Lecuyer, District Manager  
(847) 526-3300

The Northern Moraine Wastewater Reclamation District completed a Facility Plan Amendment in 2004 which outlined a Capital Improvements Program for rehabilitation of the older lift stations. In 2006, the District assumed ownership of the collection system and lift stations in the Village of Lakemoor. The lift stations were in poor physical condition, which included failed structural components, code violations, and inoperable pumps and valves. The District reprioritized its Capital Improvements Plan to address the needs of the infrastructure and elected to move forward with the rehabilitation of five Lakemoor Lift Stations immediately.

Trotter and Associates, Inc. provided planning, design and construction engineering for the project. The project included complete rehabilitation of five lift stations: the replacement of pumps, piping, valves, controls, structural components, hatches, and back-up power. The stations had various flow rates, head conditions, and pump sizes. Trotter and Associates developed a standard design for rehabilitation of these stations based on a flexible configuration that could be applied to each station. A single pump size was selected that could be adjusted by variable frequency drive setting to pump at the appropriate rate for the individual application. Once the appropriate pump speed was determined, the pumps were then set to start and run at that speed. This system enabled the District to maintain a single pump type and stock spares that are universally interchangeable across the system.

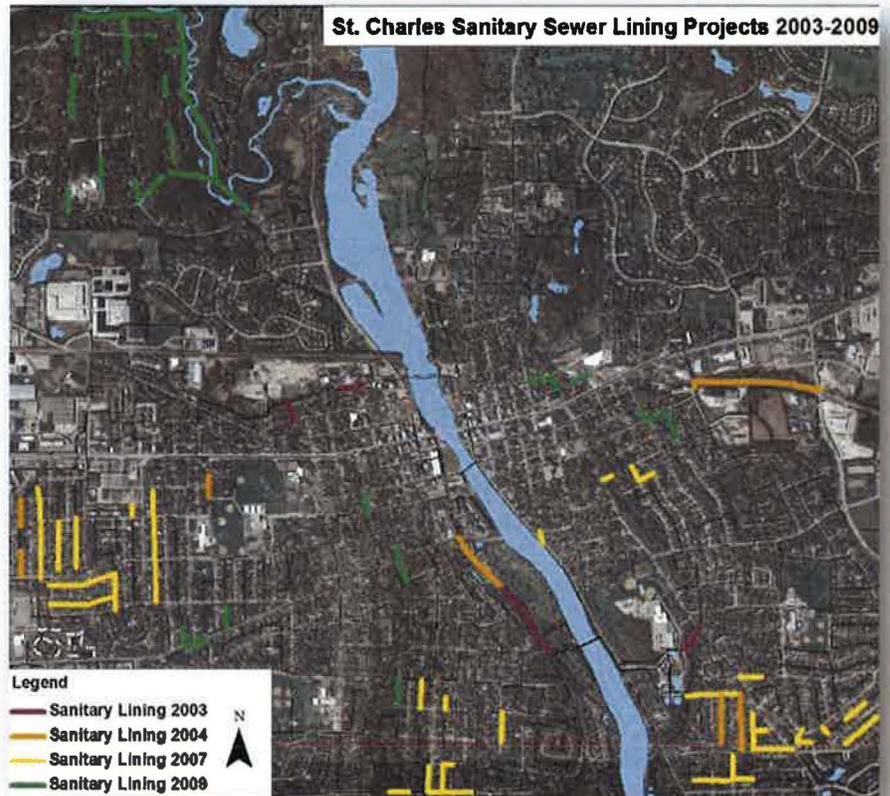
The project was awarded at a cost of \$527,000 and completed in June of 2007.





### Collection System Rehabilitation and Improvements (2003 – 2009)

Trotter and Associates, Inc. have provided sanitary sewer collection system engineering services for the City of St. Charles since 1999. TAI has written the City of St. Charles' Facility Plans and Facility Plan Updates for both the Main Wastewater Treatment Facility's Service Area and the West Side Water Reclamation Facility's Service Area. Both included an in-depth analysis of the existing sanitary sewer collection systems for the respective treatment facilities. The reports identified and evaluated the existing and future capacity requirements, provided an analysis existing conditions of the sewers, and provided recommendations for maintenance, rehabilitation and future improvements.



In 2003, TAI assisted the City with the implementation of the City's first sewer lining program and has provided engineering services on an annual to bi-annual basis. Since 2009 Sewer Lining Project, the City had completed sewer lining for nearly 50,800 feet of sanitary sewer with a total construction cost of \$1,730,000. At the conclusion of this project, TAI provided engineering documentation developed specifically for the City to assist them with implementation of their routine sewer lining program in-house.

- 2003 Sewer Lining Project – \$182,348 – 2,406 feet of 8" – 24"
- 2004 Sewer Lining Project – \$239,528 – 6,258 feet of 8" – 15"
- 2005 Sewer Lining Project – \$314,706 – 10,261 feet of 8" – 18"
- 2007 Sewer Lining Project – \$512,654 – 17,030 feet of 8" – 10"
- 2009 Sewer Lining Project – \$480,727 – 14,790 feet of 6" – 15"





### Siphon Evaluations and Rehabilitations

The City wished to evaluate the condition and capacity of the three inverted siphons that convey flow across the Fox River. Sanitary sewer modeling indicated that the siphons had a reduced capacity from their original design. It was assumed that one or more of the three crossings were partially blocked with sediment. While the existing structures were in good condition, it was determined that most of the mechanical components (gates, valves, etc.) had become corroded and were inoperable. Therefore, routine cleaning and maintenance was very difficult.

The **Park Shore Siphon Evaluation** included replacement of the concrete lid, access hatch, and isolation shear gates and placement of flowable fill in the overflow section of the influent chamber. The flap gates in the upper effluent chamber were also replaced, and valves and cleanout quick-connection fittings were installed in the lower effluent chamber. Finally, the 10", 14" and 20" siphon lines were cleaned and televised. The project was completed in 2011.



The **North Siphon Rehabilitation** required a similar evaluation that was performed on the Park Shore Siphon. The project included replacement of the concrete lid, access hatches, and isolation shear gates in the influent chamber. The flap gates were replaced in the effluent chamber, and the 14" and 18" siphon lines were cleaned, televised and scanned. The project was completed in 2012.





The **Illinois Street Siphon Rehabilitation** required a similar evaluation, but unlike the Park Shore and North siphons, the work would take place within a busy street. TAI worked with the contractor and the City to phase in the work to minimize the effect on traffic, the collection system, and events downtown such as the annual Scarecrow Festival. The project included the replacement of clean-out valves on both ends of the 10" and 12" siphon lines, replacement of the manhole frames and covers above the effluent chamber, replacement of the concrete roadway above the effluent chamber, and the cleaning and televising of both siphon lines.

During televising, several sources of I/I were identified at joints in the siphon lines. TAI administered a change order to provide chemical grouting at the joints and to install cured-in-place pipe (CIPP) within each siphon line. The lines were televised again to provide the City assurance that the leaks were eliminated. The project was completed in 2014.





### **DeKalb Sanitary District – Annie Glidden Pumping Station**

*Mike Holland, P.E., District Engineer*  
*(815) 758-3513*

Annie Glidden Pumping Station serves portions of Northern Illinois University and western DeKalb. The station equipment had exceeded its service life and required replacement.

The existing pump systems were driven by a liquid rheostat DC drive (“FloMatcher”) and had a capacity of 1.43 MGD. The liquid rheostat system was replaced with variable frequency drives. The pump station capacity was increased to 4.31 MGD with the ability to add a third pump bringing the ultimate capacity to 6.11 MGD. Wemco Hidrostal with screw centrifugal pumps were chosen due to the characteristics of the waste received from NIU. The project also included new control systems, motor control and power distribution equipment, and general refurbishment.





### Other Lift Station Projects

Trotter and Associates, Inc. has provided planning, design, permitting and construction engineering for over 150 water and wastewater projects in the last nineteen years including over forty lift station projects and forcemain repairs/replacements. In addition to those listed on the proceeding pages, TAI also provided design and construction services for the following projects.

- City of Batavia – First Street Lift Station
- City of Batavia – Colonial Village Lift Station
- City of Batavia – South River Street Lift Station
- City of Batavia – Holy Cross Lift Station
- City of Des Plaines – Oakton Street Pump Station
- City of Geneva – East Side Interceptor Sewer
- City of St. Charles – West Side WRF Raw Sewage Lift Station
- City of St. Charles – West Side WRF – RAS/WAS Lift Station
- DeKalb Sanitary District – West Lincoln Highway Sanitary Sewer Improvements
- DeKalb Sanitary District – Moraine Terrace Sewer Improvements
- DeKalb Sanitary District – Locust Street Sanitary Sewer Improvements
- DeKalb Sanitary District – Sewer Lining and Spot Repairs (2002-2010)
- Illinois American Water – Route 7 (159<sup>th</sup> Street) Water main and Sanitary Sewer Relocates
- Illinois American Water – IL Routes 53 and 56 Water Main and Sanitary Sewer Relocations
- Illinois American Water – Bell Road Water and Sewer Main Relocation
- Northern Moraine WRD – Deer Grove North Lift Station
- Northern Moraine WRD – Darrell Road Lift Station
- Northern Moraine WRD – Port Barrington LPSS
- Northern Moraine WRD – Route 120 Interceptor and Low Pressure Sanitary Sewer
- Northern Moraine WRD – Port Barrington Low Pressure Sanitary Sewer Improvements Phases I and II
- Village of Addison – Route 53 Pump Station
- Village of Addison – Belmont Sanitary Water Improvements
- Village of Addison – Jo Ann Lane Sewer Replacement
- Village of Algonquin – Raw Sewage Lift Station
- Village of Algonquin – RAS/WAS Lift Station
- Village of Algonquin – Northern Basin Capacity Analysis & CIP Development
- Village of Algonquin – GIS Basemap
- Village of Bartlett – U46 Sanitary Sewer Extension Improvements
- Village of Carpentersville – Lift Station #10
- Village of Carpentersville – Lift Station #12
- Village of Carpentersville – Lift Station #13
- Village of Carpentersville – Miller Road Lift Station
- Village of Carpentersville – Rivers End Lift Station
- Village of East Dundee – RAS/ WAS Lift Station
- Village of Fox Lake – GIS Implementation
- Village of Mundelein – Lift Station #3
- Village of Mundelein – IL Route 45 Sanitary Sewer Improvements
- Village of Roselle – Chesapeake Lift Station
- Village of Roselle – Excess Flow Lift Station
- Village of Union – GIS Conversion of the Village Zoning and Land Use Plan Maps





**AGENDA ITEM EXECUTIVE SUMMARY**

Agenda Item number: 5.j

Title:

Recommendation to Award Proposal for SCADA Program Management – Phase 1 to Concentric Integration

Presenter:

Tim Wilson

Meeting: Government Services Committee

Date: October 23, 2017

Proposed Cost: \$490,000

Budgeted Amount: \$1,000,000

Not Budgeted:

**Executive Summary** *(if not budgeted please explain):*

For reliability, efficiency and safety, the water and wastewater treatment and pump facilities require continuous automated operation. Currently, the backbone of this operation is controlled by the water and wastewater Supervisory Control and Data Acquisition (SCADA) systems. Both the water and wastewater utility’s SCADA system are composed of computer hardware and software systems. Due to the aging infrastructure, the SCADA system lacks security constraints, backup systems, has no integration to the City network and has limited data acquisition; therefore it is nearing the end of its life.

In 2016, City Council approved Concentric Integration to complete a SCADA master plan for both the water and the wastewater system. This evaluation included: process automation, hardware, software, network/communication, security, disaster recovery, alarms, data collection, reports, and remote access. This phase of the project is completed with recommendations, implementation schedule, and long term capital planning provided.

In the next phase of this project, Concentric will provide program management services and subcontractor coordination. It will also involve technological improvements, the installation of the system at remote sites and the professional services to oversee and coordinate this phase of the project. Concentric will provide verification of installations, quality control testing of all equipment, and manage the work by subcontractors. In addition, they will configure and coordinate the SCADA network design and configuration with the City’s information system network and team.

Concentric has great knowledge of the City’s current networks and the 2016 SCADA Master Plan. They have collaborated closely with Public Works and the Information Systems staff during the planning phase of this project, being the most qualified firm. Public Works recommends continuing this project with Concentric Integration to implement and oversee the next phase of improvements. The \$490,000 will cover Concentric Integration’s portion of the contract, approximately 50% of the total project cost.

This winter, the city staff will be returning to this committee with updates and contract approvals of equipment and work being conducted by subcontractors. The estimated value for equipment is \$441,000, with a cost of \$66,000 for subcontracting work.

**Attachments** *(please list):*

\* SCADA Master Plan \* Concentrics Proposal Phase 1

**Recommendation/Suggested Action** *(briefly explain):*

Recommendation to Award the Proposal for SCADA Program Management – Phase 1 to Concentric Integration for a not to exceed price of \$490,000.

# City of St. Charles

*2016-17*

## *SCADA System Master Plan*



Prepared by B&W Control Systems Integration  
February 2017

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## 1.0 Executive Summary

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The City of St. Charles provides water and wastewater services for approximately 33,000 residents, as well as business and other institutions. The City treats its raw well water at a variety of treatment facilities throughout the City, pumps the water into the distribution system, where three elevated towers with a combined storage of approximately 2.8 million gallons, keeps the water ready for usage. In addition, one larger Main and one smaller West wastewater treatment plant (currently) treat City wastewater. In addition to these facilities, the City owns and operates 17 wastewater pump stations. Solids handling and treatment facilities are provided at both the Main and West WWTPs. Lastly, the City owns and operates its own single mode fiber communication network that is physically maintained by City Electrical Department and managed by the City's Information Technology staff.

Most all water and wastewater pumping and treatment facilities require continuous operation, and St. Charles' facilities are no different. High levels of reliability and the ability to respond quickly to issues are critical requirements. Historically, the City maintains this level of reliability by utilizing selective automation, as well as monitoring and manually responding to abnormal situations when required. The City utilizes a Supervisory Control and Data Acquisition (SCADA) system for each wastewater facility, as well as a SCADA system for the water system. While the newest of the three SCADA systems at the Main WWTP is larger and more comprehensive, all three SCADA systems largely simply monitor existing equipment, provide a limited amount of data acquisition, have no remote access options, and still require Public Works Water and Environmental Operations staff to manually collect and analyze data.

With the growing need to upgrade facilities to improve treatment (phosphorus removal, for example) and aging system and distribution infrastructure, City personnel will need improved technology tools to continue operating efficiently and effectively into the future. To this end, modern comprehensive SCADA systems can provide efficient view, response, and automated control at each of the City's facilities, as well as securely and remotely. Additionally, modern SCADA systems also focus on optimizing energy usage by automated process control and automated reporting, as well as simply making operators aware of how changing process and influent flow characteristics impact energy resource efficiency.

This SCADA System Master Plan focuses on the strategic and specific steps recommended to implement appropriately automated, efficiently managed, energy optimized and securely and flexibly accessible facilities across the City. Each system and related operations was evaluated for the efficient level of automation. Information (data) management (historical data collection and reporting) was also considered and recommendations made for improvement. The report concludes with a recommended staged/phased approach to an implementation, where budget costs are provided.

## 2.0 Existing SCADA System Overview

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### 2.1 Introduction

The purpose of Section 2 is to provide a review of the City's facilities and related automation infrastructure. An accurate inventory of automation and related equipment is an essential foundation to the analysis and plan of recommended improvements, which is provided in Section 3. Together with staff's assistance, we were able to successfully inventory what we believe to be 95-100% of the City's existing automation-related hardware and software.

### 2.2 Site Overview

The City owns and operates a number of wastewater treatment plants, sanitary lift stations, and water system facilities such as wells, PRVs and elevated tanks. A list of facilities is provide below.

#### 2.2.1 Wastewater Treatment Plants

- Main WWTP
- West WWTP

#### 2.2.2 Sanitary Lift Stations

- 7<sup>th</sup> and Division
- Country Club
- Eastside
- Illinois
- Kingswood
- Oak Creek
- Pheasant Run
- Pine Ridge
- Red Gate (Crane Rd)
- Reneaux Manor
- Riverside
- Royal Fox 1
- Royal Fox 2
- Washington
- Wild Rose
- Woods of Fox Glen
- Zylstra

#### 2.2.3 Water System Facilities

- Well Nos. 3 & 4
- Well No. 7
- Well No. 8
- Well No. 9

- Well No. 11
- Well No. 13
- 10<sup>th</sup> St. Tower
- Campton Hills Tower
- Red Gate Tower
- 10<sup>th</sup> St. PRV
- 4<sup>th</sup> and Bowman PRV
- Division St. PRV
- Geneva Rd Willowgate PRV
- Madison Ave PRV
- Timbers Rte 31 PRV

## **2.3 Process Automation Overview**

Both Water and Wastewater process were reviewed and facility tours were conducted during the SCADA evaluation for each of the City’s primary facilities (photos were taken at a number of other facilities). Process automation notes were taken during the process meetings to summarize each SCADA water and wastewater potential site and related process at the City’s facilities.

### 2.3.1 Wastewater Process Automation

The different processes at each of the facilities were briefly discussed and evaluated to determine the potential and related benefit of improved SCADA automation. When evaluating the potential for improved automation, we review automation hardware, automation software, potential improved process, efficiency, safety, reliability, or operational flexibility. In general, the Main WWTP, being the most recently improved facility from an automation perspective, had the most up-to-date hardware and software, but also had the potential to benefit from additional automation improvements. The West WWTP utilizes fairly dated (15+ years old) SCADA hardware, including the oldest computer the City utilizes for SCADA. Very few wastewater treatment processes were actually automated; most just simply reported status to the operator but required manual operator operation. Ideally, a process should be fully automated during normal, stable operations, but alert and always allow operations staff to manually operate the process during outside of normal situations.

### 2.3.2 Water Process Automation

The City’s water treatment, distribution, and storage system utilizes a variety of typical shallow and deep well treatment systems. The water treatment facilities are independently controlled (each facility has its own controllers) but communicate with the central PLC at Public Works, which handles messaging between all of the sites and allows operations staff to select different towers or pressure setpoints to control that facility. Staff

currently “actively” operates each of the facilities during working hours (all facilities are operated one shift per day) making operational changes locally at the water facilities. Many of the facilities with a large amount of potential local data did not bring much of that data back to the SCADA Server at Public Works. Operations was clearly lacking useful detailed flows, chemical data, backwash information, and other beneficial water system data acquisition in the SCADA software.

### 2.3.3 Lift Station Automation

The City’s lift station use a variety of methods for pump control. Some stations have PLC-based level controls with PLC-based float control, some use a single-purpose manufacturer’s pump controller (such as the Metropolitan LMS-400), while others simply use float relay-based control logic. Most lift stations have limited data transmitted back to the main SCADA sites.

## **2.4 SCADA Hardware Overview**

The following sections provide a general overview of the SCADA related hardware currently in use by the City. We have provided a short narrative for each hardware category, followed by a technical summary of what makes and models are in place. Please refer to Exhibit A for a SCADA network diagram showing existing significant automation equipment hardware and their associated locations.

### 2.4.1 SCADA Security Hardware

The City currently has their SCADA networks (Water and WWTP) separated from the rest of the City’s networks. It is considered best practice to restrict access to SCADA networks from other networks, but carefully allow traffic between networks, where it is required or advantageous. Currently, we did not observe and connectivity between the City’s SCADA and administrative networks so traffic remains appeared fully isolated from the other City networks. Typically, selective connectivity is permitted so organizations can back up, apply Windows patches, manage antivirus, view published SCADA historical data from administrative computers, or even provide remote access when needed.

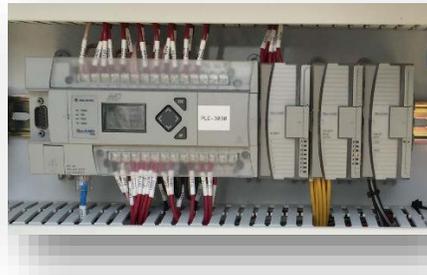
The City performs network isolation for SCADA traffic by creating virtual local area networks (VLAN) on their Cisco 4948 layer 3 (IP) and remote capable switches. They do not add routing to these VLANs so they have no way of communicating outside of their segmented networks.

### 2.4.2 Programmable Logic Controllers (PLCs)

Programmable Logic Controllers (PLCs) are the primary devices that contain programming logic for operating the process equipment. These are a

critical part of the SCADA system, as without them, the process equipment will not operate automatically. The majority of the City's facilities utilize Allen-Bradley PLCs of varying models, including the SLC 500 Series (SLC 5/03, 5/04 and 5/05 models), MicroLogix Series (1100 and 1400 models), and the CompactLogix Series. See the images below for examples of the MicroLogix and SLC series PLCs.

A list of PLC hardware at each site is included in Exhibit B.



**Figure 1 – MicroLogix 1400 PLC**



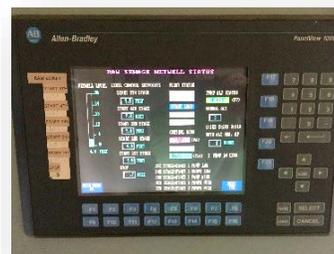
**Figure 2 – SLC 5/04 PLC**

### 2.4.3 Operator Interface Terminals (OITs)

Operator Interface Terminals (OITs) are industrial panel-mounted touch screens that allow operations staff to monitor equipment status and alarms. A variety of these are used throughout the City, including Allen-Bradley Standard PanelViews, Allen-Bradley PanelView Plus, and one Automation Direct unit. Samples of two of the City's existing OITs (one older and one newer) are shown in the Figures below. A list of all of the City's OITs is included in Exhibit B.



**Figure 3 – Newer PanelView Plus**



**Figure 4 – Older Standard PanelView**

### 2.4.4 SCADA Servers and Clients

The City has various SCADA Servers and clients for monitoring the water and WWTP systems. A SCADA server is responsible for communicating directly

to process PLC hardware and a client is only responsible for communicating with the SCADA server itself, and NOT to the PLC hardware.

#### 2.4.4.1 Wastewater Treatment Plants

Both the Main and West WWTPs have single stand-alone SCADA computers that act as servers; the Main WWTP has a server class machine, and the West WWTP has a very old (8+ years) desktop computer acting as server. The Main WWTP also has an industrial panel mounted PC mounted in the Sludge Handling Building control panel that is a SCADA client node. The West WWTP does not have any SCADA client nodes. Following are images of the City's two WWTP SCADA servers.



**Figure 5 - West WWTP SCADA Server**



**Figure 6 - Main WWTP SCADA Server**

#### 2.4.4.2 Water Facilities and Lift Stations

The SCADA Server used for monitoring the Water Facilities and Lift Stations is located at Public Works. Well 8 and Well 13 also both have SCADA computers acting as servers on site for locally viewing status and alarms for those sites. No SCADA client or remote nodes exist for the water/lift station SCADA system. Following are images of the SCADA “servers” at both Well 8 and 13. Because the two computers communicate directly with PLCs, they are considered servers, although they are more like remote SCADA view clients in their use by the City.

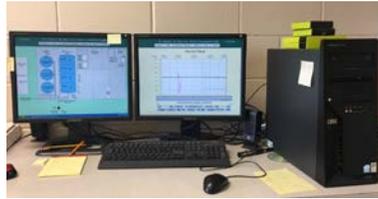


Figure 7 - Well 8 SCADA Server



Figure 8 - Well 13 SCADA Server

## 2.5 SCADA Software

The City uses Wonderware InTouch for its current SCADA software. The City currently does not maintain an annual support contract with Wonderware, and the versions in use are between 5 and 8 years old (have not been recently updated).

## 2.6 Network/Communications

### 2.6.1 Wastewater Treatment Plants

The Main WWTP uses Ethernet communications between the various PLC panels and the SCADA server. Fiber, CAT5e, and Ethernet radio-based physical connection types are used throughout the plant.

The West WWTP largely uses the Allen Bradley DH+ communication protocol over fiber optic cable for communications between the various PLCs and the SCADA server. See the figures below for examples of the DH+ communication in both a PLC cabinet and the West WWTP SCADA server.



Figure 9 - West WWTP Fiber to DH+ Converter

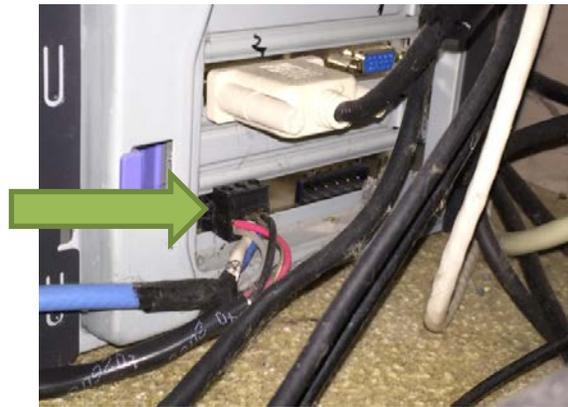


Figure 10 - West WWTP DH+ Communication Card in SCADA Server

The Main WWTP, West WWTP, and Public Works facility are all connected via City-owned fiber optic cable operating at both 10 Mbps and 100 Mbps.

## 2.6.2 Water System and Lift Station Facilities

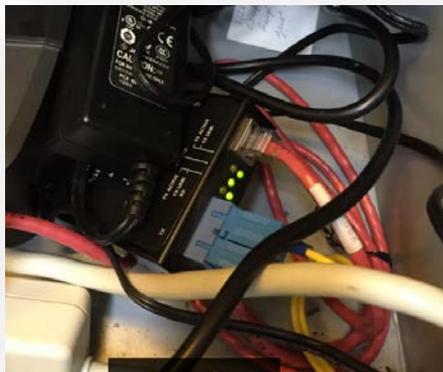
The water system and some lift station sites use the extensive City fiber optic network for communications from the remote sites back to Public Works where the master PLC and SCADA Server are located. A number of the lift stations also utilize cellular communications using a Cradlepoint cellular router. To enable the use of the fiber communications, the City is encapsulating serial-based communications on some of the older PLCs within an Ethernet-based fiber communication converter. During our review, staff indicated that the serial to Ethernet communication converters periodically need to be reset for correct communications to resume. See the figures following that show a selection of converters as well as the lift station cellular Cradlepoint devices.



**Figure 11 - 10st St. Tower SCADA Cabinet with Serial to Ethernet and Ethernet to Fiber Converters**



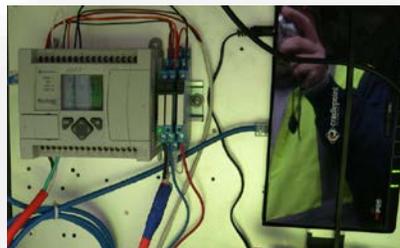
**Figure 12 – Campton Hills Tower SCADA Cabinet with Serial to Ethernet Converter**



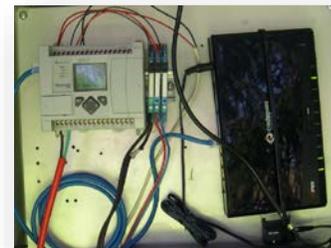
**Figure 13 - Campton Hills Tower SCADA Cabinet with (Serial Encapsulated) Fiber to Ethernet Converters**



**Figure 14 – Well 7 SCADA Cabinet with Serial to Ethernet and Ethernet to Fiber Converters**



**Figure 15 - 7th and Division Lift Station Telemetry PLC and Cradlepoint Cellular Radio (typical)**



**Figure 16 – Country Club Lift Station Telemetry PLC and Cradlepoint Cellular Radio (typical)**

## 2.7 Security/Disaster Recovery

The City has five computers that act as SCADA servers:

- One is at the Main WWTP and is a server-class machine with the recommended redundant hard drives and power supplies and is running a server operating system. We did not observe any automatic or regular backups for disaster recovery purposes.
- The next is at the West WWTP is an older Windows XP computer with no redundancy. We did not observe any automatic or regular backups for disaster recovery purposes.
- The next TWO servers are operating at Well 8 (Windows XP operating system) and Well 13 (Windows 7 operating system) and although they are acting in a SCADA server role, they are largely just used for local viewing of SCADA data and are not in a critical alarming or informational capacity. Neither the Well 8 nor the Well 13 computers have any redundancies nor are they backed up for disaster recovery purposes.
- The last SCADA server is a desktop computer located at Public Works, is operating in a SCADA server capacity (running Windows 7), and should be considered in a critical role, as its failure would mean operations staff would have to be local onsite to view any particular locations' status.

The four desktop-class computers acting as servers are all standard desktop computers with no redundancy; a failure of any hard drive on any of these three servers would result in significant data loss for the City. Three of the SCADA servers are running Windows XP and the one at the Main WWTP was running Windows Server 2008 R2. Windows XP is not a supported operating system and computers running Windows XP in a server role are considered high risk for viruses and should be considered a priority for replacement.

The three Windows XP SCADA servers are only patched up to Windows XP Service Pack 2 (Service Pack 3 has been available since April 2008). It appears that after the SCADA servers were deployed there has not been a routine patch management procedure performed. In addition, there did not appear to be any antivirus or malware protection in place. We did not observe that any of the SCADA servers had any type of backup software in place.

## 2.8 Alarming

The City currently utilizes Specter Instruments Win 911 for wastewater based alarms and Wonderware SCADAAlarm for water system based alarming. In addition, there is a largely custom phone notification interface that allows the public to call in a request and utilizes the water SCADA system to provide dial-out notification to Public Works staff. The Main WWTP Wonderware SCADA Server provides local notification and logging or alarms for the Main and West WWTPs.

## 2.9 Historical Data Collection

The City's (West WRF) SCADA server currently uses the (default) GE Classic Historian, which does not have an easy (realistically feasible) way for a City staff to extract data from the SCADA system. Classic Historian is designed to be used on the SCADA server to view basic trending information, and is not designed to be used to extract data out of the SCADA server, which would be very useful for City staff. Currently, staff has to request that data be processed for export out of the Classic Historian, at which point staff receives a Microsoft Excel® based spreadsheet of the data. Most all of the historical data analysis in St. Charles is being done essentially manually.

## 2.10 Reporting

There is no City SCADA-based reporting system in use at any of the facilities. Reporting is different than a historian; historian software allows you to see (sometimes massive amounts of data and) process trends separate from SCADA and reporting software will summarize massive amounts of data into simple reports for both the IEPA/state, as well as operations and management staff. 100% of the City water/wastewater data collection and reporting starts with manual data entry (no SCADA data is automatically entered). The figure below is a snapshot of the manual data collection template used by City WWTP staff at the Main WWTP.

Date: \_\_\_\_\_ Main WWTP Plant Checklist Operator(s): \_\_\_\_\_

Primary Treatment	Digester	Ultraviolet Disinfection
<b>Sludge Levels</b>	Gas Pressure _____ in.	UV Transmittance sample set-up _____
North 1: A.M _____	<b>Digester Gas Production</b>	a) Warm-up Photometer for 15 Min _____
North 2: A.M _____	701 Stop: _____	b) Clean cuvette with distilled water _____
South 1: A.M _____	Start: _____	c) Zero meter with distilled water _____
South 2: A.M _____	Total: _____ 0	d) Follow Photometer instructions _____
<b>Pump Data</b>	702 Stop: _____	e) Set UV Transmittance % (5% less) _____
1201 Speed % _____	Start: _____	<b>**Transmittance is currently set at 50%**</b>
On Time _____ Off Time _____	Total: _____ 0	Check Bank status, Alarm status & history screens for faults _____
1202 Speed % _____	701 & 702 _____ 0 (Cu Ft)	Check operator interface screen to insure both banks of UV lamps & repairs are in remote auto. _____
On Time _____ Off Time _____	Storage Steps: _____	Check for leaks on Hyd./Coolant lines _____
1203 Speed % _____	Start: _____	Check Hydraulic fluid level-DO NOT OVERFILL- Use mfg. req'd. Hyd. Fluid _____
On Time _____ Off Time _____	Total: _____ 0	Check Hydraulic pressure (100-400 psi) _____
GRAB _____	<b>Natural Gas Usage</b>	Check Coolant level-DO NOT OVERFILL- Use mfg. req'd coolant _____
Pump 1201 1202 1203	701 Stop: _____	

Figure 17 - Main WWTP Manual Data Collection Checklist

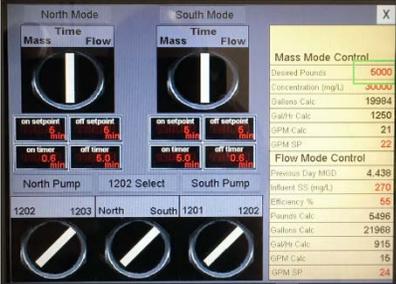
Water system data is also manually collected and manually entered into Microsoft Excel. Following is a sample of a water site data collection form that is used by City staff.



1. **A review of the process in light of the value of automation** – Just because something *can* be automated, does not mean that it *should* be automated. BWCSI discussed with staff to determine if something was considered a good candidate for automation now or in the future. Staff was told to “assume everything is a dollar” to automate to remove the negative pressure of cost consideration during discussion. In discussions with staff, if we jointly did not clearly see operational improvement potential, no further discussion took place.
2. **The feasibility and relative cost for automation** – What would it take (cost) to automate a particular process? Cursory discussions were conducted to evaluate the mechanical, electrical, hydraulic, and controls changes necessary to automate a particular process or part of a process.
3. **The availability of applicable automation technology** – While items like flow, dissolved oxygen, pressure, and chemical weights/dosing are straightforward to analyze, some technologies (like online Biological Oxygen Demand or online phosphate analysis, for example) were reviewed to see if there are technologies mature enough to consider as a reliable automation control parameter.

The following table summarizes the discussion and analysis of options for process automation improvements. A ranking of one to ten is provided (ten being the “best” potential for automation) as a means to evaluate the value, feasibility, cost, and availability of various process automation options. The Cost Summary table at the end of the report includes estimates for where automation was considered valuable, feasible, and available to implement according to the review during the report.

**Table 1 – Automation Process Feasibility Summary**  
 City of St. Charles  
 SCADA System Master Plan

Site/Process	Technology, Instrumentation, and Controls Recommendations	
<b>Main WWTP</b>		
Influent Flow	Add outdoor camera to influent/excess flow weir structure and provide live feed to SCADA/HMI/Mobile.	
Primary Clarification	Add programming to allow for automated wasting options, pump speed control from SCADA (it currently is just at the local OIT), and eliminate having to be in the building to waste primary sludge. Add camera to building interior. See existing Primary Pumping local OIT screen to the right.	
Primary Clarification	Add sludge blanket depth meter(s) to see blanket depth.	
Aeration	Replace all dissolved oxygen probes with working probes with 50 ft cables on them to allow for flexible placement in tanks.	
Aeration <sup>1</sup>	Consider Mixed Liquor Suspended Solids meter in aeration tank to allow for F/M calculations.	
Aeration <sub>1</sub>	Add one ammonia analyzer towards the front end of the aeration tanks prior to split. Consider one or more ammonia analyzers at the tail end of the tank or just prior to heading into the secondary clarifiers.	
Return Activated Sludge	Add motor operators to telescoping valves to adjust RAS rate/mass remotely.	
Return Activated Sludge	Add RAS solids meter to determine mass of RAS/WAS in return and waste.	
<b>West WWTP</b>		
<b>Process</b>	<b>Notes/ Added Instrumentation</b>	
Alarming/General	Add detailed process alarms into a local installation of Win911.	
Electrical Room	Add UPS to control panel/enclosure	
Fine Screen	Tie in additional screen alarms to SCADA (i.e. – position fail) Currently the screen only has high water alarm.	
Aeration	Add 2 DO probes to replace broken units. Add one ammonia analyzer towards the front end of the aeration tanks prior to split. Consider one or more ammonia analyzers at the tail end of the tank or just prior to heading into the secondary clarifiers.	
Aeration	Consider turnkey (procurement) high speed blower replacement of existing Hoffman Blowers and simple automated dissolved oxygen control system. See existing Hoffman Blowers shown to the right.	
Secondary Clarifier	Add one sludge blanket level detector to each of the two secondary clarifiers.	
Aerobic Digester	Replace broken supernatant flow meter. Add two alarms: Thickener arm fail, air lift fail	

<sup>1</sup> Automation to be reconsidered during a full BNR design

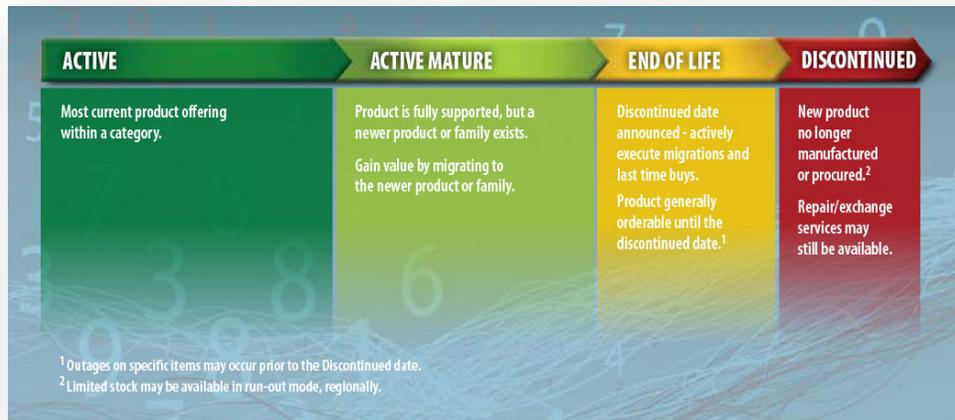
<b>Site/Process</b>	<b>Technology, Instrumentation, and Controls Recommendations</b>
Disinfection	Add existing Allen Bradley UV panel status to SCADA.
<b>Water Sites</b>	
Chemical Feed	Add chemical feed data to SCADA from select water treatment sites. Budget \$50,000 to tie in existing scales and add some instrumentation.
Chemical & Related Pump Status	Add chemical and various transfer pump data from select water treatment sites. Budget \$20,000 to work with staff to identify key pumps to bring status into SCADA.
Trend all water KPIs	Add all Key Performance Indicators to Water SCADA master and trend.
Well 13	Add online pH monitor and trend
Well 9	Replace mercury switches with backup local control pressure transducers
Various water sites	Review failed sensors and update or replace. Budget \$50,000 to review and repair existing sensors and analyzers.
<b>Lift Stations</b>	
All Sites	Consider Power Monitoring for each pump to better assess pump condition and station performance.
All Sites	Poll lift stations every 10-15 seconds for status including wetwell level. Use data to estimate fill and pumping flow rates.
Multiple Sites	Some of the lift stations use PLC-based control while others do not. We recommend standardizing on PLC-based controls for all lift stations which provides more flexibility/functionality than the existing system.

## 3.2 Hardware

### 3.2.1 SCADA PLCs

The existing Allen-Bradley PLCs in use throughout the City are one of the most widely used in the area for water/wastewater applications designed in the 1990s and 2000s. The Village uses mostly “older” series PLCs (such as the SLC and MicroLogix), and a couple newer platform CompactLogix PLCs. The status of each type of PLC is provided in this section, with a replacement plan at the end of the section for those that are recommended for replacement.

The following graphic (borrowed from [Rockwell Automation’s Project Lifecycle Status page](#)) illustrates the various stages Rockwell (Allen-Bradley) equipment can fall into.



**Figure 19 - Rockwell Automation Product Lifecycle Status Graphic**

The SLC Series PLCs are in Active Mature status, and still currently supported by the manufacturer and spare parts are readily available. However, Allen-Bradley has started the process of discontinuing the SLC series PLCs (the SLC 500, 5/01, 5/02 models are all discontinued). Allen-Bradley has also significantly increased costs to “encourage” replacement with the newer Logix platform. As a result, we recommend budgeting to replace the existing SLC Series PLCs with the CompactLogix Series to move the City onto the newer PLC platform. Also, in the event of a partial PLC failure or an identified need to upgrade the PLC programming before the units are replaced, we would recommend the City consider a Logix-based upgrade at that time to avoid reinvesting in the older hardware platform. Replacing the SLC 5/03 and 5/04 PLCs with CompactLogix have the added benefit of providing the ability to communicate using the native Ethernet port on the PLC rather than a third party converter, which adds complexity and provides an additional point of failure.

Even though the existing CompactLogix L23E PLC at Well 13 and L35E PLC used for the UV system at the Main WWTP are a newer platform, those specific models has been discontinued as a newer model is available. The newer model (L24ER and L33ER, respectively) are basically a direct replacement, so there is no reason to proactively replace these PLCs.

The MicroLogix 1100 and 1400 PLCs are in Active status and fully supported, so there is no need to plan for their replacement at this time.

For any new projects designed and implemented by the City moving forward, the Allen-Bradley MicroLogix 1400 or CompactLogix Series PLCs should be used. The CompactLogix L1, L2, or L3 Series should be determined based on the specific application requirements. A summary of the

specifications for the different CompactLogix PLCs appears in the table below.

**Table 2 – Recommended PLC Model Overview and Summary Capacity**

PLC Model	Comm Ports	On Board I/O Capacity	Expansion I/O Type	Expansion I/O Capacity
MicroLogix 1400	ENET, 2 Serial	20 DI / 12 DO 4 AI / 2 AO	1762 Series	Qty 7 modules
Compact L18ER	ENET, USB	16 DI / 16DO	1734 Series	Qty 8 modules
Compact L24ER	ENET, USB	16 DI / 16 DO / 4 AI / 2 AO	1769 Series	Qty 4 modules
Compact L30ER	ENET, USB	None	1769 Series	Qty 8 modules
Compact L33ER	ENET, USB	None	1769 Series	Qty 16 modules
Compact L36ERM	ENET, USB	None	1769 Series	Qty 30 modules

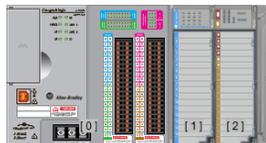
Following are images of the MicroLogix 1400 and various CompactLogix PLCs:



MicroLogix 1400



CompactLogix L18ER



CompactLogix L24ER



CompactLogix L33ER

Specific recommendations for both PLC and OIT replacement for each site are provided in Exhibit B.

### 3.2.2 Operator Interface Terminals

The Allen-Bradley Standard PanelViews and PanelView Plus OITs that are used throughout the City have all been discontinued. We recommend that the City plan to upgrade any Standard PanelView with the new Allen-Bradley PanelView Plus 7 Series. The specific model and screen size is determined based on the existing PanelView being replaced. The existing PanelView Plus units, although obsolete, do have a direct replacement that requires minimal work to migrate the program as the same software is used to configure the PanelView Plus and PanelView Plus 7 units. Therefore, there is no need to proactively replace these units.

The existing Standard PanelView units should be replaced in conjunction with the PLC replacement within the same panel.

Any new projects should include using the PanelView Plus 7 Series OITs. The OIT size (7" through 15") should be determined based on the level of detail required on the screens.

Specific recommendations for both PLC and OIT replacement for each site are provided in Exhibit B.

### 3.2.3 SCADA Server Hardware

BWCSI typically recommends that server class, commercially manufactured machines are used for SCADA applications (like what the City uses for other IT systems). SCADA class machines should have redundant hard drives and redundant power supplies, which are the components that most often fail on a computer. Many communities choose to house SCADA server hardware in a server room or physically protected area and rack enclosures can be used to optimize floor space. Servers should be planned for physical replacement every 5 years.

Additional system resiliency can be achieved by leveraging Hyper-V replication in the virtualized SCADA environment. Copies of the main virtualization files would be replicated over the fiber optic network to the failover replicate server at City Hall to be used in the event of a major hardware or software outage.

BWCSI recommends the following resilient approach which includes two virtual host servers, each with multiple virtual machines:

- Install a new server class machine running Microsoft's Windows 2016 Server platform with Hyper-V to be the new virtual host server supporting a virtualized SCADA infrastructure. The new server should be located in a server rack or cabinet located at Public Works. Virtualization is a way of taking a larger server and partitioning it into smaller servers.
- On the new virtual host server configure two Virtual SCADA Servers (one for water and one for wastewater) with SCADA Software needed to communicate with the Programmable Logic Controllers (PLCs) and Win911 alarm software.
- On the new virtual host server configure two Virtual Remote Access Servers (RDS) with SCADA thin client licenses (one for water and one for wastewater). These licenses will provide the access to view the City's SCADA graphical software (Water, and Wastewater). Each SCADA environment will be restricted through security.
- On the new virtual host server configure two virtual servers for Mobile 911 alarming (iPhone and Android alerting). The Mobile 911 servers could be located at City Hall, if desired.

- Configure virtualization replication to a server class machine located at City Hall for all six virtual servers listed above. If the City has an existing virtual host, it may be used as the replication server if it has enough resources.

### 3.3 Software

#### 3.3.1 SCADA Graphics Software

The Wonderware InTouch software currently in use by the City is one of the three most commonly used SCADA software packages for Water/Wastewater (the others being GE iFix and Rockwell FactoryTalk View SE). Wonderware System Platform (WW SP) is Wonderware's newer SCADA software application that exceeds InTouch in functionality, but is more complex to implement, with few local integrators who have expertise in the software development making long-term serviceability a liability. We recommend the City consider reviewing alternative software suppliers before upgrading and make a decision based on desired functionality, best fit and long-term serviceability.

#### 3.3.2 SCADA Software Screens

Whether or not the City pursues a physical control room or stays with a remote software-based "control room" concept, it would be ideal for the City to have a set of standards for SCADA screens and related screen development. The existing screens show "building numbers" for navigation (see below for example) and are should be ideally set up to show the various processes *instead of* building numbers. Using building numbers for navigation may feel familiar to experienced staff but they do not mean anything to the process and require new staff to learn what building does what instead of more intuitive process based screens (i.e. – "Primary Clarifiers," or "Solids Processing"). In addition, some screens are very busy "CAD" looking screens (see WAS Screen below) and others are very different and use overly simplified shapes (see Aeration screen below) with little representation of process. For a new or even somewhat experienced operator, the existing screens and their navigation can be very confusing.

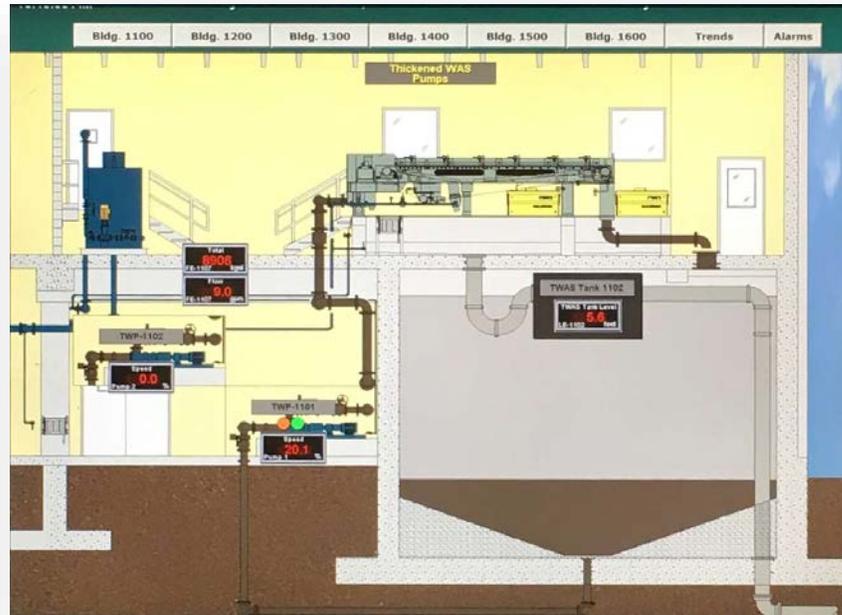


Figure 20 - St Charles Main WWTP WAS SCADA Screen

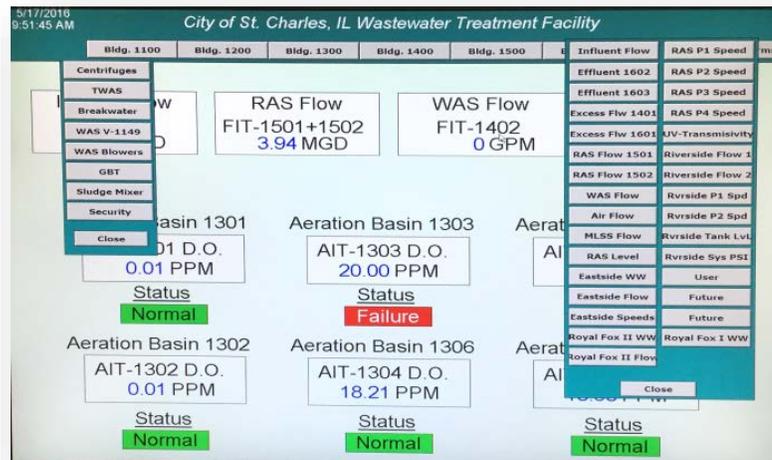


Figure 21 - St. Charles Main WWTP Aeration SCADA Screen

BWCSI typically recommends that SCADA screens follow some simple rules to help operators work with them easily, be easily updatable, as well as support more forward-facing “high performance HMI” standards. The following are a list of recommended features and attributes that we recommend the City consider for SCADA screen development:

- **SCADA Screen standards** – Some sort of HMI style guide should be used to identify the basic navigation, KPIs (see below), color use, and display functionality.

- Level 1 (overview) screens should ideally be simple, without a lot of color or distracting animations, without process detail.
  - Level 2 should be a unit process (aeration, for example) and still not show a lot of detail and stick to simple colors and no animation.
  - Level 3 and optionally Level 4 can show process details, diagnostics, all detailed sensors, alarms, etc., as well as we simple animations.
- **SCADA Screen Physical Design** should ideally be a 16:9 (wide screen) aspect ratio, or 1920 pixels wide by 1080 pixels tall (full high definition). All monitors and displays used for SCADA should also support this resolution natively.
  - **Process KPIs** – Key Performance Indicators (KPIs) should be identified during SCADA development for each *process* and labeled as such. KPIs for each plant (usually influent and effluent flows, select loads, or system pressure and flows for water) should also be identified and labeled as such. KPIs should be prominently displayed for each process and plant SCADA screen (see below). Ideally, KPIs would also show normal ranges of operation on the graphics themselves, to allow operations staff to see “normal” values quickly.
  - **Energy management** and related key KPIs/metrics should be visualized and available on every applicable process screen. Energy and process KPIs should be considered for combination and trending displays as well. The current real-time estimated cost of operations per facility should be displayed and trended for each. For example, showing the current influent MGD/Plant kW over time will help to sensitize operations staff to the result of energy efficiency changes during process or flow changes, even if there is not a strong impetus to optimize energy usage. Similarly, on a process level, showing and trending current ammonia loading rate (lbs/hr. or similar) at the WWTPs can be useful to understand the result of return flows high in ammonia and their impact over time on the aeration process.
  - **SCADA Screen layout** – any new SCADA work done for the City should support the recommended layout for SCADA screens similar to what is shown below. A couple sample existing SCADA system screens from other facilities are shown below the generic recommended layout.

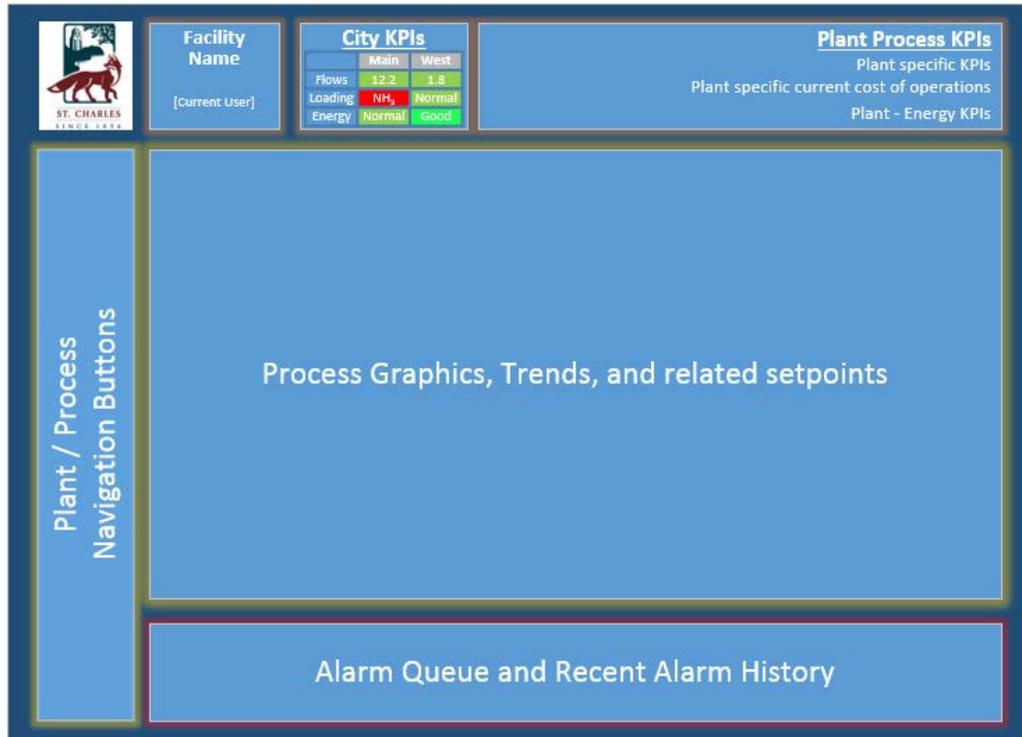


Figure 22 - Recommended SCADA Screen Layout

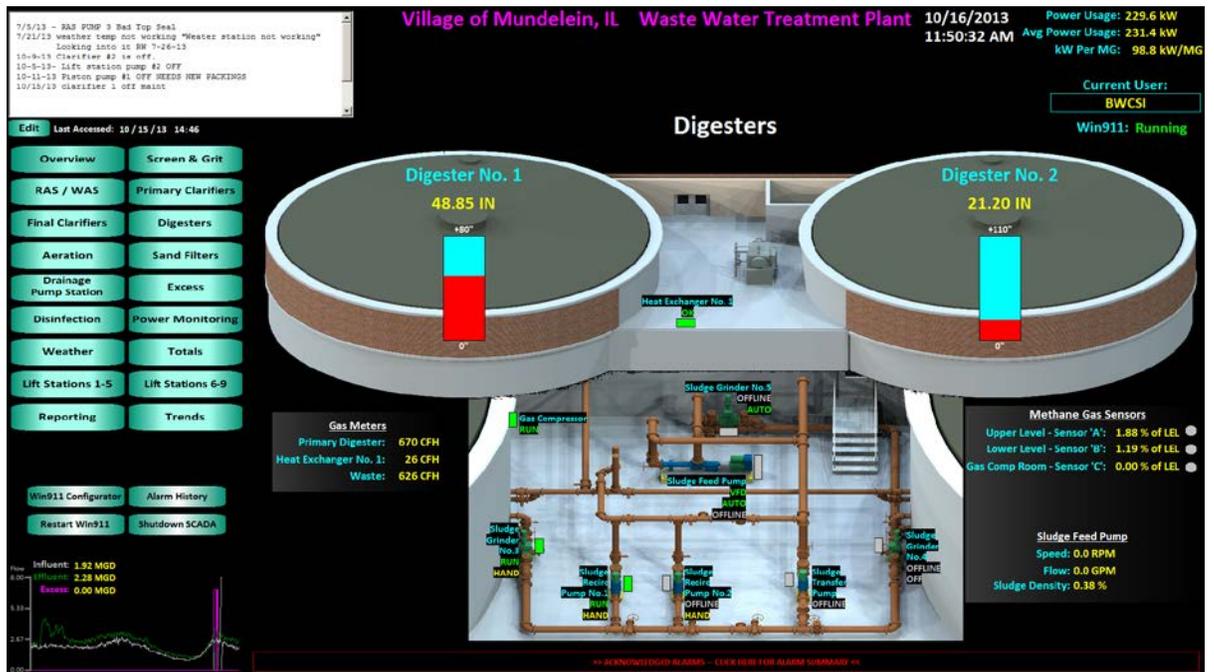


Figure 23 - Sample SCADA Screen Layout in Use (Digester Building Shown)

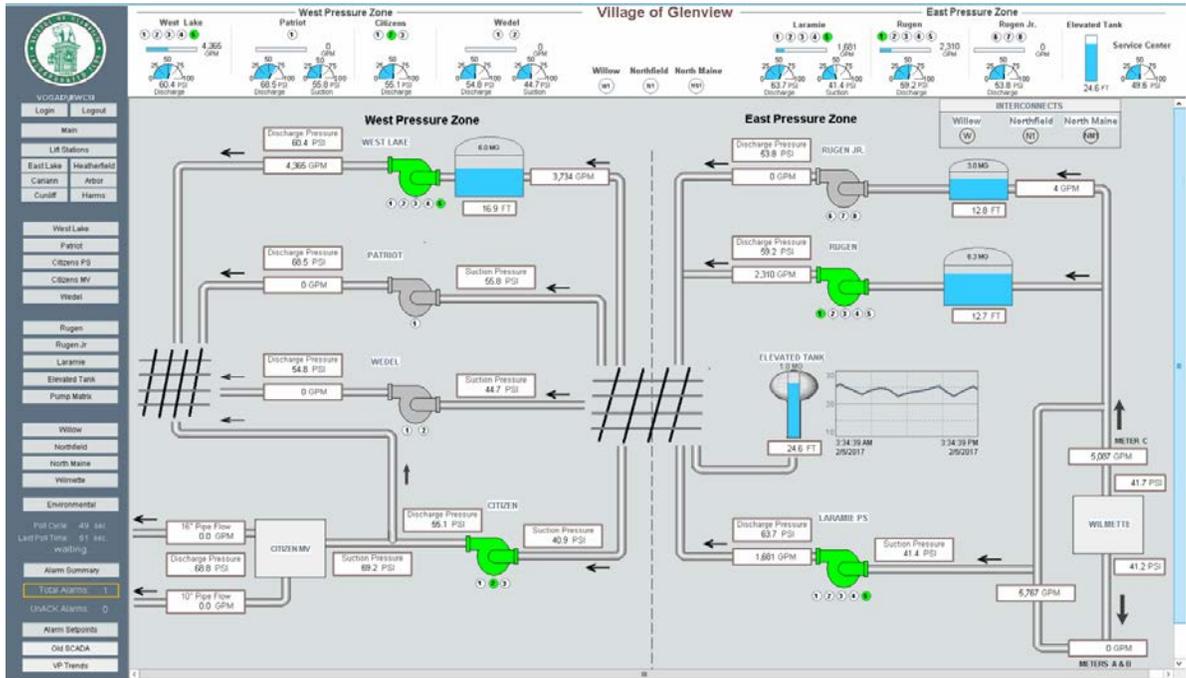


Figure 24 - Sample SCADA Screen Layout (Water System Overview)

- Quick Trends or Sparklines** – Quick trends or “sparklines” are often small, sometimes unitless graphs that show specific key process values trended over time. They allow users to quickly glance and see if trends are going up, down, steady, or erratic and can help troubleshoot process changes. We recommend the City consider the inclusion of sparklines in the SCADA screens developed. See a sample of a SCADA sparklines in the figure below.

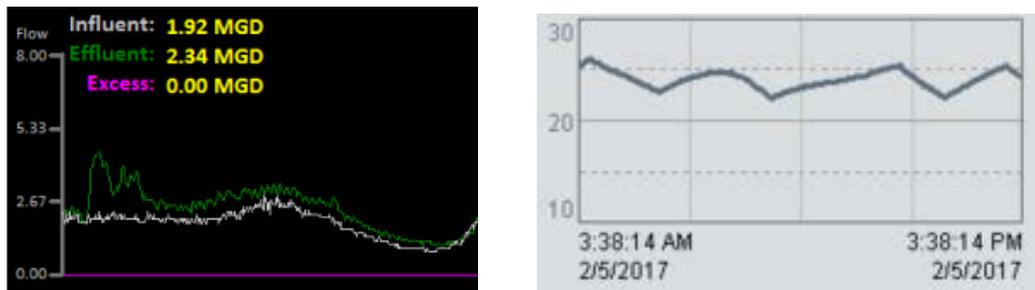


Figure 25 - Sample SCADA Sparklines (smaller in SCADA)

### 3.4 Network/Communications

In general, BWCSI recommends managed industrial Ethernet switches in all SCADA environments. Managed switches provide VLAN capabilities (network segmentation), health and statistics, and other key indicators. The City has standardized on Cisco for its administrative network LAN/WAN infrastructure and also use Cisco industrial switches in some process control panels. Cisco has a product line of industrial Ethernet switches. Rockwell also uses the Cisco operating system in their industrial switches branded as their Stratix line.

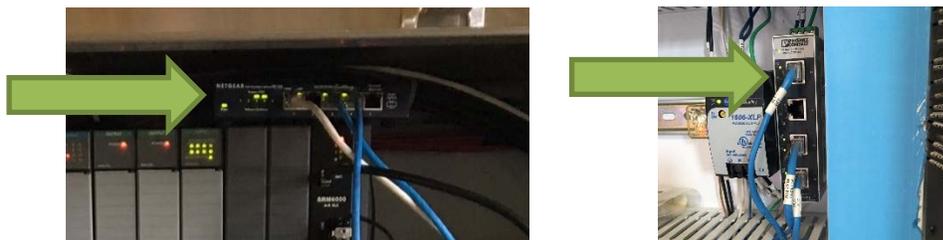
### 3.4.1 Routing and Firewalling

BWCSI recommends network isolation for SCADA servers, PLCs, and other network connected instrumentation. Users should ideally only interact with the SCADA servers through thin client terminals. Remote SCADA connections should be limited to only the ports required for communication. SCADA servers should be allowed to communicate with the City’s IT management applications like Windows Patch management and Antivirus management again through the required ports needed. A syslog application can capture the traffic passing through the network devices and keep a detailed log of all communication attempts.

BWCSI recommends the City selectively turn on routing between its existing SCADA network and the existing administrative network. In addition, after the new SCADA architecture is implemented, Public Works SCADA users would connect through thin clients located on the administrative network. The City’s WhatUp Gold monitoring software could also be used to monitor a few more key SCADA network and security devices to ensure the SCADA network’s health and continued stability.

### 3.4.2 Main WWTP

There are numerous control panels where the physical network connections and network switching should be improved. We recommend that every Ethernet (Cat5/6 or fiber) cable be terminated in a patch panel with patch cables used to connect the patch panel to the Ethernet switch, rather than simply crimping ends on the cables. This would provide for a more robust connection. Also, many of the panels use consumer-grade Ethernet switches rather than industrial Ethernet switches. We recommend that all of the consumer-grade switches be replaced with industrial switches as described above.



**Figure 26 – Consumer Grade Switch (Left) vs Industrial Switch (Right)**

### 3.4.3 West WWTP

The West WWTP currently has fiber optic cabling between all PLC panels. The existing PLCs use the DH+ communication protocol over the fiber optic cabling. When the PLCs are replaced, the existing fiber optic cabling can

simply be used for Ethernet communications in lieu of the DH+ communications.

#### 3.4.4 Water Facilities and Lift Stations

We recommend replacing the existing Cradlepoint cellular router with an industrial cellular router. The industrial cellular routers are more suitable for the application as they are designed to be installed inside control panels and have more robust environmental ratings.

### **3.5 Security/Disaster Recovery**

BWCSI recommends several changes to address disaster recovery and overall security for the SCADA network.

#### 3.5.1 Backup and Recovery

The City should implement network level backups for all SCADA servers to a secure location like a storage device at City Hall. BWCSI typically recommends that SCADA backup data should be retained on a rolling 4-week period. “Off the shelf” backup software has this feature built in. These backups are used to restore data files that may become corrupt or deleted. The backups could also be used to restore the system in the event a complete system outage. Cloud based backups are also a good option to keep data protected.

#### 3.5.2 Antivirus and Patch Management

We recommend the City proactively patch their SCADA servers with Antivirus updates and Windows Operating System Patches, addressing system security and performance. Typically SCADA patching is done by a qualified systems integrator in coordination with both Public Works and City IT. Patches should be reviewed prior to deployment for SCADA application compatibility. Most AV and patch management systems provide very good reporting on patch revisions. These reports should be reviewed by a qualified systems integrator on a periodic basis to make sure that SCADA system security is being addressed without having to interrupt the SCADA applications.

#### 3.5.3 Standardized Logins and Password

We recommend the City consider leveraging their existing Active Directory network accounts to provide authorization and track all access to SCADA applications. On boarding and off boarding can be simplified and access can be changed / removed in a single spot rather than separate areas.

## 3.6 Alarm Management

We recommend that the City simply upgrade their existing Specter Instruments Win-911 alarm software for the wastewater based alarms, and replace the Wonderware SCADAAlarm software with Win-911 for water system based alarming since Wonderware SCADAAlarm is an obsolete product. The newer release of Win-911 has the ability to use Voice-over-IP (VoIP) connection for making phone calls, and other methods of notification (such as iOS or Android push notification in an app) that do not rely on standard voice-grade phone lines. The newer software also provides additional benefit as it can be installed on virtualized server-class systems. In addition, standard voice-grade phone lines are becoming less prevalent, making a virtual VoIP connection more ideal.

We recommend the City also consider installing three backup hardware alarm dialers (one each for Water/Lift Stations, Main WWTP and the West WWTP) to provide alarm notification if the software-based alarming were to fail. The backup dialers would be wired directly to a local PLC and would not rely on the SCADA or Win911 alarming software to function.

## 3.7 Historical Data Collection / Reporting

### 3.7.1 SCADA Trending/Historian

The concept of the SCADA trend versus enterprise historian is often misunderstood. An enterprise historian is different than a typical (relational) database like Microsoft Access or Microsoft SQL. Enterprise process historians generally are superior in four areas:

1. Data Storage Speed
2. Data Compression
3. Ability to analyze trends outside of SCADA
4. Ability to talk to other/outside data sources

Most operators want to know the trend of many different tags (points of data) over months, days, hours, or even over minutes (rarely over seconds in the water/wastewater industry). If a typical water or wastewater facility has between one and two thousands tags of data and wants to collect data at least once or twice per minute that results in literally millions of data points per day. While many modern server-based relational databases (i.e. – Microsoft SQL) can handle that amount of data, process historians typically store that data effortlessly and will compress the data with very little user intervention or integrator configuration. For example, if a typical RAS flow rate stays the same for 4 hours, a process historian will only store a new data point every 10-15 minutes and just “flag” the tag to indicate it hasn’t changed, effectively reducing the data collected by a factor of 10 or

more. A relational database would typically have to store the same data point for each time period it was collected.

Wonderware InTouch (the City's current SCADA software vendor) has two types of process (SCADA) "historian" type tools available: **Built-in Trending** and **Wonderware (Enterprise) Historian**. The City is currently only licensed for the built-in trend tool, as it was included as a part of the original SCADA implementations. While the existing trend tool does a good job of regularly storing process points of data and showing a few trend screens in SCADA, it is very limited in its ability to effectively aggregate, analyze, and display the data conveniently for City staff. InTouch built-in trending requires a manual and very technical process to extract data for analysis and as such, is not typically recommended for agencies that regularly analyze process data.

Once a utility has decided to pursue a higher performance and more flexible enterprise historian, an analysis of *which* process historian to choose needs to be made. Similar to the SCADA software itself, there are a few major vendors that provide very good options for a better process historian. For the sake of simplicity and efficiency, BWCSI recommends the review of the two leading water/wastewater historian vendors in the area: [Rockwell FactoryTalk Historian](#) and the [Wonderware Historian](#). Both Rockwell and Wonderware Historians are used by thousands of facilities world-wide and have excellent support. Their Historian clients make it easy for users NOT in SCADA to analyze data created by SCADA.

Both the Wonderware and Rockwell Historians have a full-featured separate client installation and software that allows for built-in dynamic graphing from the tag selection, built-in filtering, an advanced query tool, and other statistical analysis tools. See the figures below for examples of the Wonderware Historian Client. The Rockwell client is similar.

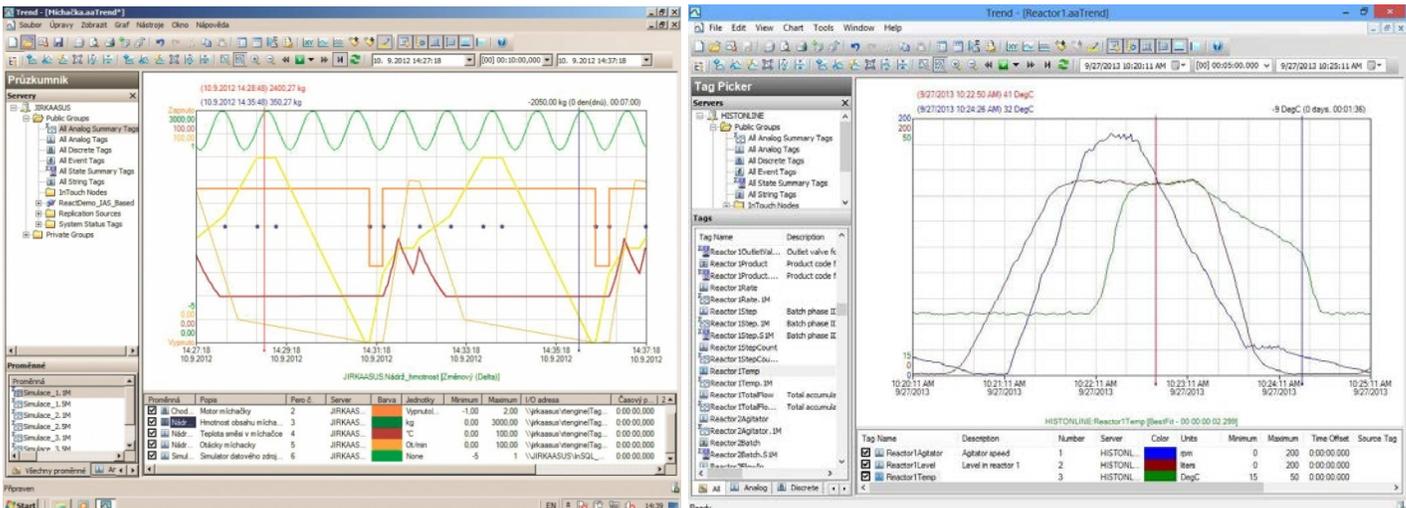


Figure 27 - Sample Screenshots of Wonderware Historian Client

Despite coming from a competing software vendor, the Rockwell Historian product is also compatible with a Wonderware-based SCADA system. A short demonstration of the Wonderware Historian product was presented to City staff during the SCADA planning workshop and staff seemed very interested in the built-in capabilities of the product. While a detailed historian product evaluation and design is outside the scope of this implementation evaluation, BWCSI recommends the City consider an investment in a one or two seats of the Rockwell or Wonderware Historian product (possibly a limited length demo license), as well as a further evaluation of both. It was clear through our evaluation that the staff could definitely use a method to quickly and easily extract SCADA data for analysis. By budgeting for a detailed historian trial and analysis, the City can expect to gain a deep understanding of the product's capabilities and potential and obtain a more detailed estimate of a full implementation. For budgeting purposes we assumed up to six concurrent users of the historian deployed across the City and have provided budget numbers that would allow the City to add SCADA servers in the future that would also "plug into" the then existing historian architecture.

### 3.7.2 Reporting

#### 3.7.2.1 Summary Recommendation

We recommend the City replace most all current pencil/clipboard and Microsoft Excel data collection for both Water and Wastewater with a relational-database style browser-based reporting system.

#### 3.7.2.2 Difference Between a Historian and Reporting Solution

Although a historian mentioned in the section above is a critical tool to manage process and related data, they typically do not provide the flexible reporting that is required for regulatory purposes and effective operations. In most water and wastewater treatment facilities, there are primarily three sources of data:

1. **SCADA data** (automatically generated)
2. **Laboratory data** (typically collected through either MS Excel™ or in some sort of Laboratory Information Management System , or LIMS). Sometimes this data comes from the operations staff as well if the tests are straightforward.
3. **Operational data** (any manually collected data, in the City's case, done by pencil and clipboard then manually transferred to Excel on a regular basis).

At the City, these three sources of data currently are each collected independently and much (but not all) of the information from laboratory and operational is currently combined manually in Excel. While Microsoft Excel is a very familiar product to many, it has many disadvantages in data-centric applications like water/wastewater. Specifically:

- **Difficult to look at more than a month** - Excel is not meant to be a database. In order to look at, say a year or two worth of data, often dozens or possibly over a hundred Excel files need to be opened. For example, if the City wanted to compare water usage in July for the past 10 years, it would take hours.
- **Lack of outside data access** - Data cannot be accessed or linked to and from other applications into Excel easily. Rainfall data from USGS or Weather Underground, for example, cannot be easily brought into Excel operations spreadsheets, yet it impacts operations at the wastewater facilities when it comes to excess flow. On the water side, City water meter data cannot and is not currently compared monthly with water production making monthly unaccounted for (non-revenue) water loss analysis difficult.
- **Data sharing delays** - Lab result spreadsheets are typically not made available to operators until the process has long since changed. For example, wastewater operators could benefit from knowing ammonia results quickly, but do not get them until the request the data from the lab when it is done and open separate spreadsheets to see it.

There are other commercial and open architecture reporting solutions such as Hach WIMS or other database and browser-based solutions that could likely suit the City much better than Excel spreadsheets. Whatever product the City chooses, we recommend the City consider the following core components of a WRF Reporting system:

- Relational database architecture (all data stored in the same database with virtually unlimited storage)
- Option for a browser-based (clientless) software (so users don't need to install dedicated software on their computers)
- Supports full data export to Excel (for Excel graphing and additional analysis outside of the product)
- Support for simple laboratory data collection (managed laboratory data entry in the SAME SYSTEM)
- Support for automated SCADA summary data (usually daily) collection

- Supports (future) netDMR export or automated State of Illinois EPA - based reporting
- Supports manual tablet or smartphone-based data collection
- Natively designed for the water and wastewater industry

Due to the complex nature of deploying a City-wide water/wastewater reporting system, we recommend City staff consider a product summary evaluation (demonstrations) followed by a pilot project utilizing one or two reporting systems prior to a full implementation. As such, we have provided a budgeted phased approach to a Reporting deployment in the cost table in Section 4.

### 3.8 Remote Access

The City’s administrative network currently employs a very secure and flexible remote networking authentication and remote network access protocol called Virtual Private Networking (VPN). It was operating on a Cisco ASA5510 during this study. If Public Works were to follow the recommended Remote Desktop Services (RDS) SCADA architecture described above and leverage the City’s existing (VPN) infrastructure, water/wastewater staff would have fully secured, audited, and safe SCADA access from remote computers, supported tablets, as well as supported cellular smart phones. The VPN/RDS style of remote SCADA access is well supported and in use by dozens of water/wastewater utilities in the area, and will provide the City with the security they need and the added convenience of remote access to SCADA, which typically saves communities in reduced overtime labor and allows quicker response to water and wastewater emergencies. The most secure agencies utilize two-factor authentication, which requires a small key fob or app on a smart phone in conjunction with username and password to authenticate remotely.

Enabling remote access through a remote desktop application will allow Public Works staff to have remote access to SCADA screens. However even though RDS style remote apps support native applications, all must utilize the RDS environment, which can be difficult to navigate and use on a tablet or smartphone, as it is essentially a Windows computer running through a tablet or smartphone. Native applications (or “apps” as they are usually known) are specifically designed for tablet and smartphone environments and offer advantages such as larger buttons, icons, and simplified navigation (as opposed to repeatedly pinch-zooming in and out). Currently, there are not native apps for Wonderware InTouch, but there are other options for other apps that work well with Wonderware software (like SmartGlance, to the right, for example) that can be



**Figure 28 - Sample SmartGlance Screenshot**

considered during an upgrade and would allow water/wastewater staff an improved mobile experience.

As the City moves forward with SCADA (and related) technology upgrades, and as SCADA technology itself continues to advance (and more apps become available), we recommend the City periodically (a couple times per year) evaluate potential native applications to supplement the RDS environment. Based on the City's existing information technology architecture, we do not for see a significant (>\$1,000) investment to implement more tablet and smartphone-friendly apps.

## **4.0 Budget Costs**

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The tables below summarize the budget costs associated with the capital recommendations made in Section 3 of this report. Within each table, the costs are further broken down by phase. A detailed design was not included in the scope of this project, and as such, these costs are based on information collected for this planning report and should not be considered all-encompassing.

**Table 3 – Budget Cost Summary for Main WWTP**

Scope of Work	Phase 1 Cost	Phase 2 Cost	Phase 3 Cost	Phase 4 Cost	Reference Section
Sludge Handling PLC-1100 PLC and OIT Replacement				\$22,500	3.2.1 & 3.2.2
Headworks PLC-1200 PLC and OIT Replacement				\$15,000	3.2.1 & 3.2.2
Primary Sludge PLC-1201 PLC and OIT Replacement				\$15,000	3.2.1 & 3.2.2
Aeration PLC-1300 PLC and OIT Replacement				\$19,500	3.2.1 & 3.2.2
RAS PLC-1600 PLC and OIT Replacement				\$24,500	3.2.1 & 3.2.2
Anaerobic Digester PLC-1700 PLC and OIT Replacement				\$23,000	3.2.1 & 3.2.2
Backup Dialer Installation	\$6,000			\$0	3.6
Influent Flow Outdoor Camera with Video Management Software				\$8,000	3.1
Primary Clarification Automated Wasting and Outdoor Camera				\$10,000	3.1
Primary Clarification Sludge Blanket Levels (2 total)				\$30,000	3.1
Aeration – Replace DO probes ( <i>cost per probe</i> )				\$3,000	3.1
Aeration – MLSS meter				\$20,000	3.1
Aeration – ammonia analyzer				\$35,000	3.1
Return Activated Sludge – motor operators ( <i>cost per operator</i> )				\$10,000	3.1
Return Activated Sludge – solids meter				\$20,000	3.1
Ethernet switch upgrades (PLC-1300, PLC-1600)				\$10,000	3.4.1
<b>TOTALS</b>	<b>\$6,000</b>			<b>\$265,500</b>	

**Table 4 – Budget Cost Summary for West WWTP**

Scope of Work	Phase 1 Cost	Phase 2 Cost	Phase 3 Cost	Phase 4 Cost	Reference Section
Headworks PLC-2201 PLC and OIT Replacement			\$32,000		3.2.1 & 3.2.2
UV PLC-2601 PLC and OIT Replacement			\$23,500		3.2.1 & 3.2.2
UV MFR Panel PLC and OIT Replacement			\$11,000		3.2.1 & 3.2.2

Scope of Work	Phase 1 Cost	Phase 2 Cost	Phase 3 Cost	Phase 4 Cost	Reference Section
RAS/WAS PLC-2701 PLC and OIT Replacement			\$25,500		3.2.1 & 3.2.2
Digester PLC-2801 PLC and OIT Replacement			\$23,500		3.2.1 & 3.2.2
Backup Dialer Installation	\$6,000				3.6
Alarming/General	\$5,000				3.1
Electrical Room UPS	\$2,000				3.1
Fine Screen alarming and status		\$10,000			3.1
Aeration instrumentation				\$70,000	3.1
Aeration High Speed Blowers				\$500,000	3.1
Secondary Clarifier sludge blanket level				\$30,000	3.1
Aerobic Digester supernatant flow meter				\$20,000	3.1
Disinfection UV status		\$10,000			3.1
<b>TOTALS</b>	<b>\$6,000</b>	<b>\$20,000</b>	<b>\$115,500</b>	<b>\$620,000</b>	

**Table 5 – Budget Cost Summary for Water Facilities**

Scope of Work	Phase 1 Cost	Phase 2 Cost	Phase 3 Cost	Phase 4 Cost	Reference Section
Public Works – Master PLC		\$16,500			3.2.1 & 3.2.2
Well 3 & 4 PLC and OIT Replacement		\$89,000			3.2.1 & 3.2.2
Well 7 PLC and OIT Replacement		\$21,000			3.2.1 & 3.2.2
Well 8 PLC and OIT Replacement		\$65,000			3.2.1 & 3.2.2
Well 9 PLC and OIT Replacement		\$20,000			3.2.1 & 3.2.2
Well 11 PLC and OIT Replacement		\$21,000			3.2.1 & 3.2.2
Well 13 PLC and OIT Replacement		\$45,500			3.2.1 & 3.2.2
10 <sup>th</sup> Street Tower PLC and OIT Replacement		\$13,500			3.2.1 & 3.2.2
Campton Hills Tower PLC and OIT Replacement		\$13,500			3.2.1 & 3.2.2
Backup Dialer Installation		\$6,000			3.6
Chemical Feed			\$50,000		3.1

Scope of Work	Phase 1 Cost	Phase 2 Cost	Phase 3 Cost	Phase 4 Cost	Reference Section
Chemical & Related Pump Status			\$20,000		3.1
Trend all water KPIs		\$10,000			3.1
Well 13 pH monitor		\$10,000			3.1
Well 9 pressure control		\$15,000			3.1
Various water sites – misc work			\$50,000		3.1
<b>TOTALS</b>		<b>\$35,000</b>	<b>\$120,000</b>		

**Table 6 – Budget Cost Summary for Lift Stations**

Scope of Work	Phase 1 Cost	Phase 2 Cost	Phase 3 Cost	Phase 4 Cost	Reference Section
Eastside PLC and OIT Replacement				\$20,500	3.2.1 & 3.2.2
Riverside PLC and OIT Replacement				\$53,500	3.2.1 & 3.2.2
Install Power Meters (cost per pump)		\$5,000			3.1
Pheasant Run Add PLC-based controls and level transmitter			\$30,000		3.1
7 <sup>th</sup> and Division Add PLC-based controls and level transmitter			\$30,000		
Woods of Fox Glen Add PLC-based controls			\$25,000		
Kingswood Replace cellular router and connect to pump control PLC		\$8,500			
Country Club Add PLC-based controls			\$25,000		
Royal Fox 1 Replace cellular router and connect to pump control PLC		\$8,500			
Reneaux Replace cellular router and connect to pump control PLC		\$8,500			
Oak Crest Add PLC-based controls			\$25,000		
Red Gate Add PLC-based controls			\$25,000		
Wild Rose Add PLC-based controls and level transmitter			\$30,000		

Scope of Work	Phase 1 Cost	Phase 2 Cost	Phase 3 Cost	Phase 4 Cost	Reference Section
Zylstra Add PLC-based controls			\$25,000		
Pine Ridge Add PLC-based controls			\$25,000		
Washingtongton Add PLC-based controls and level transmitter			\$30,000		
<b>TOTALS</b>		<b>\$30,500</b>	<b>\$270,000</b>	<b>\$74,000</b>	

**Table 7 – Budget Cost Summary for SCADA Hardware/Software**

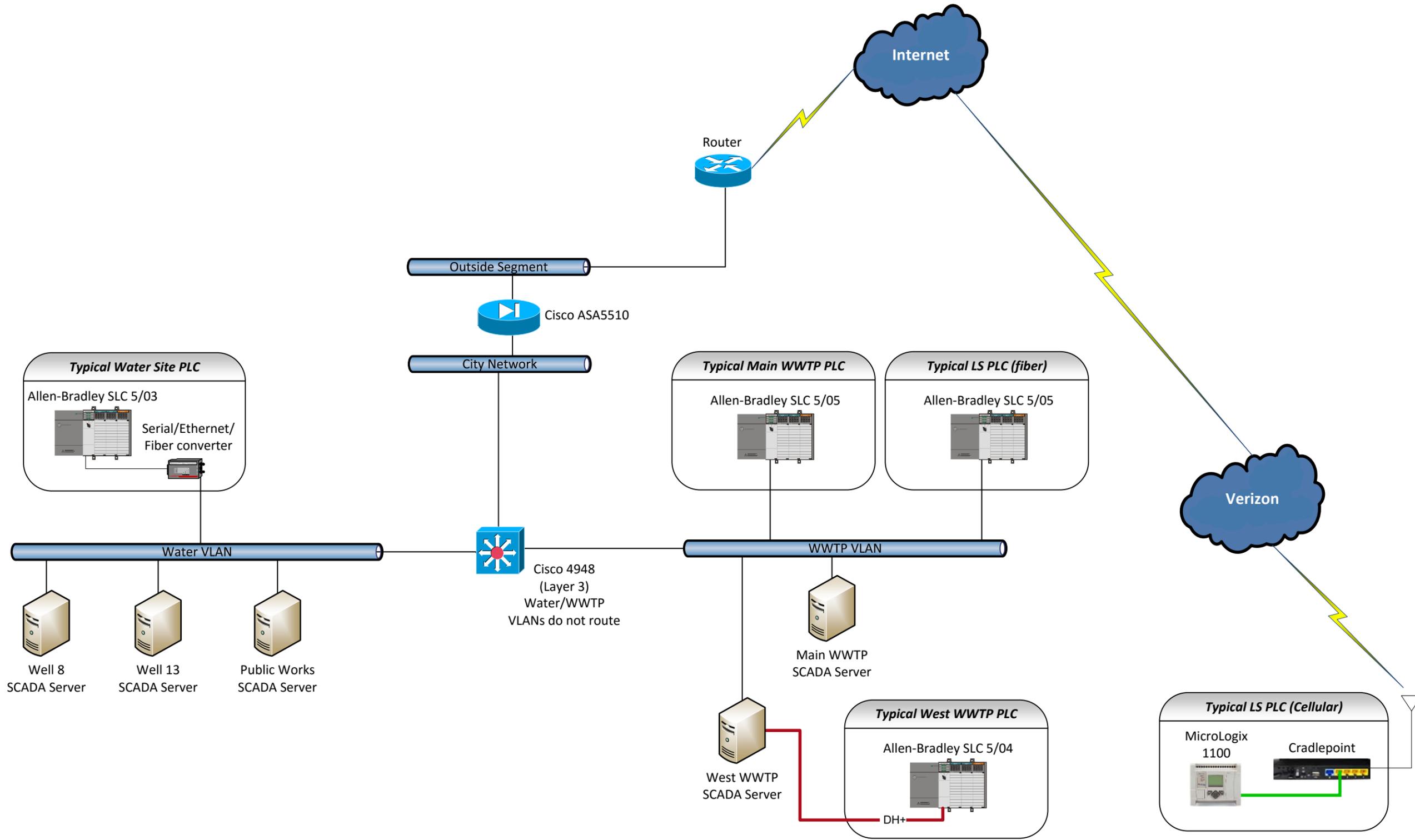
Scope of Work	Phase 1 Cost	Phase 2 Cost	Phase 3 Cost	Phase 4 Cost	Reference Section
SCADA Server Hardware/Software Upgrade (includes alarm software)	\$145,000				3.2.1 & 3.2.2
<b>TOTALS</b>	<b>\$145,000</b>				

#### 4.1 Total Budget Cost Summary Table

The following table provides a summary of the all of the costs for each phase of implementation, combining all facilities and recommendations.

**Table 8 – Budget Cost Summary for Complete Improvements**

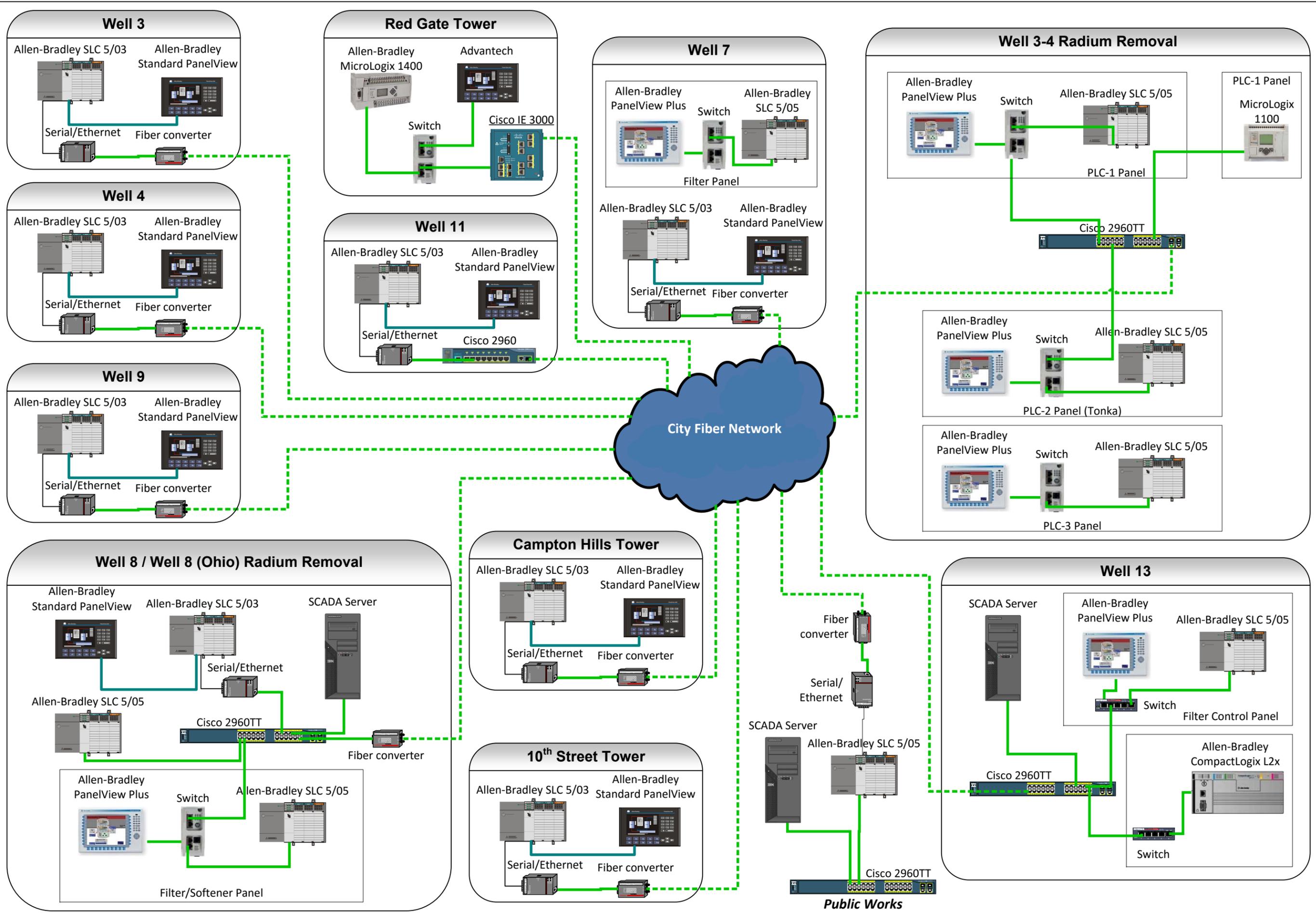
	Phase 1 Cost	Phase 2 Cost	Phase 3 Cost	Phase 4 Cost
Main WWTP Upgrades	\$6,000	\$0	\$0	\$265,500
West WWTP Upgrades	\$6,000	\$20,000	\$115,500	\$620,000
Water Site Upgrades	\$0	\$346,000	\$120,000	\$0
Lift Station Upgrades	\$0	\$30,500	\$270,000	\$74,000
SCADA Hardware/Software Upgrades	\$145,000	\$0	\$0	\$0
<b>TOTALS</b>	<b>\$157,000</b>	<b>\$396,500</b>	<b>\$505,500</b>	<b>\$959,500</b>



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City of St. Charles, Illinois  
 Network Diagram  
 Overview

**B&W Control Systems Integration**  
 8678 Ridgefield Rd.  
 Crystal Lake, IL 60012  
 www.bwcsi.com  
 (815) 788-3600



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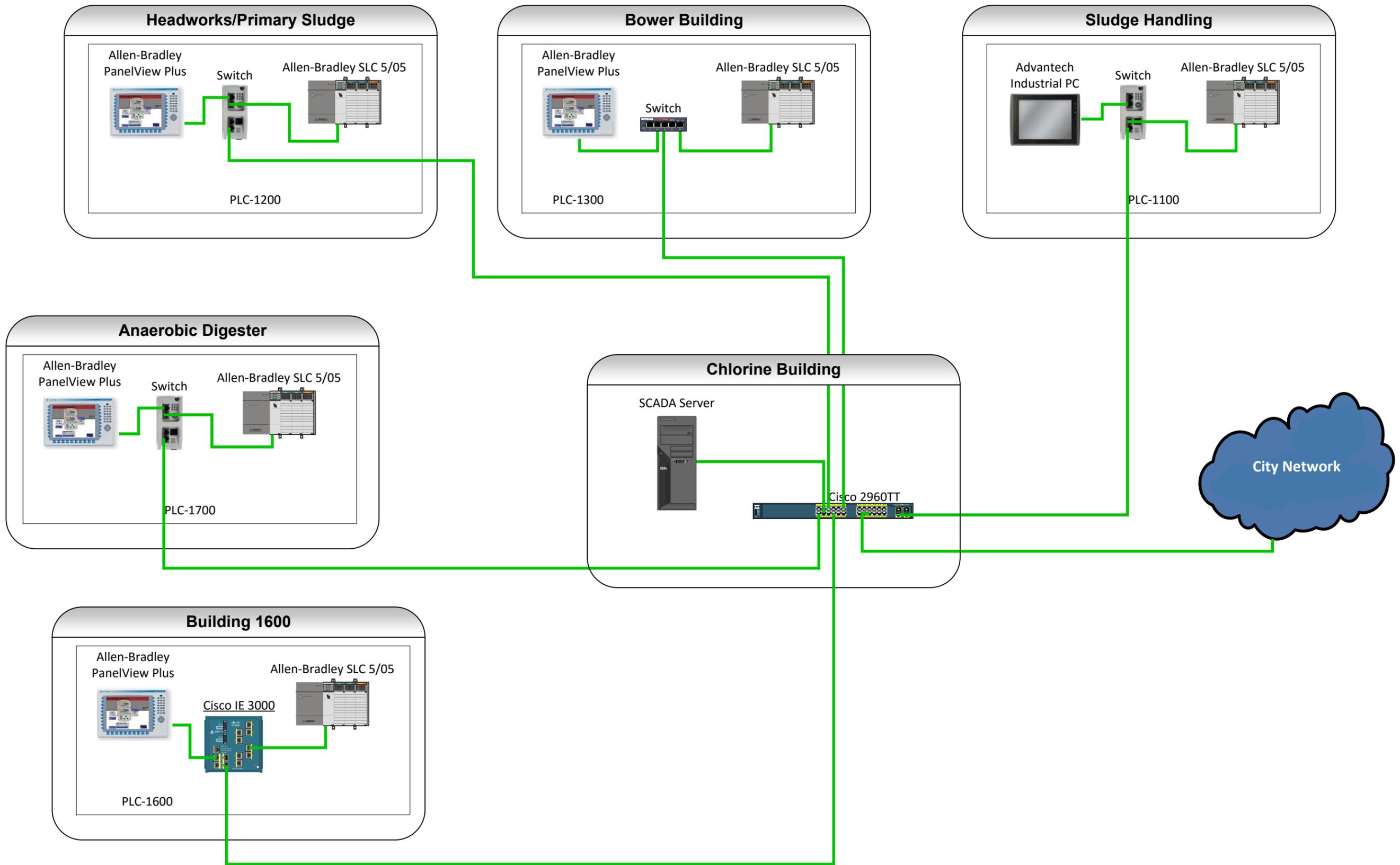
City of St. Charles, Illinois

Network Diagram – Water System  
Existing Physical – Layer 1



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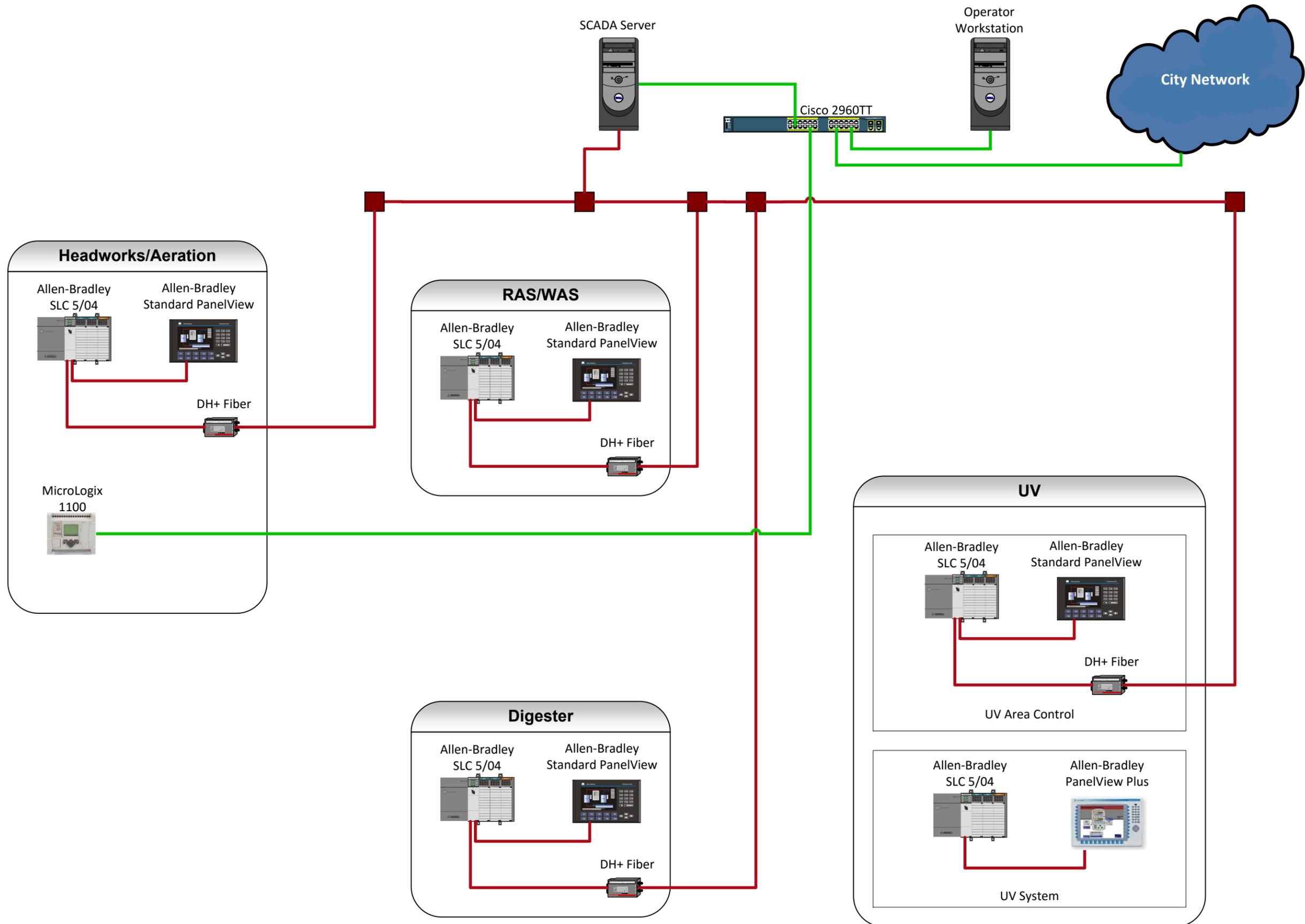
City of St. Charles, Illinois  
 Network Diagram – Main WWTTP  
 Existing Physical - Layer 1



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Note: Physical routing of Ethernet cables requires field verification



Note: Physical routing of DH+ cables requires field verification

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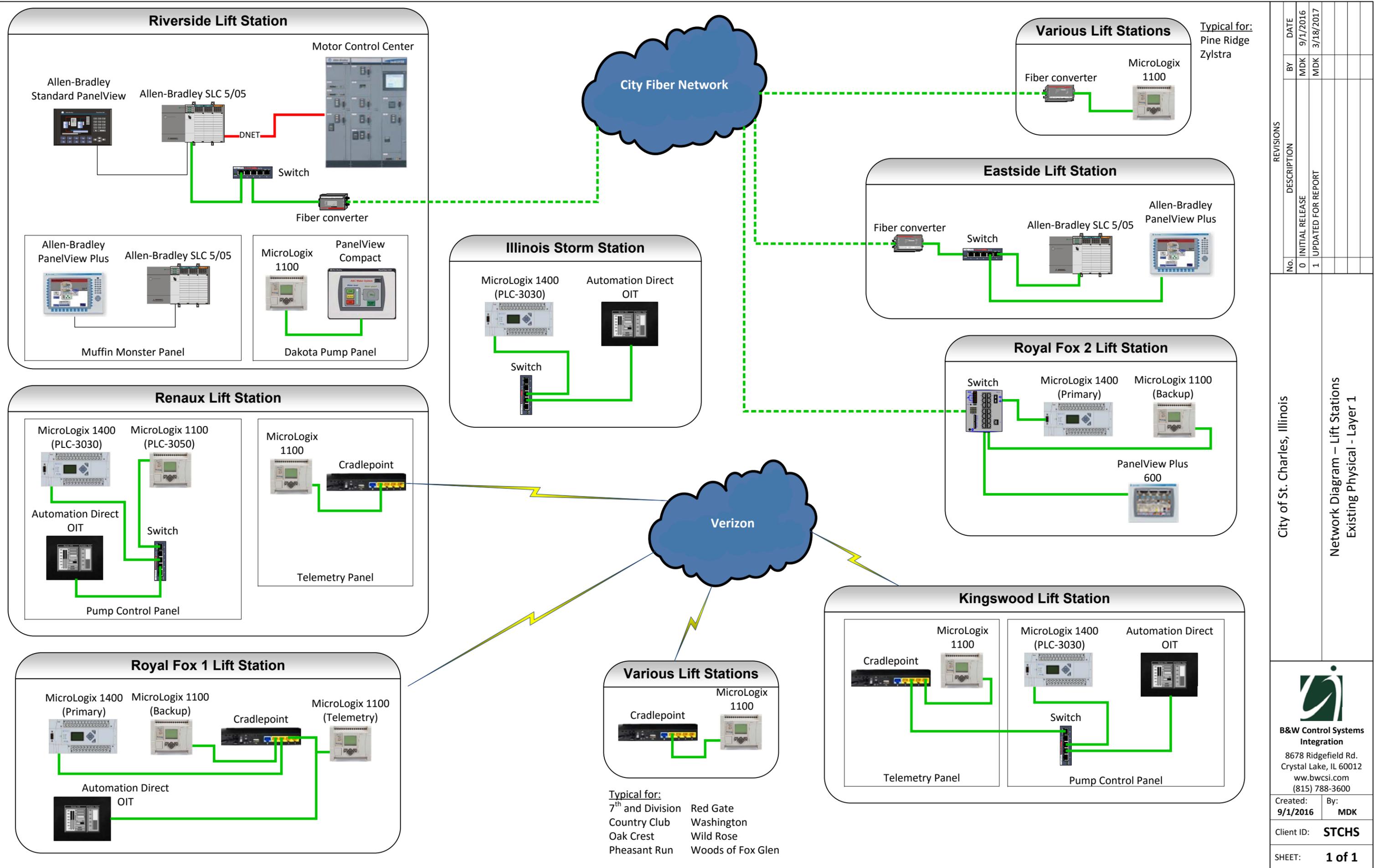
City of St. Charles, Illinois

Network Diagram – West WWTP  
Existing Physical - Layer 1



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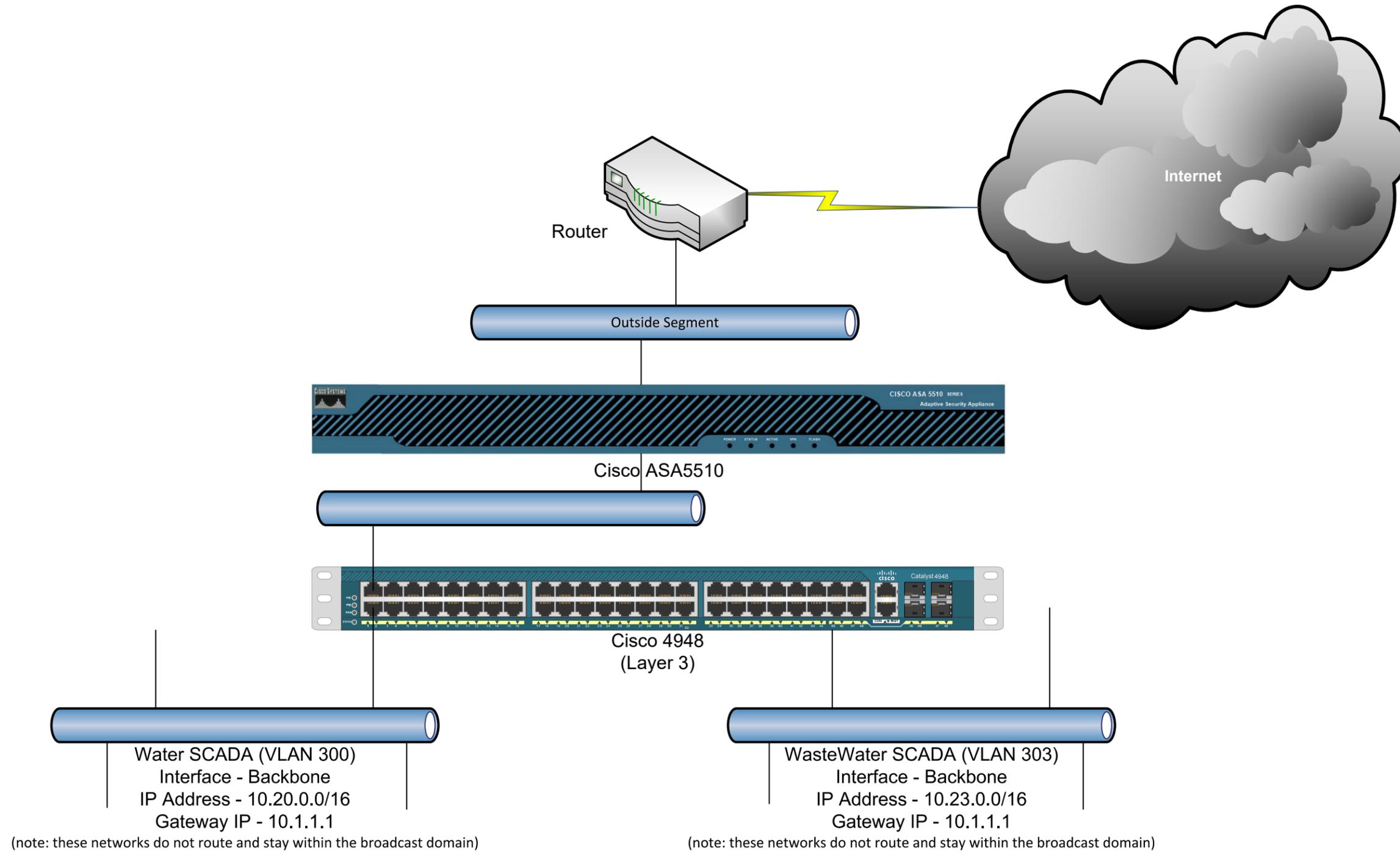


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City of St. Charles, Illinois  
 Network Diagram – Lift Stations  
 Existing Physical - Layer 1

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NOTE: For detailed VLAN diagram refer to City's IT network diagram.

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City of St. Charles, Illinois

Network Diagram  
Network - Layer 3



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**Public Works**



SCH\_H2O\_M-PC  
 OS: Microsoft Windows 7  
 Wonderware Dev Studio Unlim/60k/500  
 SCADA Alarm  
 10.20.42.150

**Well 13**



w13-wd-scadaserver  
 OS: Microsoft Windows 7 Pro  
 Wonderware Dev Studio Unlim/60k/500

**Well 8**



wl8-scada-srv1  
 OS: Microsoft Windows XP  
 Wonderware Dev Studio 250/500/100

**Main Treatment Plant**



MainSCADA  
 OS: Microsoft Windows Server 2008  
 Wonderware Dev Studio Unlim/60k/500  
 Win911  
 IP: 10.23.52.160/16

**Main WWTP PLC-1100**



Advantech Industrial PC  
 OS: Microsoft Windows 7  
 Wonderware Intouch Runtime 3k tag w/I/O

**West Treatment Plant**



SCADA  
 OS: Windows XP  
 Wonderware InTouch Dev. 3,000 tag  
 IP: 10.23.52.100/16

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City of St. Charles, Illinois

Network Diagram  
 SCADA Software



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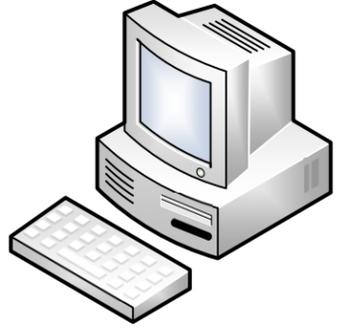
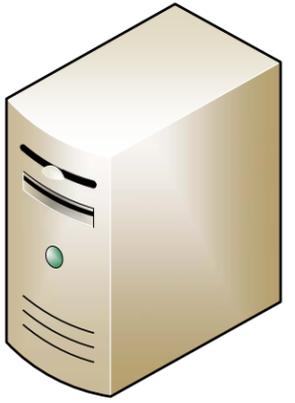
City of St. Charles  
SCADA Equipment Inventory  
and Replacement Plan

EXHIBIT B

Panel	Category	PLC	PLC Status	PLC Replacement	OIT	OIT Status	OIT Replacement
PW	Water	SLC 5/05	Active Mature	CompactLogix L36	N/A	N/A	N/A
Well 3 & 4 - PLC-3 (Well)	Water	SLC 5/05	Active Mature	CompactLogix L36	2711P-T15C4D1	Discontinued	None
Well 3 & 4 - PLC-2 (Tonka)	Water	SLC 5/05	Active Mature	CompactLogix L36	2711P-T15C4D1	Discontinued	None
Well 3 & 4 - PLC-1 (Supervisory)	Water	SLC 5/05	Active Mature	CompactLogix L36	2711P-T15C4D1	Discontinued	None
Well 3 & 4 (Well 3 - Flolo)	Water	SLC 5/03	Active Mature	CompactLogix L30	N/A	N/A	N/A
Well 3 & 4 (Well 4 - Flolo)	Water	SLC 5/03	Active Mature	CompactLogix L30	N/A	N/A	N/A
Well 7	Water	SLC 5/03	Active Mature	CompactLogix L33	2711-B6C3	Discontinued	PanelView Plus 7 700
Well 8 (Main)	Water	SLC 5/05	Active Mature	CompactLogix L36	2711P-T12C4D2	Discontinued	None
Well 8 (Small Panel)	Water	SLC 5/05	Active Mature	CompactLogix L30	N/A	N/A	N/A
Well 8 (SCADA)	Water	SLC 5/03	Active Mature	CompactLogix L33	2711-B6C3	Discontinued	PanelView Plus 7 700
Well 9	Water	SLC 5/03	Active Mature	CompactLogix L30	2711-B6C3	Discontinued	PanelView Plus 7 700
Well 11	Water	SLC 5/03	Active Mature	CompactLogix L30	2711-B6C3	Discontinued	PanelView Plus 7 700
Well 13 (Large Panel)	Water	SLC 5/03	Active Mature	CompactLogix L36	PanelView Plus 1500	Discontinued	None
Well 13 (Small Panel)	Water	Compact L23E	Discontinued	None	N/A	N/A	N/A
10th_Tower	Water	SLC 5/03	Active Mature	MicroLogix 1400	2711-B6C3	Discontinued	PanelView Plus 7 700
CH_Tower	Water	SLC 5/03	Active Mature	MicroLogix 1400	2711-B6C3	Discontinued	PanelView Plus 7 700
RG_Tower	Water	Micro 1400	Active	None	Maple Systems	Active	None
MainWWTP (Headworks PLC-1200)	WWTP	SLC 5/05	Active Mature	CompactLogix L33	2711P-T10C15D1	Discontinued	None
MainWWTP (Primary Sludge PLC-1201)	WWTP	SLC 5/05	Active Mature	CompactLogix L33	2711P-T10C15D1	Discontinued	None
MainWWTP (Aeration PLC-1300)	WWTP	SLC 5/05	Active Mature	CompactLogix L33	2711P-T10C15D1	Discontinued	None
MainWWTP (Anaerobic Digester PLC-1700)	WWTP	SLC 5/05	Active Mature	CompactLogix L36	2711P-T10C15D1	Discontinued	None
MainWWTP (Sludge Handling PLC-1100)	WWTP	SLC 5/05	Active Mature	CompactLogix L36	Advantech IPPC-6172A	Active	
MainWWTP (UV Building 1600)	WWTP	SLC 5/05	Active Mature	CompactLogix L36	2711P-T10C15D1	Discontinued	None
MainWWTP (UV System PLC)	WWTP	Compact L35E	Discontinued	None	2711P-T7xxxx	Discontinued	None
WestWWTP (Headworks/Aeration PLC-2201)	WWTP	SLC 5/04	Active Mature	CompactLogix L36	2711E-K10C6	Discontinued	PanelView Plus 7 1000
WestWWTP (Headworks/Aeration - Alarm PLC)	WWTP	Micro 1100	Active	None	N/A	N/A	N/A
WestWWTP (RAS/WAS PLC-2701)	WWTP	SLC 5/04	Active Mature	CompactLogix L33	2711E-K10C6	Discontinued	PanelView Plus 7 1000
WestWWTP (Digester)	WWTP	SLC 5/04	Active Mature	CompactLogix L33	2711E-K10C6	Discontinued	PanelView Plus 7 1000
WestWWTP (UV PLC-2601)	WWTP	SLC 5/04	Active Mature	CompactLogix L33	2711E-K10C6	Discontinued	PanelView Plus 7 1000
WestWWTP (UV - MFR Panel)	WWTP	SLC 5/04	Active Mature	CompactLogix L30	PanelView Plus 600	Discontinued	None
7th and Division LS	LS	Micro 1100	Active	None	N/A	N/A	N/A
Country Club LS	LS	Micro 1100	Active	None	N/A	N/A	N/A
Eastside LS (Main PLC)	LS	SLC 5/05	Active Mature	CompactLogix L33	2711P-T10xxxx	Discontinued	PanelView Plus 7 1000
Eastside LS (Muffin Monster)	LS	?			2711P-B10C4D1?	Discontinued	PanelView Plus 7 1000
Illinois Storm (Pump Control)	LS	Micro 1400	Active	None	Automation Dir ?	?	?
Kingswood LS (Comms RTU)	LS	Micro 1100	Active	None	N/A	N/A	N/A
Kingswood LS (Pump Control)	LS	Micro 1400	Active	None	Automation Dir ?	?	?
Oak Crest LS	LS	Micro 1100	Active	None	N/A	N/A	N/A
Pheasant Run LS	LS	Micro 1100	Active	None	N/A	N/A	N/A
Pine Ridge LS	LS	Micro 1100	Active	None	N/A	N/A	N/A
Red Gate LS	LS	Micro 1100	Active	None	N/A	N/A	N/A
Reneaux Manor LS (Main PLC 1)	LS	Micro 1400	Active	None	Automation Dir EA7-T8C	Active	None

City of St. Charles  
SCADA Equipment Inventory  
and Replacement Plan

Panel	Category	PLC	PLC Status	PLC Replacement	OIT	OIT Status	OIT Replacement
Reneaux Manor LS (Main PLC 2)	LS	Micro 1100	Active	None	N/A	N/A	N/A
Reneaux Manor LS (Telemetry)	LS	Micro 1100	Active	None	N/A	N/A	N/A
Riverside LS (Dakota Pump)	LS	Micro 1100	Active	None	PanelView C600	Discontinued	PanelView Plus 7 700
Riverside LS (Main in MCC)	LS	SLC 5/05	Active Mature	CompactLogix L33	2711-K10C16	Discontinued	PanelView Plus 7 1000
Riverside LS (Muffin Monster)	LS	SLC 5/05	Active Mature	CompactLogix L33	2711P-B10C4D1	Discontinued	None
Royal Fox 1 LS (Comms RTU)	LS	Micro 1100	Active	None	N/A	N/A	N/A
Royal Fox 1 LS (Backup Float Control)	LS	Micro 1100	Active	None	N/A	N/A	N/A
Royal Fox 1 LS (Primary Pump Control)	LS	Micro 1400	Active	None	2711P-T6C20D8	Active	None
Royal Fox 2 LS (Backup Float Control)	LS	Micro 1100	Active	None	N/A	N/A	N/A
Royal Fox 2 LS (Primary Pump Control)	LS	Micro 1400	Active	None	2711P-T6C20D8	Active	None
Washington LS	LS	Micro 1100	Active	None	N/A	N/A	N/A
Wild Rose LS	LS	Micro 1100	Active	None	N/A	N/A	N/A
Woods of Fox Glen LS	LS	Micro 1100	Active	None	N/A	N/A	N/A
Zylstra LS	LS	Micro 1100	Active	None	N/A	N/A	N/A



**Virtualized SCADA Server**  
 Software Installed

- Windows 2012 R2 Standard
- SCADA Software
- Win911 Intermediate (SIP)
- Managed Antivirus
- AD Integration (behind SCADA inline firewall)

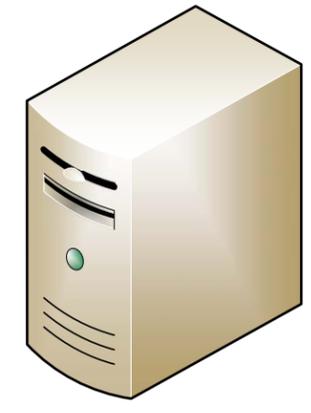
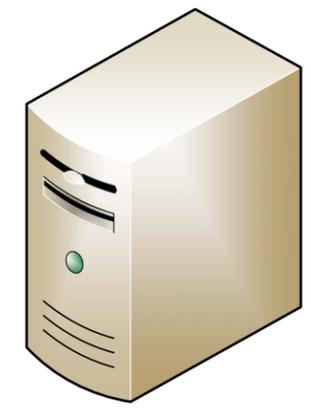
**Virtualized Remote Desktop Server**  
 Software Installed

- Windows 2012 R2 Standard
- Windows RDS Licensing Server
- Windows RDS Licenses
- SCADA Software
- Managed Antivirus
- AD Integration

**SCADA Client Workstation**  
**RDS Connection to SCADA RDS Server**

- Windows 10 Pro or thin client OS

City Hall



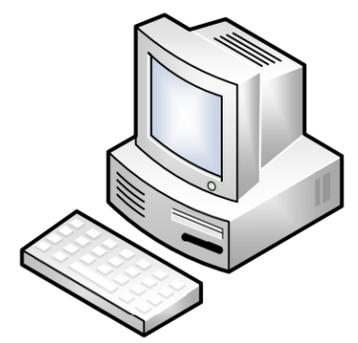
**Virtualized Win911 Mobile Server**  
 Software Installed

- Windows Operating system (can be Windows 10)
- Win911 Mobile Application
- Managed Antivirus
- AD Integration

**Virtualized**

- Failover Servers

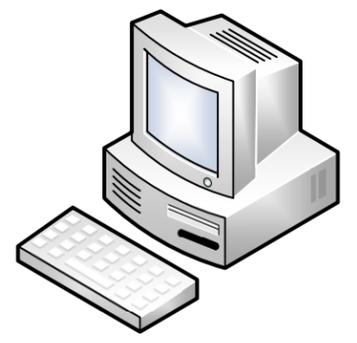
Well 13



**SCADA Client Workstation**  
**RDS Connection to SCADA RDS Server**

- Windows 10 Pro or thin client OS

Well 8



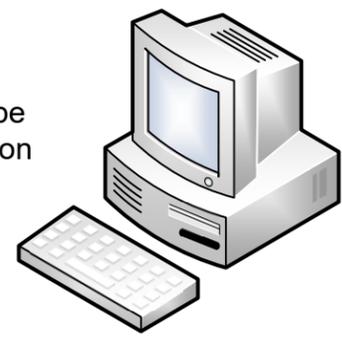
**SCADA Client Workstation**  
**RDS Connection to SCADA RDS Server**

- Windows 10 Pro or thin client OS

Other City Locations and Remote



**Remote Access iPad RDP**  
 Note: This device could be on internet or using Verizon private



**SCADA Client Workstation**  
**RDS Connection to SCADA RDS Server**

- Windows 10 Pro or thin client OS

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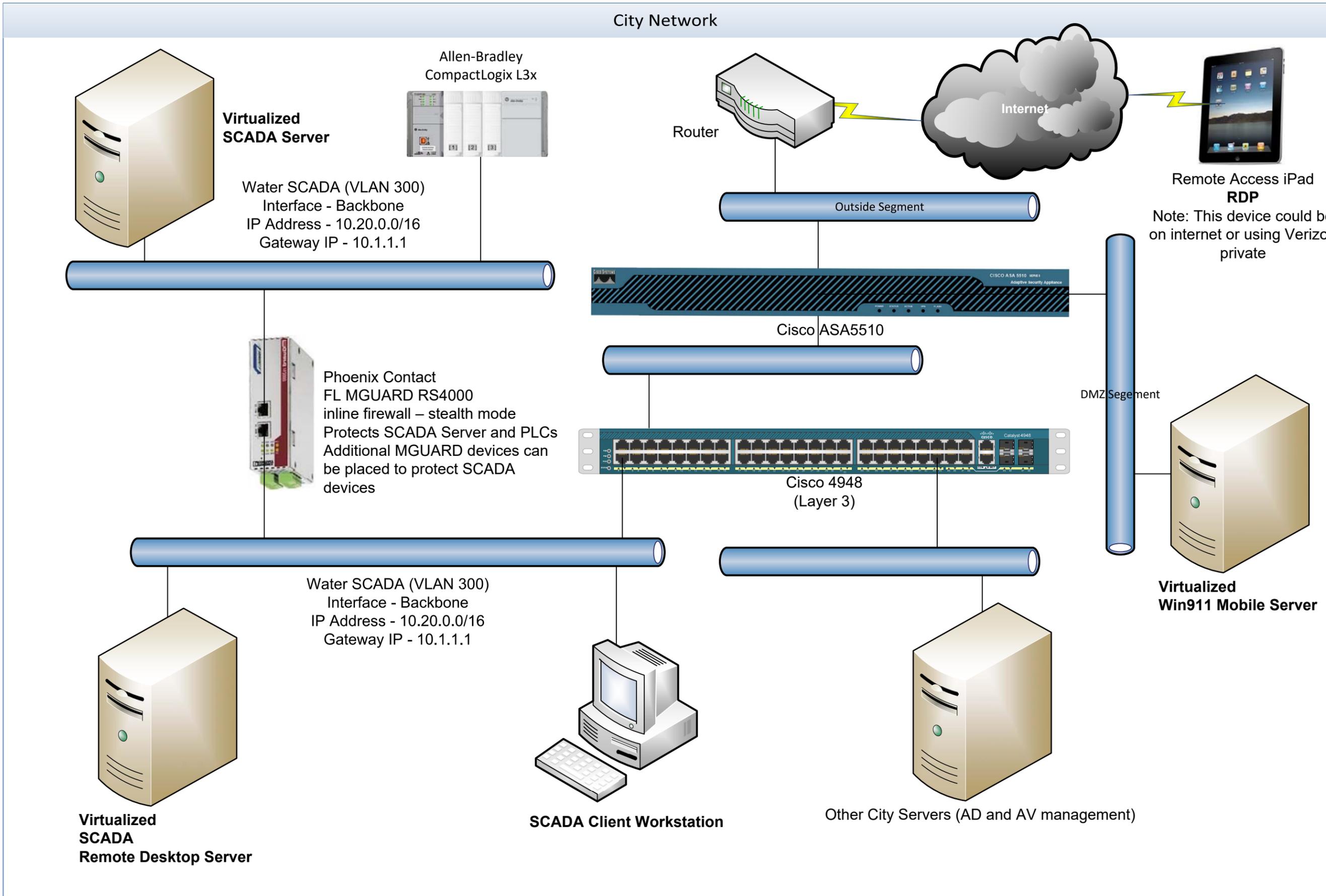
City of St. Charles, Illinois

Network Diagram

SCADA Software – Water System Future



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City of St. Charles, Illinois

Network Diagram

Water SCADA Network - Future



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Public Works



**Virtualized SCADA Server**

- Windows 2012 R2 Standard
- SCADA Software
- Win911 Intermediate(SIP)
- Antivirus
- AD Integration  
(behind SCADA inline firewall)



**Virtualized Remote Desktop Server**

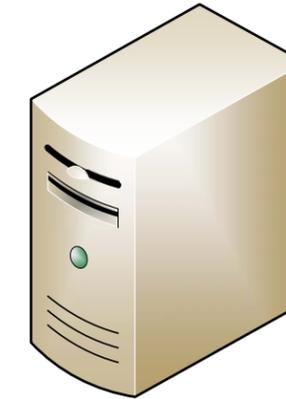
- Windows 2012 R2 Standard
- Windows RDS Licensing Server
- Windows RDS Licenses
- SCADA Software
- Managed Antivirus
- AD Integration

City Hall



**Virtualized Win911 Mobile Server**

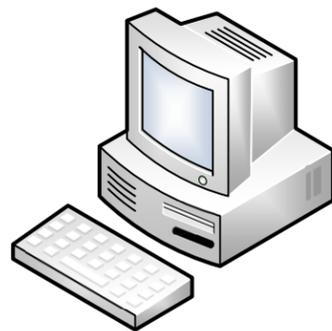
- Software Installed
- Windows Operating system  
(can be Windows 10)
  - Win911 Mobile Application
  - Managed Antivirus
  - AD Integration



**Virtualized**

- Failover Servers

Other City Locations and remote



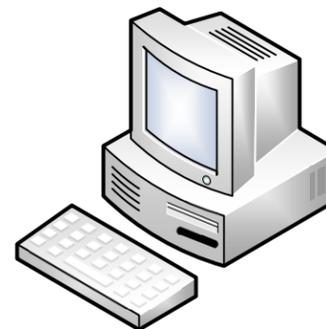
- SCADA Client Workstation  
RDS Connection to SCADA RDS Server
- Windows 10 Pro or thin client OS



Remote Access iPad  
**RDP**

Note: This device could be on internet or using Verizon private

Main Treatment Plant



- SCADA Client Workstation  
RDS Connection to SCADA RDS Server
- Windows 10 Pro or thin client OS

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City of St. Charles, Illinois  
Network Diagram  
SCADA Software – Wastewater Future

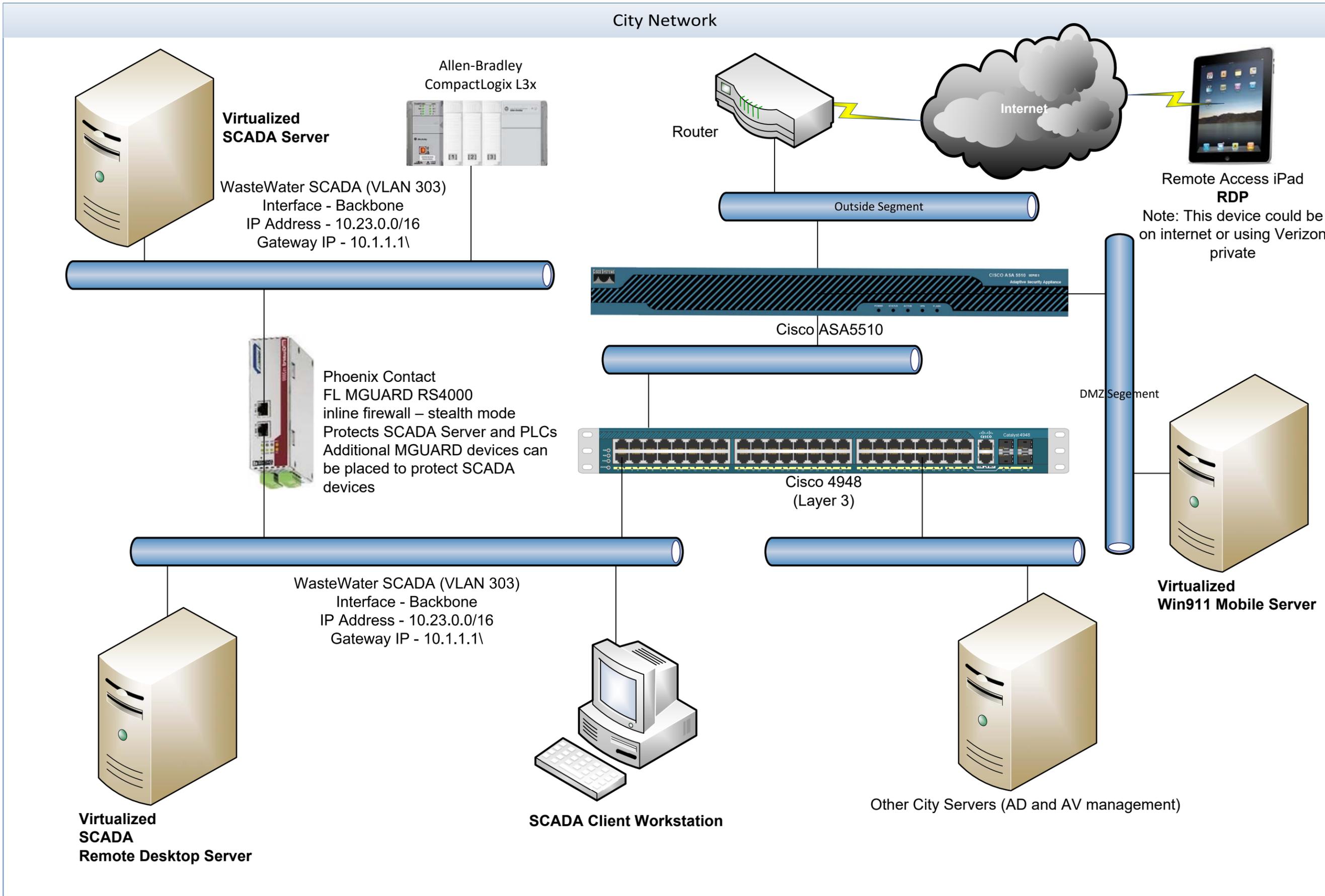


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City of St. Charles, Illinois

Network Diagram

Wastewater SCADA Network – Future



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SCDAVS01  
Windows 2012 R2  
Hyper-V Role  
Virtual Host Server  
(Primary)



SCDAVS02  
Windows 2012 R2  
Hyper-V Role  
Virtual Host Server  
(replication)



**Virtualized  
SCADARDS1**  
Office Pro Plus  
Windows 2012 R2 with RDS - CALs  
SCADA Software without I/O RDS



**Virtualized  
SCADASC1**  
Windows 2012 R2  
Win911 Intermediate  
SCADA Software – talks to PLCs  
(SCADA Network)

City Virtual Infrastrure  
Windows 2012 R2  
Hyper-V Role  
Virtual Host Server  
(replication)



**Virtualized  
SCADAALM1**  
Windows 10 Pro  
Vipr AV  
Mobile 911  
(City Network)

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City of St. Charles, Illinois  
Network Diagram  
Virtualized Infrastructure



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September 6, 2017

Mr. Tim Wilson  
Environmental Services Manager - Public Works  
City of St. Charles  
2 E. Main Street  
St. Charles, IL 60174

***Subject: SCADA Program Management - Phase 1 (Hardware & Software Upgrades)***

Dear Mr. Wilson:

The City of St. Charles provides water and wastewater services for approximately 33,000 residents, as well as businesses and other institutions. A network of groundwater treatment facilities, water distribution, two wastewater plants, 17 wastewater pumping stations, communications, and electrical distribution all fall under the City's responsibility. City water and wastewater utility leadership worked closely with Concentric Integration over the past year to identify key areas of improvement for Supervisory Control and Data Acquisition (SCADA). During the Master Plan project, it became apparent to our leadership that the City really wants to do more than "keep the lights on;" staff really wants to improve quality and the efficiency of their operations.

Most all water and wastewater treatment and pumping facilities require continuous operation, and St. Charles' facilities are no different. High levels of reliability and the ability to respond quickly to issues are critical requirements. Historically, the City maintains this level of reliability by utilizing selective automation, as well as monitoring and manually responding to abnormal situations when required. The City utilizes a SCADA system for each wastewater facility, as well as a third separate SCADA system for the water system. While the newest of the three SCADA systems at the Main WWTP is larger and more comprehensive, all three SCADA systems largely simply monitor existing equipment, provide a very limited amount of data acquisition (historical data collection and analysis), have no remote access options, and still require Public Works staff to manually collect and analyze data.

With the growing need to upgrade facilities to improve treatment (improved water treatment and distribution, or enhanced phosphorus removal, for example) and aging system and distribution infrastructure, City personnel really need improvements to their technology tools to continue operating efficiently and effectively into the future. To this end, modern comprehensive SCADA systems can provide efficient view, response, and automated control at each of the City's facilities, as well as securely and remotely. Additionally, modern SCADA systems also embrace a "Smart City vision" by focusing on





green technologies, such as optimizing energy usage by automated process control and automated reporting, as well as simply making operators aware of how changing process and influent flow characteristics impact energy resource efficiency.

The SCADA System Master Plan that was completed earlier this year focuses on the phased strategic and specific steps recommended to implement appropriately automated, efficiently managed, energy optimized and securely and flexibly accessible facilities across the City. This SCADA Program Management proposal lays out the first phase of improvements designed to eliminate obsolete equipment, optimize and further secure communications, and enable water and wastewater utility staff to take advantage of significantly improved data acquisition. The City should note that there is a significant amount of recommendations beyond this largely “hardware and software” upgrade phase that will provide more impactful improvements to the operation of the water and wastewater systems.

The SCADA system improvements in this first phase involve a large amount of equipment that will be purchased/bid out, electrical subcontracting that will be bid out, Information Technology (IT) improvements coordinated with City staff, installation at remote sites, as well as professional services to oversee, program, coordinate, and provide a single point of responsibility for the City. Because of Concentric’s close collaboration with staff during the planning phase of the improvements, we would propose the opportunity to continue to work with the City overseeing the improvements the City has budgeted for.

Following is a detailed Scope of Services to oversee the City’s first SCADA System Improvements Program. It is our hope and expectation that if year one of this is successful, we would appreciate the opportunity to continue the second phase.

## **Scope of Services**

### ***Division of Work***

Concentric Integration will be responsible for project management, detailed design, equipment procurement, sub-contracting coordination, programming (including Information Technology and security-related configuration), and start-up.

Concentric Integration will solicit quotes from multiple panel fabricators to obtain the most cost effective panel fabrication costs for new control panels.

Concentric Integration will solicit proposals from qualified electricians to perform equipment installation to obtain the most cost effective installation costs.





## ***SCADA Infrastructure***

The existing SCADA server architecture will be modified such that the existing SCADA servers for the Main WWTP, West WWTP, and Water/Lift Station Systems will be consolidated into a single server application and converted into a hardware redundant platform similar to the City's advanced virtualization IT infrastructure. This new SCADA server platform will be fully virtualized to allow more efficient use of server hardware, and allow for City IT to provide daily backups, which should allow for 1 day (or faster) restoration in the event of a catastrophic failure.

A second virtual server, used for Remote Desktop Services (RDS), will be configured to allow multiple authorized water and wastewater operators and managers to view SCADA simultaneously at any WWTP, Water Plant, Public Works, City Hall, or remotely using devices such as thin clients or tablets (with proper credentials).

The following SCADA Hardware and Software scope items are included:

- SCADA Server hardware and associated operating system, virtualization, replication, backup, and similar software licensing, including SCADA thick client machines, as indicated below. Note that all support agreements are from the date of purchase, not necessarily the date of beneficial use.
  - Two (2) HP Proliant DL380 virtual host servers, each with 64GB RAM, six 600GB hard drives with RAID controller, redundant power supplies, 3 year 24x7 4-hour response/support.
  - Six (6) HP Z440 workstation computers with six (6) 24" LCDs, four (4) 80" LCDs and two (2) 65" LCDs.
  - Twelve (12) Microsoft Windows Server 2016 single core licenses with Software Assurance for 1 year.
  - Twenty (20) Microsoft Windows User CAL licenses with Software Assurance for 1 year.
  - Twenty (20) Microsoft Windows Remote Desktop Services licenses with Software Assurance for 1 year.
  - Eight (8) Microsoft Office Pro licenses with Software Assurance for 1 year.
  - Two (2) licenses of SteelEye DataKeeper Cluster Edition replication software, including one year of support.
  - Two (2) licenses of Veeam Backup and Replication Enterprise Plus for Hyper-V, including one year of support.
- SCADA network equipment as follows:
  - One (1) Full height (42U) network rack enclosure with one 48-port copper and one 12-port fiber patch panel, rack-mount Uninterruptible





Power Supply (UPS), power distribution units, cable management, and LCD KVM. Rack will be installed in Public Works SCADA closet (where the existing master Programmable Logic Controller (PLC) is located).

- One (1) Cisco ASA5516 firewall with one year of SMARTnet support and FirePOWER services.
- All labor associated with the SCADA server replacement, including fully redeveloping all SCADA system graphics, SCADA server configuration, SCADA client configuration, network device configuration, Historian configuration, installation and testing.

The SCADA Software licenses (including SCADA graphics package, enterprise historian, and alarming software) are included in the cash allowance indicated in the Fee section.

### **Water System Improvements**

When this phase is complete, the City will have replaced all of the “Active Mature” Allen Bradley Small Logic Controller (SLC) PLCs with fully supported Ethernet-based CompactLogix PLCs for all of the water sites (including the master site). In specific:

- Replace existing Allen-Bradley SLC Series PLCs with CompactLogix Series (L30, L33 or L36) PLCs at Well sites, and replace with MicroLogix 1400 PLCs at Water Tower sites.
- Replace existing Standard PanelViews with PanelView Plus Operator Interface Terminals (OITs).
- Migrate existing PLC programs from SLC Series PLCs to the CompactLogix or MicroLogix PLCs.
- Migrate existing Standard PanelView programs to the PanelView Plus OITs.
- Replace existing backup alarm dialer with Sensaphone SCD-PRO dialer.
- Existing control panel enclosures and other components not being replaced are to remain.
- Refer to tables below for specific control panels where PLCs and Operator Interface Terminals (OIT) are being replaced.

P/N	Description	Well 3/4 PLC-1	Well 3/4 PLC-2	Well 3/4 PLC-3	Well 3/4 Well 3	Well 3/4 Well 4
1769-L30ER	L30 PLC				1	1
1769-L33ER	L33 PLC					
1769-L36ERM	L36 PLC	1	1	1		





P/N	Description	Well 3/4 PLC-1	Well 3/4 PLC-2	Well 3/4 PLC-3	Well 3/4 Well 3	Well 3/4 Well 4
1769-SDN	DeviceNet Mod					
1769-PA2	Power Supply, 2A				1	1
1769-PA4	Power Supply, 4A	1	1	2		
1769-IF4I	4 Ch Analog In	1				1
1769-IF8	8 Ch Analog In	1	2	4		
1769-IF16C	16 Ch Analog In					
1769-OF4CI	4 Ch Analog Out	1	1	4		
1769-OW8I	8 Pt Relay Out				1	1
1769-OW16	16 Pt Relay Out	2		1		
1769-OA8	8 Pt AC Out					
1769-OA16	16 Pt AC Out					
1769-OV16	16 Pt DC Out					
1769-IA8I	8 Pt AC Input					
1769-IA16	16 Pt VAC In	1	4		1	1
1769-IQ16	16 Pt 24 VDC	1		3		
1769-IQ32	32 Pt DC In		4			
2711P-B7C22A9P	PV Plus 7 700					

P/N	Description	Water MTU	Well 7	Well 8 Treatment	Well 8 Chem	Well 8 SCADA
1769-L30ER	L30 PLC				1	
1769-L33ER	L33 PLC		1			1
1769-L36ERM	L36 PLC	1		1		
1769-SDN	DeviceNet Mod					
1769-PA2	Power Supply, 2A	1			1	
1769-PA4	Power Supply, 4A		1	2		1
1769-IF4I	4 Ch Analog In		1		1	2
1769-IF8	8 Ch Analog In			3		
1769-IF16C	16 Ch Analog In					
1769-OF4CI	4 Ch Analog Out			1		1
1769-OW8I	8 Pt Relay Out		1		1	2
1769-OW16	16 Pt Relay Out			5		
1769-OA8	8 Pt AC Out					
1769-OA16	16 Pt AC Out					
1769-OV16	16 Pt DC Out					
1769-IA8I	8 Pt AC Input					
1769-IA16	16 Pt VAC In			7		3
1769-IQ16	16 Pt 24 VDC	1	3		1	
1769-IQ32	32 Pt DC In					
2711P-B7C22A9P	PV Plus 7 700		1			1

P/N	Description	Well 9	Well 11	Well 13	10 <sup>th</sup> St Tower	Campton Hills Twr
1769-L30ER	L30 PLC	1	1			
1769-L33ER	L33 PLC			1		





P/N	Description	Well 9	Well 11	Well 13	10 <sup>th</sup> St Tower	Campton Hills Twr
1769-L36ERM	L36 PLC					
1769-SDN	DeviceNet Mod					
1769-PA2	Power Supply, 2A	1				
1769-PA4	Power Supply, 4A		1	3		
1769-IF4I	4 Ch Analog In	1	2	5		
1769-IF8	8 Ch Analog In					
1769-IF16C	16 Ch Analog In					
1769-OF4CI	4 Ch Analog Out	1				
1769-OW8I	8 Pt Relay Out	1	1	3		
1769-OW16	16 Pt Relay Out			3		
1769-OA8	8 Pt AC Out					
1769-OA16	16 Pt AC Out					
1769-OV16	16 Pt DC Out					
1769-IA8I	8 Pt AC Input			7		
1769-IA16	16 Pt VAC In		2			
1769-IQ16	16 Pt 24 VDC	1		4		
1769-IQ32	32 Pt DC In					
2711P-B7C22A9P	PV Plus 7 700	1	1		1	1
1766-L32BXB	MicroLogix 1400				1	1
1762-IF4	4 Ch AI				1	1

## Lift Station Improvements

### Lift Stations with existing Float Control

- This scope applies to lift stations that currently only have hard-wired float controls, including the following sites: Pheasant Run, 7<sup>th</sup> and Division, Wild Rose, and Washington.
- Provide new PLC-based control panel and submersible level transducer to replace existing float-based control system.
- Rewire existing floats to operate a backup float control system to be used in the event that the new PLC-based control system faults. City is responsible to ensure existing floats operate correctly and are in the correct locations.
- Provide lift station control panel consisting of the following components mounted inside an outdoor-rated fiberglass enclosure:
  - Allen-Bradley MicroLogix 1400 PLC, or equal.
  - Allen-Bradley 7" PanelView Plus OIT, or equal.
  - Industrial Cellular Router.
  - Uninterruptible Power Supply System.
  - Heater.
  - Other miscellaneous components as required for a complete panel.





- Install level transducer in wet well with conduit/wire as required to connect to PLC control panel.
- Program PLC and OIT to control pumps based on wet well level.

#### Lift Stations with existing non-PLC based Level Control

- This scope applies to lift stations that currently use a level transducer with a non-PLC based level controller, including the following sites: Woods of Fox Glen, Country Club, Oak Crest, Red Gate, Zylstra, and Pine Ridge.
- Provide new PLC-based control panel to replace existing control system.
- Rewire existing floats to operate a backup float control system to be used in the event that the new PLC-based control system faults.
- Provide PLC-based control panel consisting of the following components mounted inside an outdoor-rated fiberglass enclosure:
  - Allen-Bradley MicroLogix 1400 PLC, or equal.
  - Allen-Bradley 7" PanelView Plus OIT, or equal.
  - Industrial Cellular Router.
  - Uninterruptible Power Supply System.
  - Heater.
  - Other miscellaneous components as required for a complete panel.
- Program PLC and OIT to control pumps based on wet well level.

#### Lift Stations with existing SLC 500 Series PLCs

- This scope applies to lift stations that currently have Allen-Bradley SLC 500 Series PLCs, including the following sites: Eastside and Riverside.
- Replace existing Allen-Bradley SLC Series PLCs with CompactLogix Series (L30, L33 or L36) PLCs.
- Replace existing Standard PanelViews with PanelView Plus OITs.
- Migrate existing PLC programs from SLC Series PLCs to the CompactLogix or MicroLogix PLCs.
- Migrate existing Standard PanelView programs to the PanelView Plus OITs.
- Existing control panel enclosures and other components not being replaced are to remain.
- Refer to tables below for specific control panels where PLCs and OITs are being replaced.





P/N	Description	Eastside	Riverside Main PLC	Riverside Grinder	Riverside Dakota
1769-L30ER	L30 PLC				
1769-L33ER	L33 PLC	1	1	1	
1769-L36ERM	L36 PLC				
1769-SDN	DeviceNet Mod		1		
1769-PA2	Power Supply, 2A				
1769-PA4	Power Supply, 4A	1	1	1	
1769-IF4I	4 Ch Analog In		2		
1769-IF8	8 Ch Analog In	1		2	
1769-IF16C	16 Ch Analog In				
1769-OF4CI	4 Ch Analog Out				
1769-OW8I	8 Pt Relay Out	1	1	1	
1769-OW16	16 Pt Relay Out			1	
1769-OA8	8 Pt AC Out				
1769-OA16	16 Pt AC Out				
1769-OV16	16 Pt DC Out				
1769-IA8I	8 Pt AC Input				
1769-IA16	16 Pt VAC In		1	3	
1769-IQ16	16 Pt 24 VDC	2	3		
1769-IQ32	32 Pt DC In				
2711P-B10C22A9P	PV Plus 7 1000	1	1		
2711P-B7C22A9P	PV Plus 7 700				1

### Lift Stations with existing MicroLogix Series PLCs

- This scope applies to lift stations that currently have Allen-Bradley MicroLogix 1100 or MicroLogix 1400 PLCs, including the following sites: Kingswood, Royal Fox, and Reneaux.
- Replace existing cellular router with industrial cellular router.

## Concentric Assumptions / Owner Responsibilities

- Owner will provide site access for installation, programming, and startup on normal business days between 7:00 am and 5:00 pm.
- Owner understands that all existing equipment to remain is assumed to be in good, working order. In the event that any other equipment does not perform as-expected, Concentric will work with the Owner to repair, as-needed, under a separate contract.
- Owner will dispose of/recycle any removed equipment.





## Annual Support

This Project will add additional hardware and software to the Owner, some of which has support or maintenance associated with it. Concentric recommends the Owner maintain any applicable support agreements once the initial support/warranty periods expire. Specific pricing for these agreements cannot be provided at this time as the SCADA software selection has not been made. Once that selection is made, Concentric will provide the estimated annual support costs. Based on our preliminary design, we expect total annual support costs for manufacturer support contracts to be \$30,000. The first year of support is included in the cash allowance indicated in the Fee section below.

## Project Schedule

Concentric is available to begin work upon notice to proceed.

Our estimated project schedule will be agreed upon at the project kickoff meeting.

## Warranty

The warranty listed in the attached Standard Terms & Conditions document (Paragraph 13):

- DOES apply
- DOES NOT apply





## Fee

Our fee for the above scope includes a **large majority of SUBCONTRACTED and BID EQUIPMENT** that we will coordinate/facilitate on behalf of the City. The table below outlines the total cost to the City, but approximately \$500,000 of subcontracted installation and equipment is planned for during this project, including an \$85,000 cash allowance for SCADA software licensing (once finalized).

The fee for the overall SCADA Phase 1 project is summarized in the table below. The estimated sum total of the project is \$997,000, with \$490,000 being related to a direct contract with Concentric (this proposal), and the additional estimated \$507,000 as subcontracted and/or bid equipment, subject to future review of final pricing by the City as subcontracted and bid pricing is finalized.

Scope Item	Concentric	Estimated Amounts		Total
	Labor	Subcontract	Equipment	
Program, Project Management, and Subs Coordination	\$95,000			<b>\$95,000</b>
Design (Panel Drawings, network design, etc.)	\$65,500			<b>\$65,500</b>
Programming (PLC, PanelView, SCADA development)	\$203,000			<b>\$203,000</b>
IT server, computer, network configuration	\$16,500			<b>\$16,500</b>
Installation verification and QC/Testing	\$110,000			<b>\$110,000</b>
Subcontractors (Panel fabrication and electrical installation of level transmitters and control panels)		\$66,000		<b>\$66,000</b>
Materials/Equipment			\$356,000	<b>\$356,000</b>
Cash Allowance for SCADA Software Licensing			\$85,000	<b>\$85,000</b>
<b>TOTAL</b>	<b>\$490,000</b>	<b>\$66,000</b>	<b>\$441,000</b>	<b>\$997,000</b>

This agreement is valid for 90 days from the date of this proposal.

## Terms & Conditions

Refer to attached Standard Terms & Conditions document.





## Acceptance

If this **\$490,000** proposal is acceptable, please sign one copy and return to us. Feel free to contact us if you have any questions.

Sincerely,

CONCENTRIC INTEGRATION, LLC

Michael D. Klein, PE  
Automation Department Manager/Project Manager  
MDK

Christopher T. Sosnowski, PE  
President

CITY OF ST. CHARLES, ILLINOIS

ACCEPTED BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

*Above signature implies acceptance of the attached **STANDARD TERMS & CONDITIONS***





## Standard Terms and Conditions

1. The submitted proposal and these Standard Terms & Conditions constitute and are herein referred to as the Agreement.
2. Concentric Integration is herein referred to as Concentric, and the party with whom Concentric is entering into this Agreement with is herein referred to as Owner.
3. Concentric may submit requests for periodic progress payments for services rendered. Payments shall be due and owing by the Owner upon receipt of Concentric's invoice for services. Payments to Concentric after sixty (60) consecutive calendar days from the date of Concentric's invoice for services shall include an additional late payment charge computed Owner an annual rate of twelve percent (12%) from date of Concentric's invoice; and Concentric may, after giving seven (7) days written notice to the Owner, suspend services under this Agreement until Concentric has been paid in full all amounts due for services, expenses, and late payment charges.
4. This Agreement may be terminated, in whole or in part, by either party if the other party substantially fails to fulfill its obligations under this Agreement through no fault of the terminating party; or the Owner may terminate this Agreement, in whole or in part, for its convenience. However, no such termination may be effected unless the terminating party gives the other party: (1) not less than ten (10) calendar days written notice by certified mail of intent to terminate, and (2) an opportunity for a meeting with the terminating party before termination. If this Agreement is terminated by either party, Concentric shall be paid for services performed to the effective date of termination, including reimbursable expenses. In the event of contract termination, the Owner shall receive reproducible copies of Drawings, Custom Developed Applications and other documents completed by Concentric.
5. Concentric agrees to hold harmless and indemnify the Owner and each of its officers, agents and employees from any and all liability claims, losses, or damages, to the extent that such claims, losses, or damages are caused by Concentric's negligence in the performance of the services under this Agreement, but not including liability that may be due to the sole negligence of the Owner or other consultants, contractors or subcontractors working for the Owner, or their officers, agents and employees. In the event claims, losses, or damages are caused by the joint or concurrent negligence of Concentric and the Owner they shall be borne by each party in proportion to its negligence.
6. The Owner acknowledges that Concentric is a Limited Liability Company and not a Professional Service Corporation, and further acknowledges that the corporate entity, as the party to this contract, expressly avoids contracting for individual responsibility of its officers, directors, or employees.
7. The Owner and Concentric agree that any claim made by either party arising out of any act of the other party, or any officer, director, or employee of the other party in the execution or performance of the Agreement, shall be made solely against the other party and not individually or jointly against such officer, director, or employees.
8. For the duration of the project, Concentric shall procure and maintain insurance for protection from claims under worker's compensation acts, claims for damages because of bodily injury including personal injury, sickness or disease or death of any and all employees or of any person other than such employees, and from claims or damages because of injury to or destruction of property including loss of use resulting therefrom, alleged to arise from Concentric's negligence in the performance of services under this Agreement. The Owner shall be named as an additional insured on Concentric's general liability insurance policy. The limits of liability for the insurance required by this Subsection are as follows:

Workers Compensation:	Statutory Limits	Excess Umbrella Liability:	\$5,000,000 per claim and aggregate
General Liability:	\$1,000,000 per claim / \$2,000,000 aggregate	Professional Liability:	\$5,000,000 per claim
Automobile Liability:	\$1,000,000 combined single limit		\$5,000,000 aggregate
9. Notwithstanding any other provision of this Agreement, and to the fullest extent permitted by law, the total liability, in the aggregate, of Concentric and their officers, directors, employees, agents, and any of them, to the Owner and anyone claiming by, through or under the Owner, for any and all claims, losses, costs or damages whatsoever arising out of, resulting from or in any way related to the project or the Agreement from any cause or causes, including but not limited to the negligence, professional errors or omissions, strict liability or breach of contract or warranty expressed or implied of Concentric or their officers, directors, employees, agents or any of them, hereafter referred to as the "Owner's Claims", shall not exceed the total insurance proceeds available to pay on behalf of or to Concentric by their insurers in settlement or satisfaction of Owner's Claims under the terms and conditions of Concentric's insurance policies applicable thereto, including all covered payments made by those insurers for fees, costs and expenses of investigation, claims adjustment, defense and appeal.
10. Concentric is responsible for the quality, technical accuracy, timely completion, and coordination of all Designs, Drawings, Custom Developed Applications and other services furnished or required under this Agreement, and shall endeavor to perform such services with the same skill and judgment which can be reasonably expected from similarly situated professionals.
11. The Owner may, at any time, by written order, make changes within the general scope of this Agreement in the services to be performed by Concentric. If such changes cause an increase or decrease in Concentric's fee or time required for performance of any services under this Agreement, whether or not changed by any order, an equitable adjustment shall be made and this agreement shall be modified in writing accordingly. No service for which an additional compensation will be charged by Concentric shall be furnished without the written authorization of the Owner.
12. All Drawings, Custom Developed Applications, and other documents prepared or furnished by Concentric pursuant to this Agreement are instruments of service in respect to the project, and Concentric shall retain the right of reuse of said documents and electronic media by and at the discretion of Concentric whether or not the project is completed. Electronic copies of Concentric's documents for information and reference in connection with the use and occupancy of the project by the Owner and others shall be delivered to and become the property of the Owner; however, Concentric's documents are not intended or represented to be suitable for reuse by the Owner or others on additions or extensions of the project, or on any other project. Any such reuse without verification or adaptation by Concentric for the specific purpose intended will be at the Owner's sole risk and without liability or legal exposure to Concentric, and the Owner shall indemnify and hold harmless Concentric from all claims, damages, losses and expenses including attorneys' fees arising out of or resulting therefrom.
13. Concentric warrants that the services provided for under this Agreement will be completed in a good and workmanlike manner in accordance with applicable codes, ordinances, regulations or other legal Owner. For a period of one (1) year after the Owner receives beneficial use of the installation, Concentric will provide a limited warranty to the Owner for any defect due to improper materials or workmanship supplied by Concentric. Any such warranty provided to Owner shall be provided by Concentric without expense to the Owner for the one (1) year period described herein. **CONCENTRIC'S WARRANTY IS A LIMITED WARRANTY FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF BENEFICIAL USE OF THE INSTALLATION.** This warranty is limited to only defects in material and workmanship on products purchased and fully installed by Concentric and excludes defects caused by improper use, abuse, accident, acts-of-God (including but not limited to lightning), alteration, or other conditions beyond Concentric 's control, as determined by Concentric, and all manufacturer's products or workmanship as covered by their respective warranties. For manufacturer's products or workmanship, Concentric will deliver to Owner all manufacturers' warranties of products. **IN CONSIDERATION OF THE LIMITED WARRANTY CONTAINED HEREIN THE OWNER AGREES AND ACKNOWLEDGES THAT SUCH WARRANTY REPLACES ALL OTHER WARRANTIES EITHER EXPRESS OR IMPLIED INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** Concentric's warranty is limited to repair or replacement of a defective product without cost to the Owner. **OWNER WAIVES ALL CLAIMS TO INCIDENTAL OR CONSEQUENTIAL DAMAGES.** This limited warranty extends only to the Owner and not to subsequent buyers/owners. Owner must give written notice of a defect within the one (1) year warranty period described above. In the event of any dispute between the Owner and Concentric, such dispute shall be resolved in accordance with these Standard Terms & Conditions and the Agreement.
14. Any provision or part thereof of this Agreement held to be void or unenforceable under any law shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon the parties. The parties agree that this Agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision which comes as close as possible to expressing the intention of the stricken provision.
15. This Agreement contains and embodies the entire and integrated agreement between parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral.



**AGENDA ITEM EXECUTIVE SUMMARY**

Agenda Item number: 6.a

Title:

Recommendation to Approve the Illinois Emergency Management Mutual Aid System Agreement

Presenter:

Fire Chief Joseph Schelstreet

Meeting: Government Services Committee Date: October 23, 2017

Proposed Cost: \$0

Budgeted Amount: \$N/A

Not Budgeted:

**Executive Summary** *(if not budgeted please explain):*

In order to ensure adequate response to natural and manmade disasters, the City of St. Charles maintains its own Emergency Management Agency as a division of the Fire Department. Many communities within the State of Illinois have a comparable response capacity, and the Illinois Emergency Services Management Association coordinates a state-wide mutual aid response system that closely resembles the current structure in place for Fire Departments.

A state wide structure simplifies the provision of mutual aid when any individual community is stricken by offering a common template.

There is no cost to participate and no mandate to respond if local conditions do not allow for the availability of personnel or resources. This document has also been reviewed by legal counsel.

**Attachments** *(please list):*

\* Fire lane description identified as "Exhibit A" in Title 10.43.010 of the City Code.

**Recommendation/Suggested Action** *(briefly explain):*

Recommendation to approve the Illinois Emergency Management Mutual Aid System Agreement.

**Illinois Emergency Management  
MUTUAL AID SYSTEM  
AGREEMENT**

This Agreement made and entered into the date set forth next to the signature of the respective parties, by and between the units of local government subscribed hereto (hereafter "Unit(s)") that have approved this Agreement and adopted same in manner as provided by law and are hereafter listed at the end of this Agreement.

**WHEREAS**, the Constitution of the State of Illinois, 1970, Article VII, Section 10, authorizes units of local government to contract or otherwise associate among themselves in any manner not prohibited by law or ordinance; and,

**WHEREAS**, the "Intergovernmental Cooperation Act", 5 ILCS 220/1 et seq., provides that any power or powers, privileges or authority exercised or which may be exercised by a unit of local government may be exercised and enjoyed jointly with any other unit of local government; and,

**WHEREAS**, Section 5 of the Intergovernmental Cooperation Act, 5 ILCS 220/5, provides that any one or more public agencies may contract with any one or more public agencies to perform any governmental service, activity or undertaking which any of the public agencies entering into the contract is authorized by law to perform, provided that such contract shall be authorized by the governing body of each party to the contract; and,

**WHEREAS**, the parties hereto have determined that it is in their best interests to enter into this Agreement to secure to each the benefits of mutual aid in emergency management and the protection of life and property from an emergency or disaster; and,

**WHEREAS**, the parties hereto have determined that it is in their best interests to form an association to provide for communications procedures, training and other necessary functions to further the provision of said protection of life and property from an emergency or disaster.

**NOW, THEREFORE**, in consideration of the foregoing recitals, the Unit's membership in the Illinois Emergency Management Mutual Aid System (IEMMAS) and the covenants contained herein, **THE PARTIES HERETO AGREE AS FOLLOWS:**

## **SECTION ONE**

### **Purpose**

It is recognized and acknowledged that in certain situations, such as, but not limited to, emergencies, natural disasters, man-made catastrophes and special events, the use of an individual Member Unit's personnel and equipment to perform functions outside the territorial limits of the Member Unit is desirable and necessary to preserve and protect the health, safety and welfare of the public. It is further expressly acknowledged that in certain situations, such as the aforementioned, the use of other Member Unit's personnel and equipment to perform functions within the territorial limits of a Member Unit is desirable and necessary to preserve and protect the health, safety and welfare of the public. Further, it is acknowledged that coordination of mutual aid through the Illinois Emergency Management Mutual Aid System is desirable for the effective and efficient provision of mutual aid.

## SECTION TWO

### Definitions

For the purpose of this Agreement, the following terms as used in this agreement shall be defined as follows:

- A. "Illinois Emergency Management Mutual Aid System" (hereinafter referred to as "IEMMAS"): A definite and prearranged plan whereby response and assistance is provided to a affected/stricken Unit by the Aiding Unit(s) in accordance with the system established and maintained by the IEMMAS member Units and amended from time to time;
- B. "Member Unit": A unit of local government including but not limited to a city or county having an Emergency Management Program accredited/certified by the State of Illinois, or an intergovernmental agency and the units of which the intergovernmental agency is comprised which is a party to the IEMMAS Agreement and has been appropriately authorized by the governing body to enter into such agreement, and to comply with the rules and regulations of IEMMAS;
- C. "Affected/stricken Unit": A Member Unit which requests aid through the Illinois Emergency Management Agency in the event of an emergency;
- D. "Aiding Unit": A Member Unit furnishing equipment, personnel, and/or services to an affected/stricken Unit;
- E. "Emergency/Disaster": An occurrence or condition in a Member Unit's territorial jurisdiction which results in a situation of such magnitude and/or consequence that it cannot be adequately handled by the affected / stricken Unit and such that a Member Unit determines the necessity and advisability of requesting aid.

- F. "IEMA Regions": The geographically associated Member Units or unit of which have been grouped for operational efficiency and representation of those Member Units.
- G. "Training": The regular scheduled practice of emergency procedures during non-emergency drills/exercise to implement the necessary joint operations of IEMMAS.
- H. "IESMA-MST Committee": The governing body of IEMMAS is comprised of the IEMMAS Team Leaders and Assistant Team Leaders, of whom are members of the Illinois Emergency Services Management Association.
- I. "Mobile Support Team": A group of emergency management personnel, who are members of Member Units and who are approved by the IEMMAS Executive Board and operate under guidelines as established by the IEMMAS Executive Board.
- J. "Special Event": A non-routine event that places a strain on a Member Unit's resources that may involve a large number of people and that such event requires additional planning, preparation and mitigation for public safety.

### **SECTION THREE**

#### **Authority and Action to Effect Mutual Aid**

- A. The Member Units hereby authorize and direct their respective Emergency Manager / Coordinator or his designee to take necessary and proper action to render and/or request mutual aid from the other Member Units in accordance with the policies and procedures established and maintained by the IEMMAS Member Units. The aid rendered shall be to the extent of available personnel and

equipment not required for adequate protection of the territorial limits of the Aiding Unit. The judgment of the Emergency Manager / Coordinator, or his designee, of the Aiding Unit shall be final as to the personnel and equipment available to render aid.

- B. Whenever an emergency / disaster or special event occurs and conditions are such that the Emergency Manager / Coordinator, or his designee, of the affected / stricken Unit determines it advisable to request aid pursuant to this Agreement he shall notify IEMA of the nature and location of the emergency / disaster / special event and the type and amount of equipment and personnel and/or services requested from the IEMMAS, including the activation of Mobile Support Teams.
- C. The Emergency Manager / Coordinator, or his designee, of the Aiding Unit shall take the following action immediately upon being requested for aid:
1. Establish the incident command system at the site of the emergency.
  2. Determine what equipment, personnel and/or services is requested according to the system maintained by IEMMAS;
  3. Determine if the requested equipment, personnel, and/or services can be committed in response to the request from the affected/stricken Unit;
  4. Dispatch immediately the requested equipment, personnel and/or services, to the extent available, to the location of the emergency reported by the affected/stricken unit in accordance with the procedures of IEMMAS;
  5. Notify the affected / stricken unit if any or all of the requested equipment, personnel and/or services cannot be provided.

## **SECTION FOUR**

### **Incident Management System**

The National Incident Management System shall be the standard under which this Agreement shall function. The purpose of the incident management system shall be to provide structure and coordination to the management of emergency incident operations in order to provide for the safety and health of emergency service organization personnel and other persons involved in those activities. Personnel dispatched to aid a party pursuant to this Agreement shall remain employees of the Aiding Unit. Personnel rendering aid shall report for direction and assignment at the scene of the emergency to the State Incident Commander at the Forward Command Post. The party rendering aid shall at all times have the right to withdraw any and all aid upon the order of its Emergency Manager / Coordinator or his designee; provided, however, that the party withdrawing such aid shall notify the State Incident Commander at the Forward Command Post of the withdrawal of such aid and the extent of such withdrawal.

## **SECTION FIVE**

### **Compensation for Aid**

Equipment, personnel, and/or services provided pursuant to this Agreement shall be at no charge to the party requesting aid; however, any expenses recoverable from third parties shall be equitably distributed among responding parties. Nothing herein shall operate to bar any recovery of funds from any state or federal agency under any existing statutes.

## **SECTION SIX**

### **Insurance**

Each party hereto shall procure and maintain, at its sole and exclusive expense, insurance coverage, including: personal injury, property damage. No party hereto shall have any obligation to provide or extend insurance coverage for any of the items enumerated herein to any other party hereto or its personnel. The State of Illinois shall provide workman compensation and comprehensive liability insurance. Upon request, Member Units shall provide such evidence as herein provided to the IEMMAS members.

## **SECTION SEVEN**

### **Indemnification**

Each party hereto agrees to waive all claims against all other parties hereto for any loss, damage, personal injury or death occurring in consequence of the performance of this Mutual Aid Agreement; provided, however, that such claim is not a result of gross negligence or willful misconduct by a party hereto or its personnel.

Each party requesting or providing aid pursuant to this Agreement hereby expressly agrees to hold harmless, indemnify and defend the party rendering aid and its personnel from any and all claims, demands, liability, losses, suits in law or in equity which are made by a third party. This indemnity shall include attorney fees and costs that may arise from providing aid pursuant to this Agreement. Provided, however, that all employee benefits, wage and disability payments, pensions, worker's compensation claims, damage to or destruction of equipment and clothing, and medical expenses of the party rendering aid shall be the sole and exclusive responsibility of the respective party for its employees, provided, however, that such claims made by a third party are not the result of gross negligence or willful misconduct on the part of

the party rendering aid.

The obligations and duties set forth in this Section shall survive the end or termination of this Mutual Aid Agreement.

## **SECTION EIGHT**

### **Non-Liability for Failure to Render Aid**

The rendering of assistance under the terms of this Agreement shall not be mandatory if local conditions of the Aiding Unit prohibit response. It is the responsibility of the Aiding Unit to immediately notify the affected / stricken unit of the Aiding Unit's inability to respond; however, failure to immediately notify the affected / stricken unit of such inability to respond shall not constitute evidence of noncompliance with the terms of this section and no liability may be assigned.

No liability of any kind or nature shall be attributed to or be assumed, whether expressly or implied, by a party hereto, its duly authorized agents and personnel, for failure or refusal to render aid. Nor shall there be any liability of a party for withdrawal of aid once provided pursuant to the terms of this Agreement.

## **SECTION NINE**

### **Term**

This Agreement shall be in effect for a term of one year from the date of signature hereof and shall automatically renew for successive one-year terms unless terminated in accordance with this Section.

Any party hereto may terminate its participation in this Agreement at any time, provided that the party wishing to terminate its participation in this Agreement shall give written notice to

the IEMMAS specifying the date of termination, such notice to be given at least 90 calendar days prior to the specified date of termination of participation. The written notice provided herein shall be given by personal delivery, registered mail or certified mail.

## **SECTION TEN**

### **Effectiveness**

This Agreement shall be in full force and effective upon approval by the parties hereto in the manner provided by law and upon proper execution hereof.

## **SECTION ELEVEN**

### **Binding Effect**

This Agreement shall be binding upon and inure to the benefit of any successor of entity which may assume the obligations of any party hereto. Provided, however, that this Agreement may not be assigned by a Member Unit without prior written consent of the parties hereto; and this Agreement shall not be assigned by IEMMAS without prior written consent of the parties hereto.

## **SECTION TWELVE**

### **Validity**

The invalidity of any provision of this Agreement shall not render invalid any other provision. If, for any reason, any provision of this Agreement is determined by a court of competent jurisdiction to be invalid or unenforceable, that provision shall be deemed severable and this Agreement may be enforced with that provision severed or modified by court order.

## **SECTION THIRTEEN**

### **Notices**

All notices hereunder shall be in writing and shall be served personally, by registered mail or certified mail to the parties at such addresses as may be designated from time to time on the IEMMAS mailing lists or, to other such addresses as shall be agreed upon.

## **SECTION FOURTEEN**

### **Governing Law**

This Agreement shall be governed, interpreted and construed in accordance with the laws of the State of Illinois.

## **SECTION FIFTEEN**

### **Execution in Counterparts**

This Agreement may be executed in multiple counterparts or duplicate originals, each of which shall constitute and be deemed as one and the same document.

## **SECTION SIXTEEN**

### **IESMA-MST Committee**

The IESMA-MST Committee is hereby identified as the authority to consider, adopt and amend from time to time, as needed, rules, procedures, by-laws and any other matters deemed necessary. The IESMA-MST Committee shall consist of 3 members appointed from within each IEMMAS region, who shall serve as the voting representative of said region on IEMMAS matters, and may appoint a designee to serve temporarily in his stead. Such designee shall be

from within the respective region and shall have all rights and privileges attendant to a representative of that region. The IESMA Executive Board as provided for in the by laws shall coordinate the activities of the IEMMAS.

## **SECTION SEVENTEEN**

### **Duties of the IESMA-MST Committee**

The IESMA-MST Committee shall meet regularly to conduct business and to consider and publish the rules and procedures of the IEMMAS.

## **SECTION EIGHTEEN**

### **Rules and Procedures**

Rules, procedures of the IEMMAS shall be established by the IESMA-MST Committee as deemed necessary from time to time for the purpose of administrative functions, the exchange of information and the common welfare of the IEMMAS.

## **SECTION NINETEEN**

### **Amendments**

This Agreement may only be amended by written consent of all the parties hereto. This shall not preclude the amendment of rules, procedures of the IEMMAS as established by the IESMA-MST Committee to this Agreement. The undersigned unit of local government or public agency hereby has adopted, and subscribes to, and approves this MUTUAL AID SYSTEM Agreement to which this signature page will be attached, and agrees to be a party thereto and be bound by the terms thereof.

This Signatory certifies that this Illinois Emergency Management Mutual Aid System

Agreement has been adopted and approved by ordinance, resolution, or other manner approved by law, a copy of which document is attached hereto.

\_\_\_\_\_  
President  
Illinois Emergency Service Management Association

\_\_\_\_\_  
DATE

\_\_\_\_\_  
IEMMAS Chairperson

\_\_\_\_\_  
DATE

Political Entity

\_\_\_\_\_  
Mayor Raymond P. Rogina

\_\_\_\_\_  
DATE

St. Charles, Illinois

ATTEST:

\_\_\_\_\_  
Clerk  
St. Charles, Illinois

\_\_\_\_\_  
DATE



**AGENDA ITEM EXECUTIVE SUMMARY**

Agenda Item number: 7.a

Title:

Recommendation to Approve Modifications to City Ordinance Title 2 “Administration and Personnel”, Chapter 2.32 “Police Department”, Section 2.32.020 “Appointments, Promotion, and Vacancy Filling”

Presenter:

Chief Keegan

Meeting: Government Services Committee

Date: October 23, 2017

Proposed Cost:

Budgeted Amount: \$

Not Budgeted:

**Executive Summary** *(if not budgeted please explain):*

Due to some additional attrition and personnel changes within the Police Department, a modification of the Police Department’s command structure via the attached ordinance revision is needed for City Council consideration.

These revisions (explained in greater detail within the associated memo and organizational chart), modify the command structure of the Police Department to provide better oversight and command of both patrol operations and the various ancillary duties of the Police Department’s command team. This modification is budget and FTE neutral and, in fact, due to other modifications within the Police Department, has a positive impact on the overall operating budget of the Police Department.

Please see the attachments for additional information.

**Attachments** *(please list):*

\* Memo \* Organizational Chart \* Ordinance

**Recommendation/Suggested Action** *(briefly explain):*

Recommendation to approve modifications to City Ordinance Title 2 “Administration and Personnel”, Chapter 2.32 “Police Department”, Section 2.32.020 “Appointments, Promotion, and Vacancy Filling.”



# Memo

Date: 10/17/2017  
To: Mark Koenen, City Administrator  
From: James Keegan, Chief of Police  
CC: Ray Rogina, Mayor  
Re: Police Department Reorganization

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As outlined below and discussed in our on-going planning meetings, I am recommending the following modifications to our City Code pursuant to City Council approval.

The below captioned recommendations alter the command structure of the police department to both fill vacant positions via attrition and provide more consistent supervision and oversight to a younger work force. Each of these modifications is in most cases, cost/personnel neutral and contributes to an overall reduction to our operating budget.

Highlights to recent changes recommended include:

- After the retirement of Commander Gatlin (5/1/17), the Commander of Administration role was filled on a temporary basis by a sergeant on restructured duty due to an off-duty injury. That sergeant is now back to full-duty and we are ready to proceed with a promotional opportunity.
- The K-9 position has gone unfilled and remains vacant pursuant to the passing of "Aries". The officer was assigned back to uniform patrol operations and is assisting us with staffing concerns. We will at some point look to fill this position but not until staffing levels settle into optimum levels.
- The Community Restitution position (full-time) has now been reclassified into a part-time position and additional hours are now being offered at both night and on weekends to accommodate younger defendants trying to obtain additional hours. This change will yield significant savings.
- The additional deputy chief returns us to previous staffing levels and allows us to free up commanders from administrative duties for additional oversight of both patrol operations. Within the last few years we have hired several new officers and promoted four of the six patrol sergeants.

In an attempt to simplify our ordinances, I am broadening the term ‘deputy chief’ and “commander” into the attached ordinance and not using a specific position (i.e.- Deputy Chief of Administration or Commander of Investigations). This is an attempt to build upon our exempt personnel’s backgrounds and in the spirit of true succession planning, promote and appoint to a specific rank and not a specific position. This creates a more well-rounded police executive with a better understanding of the entire police departments operations and not a specific task, skill-set or specialty.

Thank you in advance for your cooperation in this matter. As always, I stand ready to discuss my recommendations at your convenience. These recommendations mandate that we modify the code accordingly:

## Chapter 2.32

### POLICE DEPARTMENT

#### Sections:

#### 2.32.020 Appointments, promotion, and vacancy filling.

#### 2.32.020 Appointments, promotion, and vacancy filling.

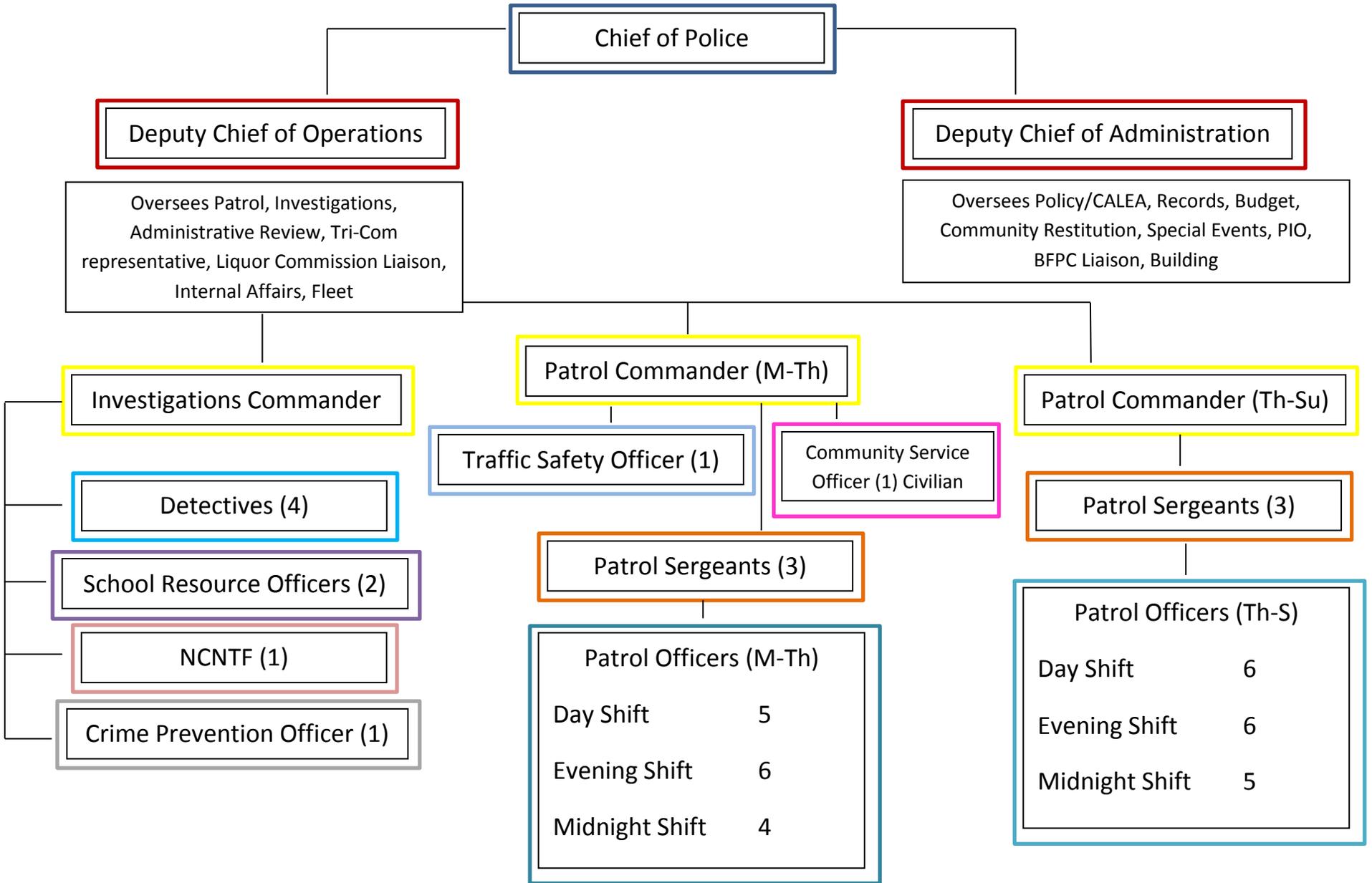
2. ~~The Deputy Chief, Commander of Investigations, Commander of Patrol, and Commander of Administration~~ All Deputy Chief and Commander positions shall be exempt rank(s) and position(s) and shall be appointed or promoted by the City Administrator upon the recommendation of the Chief of Police and shall be subject to removal by the City Administrator.

The provisions of 65 Illinois Compiled Statutes 5/10-2.1-4, as amended, shall not apply to appointments, promotions or removals for the position(s) of Chief of Police, Deputy Chiefs, ~~Commander of Investigations, Commander of Patrol, and Commander of Administration~~ or Commanders.

3. Any full-time member of the Police Department appointed as Chief of Police, Deputy Chief, ~~or Commander of Traffic & Special Events, and Commander of Investigations,~~ unless outlined herein, shall not retain any reversionary rights in any former position and shall not be returned to such position if removed or resigned from his appointed position.

1. 1. Any full-time member of the Police Department holding the rank of Deputy Police Chief, ~~or Commander of Investigations, Commander of Patrol, and Commander of Administration~~ upon enactment of this ordinance shall be classified during his or her term in such position as on furlough from the Police Department at the rank to which he or she is entitled under the Board of Fire and Police Commissioners at the beginning of his or her term of office.

# St. Charles Sworn Police Personnel Chart



Total Sworn Personnel: 53

**City of St. Charles, Illinois**  
**Ordinance No. 2017-M- \_\_\_\_\_**

**An Ordinance Amending Title 2 “Administration and Personnel”,  
Chapter 2.32 “Police Department”, Section 2.32.020 “Appointments,  
Promotion, and Vacancy Filling”, of the St. Charles Municipal Code**

**BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ST. CHARLES,  
KANE AND DUPAGE COUNTIES, ILLINOIS, AS FOLLOWS:**

SECTION ONE: That Title 2 “Administration and Personnel” Chapter 2.32 “Police Department” Section 2.32.020 “Appointments, Promotion, and Vacancy Filling”, of the St. Charles Municipal Code, be and is hereby amended as follows:

2. All Deputy Chief and Commander positions shall be exempt rank(s) and position(s) and shall be appointed or promoted by the City Administrator upon the recommendation of the Chief of Police and shall be subject to removal by the City Administrator.

The provisions of 65 Illinois Compiled Statutes 5/10-2.1-4, as amended, shall not apply to appointments, promotions, or removals for the position(s) of Chief of Police, Deputy Chief, or Commander.

3. Any full-time member of the Police Department appointed as Chief of Police, Deputy Chief, or Commander, unless outlined herein, shall not retain any reversionary rights in any former position and shall not be returned to such position if removed or resigned from his appointed position.

1. Any full-time member of the Police Department holding the rank of Deputy Police Chief or Commander upon enactment of this ordinance shall be classified during his or her term in such position as on furlough from the Police Department at the rank to which he or she is entitled under the Board of Fire and Police Commissioners at the beginning of his or her term of office.

SECTION TWO:

That, after the adoption and approval hereof, this Ordinance shall (i) be printed or published in book or pamphlet form, published by the authority of the City Council of the City of St. Charles, or (ii) within thirty (30) days after the adoption and approval hereof, be published in a newspaper published in and with a general circulation within the City of St. Charles.

SECTION THREE: This Ordinance shall be in full force and effect ten (10) days from and after its passage by a vote of the majority of the corporate authorities now holding office, approval and publication in the manner provided by law.

PRESENTED to the City Council of the City of St. Charles, Illinois, this \_\_\_\_ day of \_\_\_\_\_, 2017.

PASSED by the City Council of the City of St. Charles, Illinois this \_\_\_\_ day of \_\_\_\_\_, 2017.

APPROVED by the Mayor of the City of St. Charles, Illinois, this \_\_\_\_ day of \_\_\_\_\_, 2017.

\_\_\_\_\_  
Raymond P. Rogina, Mayor

ATTEST:

\_\_\_\_\_  
City Clerk

COUNCIL VOTE:

Ayes : \_\_\_\_\_

Nays : \_\_\_\_\_

Absent : \_\_\_\_\_