

City Council Work Session Handouts

November 3, 2014

- I. Review and Discuss the Water/Sewer SCADA (Supervisory Control and Data Acquisition) System
- II. Review and Discuss an Update on the 2014 Corporate Challenge Program



SCADA Project

Steve Graves
Chief Information Officer
November 3, 2014



SCADA System

- What is a SCADA System?
 - Supervisory Control & Data Acquisition System
 - **Programmable Logic Controller (PLCs)**
 - **Chlorine Analyzers**
 - **Human-Machine Interface Software (HMI)**
 - **Communications (Fiber, LTE)**
 - **Data Center Equipment (Servers, Storage)**
 - **SCADA Control Center Update**

SCADA System

Generator



Security Panel



Electrical Panel



Relay Panel



MCC Pump and Discharge Control

Pumps



PLC Panel



Pressure Relief Valve





SCADA System

- Why Replace?
 - Current System is largely 20 years old
 - Software is out-of-date
 - No expansion capabilities
 - Uses older radio technology for communications
- Council provided \$1.7 Million in Utility CO funding
- Project assigned to Information Technology

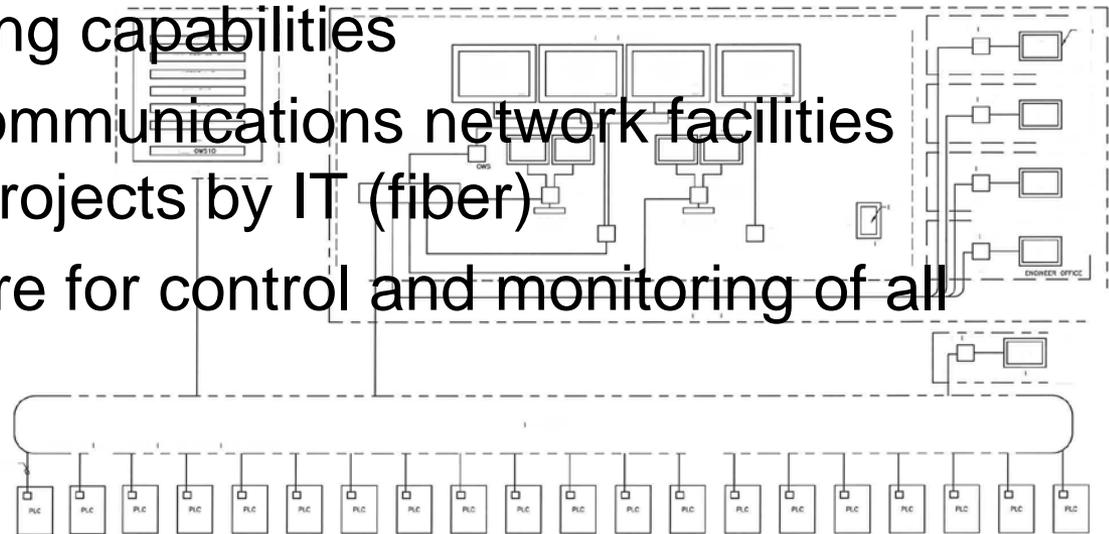


Project Details

- Replace control equipment at:
 - Five pump stations & one booster
 - Seven elevated storage tanks
 - Five sewage lift stations
 - Multiple/many valve controls
 - Add automated chlorine analyzers
 - Rehab wiring, panels and conduit at all sites
- 

Project Details

- New system will take advantage of IT's fault-tolerant infrastructure for mission critical applications
- The new system will provide:
 - Enhanced reporting capabilities
 - Use of existing communications network facilities added in earlier projects by IT (fiber)
 - Advanced software for control and monitoring of all equipment



Project Details

- Remodel SCADA Control Center at Service Center and add additional monitoring capabilities
- The new system design will allow operators to function anywhere they can access the network.



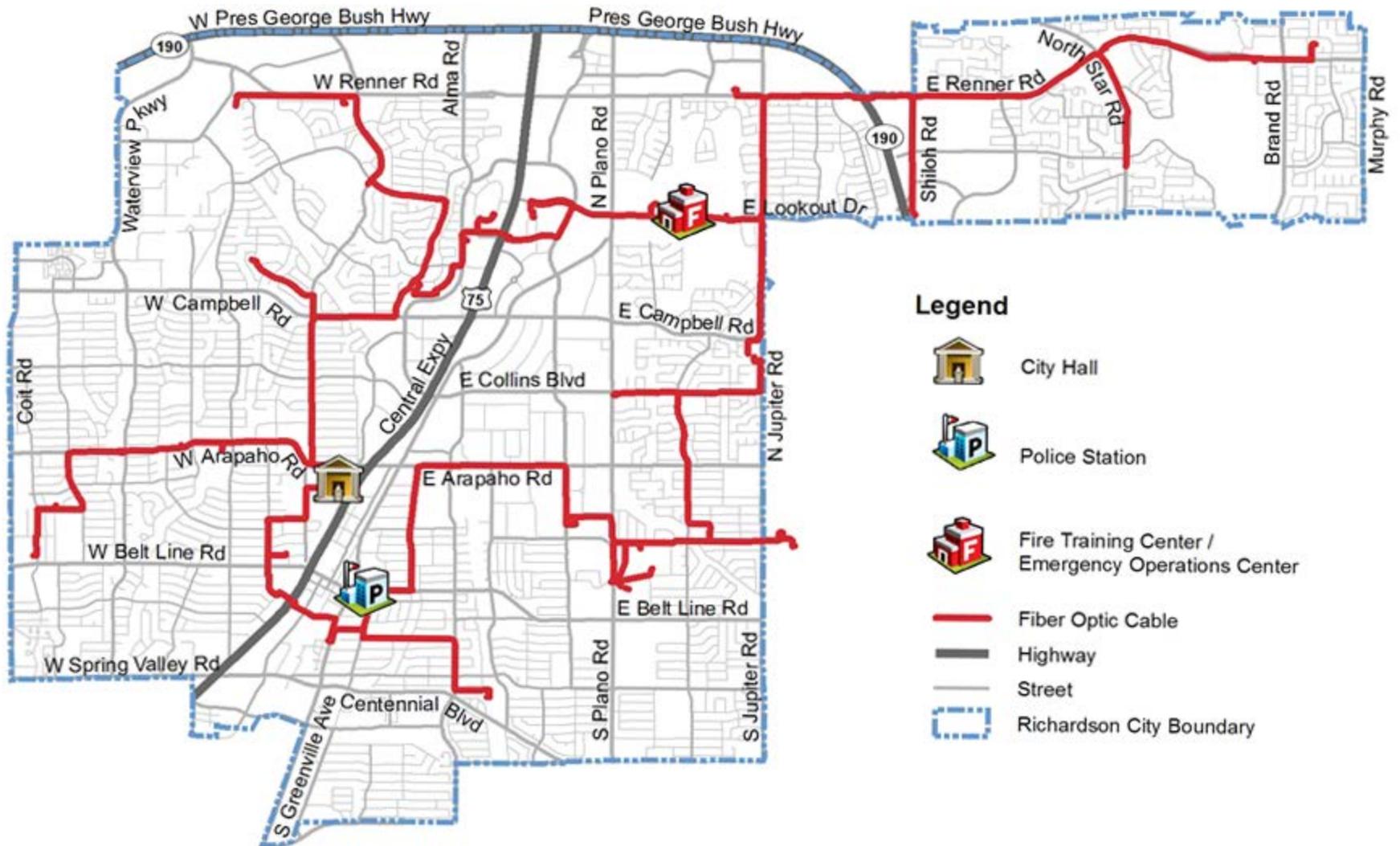
CONTROL ROOM
AS SHOWN

An aerial photograph showing a large, curved, multi-story building with a grey facade and a red roofline. To the right of the building is a tall, white, cylindrical water tower with a blue logo on its top. The scene is set in an urban environment with parking lots and some greenery.

Council Goals

- **Appropriate Use of Technology**
 - Detail and improve a COR technology adoption and procurement policy to ensure integration, compatibility, support, and sustainability for all City technology purchases.
 - Develop and implement a plan to optimize current technologies.
 - Develop and implement an improved data and system security policy.

Data & Investment Protection



An aerial photograph showing a large, curved, modern building with a grey facade and a red roofline. In the foreground, there is a prominent white water tower with a blue logo on its top. The scene is set in an urban or campus environment with parking lots and some greenery.

Design/Build Process

- New method for handling civil projects recently approved by State.
- Projects typically completed 30% faster, and 20%-30% cheaper (TML Estimate)
- Value engineering occurs **before** contract is signed



Design/Build Steps

- Determine requirements
- Create a specification for completed result
- Issue RFP for designs (includes price)
- Score qualifications
- Score designs
- Score price
- Negotiate best and Final Price
- Build project



An aerial photograph showing a large, curved, multi-story building with a grey facade and a red roofline. To the right of the building is a tall, white water tower with a blue logo on its top. The scene is set in an urban environment with parking lots and some greenery.

Where are we...

- Four vendors were selected as finalist
- Proposals were submitted by vendors.
- Designs and pricing were reviewed and scored by city staff.
- Staff and CP&Y are currently negotiating best and final offer with leading vendor.

SCADA Planning

- Included additional licenses for future needs
 - New water tower
- Monitoring capability for additional services
 - Electric, Security, Video, Various other systems
- Anticipate project will be on City Council's November 10th Agenda for approval
- Construction is anticipated to begin in January 2015, and complete by end of summer.



Thank You

Steve Graves

Chief Information Officer



**BlueCross BlueShield
of Texas**

2014

**CORPORATE
CHALLENGE**

CITY OF RICHARDSON

City Council Presentation

November 3rd, 2014

2014 Participating Companies



Special Olympics Texas

2014 CORPORATE CHALLENGE TAILGATE AWARD

Concentra
SOURCE
KOSMOS ENERGY
BECK
SAMSUNG
General Electric
Raytheon
KBM GROUP
Anritsu
MedAssets
firehost
HEWLETT PACKARD
FLEXJET
PEPSICO
NICE
Tektronix
PIONEER
CommScope
ServiceKing
LENNOX
BaylorScott&White
Regus
SOUTHWEST.COM
National Life Group
Mustang Technology
BlueCross BlueShield of Texas

Companion DATA SERVICES
UT DALLAS
FM Global
The Heart Hospital
TriQuint
HILTON WORLDWIDE
NITA
AmerisourceBergen
NERIUM INTERNATIONAL
Parkland
Associated AirCenter
markit
SLALOM CONSULTING
CONVERGY'S
FOSSIL GROUP
ASC
Outthinking Outdoing
CISCO
TEXAS CAPITAL BANK
ca technologies
VCE
PFSweb
ISN
Ebbey
HALLIDAY REALTORS
ASSESS Systems
ETC
QUICK



New Companies

- * Associated Air Centers
- * FireHost
- * Maxim Integrated
- * Nerium International
- * Service King
- * Slalom Consulting
- * VCE

Returners

- * Dallas County
- * NICE
- * PFSWeb



2014 Division Winners

A Division

- * Gold - Raytheon
- * Silver - PepsiCo
- * Bronze - Southwest Airlines

AA Division

- * Gold - Pioneer
- * Silver - Fossil
- * Bronze - MedAssets

B Division

- * Gold - Concentra, Inc.
- * Silver - UT Dallas
- * Bronze - Markit

BB Division

- * Gold - Texas Capital Bank
- * Silver - FlexJet
- * Bronze - Heart Hospital
Baylor Plano

C Division

- * Gold - Kosmos Energy
- * Silver - Maxim Integrated
- * Bronze - FM Global

D Division

- * Gold - L-3 Mustang Tech
- * Silver - Convergys
- * Bronze - Slalom Consulting

Event Highlights

- * 55 Total companies - *Record High*
- * Over 700 Bike Riders at 15k
- * 3,200 Runners at 5k
- * 13,000 Total participants



Partners and Sponsors

- * Blue Cross Blue Shield – Title Sponsor
- * Methodist Richardson Medical Center– Event and Water Sponsor
- * In-N-Out Burger
- * United Airlines – Raffle Sponsor
- * Hilton Hotels - Raffle Sponsor
- * Baylor Health Care – 100+ hours of athletic trainers
- * Venues –
 - * Sherrill Park Golf Course
 - * Sportsplex at Valleyview
 - * UT Dallas
 - * Billiard Den and Rackdaddy’s
 - * Adventure Landing
 - * RISD and JJ Pearce High School



Special Olympics



Special Olympics Contribution

- * \$186,000 in 2013
- * Over \$200,000 in 2014
 - * \$50,000 contribution from Lennox
 - * \$17,000 contribution from City of Richardson
 - * \$12,000 contribution from North Texas Tollway Auth.
- * Over \$1.4 million dollars raised for SOTX since inception in 1997



Looking forward to 2015

- * Streamlining registration process for new and returning companies
- * Securing additional venues
- * Researching new event possibilities
- * Developing off-season Corporate Recreation program
 - * Rebranding with a target launch of January 2015