

**1 Inch  
Binder**

Richmond Road Station Filter Building  
Lexington, Kentucky  
June 26, 2014



**KENTUCKY**  
**AMERICAN WATER**



**KENTUCKY**  
**AMERICAN WATER**

Richmond Road Station Filter Building  
Lexington, Kentucky  
June 26, 2014

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Kentucky American Water Company  
Attention: Zach Dukes  
2300 Richmond Road  
Lexington, Kentucky 40502

**Dear Mr. Dukes:**

Thank you for the opportunity to share this proposal with your team. Enclosed is the full proposal for the Richmond Road Station Filter Building Project.

We are ready to provide you with the most **Resourceful** and most **Responsive** construction team in the business, committed to driving the best **Results** for your project.

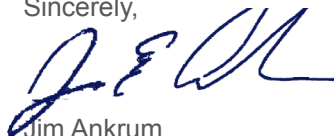
If at all possible, we would welcome the opportunity to present this proposal to you in person, so you can experience first hand what is consistently described by our clients as some of the best people in the business. When you meet with your project leadership team from Bowen, you will see the commitment, professionalism, and genuine concern for others come forth. This combination means you get a quality project, delivered on time, with no surprises.

The proposal with this letter officially conveyed from Bowen to Kentucky American Water Company, will demonstrate beyond a doubt that Bowen is the most qualified and committed firm to lead the Richmond Road Station Filter Building Project. If you have any questions or comments, please do not hesitate to reach out to our team's contact:

**Brian Stater, Estimating Manager-Water Projects Group**  
**317.842.2616 ~ [Brian@bowenengineering.com](mailto:Brian@bowenengineering.com)**

Thank you for this opportunity to share our approach and proposal to deliver another injury free, high quality project, on schedule and on budget. We look forward to continuing our successful work with you and your team.

Sincerely,



Jim Ankrum  
Senior Vice President



**Resourceful. Responsive. Results.**

# Executive Summary



## Richmond Road Station Filter Building

In the process of proposing for the project, we heard you state the following project attributes as highly important for this project.

- SCHEDULE
- Collaboration
- Involvement with Process Equipment Selection
- Value Engineering
- Cost Control
- SCHEDULE
- SCHEDULE

Bowen will be **Responsive** to these project attributes by dedicating proven project team members who have previously demonstrated their ability to achieve positive outcomes on American Water Projects. In addition, Bowen will be **Resourceful** in that we will fully collaborate with American Water, Kentucky American Water and Hazen & Sawyer during the pre-construction phase in order to expedite the overall project schedule, provide value engineering and real-time decision/cost impact. Lastly, Bowen will achieve the desired **Results** for the project with the respect to safety, schedule achievement, quality construction practices and cost control.

### KEY PROJECT DATES

**07/18/2014**

Anticipated Notice of Award

**08/15/2014**

Issued for Construction Drawings

**03/16/2015**

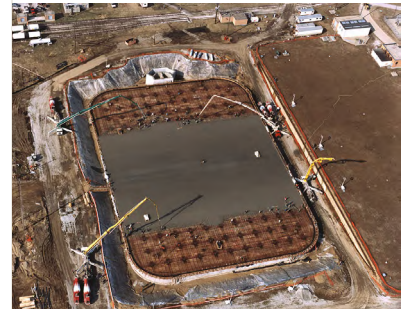
Mobilization to Site

**04/11/2016**

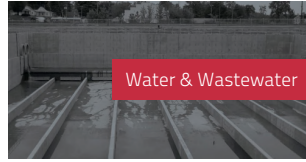
Date of Water Production

**07/06/2016**

Final Completion

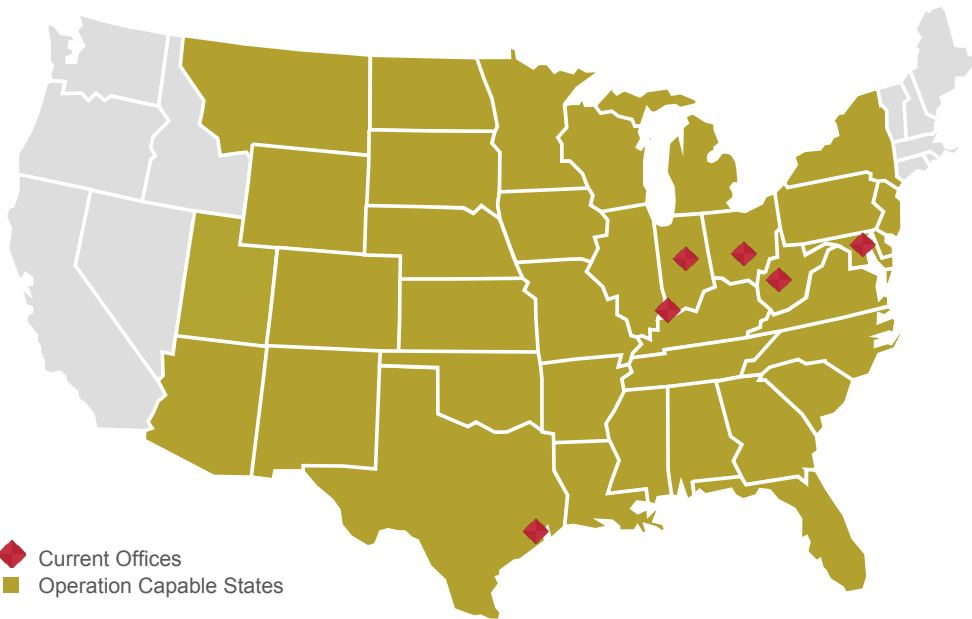


# About **BOWEN**



**8,500,000 BOWEN** employee craft-hours in the last 5 years.

Founded in 1967, Bowen is a General Contractor with operation centers and projects located throughout the country. Our team performs work for clients within the Power/Energy, Water/Wastewater and Industrial markets.



45+ YEARS IN BUSINESS

**700**  
EMPLOYEES

**77** EMPLOYEE OWNERS LICENSED P.E.s

**70** GRADUATE ENGINEERS

**16** NUMBER LICENSED (P.E.)

**64** FULL-TIME FIELD SUPERVISION

**\$1.3bil**  
REVENUE OVER LAST 5 YEARS

**\$600mil**  
BONDING CAPACITY

**0.69**  
RECORDABLE RATE

# Core Values

Zero injury and genuine concern for others

Continuous improvement

Enthusiastic teamwork & celebration

Never walk away from a problem

THE TOP  
**400**  
CONTRACTORS



#251 in Nation








#8 in Air Pollution

#19 in Power

#47 in Environmental



## With the Bowen team, YOU get:

-  A project executed on time
-  Extensive experience on American Water projects
-  A partner with a vested interest in a great project outcome
-  Proven Value Engineering results
-  A team that never walks away from a problem
-  Strong and consistent project leadership throughout the project
-  Zero-injury commitment applied to your project through a customized safety plan

## Your Proven Long Term Partner

In addition to building your project, Bowen aims to build on the partnership with Kentucky American Water. To do this, we'll provide you with a project team that is the most Resourceful, and Responsive, to drive the best Results on your project. Here is a recent statement from a partner on our ability to live this promise:

“I have directly worked with many Bowen employees over the years and have always been impressed by the talent and quality.

I am convinced that it starts with Bowen's vision and culture established many years ago - Bowen employees are conditioned to be customer focused. This attitude results in an organization that is responsive to customers and driving results to meet customer expectations.”

Alan Deboy  
Indiana American Water



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## **Separate Lump Sum Amounts**

Richmond Road Station  
Filter Building

### **What's Included:**

- Supervision and Superintendence Fees
- Contractor's Fixed Fees



# Separate Lump Sum Amounts

## Separate Lump Sum Amounts

Pre-Con Services During Design (60% to Complete)	= \$	
Supervision and Superintendence of Construction	= \$	
Contractor Fixed Fee	= \$	
<b>TOTAL</b>	<b>= \$</b>	

Bowen Engineering also acknowledges receipt of Addendum:

Addendum No. 1 - Dated June 11, 2014

Addendum No. 2 - Dated June 18, 2014





## **Authority and Qualification to do work in Kentucky**

Richmond Road Station  
Filter Building

### **Included Documents**

- Kentucky Authority and Qualification

**Commonwealth of Kentucky**  
**Alison Lundergan Grimes, Secretary of State**

Alison Lundergan Grimes  
Secretary of State  
P. O. Box 718  
Frankfort, KY 40602-0718  
(502) 564-3490  
<http://www.sos.ky.gov>

**Certificate of Authorization**

Authentication number: 150527  
Visit <https://app.sos.ky.gov/ftshow/certvalidate.aspx> to authenticate this certificate.

I, Alison Lundergan Grimes, Secretary of State of the Commonwealth of Kentucky, do hereby certify that according to the records in the Office of the Secretary of State,

**BOWEN ENGINEERING CORPORATION**

, a corporation organized under the laws of the state of Indiana, is authorized to transact business in the Commonwealth of Kentucky, and received the authority to transact business in Kentucky on May 16, 2001.

I further certify that all fees and penalties owed to the Secretary of State have been paid; that an application for certificate of withdrawal has not been filed; and that the most recent annual report required by KRS 14A.6-010 has been delivered to the Secretary of State.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal at Frankfort, Kentucky, this 6<sup>th</sup> day of May, 2014, in the 222<sup>nd</sup> year of the Commonwealth.



*Alison Lundergan Grimes*

Alison Lundergan Grimes  
Secretary of State  
Commonwealth of Kentucky  
150527/0515946



## **Construction Cost Estimate**

Richmond Road Station  
Filter Building

# Section 3 Construction Cost Estimate



**KENTUCKY  
 AMERICAN WATER**

**Section 3: Construction Cost Estimate**  
BOWEN ENGINEERING CORPORATION

Kentucky American Water

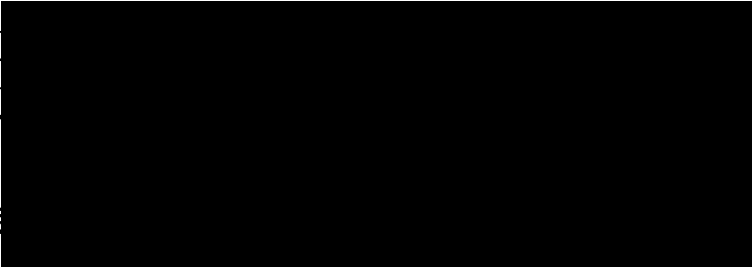
KYAW - Richmond Rd Station Treatment Plant Improvements

Div.	Description	TOTAL SELF PERFORM	TOTAL MAT'L/SUB	TOTAL COST
1	<b>General Conditions</b>			
	General Conditions			
	Kentucky State Sales Tax: 6%			
	Allowance: Background Checks			
2	<b>Sitework</b>			
a	Sitework, Clearing, Paving, Storm Sewer, Site Finishes			
b	Demolition			
3	<b>Concrete</b>			
a	Filter Building Concrete. 3306 CY			
b	Chlorine Contact Tank & Site Structures. 1431 CY			
c	Precast			
4	<b>Masonry</b>			
a	Filter Building			
5	<b>Metals</b>			
a	Filter Bulding & Chlorine Contact Tank			
6	<b>Woods &amp; Plastics</b>			
a	Filter Bulding & Chlorine Contact Tank			
7	<b>Roofing</b>			
a	Filter Building & Chlorine Contact Tank			
b	Xypex in Filter Building Pipe Gallery			
8	<b>Doors &amp; Windows</b>			
a	Filter Building & Chlorine Contact Tank			
9	<b>Finishes</b>			
a	Filter Building & Chlorine Contact Tank			
10	<b>Misc.</b>			
a	Filter Building & Chlorine Contact Tank			
11	<b>Equipment</b>			
a	Blowers			
b	Filter Bottoms, Suport Media, and Troughs			
c	GAC (Pre-Rinsed)			
d	Vertical Turbine Pumps (Floserve)			
e	Misc Eqpt			
13	<b>Special Construction</b>			
a	Instrumentation & Controls			
15	<b>Mechanical</b>			
a	HVAC & Plumbing			
b	Piping & Valves: Filter Building Process			
c	Piping & Valves: Chlorine Contact Tank Process			
d	Yard Piping: Filter Building and Chlorine Contact Tank			
e	Misc Mechanical			
16	<b>Electrical</b>			



# Section 3 Construction Cost Estimate

a	Filter Building & Chlorine Contact Tank
	<b>Total Direct Construction Cost Estimate</b>
	Recommended Contingency (2.5%)
	<b>TOTAL PROJECT CONSTRUCTION COST ESTIMATE</b>





## **Construction Work to be Performed With Own Forces**

Richmond Road Station  
Filter Building

### **What's Included:**

- A list of construction work that Bowen desires to perform with its own forces

## Section 4 Work that Bowen will perform with its own forces

Bowen Engineering is a self-performing contractor who has the capability and expertise to construct over 70% of the project scope with its own forces. Self-performing work provides the following benefits:

1. Amplified project control with respect to safety
2. Increased project control with respect to schedule achievement
3. Higher standard of quality success
4. Reduced cost due to avoiding double mark-ups

Bowen Engineering desires to self-perform the following work scopes for this project:

- a. Sitework – excavation and backfill
- b. Demolition
- c. Concrete – Cast in place & precast installation
- d. Miscellaneous metals and structural steel installation
- e. Process Equipment Installation
- f. Process Piping: Yard Piping and Exposed DIP
- g. Pre-Cast Install







## Labor Rates

Richmond Road Station  
Filter Building

### Included Documents

- Labor Rates for Self-Perform Craft

# Section 5 Labor Rates



T & M LABOR RATES										
PROJECT: Kentucky American Water Richmond Road Station 6-26-14										
Date: 6/26/14										
EMPLOYEE COMPENSATION	CARP FMN	PIPE FITTER FMN	LABOR FMN	OPER	OILER	CARP	PIPE FITTER	LABOR	MILLWRIGHT	FINSISHER
CONTRACT EXPIRATION DATE	Apr-14	Jun-14	Apr-14	Apr-14	Apr-14	Apr-14	Jun-14	Apr-14	May-14	Apr-14
BASE RATE										
TAXABLE FRINGES: PTO, HOLIDAY, BONUS										
TAXABLE SUBTOTAL										
INSUR/TAXES - %										
INSUR/TAXES - \$										
NON-TAXABLE FRINGES: HEALTH, AUTO ALLOWANCE, PENSION										
<b>TOTAL HOURLY CHARGE</b>										
	Straight-Time									
	1 1/2 Overtime									
	Double-Time									
SMALL TOOL	0.00%									
OVERHEAD%	0.00%									
PROFIT%	0.00%									




## **Heavy Equipment Rental Rates**

Richmond Road Station  
Filter Building

### **Included Documents**

- Heavy Equipment Rental Rates
- Medium Tools

# Section 6 Heavy Equipment Rental Rates

<b>BOWEN ENGINEERING CORPORATION</b>						Hourly Rate for Idle Time
<b>T&amp;M EQUIPMENT RATES -- WITH FUEL</b>		Hourly Rate	Daily Rate	Weekly Rate	Monthly Rate	
Manufacturer	Description	Rate	Rate	Rate	Rate	Time
<b>CRANES</b>						
Manitowoc 10000	100 ton Crawler Crane					
Grove RT 880	Hyd Crane 80 ton					
Grove RT 750	Hyd Crane 50 ton					
Grove RT 760	Hyd Crane 50 ton					
Grove RT 765	Hyd Crane 65 ton					
LinkBelt 8050	Hyd Crane 40 ton					
<b>TRACK HOES</b>						
Cat 375	Hyd Excavtor 5cy					
Cat 345	Hyd Excavator 3.5cy					
Cat 336	Hyd Excavator 2cy					
Deere 350	Hyd Excavator 2cy					
Cat 330	Hyd Excavator 2cy					
Cat 324	Hyd Excavator 1.25cy					
Deere 225RTS	Hyd Excavator 1.75Cy.					
Cat 308	Hyd Excavator .50cy					
Cat 305	Hyd Excavator .50cy					
Cat 304	Hyd Excavator .50cy					
Cat 303	Hyd Excavator .50cy					
<b>R.T. BACKHOES</b>						
Cat 420 D-IT	Loader/Hoe					
Cat 420E-IT	Loader/Hoe					
Cat 420F-IT	Loader/Hoe					
<b>ROLLERS</b>						
Cat CS433E	Single Drum Vibr. Comp					
<b>SKIDSTEERS</b>						
Komatsu CK30-1	Skid Loader Track					
<b>TELEHANDLERS</b>						
Cat TL-1055	Lift Cap 10,000lb					
<b>CRAWLER LOADERS</b>						
Cat 963C-IT	Hyd 3.2 Cy Track Loader					
<b>WHEEL LOADERS</b>						
Cat 930H	Wheel Loader 2.6Cy					
<b>DOZERS</b>						
Cat D5XL Dozer	Dozer 90hp					
Cat D4G-XL Dozer	Dozer 80hp					

Rates DO NOT Include Operator, Oiler, Mobilization, or Demobilization  
 Rates DO include Operational Costs (ie: fuel, oil, grease and normal maintenance)

Rate for "outside" (rented) equipment will be charged at the actual rental rate plus fuel, lubricants, maintenance, taxes and insurance, plus the applicable overhead and profit rates.



# Section 6 Medium Tools

**BOWEN ENGINEERING CORPORATION**

**MEDIUM TOOL RENTAL RATES**

Revised 10/1/13

<b>CATEGORY</b>	<b>MEDIUM TOOL</b>	<b>HRLY</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
10	CRANE MATS - <b>PER EACH</b>				
45	BEC OFFICE/ENGR. TRAILER <10 X 50				
45	BEC OFFICE/ENGR. TRAILER 10 X 60+				
47	TOOL TRAILER				
47	CONEX BOX - < 8' X 20'				
47	CONEX BOX - 8' X 40' +				
50	AIR COMPRESSOR				
55	WELDER (225 AMP)				
60	JOBSITE PICKUP (\$8.50/HR)				
81	MIKASA MQ 25 KVA GENERATOR (\$29/HR)				
	HI CYCLE GENERATOR (5000W)				
82	3" GAS OR ELECTRIC PUMP				
	4" GAS OR ELECTRIC PUMP				
	TEST PUMP				
	WELL SCREEN				
83	CONCRETE VIBRATORS, EACH				
84	PIPE LASER				
	ROTATING LASER				
85	TRANSIT				
	LEVEL				
	TOTAL STATION				
87	SEWER BOX (6 or 8 X 16, 8 X 20, 6 or 8 X 24 or 26)				
	BORE BOX (10' X 22')				
	BORE BOX (10' X 12')				
	WATER TAP LINE BOX				
	MANHOLE BOX (8'X8', 10'X10', 10'X16')				
	STONE BOX ( 8 Thru 12 CY)				
	SIDE PLATE (ALL SIZES)				
	MOBILIZATION FOR PLATES/ BOXES, <b>DAYS</b>				
88	ROUST-A-BOUT				
	MOTORIZED PIPE THREADER				
	HEATERS				
89	PLATE COMPACTOR				
	OXYGEN ACETYLENE				
	<b>HEAVY MEDIUM TOOLS</b>				
80012	CORE DRILLING UNIT				
	<b>MISC. MEDIUM TOOLS</b>				
88890	CONCRETE BUCKET				
88888	GAS DETECTOR (SAFETY)				
	RESPIRATOR (SAFETY)				
	AIR MONITORS				
	TRIPOD W/WINCH (SAFETY)				
	BLOWER (SAFETY)				
	CUT OFF SAW				
	CRANE MAN BASKET FOR ACCESS				



## Small Tool Allowance Rate

Richmond Road Station  
Filter Building

### Included Documents

- Small Tool Allowance Percentage

# ▶ Section 7 Small Tool Allowance Rate

The Small Tool Allowance rate (% of labor) intended for the self-perform work for the Richmond Road Station Filter Building [REDACTED]





## **Services and Facilities Included in Lump Sum and the Project Team**

Richmond Road Station  
Filter Building

### **Included Documents**

- Description of Service and Facilities included in the lump sum of Supervision and Superintendence
- Team Narrative
- Organizational Chart
- Resumes
  - Project Manager
  - Superintendent
  - Project Engineer





## Section 8 Services and Facilities Included in Lump Sum

The scope of services included in the lump sum of Supervision and Superintendence includes:

- i. Indirect costs associated with the Construction Management scope including:  
Field offices for both Contractor and Resident Project Representative, furnishings, access stairs and platforms, sanitary facilities for all craftsmen, progress cleaning of site/work areas, temporary parking for supervisory personnel only, water supply as necessary, temporary power for field offices and one (1) temporary power drop for construction activities, security lighting and barriers as necessary. Also included is the insurance coverage, including Commercial General Liability, Workers Compensation, Automotive, and Umbrella Liability.
  
- ii. Supervision cost including Project Manager, Superintendent, Project Engineer, Project Coordinator, Safety Manager and Project Estimator. These individuals are directly involved with the project whether on or off-site.

## Section 8 Project Team

### Team Narrative:

To successfully handle the Richmond Road Station Filter Building project, Bowen Engineering has chosen **Mr. Chris Manges** to be your proposed Operations Manager. Chris sets the standard in project management for Bowen Engineering. His project experiences includes water treatment plant construction for Missouri American Water, Indiana American Water, Illinois American Water, the former Ohio American Water, and New Jersey American Water. His strengths include pre-construction expediting, value-engineering, real-time decision/cost analysis, construction phase management, planning, and safety management. Chris' years of experience working on related projects makes him the ideal candidate to over see the Richmond Road Station Filter Building project. Chris will be on site as needed.

**Mr. Mike Doenges** will be your proposed Project Manager. Mike will lead the way in planning, executing, and monitoring your project. Mike brings demonstrated strengths in defining the scope, managing the project risks, planning project procurements, and ensuring the project quality. Mike has recently completed similar projects for New Jersey American Water, including Ranney Station (Design Build). These years of experience working on related projects makes him the perfect project manager to see the Richmond Road Station Filter Building project through to a successful completion. Mike will be on site as needed.

**Mr. John Eastes** will be your proposed Project Superintendent. John is one of Bowen's most trusted Superintendents. John brings demonstrated strengths in concrete construction, site management, mechanical process systems, process equipment installation, and subcontractor management. He has been in a supervisory role on some of Bowen's largest and most complex water treatment plant projects. John will be 100% dedicated to this project in an on-site role.

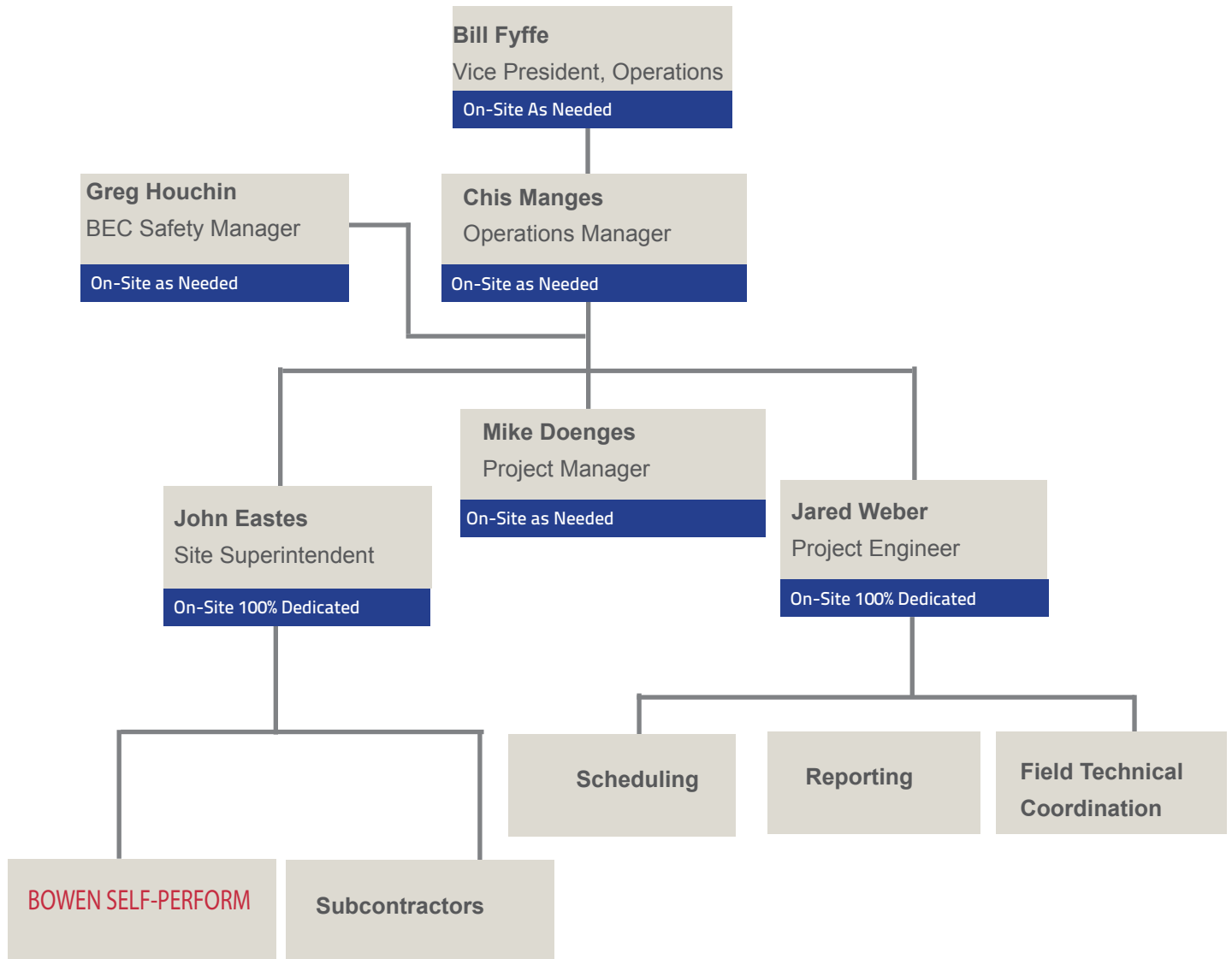
**Mr. Jared Weber** will be your proposed Project Engineer. Jared is consistently regarded as an up and coming project engineer, and will be 100% dedicated to this project in an on-site role. Jared's strengths include pre-construction planning and scheduling, value engineering, construction phase technical coordination, and maintaining accurate project data. Jared also has substantial experience constructing American Water capital projects (Indiana, Illinois, and American Water Military Services.)

The above team embraces a management philosophy that takes the long view in our partnership with owners; Kentucky America Water is no different.



**The right staff,  
 equipment, and  
 experience-delivering  
 the Richmond Road Project  
 as quickly and efficiently as  
 possible.**

# Section 8 Construction Team Organizational Chart



**Office:**

317.842.2616

**Mobile:**

317.696.2550

**Email:**

cmanges  
@bowenengineering.com

**14** YEARS OF  
EXPERIENCE

## Experience

### Key Projects

- \$9.5M - Ranney Station WTP Improvements - New Jersey American Water/Penns Grove, NJ
- \$4.2M - Interurban PAC Feed Improvements, Illinois American Water East St. Louis, Granite City, IL
- \$7.0M - Ogden Dunes Residuals Management Facility Indiana American Water - Portage, IN
- \$1.0M - Happy Hollow Operations Center - Indiana American Water West Lafayette, IN
- \$9M - Meramec & South County Chemical Feed Improvements Missouri American Water – St. Louis, Missouri
- \$3.6M - Noblesville & Newburgh Plant Expansions, American Water Noblesville & Newburgh Indiana
- \$5.0M - Philips St. Water Treatment Plant, Indiana American Water Kokomo, Indiana
- \$3.0M - Fort Sill Water Meter Installation, American Water Enterprises Fort Sill, Oklahoma
- \$5.5M - White River North 36" Transmission Mains- Carmel, IN
- \$4.0M - 169th Street 36" Transmission Mains - Noblesville, IN
- \$12.0M - Cinergy Electric Power Plant - Noblesville, IN
- \$3.5M - Conrad Hotel - Indianapolis, IN
- \$4.0M - Terre Haute Interceptor Sewer - Terre Haute, IN
- \$30M - Durkees Run CSO Improvements - Lafayette, IN
- \$5M - Speedway Unox and Biosolids WWTP - Town of Speedway, IN

### Project Manager

Bowen Engineering Corporation, 2004-Present

### Project Engineer

Bowen Engineering Corporation - Fishers, Indiana, 1999-2003

### Purdue University - West Lafayette, Indiana

B.S. Civil Engineering Construction

### Professional Licenses

Registered Engineering-In-Training - Indiana

### Professional Associations

Associated General Contractor Future Leaders Organization

### Bowen Achievements

Bowen University 101  
Bowen University 201  
Production Management Training  
Breakthrough Project Leadership  
Bowen Leadership Program, 2006  
OSHA 30 Hour

# Michael Doenges, P.E.

*Project Manager*

**Office:**

317.576.8721

**Mobile:**

317.617.8738

**Email:**

mdoenges  
@bowenengineering.com

**6** YEARS OF  
EXPERIENCE

## Experience

**Key Projects**

- \$12M - Citico Station WTP Upgrades - Chattanooga, TN
- \$10M - Ranney Station WTP Improvements - Penns Grove, NJ
- \$17M - Conemaugh Generating Station WWTP - New Florence, PA
- \$277K - IP&L Eagle Valley Chlorine Conversion - Martinsville, IN
- \$20M - TW Moses Tech Upgrades - Indianapolis, IN

**Project Manager**

Bowen Engineering Corporation, 2014-Present

**Field Engineer**

Bowen Engineering Corporation, 2009-2014

**Manager**

University of Dayton Information Center - Dayton, OH, 2007-2009

**Project Technician**

Miller-Valentine Group - Dayton, OH, 2007

**Engineering Coop**

Messer Construction Company - Dayton, OH, 2006

**General Laborer**

Ed Doenges Construction - New Bremen, OH, 2001-2005

**Butler University - Indianapolis, IN**

Master of Business Administration

**The University of Dayton- Dayton, OH**

B.S. Civil Engineering

**Professional Associations**

American Water Works Association

**Professional Training/Certifications**

Professional Engineer, Indiana

OSHA 30 Hour

Confined Space Rescuer

First Aid and CPR

**Office:**

317.842.2616

**Mobile:**

317.502.9472

**Email:**

johne  
@bowenengineering.com

**22** YEARS OF  
EXPERIENCE

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## Experience

**Superintendent**

Bowen Engineering Corporation, 1997-Present

**Key Projects**

- \$11M - White River Water Plant Technical Upgrades
- \$26M - TW Moses Water Plant Technical Upgrades
- \$52M - AEP Clifty Creek, Underground Utilities and Substructures
- \$14.5M - DP&L Killen Station FGD Foundations - Aberdeen, Ohio
- \$3.5M - TVA Bull Rund FNDS Warehouse Utilities - Knoxville, Tennessee
- \$10M - Cinergy Re-Power Power Plant - Noblesville, Indiana
- \$5M - Veolia Water Geist Station - Indianapolis, Indiana
- \$13M - Wastewater Treatment Plant - Owensboro, Kentucky
- \$1.2M - TIC/Concrete Foundation - Greenfield, Indiana
- \$2.3M - Pump Station - Crown Point, Indiana
- \$1.7M - Stop 11 Booster Station - Indianapolis, Indiana

**Project Superintendent**

Burke Concrete &amp; Construction - Indianapolis, Indiana, 1996-1997

**Key Projects**

- \$220,000 Karrington of Carmel
- \$150,000 Covenant Christian High School
- \$150,000 Brownsburg High School (Indiana)
- \$160,000 Mill Creek Elementary School
- \$2M DARHT Facility Los Alamos National Lab
- \$400,000 Jewish Community Center
- \$300,000 96th Street Transfer
- \$350,000 Vinton School

**Carpenter Foreman**

Kenneth Smock Assoc., 1992-1996

**Key Projects**

- Ford Motor Company - Indianapolis, Indiana
- Methodist Parking Garage
- RSR Industries
- Homecraft Schools

**Arsenal Technical High School**

Diploma

**Professional Training/Certifications**

30-Hour OSHA Certification

**Professional Associations**

Member Carpenters Local #60- 14 years



**Office:**

317.842.2616

**Mobile:**

317.646.2064

**Email:**

jweber  
@bowenengineering.com

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**6** YEARS OF  
EXPERIENCE

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## Experience

### **Project Engineer – Private Water**

Bowen Engineering Corporation, 2008-Present

#### **Key Projects**

- \$563K - American Water Ft. Leavenworth Sludge Collector System - Leavenworth County, KS
- \$1.3M - Indiana American Water Ogden Dunes Filter Rehabilitation - Portage, IN
- \$15.2M - American Water Fort Rucker Alabama Capital Upgrades - Ft. Rucker, AL
- \$11.4M - Indiana American Water London Road WTP - Greenwood, IN
- Awarded DBIA National Award in 2010
- \$77M - Horizon Wind Energy Meadow Lake Wind Farm - Wolcott, IN
- \$4M - Illinois American Water, East St. Louis/Granite City PAC Feed Improvements - St.Louis, MO

#### **Indiana State University - Terre Haute, Indiana**

B.S. Construction Management  
Sigma Lambda Chi, Construction Honors Society

#### **Professional Training / Certifications**

OSHA 30

#### **Bowen Achievements**

Bowen 101  
Production Management



## **Understanding of the Design Documents**

Richmond Road Station  
Filter Building

### **Included Documents**

- Narrative on Contractors  
Understanding of the Design  
Documents



# Section 9 Understanding of the Design Documents

## Section 9 - Narrative on Contractor Understanding the Design Documents:

Bowen has reviewed the 60% design documents as provided with the RFQ and subsequent addenda. The primary concept for the project is to replace the existing gravity filters with a new gravity filter building and add a new chlorine contact basin. We will elaborate on this understanding as follows:

**Filter Building:** Our understanding of the need for the new Filter Building is to replace the existing gravity filters and pipe gallery as they have exceeded their useful life. In addition, the new filters will provide longevity and reliability for the filtration process. The scope of work for the new Filter Building will be:

- Excavation into the existing hill side. This is to include removal of overburden fill, placement of lean concrete fill in certain areas, and finally some amount of rock excavation.
- Construction of a new Filter Building consisting of a mostly cast-in-place concrete structure with a precast/masonry finish to the exterior building enclosure. The structure is a classic gravity filter style with basement pipe gallery and gravity filter cells on either side of the center aisle.
- New process equipment including: Filter underdrain equipment, blowers, airwash piping and filter controls.
- Process piping and butterfly valves in filter gallery (BWS, BWW, FE, FI, etc)
- Yard Piping Including: Settled Water to Filter Building, Filtered Water to Chlorine Contact Basin, Backwash Supply from Chlorine Contact Basin, Backwash Waste to Wastewater tie-point.
- Instrumentation/Controls for the new process systems. The new I&C system will be a Bristol PLC system provided by Emerson.
- New electrical system to include power to process equipment, HVAC system, control wiring for Bristol PLC, and diesel generator.
- Existing Filter Building demolition following successful start-up.

## Filter Building Value Engineering Suggestions:

- Ref Drawing M103: Consider locating 48" FLW in the Filter Gallery. FLW header could be located to one side of the gallery, then lower the floor elevation on the Filtered Water Control Vault to 978.33'. Savings potentials: excavation/special backfill, pipe & fittings, and schedule.



**MAXIMIZE**  
 productivity  
 & **MINIMIZE COST** ↓

## Section 9 Understanding of the Design Documents (Cont)

- Consider tilt-up concrete panels with brick reliefs for Filter Building enclosure versus block and brick. Savings potentials: cost difference between panels and masonry, schedule.
- Consider using steel piping with epoxy liner versus DIP for exposed process piping. Savings potentials: cost difference in materials and installation labor.
- Consider structural steel superstructure in lieu of the cast in place beams and columns.
- Evaluate ways to reduce or eliminate the planned 24" GAC filter cap.

**Chlorine Contact Basin:** Our understanding of the intent of the Chlorine Contact basin is to provide adequate contact duration for the filtered water for proper disinfection. In addition, the basin provides a source for backwash water supply. The scope of work for the basin includes:

- Excavation/ Backfill and associated sitework for Basin.
- Structure, consisting of mostly cast-in-place concrete floors, walls, baffle walls and interior vaults. Deck to be furnished as pre-cast concrete planks with grout/membrane roof cover.
- Process Equipment: two (2) vertical turbine pumps for backwash water supply.
- Yard piping including: Filtered Water to Clearwell, emergency backwash supply to basin from High-Service Pumps, sample lines.
- Chemical Feed Piping: Fluoride, phosphate, ammonia and chlorine to chemical application vault from tie-points to be determined.

### Chlorine Contact Basin Value Engineering Suggestions:

- Consider post-tension (PT) cast-in-place concrete for Chlorine Contact Basin structure. Bowen Engineering has design-build experience with these types of tank structures specific for Chlorine Contact Basins. Roughly 30 – 50% of the concrete volume can be saved utilizing the post-tension concrete method. Vaults and divider walls can also be designed in to the structure. The deck would also be constructed of PT concrete, ensuring a leak proof seal. Other advantages include schedule savings and increased quality of concrete. See relevant project experience in this section for project examples. Please contact David Elmer, Indiana American Water for references at 317-885-2440.
- Consider using Hypalon (curtain) baffles versus cast-in-place concrete walls for both the Chlorine Contact and Backwash Tanks. Savings potentials: cost difference between concrete & Hypalon, schedule savings.
- Consider PCCP pipe versus DIP for yard piping for any pipe that is 36" and larger.





## INAW Jeffersonville

Water Treatment Plant / Jeffersonville, IN  
Project Size: \$25,600,000 / Fall 1997 - Spring 1999

Bowen teamed with Indiana American Water (INAW) to complete the Design-Build of the new Southern Indiana Operations and Treatment Center.

### Project Challenges:

- Due to a spike in population growth and demand, INAW required fast design and construction.
- At the time, this was INAW's largest contract award.
- Bowen completed the plant construction simultaneously with distribution system upgrades.

### Bowen Results:

- Bowen completed construction of the the project in a 15-month timeframe, ahead of schedule.
- To achieve this completion, Bowen acquired a portion of the distribution system installation to assist in its completion commitments.
- Bowen provided extensive VE ideas resulting \$6.2M in owner savings from the owner-defined budget of \$31.8M (19.5% savings)
- Though the team does not usually work in the commercial office space, Bowen successfully self-performed extensive architectural and finishing work on the 15,600 SF office building that included management offices, conference rooms, file storage, locker rooms, lunch rooms, control rooms and labratories.

## PROJECT SCOPE

- Site Work
- Civil/Concrete Work
- Structural Steel
- Mechanical
- Equipment Setting
- Architectural

## WTP ELEMENTS

- Well fields
- Finished water distribution systems
- Large finished water reservoirs
- Pump station
- Backwash tanks
- Filter building
- Chemical building
- Maintenance garage
- 15,600 SF Operations building

## PROJECT TEAM

- Bowen Contact: Brian Stater
- Client Contact: Alan Deboy
- Engineering: HNTB, Pat Spence





## Bowen Engineering Design-Build Clearwells and Pump Stations

Foreword: Bowen Engineering has a proud history with American Water. Our relative project experience spans over 18 years. Specific to the KYAW's need for a buried clearwell and pump station at its Richmond Road Station, Bowen has designed/built three (3) such tanks for the former Indianapolis Water Company (detailed below). All of which were delivered under the design-build model. These projects represent the best of what design-build delivery promises: cost control, schedule supremacy and team collaboration. It is our collaborative leadership from concept through completion that led to unprecedented achievement in these projects.

### Project: **South Well Field Station – 4 MG Storage Reservoir**



Year Constructed: 2004/2005

Client: Veolia Water - Indianapolis Water (now Citizen's Energy Group)

Current Owner

Contact: Ted Williams, (317)-710-2652

Design Partner: HNTB, JHCE (Tony Galterio)

Contract Amount: \$4.25MM



Schedule: Design Start = April 2004

Construction Start = June 2004

Substantial Completion = June 2005

Project Notables: Bowen Engineering was awarded this project along with HNTB to design-build this 4MG finished water storage reservoir. This fast track project was accomplished in 14 months, concept to completion. The project scope included post-tensioned cast-in-place concrete tank construction, fabric based interior baffling, chemical feed system improvements and yard piping and tie-ins to existing water storage and pumping facilities.



### Project: **White River Station 7 MG Chlorine Contact Reservoir**

Year Constructed: 2000/2001

Client: Indianapolis Water Company (now Citizens Energy Group)

Current Owner

Contact: Jim Gunn (317)-710-1226

Design Partner: Black & Veatch, JHCE (Tony Galterio)

Contract Amount: \$5.5MM



Schedule: Design Start = April 2000

Construction Start = July 2000

Substantial Completion = June 2001



### White River Station 7 MG Chlorine Contact Reservoir (Continued)

**Project Notables:** Bowen Engineering was awarded this project to design-build this 7MG chlorine contact reservoir. This fast track project was accomplished in 15 months, concept to completion. The project scope included post-tensioned cast-in-place concrete tank construction (entirely wet cured!), interior concrete block baffling, chemical feed system improvements and yard piping and tie-ins to existing water storage tanks. Some of the challenges, accomplishments and innovations include: monolithic slab and deck pours each totaling 84,000 sf. Substituted a 72" underslab influent pipe with 4 – 48" thru wall penetrations. Planned and executed a never tried finished water re-route to allow for the 72" Price Brothers Pipe influent and effluent tie-ins. No by-pass pumping was required. Cleaned, sanitized and commissioned the tank volume. Utilized Auto-CAD as a planning resource for all concrete pours.

**Project:** White River North 3.0 MG Chlorine Contact Reservoir

**Year Constructed:** 2001

**Client:** Indianapolis Water Company (now Citizens Energy Group)

**Current Owner Contact:** Ted Williams, (317)-710-2652

**Design Partner:** Black & Veatch, JHCE (Tony Galterio)

**Contract Amount:** \$3.8MM

**Schedule:** Design Start = February 2001  
Construction Start = April 2001  
Substantial Completion = December 2001

**Project Notables:** Bowen Engineering was awarded this project to design-build this 3MG chlorine contact reservoir. This fast track project was accomplished in 15 months, concept to completion. The project scope included post-tensioned cast-in-place concrete tank construction (entirely wet cured!), fabric based interior baffling, chemical feed system improvements and yard piping and tie-ins to existing water storage tanks and high service pumping systems.





## Project Schedule

Richmond Road Station  
Filter Building

### Included Documents

- Schedule Summary Narrative
- Preliminary Project Schedule



# Section 10 Schedule Summary Narrative

## Preliminary Project Schedule:

### Schedule Summary:

Bowen Engineering understands the sense of urgency required to meet the schedule set forth in the Project Documents. It is clearly stated that this new facility must be **“In Use and Useful” by no later than April 30, 2016**. As such, we have developed a preliminary schedule that shows both the new Filter Building and Chlorine Contact Tank substantially complete by **April 11, 2016**. We believe these dates are very achievable given the collaborative working relationships between our teams. The attached schedule and the following narratives will further explain our logic:

**Pre Construction Planning, Buyout, and Fabrication:** The preliminary schedule is based on the bid date of 06/26/2014 followed by a three (3) week evaluation period by American Water. Once selected, BEC would desire to participate immediately in the final design meetings with American Water and Hazen & Sawyer. This effort would include value engineering/constructibility suggestions; lock down of construction target price, issuance of Issued for Construction drawings, process equipment procurement, and construction pre-planning. We believe this time and investment will be the key to a successful project delivery.

### Filter Building: Anticipated “In Use and Useful” Date = **April 11, 2016**

In order to meet this date, Bowen, American Water and Hazen & Sawyer will have to prioritize the procurement of the process equipment and process piping/valves. In addition, urgency towards acquiring all permits that allows construction field activities to begin. Anticipated start of construction is April 2015 as stated in the RFP, but any improvement of this date would be desired. The detailed construction sequence of the filter building can be seen in the preliminary schedule.

### Chlorine Contact Tank: Anticipated Substantial Completion = **December 03, 2015**

The Chlorine Contact Tank will be constructed simultaneously with the Filter Building. BEC is planning to place a tower crane inside of the contact tank to service the filter building, chlorine contact tank, and not obstruct installation of underground pipe between the two structures. This crane will be erected around July 2015 and removed around February 2016. In addition to the planned tower crane, additional mobile cranes will be utilized as needed to support field construction. The detailed construction sequence of the contact tank can be seen in the preliminary schedule.

### Final Completion: = **July 6, 2016**

The attached schedule shows upon the successful completion of the new facilities, the existing Filter Building and Clear Well #2 will be demolished. The work will be completed in the spring of 2016 along with final site work, landscaping, and roadways. BEC then plans to reach final project completion.







Activity ID	Activity Name	Original Duration	Start	Finish	2014			2015					2016					2017											
					Jun	Jul	Aug	S	Oct	N	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	S	Oct	Nov	D	Jan	Feb	Mar			
<b>New Filter Building</b>																													
A1100	Excavate for New Filter Building	238	23-Apr-15	29-Mar-16																									
A1720	Excavate for 48" FLW Pipe Encasement	20	23-Apr-15	20-May-15																									
A1120	Install 48" UG FLW and Pipe Encasement	10	21-May-15	04-Jun-15																									
A1110	Form Rebar Pour (FRP) Slab at EL 978.33	10	05-Jun-15	18-Jun-15																									
A1130	Form Rebar Pour (FRP) Exterior Walls	10	19-Jun-15	02-Jul-15																									
A1730	Form Rebar Pour (FRP) Filtered Water Control Vault	25	03-Jul-15	06-Aug-15																									
A1140	Form Rebar Pour (FRP) Interior Walls	10	07-Aug-15	20-Aug-15																									
A1140	Form Rebar Pour (FRP) Interior Walls	15	21-Aug-15	11-Sep-15																									
A1740	Form Rebar Pour (FRP) Trough Walls and Decks	20	14-Sep-15	09-Oct-15																									
A1180	Install Interior Filter Gallery Ductile Iron Piping	30	12-Oct-15	20-Nov-15																									
A1750	Form Rebar Pour (FRP) Superstructure Columns and Beams	25	12-Oct-15	13-Nov-15																									
A1380	Install Electrical System (Power/Controls/Lighting)	75	09-Nov-15	25-Feb-16																									
A1360	Install Brick/Block (Lower Exterior Walls)	25	16-Nov-15	22-Dec-15																									
A1150	Install Filter Underdrains/Media/ Washwater Troughs	25	23-Nov-15	30-Dec-15																									
A1790	Install Interior Masonry Walls	10	02-Dec-15	15-Dec-15																									
A1760	Install Precast Roof Planks (Low Roof)	5	23-Dec-15	30-Dec-15																									
A1770	Install Brick/Block (High Roof Walls)	20	31-Dec-15	28-Jan-16																									
A1210	Install Remaining Process Mechanical	15	31-Dec-15	21-Jan-16																									
A1200	Install HVAC Equipment and Blowers	20	29-Jan-16	25-Feb-16																									
A1780	Install Precast Roof Planks (High Roof)	3	29-Jan-16	02-Feb-16																									
A1230	Install Roof System (Bar Joists/Standing Seam)	20	03-Feb-16	01-Mar-16																									
A1250	Install Hand Rail/Stairs/Ladders	5	02-Mar-16	08-Mar-16																									
A1420	Install Building Finishes	20	02-Mar-16	29-Mar-16																									
<b>New Chlorine Contact Tank</b>																													
A1260	Excavate for New Chlorine Contact Tank	137	21-May-15	03-Dec-15																									
A1820	Form Rebar Pour (FRP) Foundation and Slab at EL 981.5	20	21-May-15	18-Jun-15																									
A1820	Form Rebar Pour (FRP) Foundation and Slab at EL 981.5	7	19-Jun-15	29-Jun-15																									
A1270	Form Rebar Pour (FRP) Foundation and Slab at EL 984.00	15	30-Jun-15	20-Jul-15																									
A1290	Form Rebar Pour (FRP) Exterior Walls	20	21-Jul-15	17-Aug-15																									
A1830	Form Rebar Pour (FRP) Interior Walls	25	18-Aug-15	22-Sep-15																									
A1280	Install Exposed Mechanical Piping	10	23-Sep-15	06-Oct-15																									
A1310	Install Precast Roof Panels & Roof Membrane	25	07-Oct-15	10-Nov-15																									
A1320	Install Vertical Turbine Pumps & Piping	15	11-Nov-15	03-Dec-15																									
<b>New Chemical Injection Vault</b>																													
A1440	Excavate for Chemical Injection Vault	33	07-Aug-15	23-Sep-15																									
A1450	Form Pour Rebar (FRP) for Slab at EL 972.00	3	07-Aug-15	11-Aug-15																									
A1450	Form Pour Rebar (FRP) for Slab at EL 972.00	5	12-Aug-15	18-Aug-15																									
A1460	Form Rebar Pour (FRP) Walls	5	19-Aug-15	25-Aug-15																									
A1840	Form Rebar Pour (FRP) Deck	15	26-Aug-15	16-Sep-15																									
A1340	Install Chemical Vault Exposed Mechanical	5	17-Sep-15	23-Sep-15																									
<b>Startup and Commissioning</b>																													
A1870	Dry Startup	32	26-Feb-16	11-Apr-16																									
A1870	Dry Startup	10	26-Feb-16	10-Mar-16																									
A1880	Disinfection	7	11-Mar-16	21-Mar-16																									
A1890	Wet Startup	15	22-Mar-16	11-Apr-16																									
<b>Demolition</b>																													
A1470	Demolish Filter Building & Clearwell #2	30	26-Apr-16	07-Jun-16																									



KY American Water Richmond Road Station WTP Improvements  
 Proposal Schedule 26Jun14  
 Run Date: 25-Jun-14 Page 2 of 2

- Remaining Level of Effort
- Actual Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone



## **Technical Clarifications/ Exceptions**

Richmond Road Station  
Filter Building

### **Included Documents**

- Technical Clarifications/  
Exceptions



## Section 11 Technical Clarifications/ Exceptions

1. The GAC required as part of the filter media poses a challenge to the completion of the project due to the potential for naturally occurring Arsenic. Additionally, GAC media typically has high pH levels. In order to minimize the pH issues, Bowen Engineering has included costs for the purchasing of the pre-rinsed GAC media.

However, the potential for high Arsenic still exists even with purchase of pre-rinsed GAC media. Typically, the post installation rinse that may be required to remove the high Arsenic content is disposed by means of sanitary sewer. Currently, no provisions for backwash waste or filter waste to a sanitary connection is provided.

2. Existing clearwell is to be backfilled with native material from the new filter and contact tank excavations.
3. Bowen Engineering has not included any costs for providing additional security at the proposed construction entrance gate.
4. Bowen Engineering has not included any costs for providing the conduit and wiring for a security system or components.
5. Bowen Engineering has not included costs for any permits.





## **Commercial Clarifications/ Exceptions**

Richmond Road Station  
Filter Building

### **Included Documents**

- Commercial Clarifications/  
Exceptions



# Section 12 Commercial Clarifications/ Exceptions

It is Bowen's intent to name our Superintendent as our designated safety representative. We will also provide routine and random visits from Bowen's corporate Safety Manager as necessary to perform safety audits, risk reviews and provide general assistance to our Superintendent.





## **Performance and Payment Bond Cost**

Richmond Road Station  
Filter Building

### **Included Documents**

- Performance and Payment  
Bond Cost



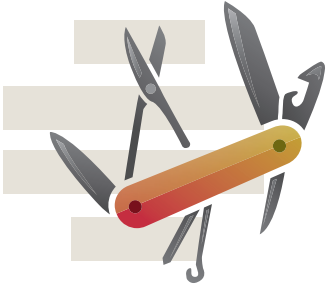
# Section 13 Performance and Payment Bond

Cost of Performance & Payment Bond =



\*If selected this will be added to the superintendence and supervision fee.





## Resourceful.

### ***BOWEN* is Resourceful**

You need a partner that has a diverse skill-set and can tackle the complex challenges that are unique to you and your project. Bowen's teams work together to solve tough problems and produce quality solutions.



## Responsive.

### ***BOWEN* is Responsive**

You need a partner that never runs away from a challenge. Bowen is honest, hardworking and truly committed to the partnership we are forming with you. When problems arise, we respond quickly and deliberately. Our vast experience and distinct approach to project planning allow us to understand upcoming challenges and overcome them before they happen.

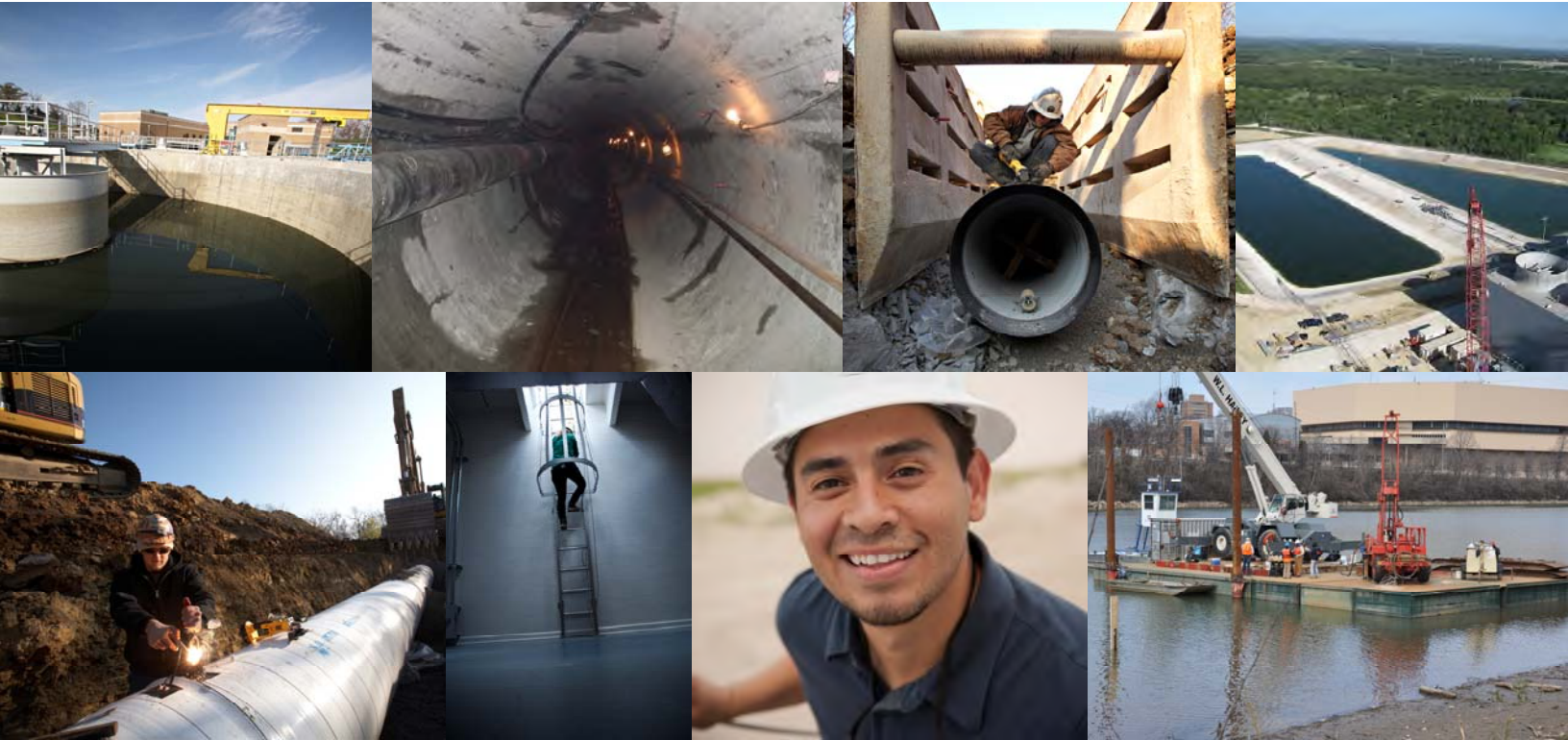


## Results.

### ***BOWEN* Delivers Results**

You need a partner that can assure that your project will complete on time, on budget and without injuries. Bowen has a proven track record with more than 45 years in the business and our best in industry project controls mean there are no surprises along the way.





# LAYNE HEAVY CIVIL, INC.

## CMAR Bid Proposal For Kentucky American Water Richmond Road Station Filter Building



**KENTUCKY**  
**AMERICAN WATER**

June 26, 2014



June 26, 2014

**Mr. Zachery Dukes**  
Kentucky American Water Company  
2300 Richmond Road  
Lexington, KY 40502

**Re: Kentucky American Water Company  
Richmond Road Station Filter Bldg  
CMAR Project  
Layne Heavy Civil Proposal**

Dear Zach,

Layne Heavy Civil, Inc.(Layne) is pleased to submit to you two (2) hard copies and one (1) CD of our Proposal to provide Construction Management at Risk (CMAR) services for the above referenced project. We have structured our Proposal to be fully responsive with the RFP dated May 2014 and all subsequent Addenda.

Your attention is called to several key aspects of our Proposal as highlighted below:

- **Proven Team Performance with American Water (AW):** Our team has successfully performed several recent Alternative Delivery projects for AW including several utilizing CMAR delivery. These include the Blendville Water Treatment Plant Shoal Creek Raw Water Intake and Pump station projects in Joplin, MO, the Raw Water Intake and Pump Station project in Jefferson City, MO, and the more recent Jacobson Reservoir project in Lexington, KY. Several of our key personnel involved in these projects are proposed to be a part of our project team.
- **Thorough Understanding of Project:** As you are aware Layne recently completed two projects in the Lexington region. With that experience and an in-depth site review, we have developed intimate knowledge of the KAW personnel, their expectations and an understanding of the requirements for the scope of work included in this RFP. There is no learning curve with Layne.
- **Established Working relationships with Richmond Road Staff and Hazen and Sawyer:** In performing work for Kentucky American on two projects in the region, Layne has developed strong working relationships with the Richmond Road staff personnel. Also, we have successfully performed filter rehabilitation work with Indiana American, at their Jeffersonville facility, and design firm, Hazen and Sawyer. In this process we understand the procedures and site protocol that will be expected through the course of the project. We believe this will be a key factor in the successful delivery of the project.
- **Competitive Price:** In today's business environment we recognize the cost of capital improvements always matters. While under the CMAR delivery model the final cost of the project will be developed later once the design has progressed further, we have spent considerable effort in determining our current Estimate of Construction Cost. In so doing we believe we have developed an accurate expectation of cost and a very competitive price for our submitted at risk fees.

We believe this combination of thorough understanding of the project, previous on-site working experience, established working relationships, and proven performance, will help ensure that Layne will deliver a cost-effective, functional facility, at a competitive price that fully meets your project goals and objectives. Again, thank you for the consideration of our team for this project. We look forward to continuing our working relationship with you.

Sincerely,  
**Layne Heavy Civil, Inc.**



M. Paul Burton, DBIA  
District Manager



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**PROPOSAL PRICE FORM/ LUMP SUM PRICING**

KENTUCKY AMERICAN WATER-RICHMOND ROAD STATION FILTER BUILDING

**PROPOSAL PRICE FORM/ LUMP SUM PRICING**

**Richmond Road Station Filter Building**

Pre-Construction Services through Final Design	-	
Construction Supervision and Superintendence	-	
CM at Risk Fee	-	
<hr/>		
Total Lump Sum Fees	-	\$
Cost of Bond Premiums (Based on Construction Estimate)	-	\$

C E R T I F I C A T E

The undersigned, Elizabeth L. Smith, hereby certifies that she is the duly elected, qualified, and acting Assistant Secretary of Layne Heavy Civil, Inc., an Indiana corporation (the "Company"), and as such is familiar with the books and records of said Company, and does hereby certify the following:

1. that M. Paul Burton is the District Manager of Layne Heavy Civil, Inc.;
2. that the resolutions set forth below were adopted by the Board of Directors of the Company by unanimous written consent, dated as of January 2, 2014; that the following is a true and correct copy of such resolutions as they appear in the minute books of the Company; and that such resolutions are in full force and effect:

A P P O I N T M E N T O F O F F I C E R S

**RESOLVED**, that all of the acts, actions and things done for, in the name of, and on behalf of the Company by its officers during the preceding year be, and the same hereby are, ratified, confirmed and approved.

**RESOLVED**, that the following persons be, and they hereby are, elected to the offices set opposite their respective names, to serve in such capacities at the pleasure of the Board of Directors until the next annual meeting of the Board of Directors and until their successors are duly elected and qualified:

Mark J. Accetturo	—	President
James R. Easter	—	Senior Vice President and Chief Financial Officer
Andrew M. Grygiel	—	Vice President and Treasurer
Steven F. Crooke	—	Vice President and Secretary
Larry D. Purlee	—	Vice President
James A. Stutler	—	Vice President
Lauren C. Atwell	—	Vice President
Russ McConnell	—	Vice President
Les F. Archer	—	Vice President
Curtis J. Schmidt	—	Assistant Treasurer
Karen J. Pender	—	Assistant Treasurer
Ruth A. Cantu	—	Assistant Treasurer
Gary H. Harber	—	Assistant Secretary
Kurt E. Sittner	—	Assistant Secretary
Elizabeth L. Smith	—	Assistant Secretary
Kevin D. Shemwell	—	Assistant Secretary
Sylvia J. Rocek	—	Assistant Secretary
Kay S. Smith	—	Assistant Secretary
Kevin F. Strott	—	Assistant Secretary
David G. Schrettner	—	Assistant Secretary
Wendy C. Scudder	—	Assistant Secretary
Ashley S. Quinn	—	Assistant Secretary

**RESOLVED**, that all authority heretofore granted by the Board of Directors to the officers of the Company shall continue in full force and effect until modified or rescinded by appropriate resolution of the Board of Directors.

3. that Mark J. Accetturo tendered his resignation as President of the Company, effective May 10, 2014, to the Board of Directors via e-mail; that said e-mail appears in the minute books of the Company; and that such resignation is in full force and effect.

4. that the resolutions set forth below were adopted by the Board of Directors of the Company by unanimous written consent, dated as of May 10, 2014; that the following is a true and correct copy of such resolutions as they appear in the minute books of the Company; and that such resolutions are in full force and effect:

**APPOINTMENT OF OFFICERS**

**RESOLVED**, that effective June 6, 2014, Les F. Archer is hereby elected to the office of President, to serve in such capacity at the pleasure of the Board of Directors until the next annual meeting or until his successor is duly elected and qualified or until his earlier resignation or removal.

**RESOLVED**, that effective May 10, 2014, Brian A. Rieschick is hereby elected to the office of Assistant Secretary, to serve in such capacity at the pleasure of the Board of Directors until the next annual meeting or until his successor is duly elected and qualified or until his earlier resignation or removal.

5. that the resolutions set forth below were adopted by the Board of Directors of the Company by unanimous written consent, dated as of January 2, 2013; that the following is a true and correct copy of such resolutions as they appear in the minute books of the Company; and that such resolutions are in full force and effect:

**AUTHORITY TO ENTER INTO CONTRACTS**

**WHEREAS**, the Board of Directors deems it in the best interests of the Company to state the bid, contract and purchase order limits of the various officers and employees of the Company.

**NOW, THEREFORE, BE IT RESOLVED**, that effective as of January 2, 2013, and in lieu of all previous actions of the Board of Directors, the authority of the following officers and employees of the corporation to (i) accept customer purchase orders and affix the corporate seal thereon; (ii) issue bids and/or enter into contracts with customers; and (iii) enter into contracts with vendors in connection with the sale of the corporation's products and services and the purchase of supplies and equipment, in the name of and on behalf of the corporation, shall be for an amount up to and including the amount set forth beside each of their titles in the following schedule:

\* \* \*

<b><u>Title</u></b>	<b><u>Amount</u></b>
President.....	\$10,000,000
Vice President .....	\$5,000,000
Assistant Division Manager, District Manager or Branch Manager.....	\$1,000,000

**FURTHER RESOLVED**, that the president or vice president of the corporation may delegate the authority to enter into contractual commitments which they are authorized to execute pursuant to these resolutions to any other officer, assistant division manager, district manager, branch manager or other employee of the corporation and may, as requested by any third party, indicate such delegation by addressing a letter or other written document to such third party.

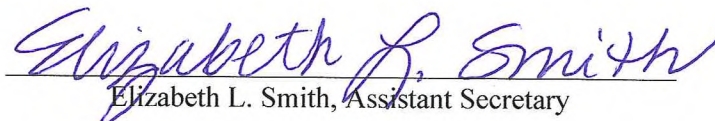
**FURTHER RESOLVED**, that prior to execution thereof, pursuant to the preceding resolution, any contract in excess of the authorized limits granted

herein must be approved by any two members of the Board of Directors; provided, however, that the execution of any contract in accordance with the preceding resolution may be considered by all third parties to be conclusive evidence that all appropriate authority pursuant to these resolutions has been granted.

**FURTHER RESOLVED**, that the secretary, any assistant secretary, or any other officer of the corporation be, and they hereby are, authorized to certify a copy of these resolutions, and any customer of the corporation is hereby authorized to rely upon said certificate as so presented.

4. that in accordance with these resolutions, two members of the Board of Directors of the Company, Messrs. David D. Singleton and Rene J. Robichaud, have granted authorization to M. Paul Burton, District Manager for the Company, to sign all contract documents and change notices between the Owner and the Company for the project known as: **Kentucky American Water Richmond Road Station Filter Building, Lexington, KY.**

**IN WITNESS WHEREOF**, Elizabeth L. Smith has hereunto set her hand this 26th day of June, 2014.

  
Elizabeth L. Smith, Assistant Secretary



**Commonwealth of Kentucky**  
**Alison Lundergan Grimes, Secretary of State**

Alison Lundergan Grimes  
Secretary of State  
P. O. Box 718  
Frankfort, KY 40602-0718  
(502) 564-3490  
<http://www.sos.ky.gov>

**Certificate of Authorization**

Authentication number: 140219  
Visit <https://app.sos.ky.gov/ftshow/certvalidate.aspx> to authenticate this certificate.

I, Alison Lundergan Grimes, Secretary of State of the Commonwealth of Kentucky, do hereby certify that according to the records in the Office of the Secretary of State,

**LAYNE HEAVY CIVIL, INC.**

, a corporation organized under the laws of the state of Indiana, is authorized to transact business in the Commonwealth of Kentucky, and received the authority to transact business in Kentucky on October 20, 2005.

I further certify that all fees and penalties owed to the Secretary of State have been paid; that an application for certificate of withdrawal has not been filed; and that the most recent annual report required by KRS 14A.6-010 has been delivered to the Secretary of State.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal at Frankfort, Kentucky, this 21<sup>st</sup> day of June, 2013, in the 222<sup>nd</sup> year of the Commonwealth.

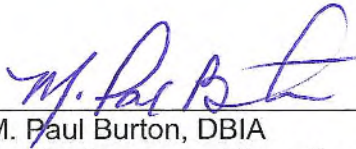


*Alison Lundergan Grimes*

Alison Lundergan Grimes  
Secretary of State  
Commonwealth of Kentucky  
140219/0624018

Layne acknowledges receipt of the following Addenda:

	<b>Dated</b>
Addendum 1	June 11, 2014
Addendum 2	June 18, 2014



\_\_\_\_\_  
M. Paul Burton, DBIA  
District Manager, Alternative Delivery- Midwest

Contact Information for Layne Heavy Civil, Inc. Proposal:

Paul Burton, DBIA  
District Manager, Alternative Delivery- Midwest

**Email:**

[paul.burton@layne.com](mailto:paul.burton@layne.com)

**Office Phone:**

(812) 865-3232

**Address:**

4520 North State Road 37  
Orleans, IN 47452



- 2.7.1.2 Silt Fence Maintenance 2hrs/wk
- 2.7.1.3 Silt Fence Removal
- 2.7.2 Inlet Protection
- 2.7.3 Ditch Checks
- 2.7.4 Temporary Seeding
  
- 2.7.5 Erosion Control Blanket (on slope between structures)
- 2.8 02510 Paving & Surfacing - Asphalt Paving
- 2.8.1 Fine Grade & Compact Subgrade
- 2.8.2 Place & Compact 9" Aggregate Subbase (1104 sy) included w/Sub
  
- 2.8.3 Asphalt Base/Surface "today's pricing" (862 sy)(4"+1.5")
- 2.8.4 Striping
- 2.8.5 Asphalt Patching
- 2.8.6 \* C&R Asphalt
- 2.10 Curb & Gutters
- 2.10.1 New Rolled Curb and Gutter along Existing Street
- 2.10.2 Concrete Flush Curb
- 2.10.3 Repair Existing Curb
- 2.11 Concrete Sidewalk/Stoop/Pad Subgrade & Base
- 2.11.1 Fine Grade & Compact Subgrade
- 2.11.2 Place & Compact 4" Aggregate Subbase (19 sy)

DIVISION 03	CONCRETE TOTAL
3.1	CONCRETE
3.1.1	<b>Filter Building</b>
3.1.1.1	Form, Pour & Finish El 977.75 Basemat
3.1.1.1.1	SOG Edge Form
3.1.1.1.2	Rebar Placement @ 220lbs/CY Allowance
3.1.1.1.3	Place SOG/Basemat
3.1.1.1.4	Chemical Curing
3.1.1.1.5	Trowel Finish Floors
3.1.1.1.6	Form Bulkheads
3.1.1.1.7	Place Waterstop at Bulkheads
3.1.1.1.8	Keyway at Bulkheads
3.1.1.1.9	Place Waterstop
3.1.1.1.10	Keyway
3.1.1.2	Form, Pour & Finish Pipe Galley/Stairway Walls
3.1.1.2.1	Form Walls
3.1.1.2.2	Rebar Placement @ 200lbs/CY Allowance
3.1.1.2.3	Place Walls
3.1.1.2.4	Plug & Patch Tie Holes
3.1.1.2.5	Rub Finish
3.1.1.2.6	Chemical Curing
3.1.1.2.7	Form Boxouts
3.1.1.2.8	Form Bulkheads
3.1.1.2.9	Place Waterstop at Bulkheads
3.1.1.2.10	Keyway at Bulkheads
3.1.1.2.11	Place Waterstop
3.1.1.2.12	Keyway
3.1.1.3	Form, Pour & Finish El. 986.00 Basemat
3.1.1.3.1	SOG Edge Form
3.1.1.3.2	Rebar Placement @ 220lbs/CY Allowance
3.1.1.3.3	Place SOG/Basemat
3.1.1.3.4	Chemical Curing
3.1.1.3.5	Trowel Finish Floors
3.1.1.3.6	Form Bulkheads
3.1.1.3.7	Place Waterstop at Bulkheads
3.1.1.3.8	Keyway at Bulkheads
3.1.1.3.9	Place Waterstop
3.1.1.3.10	Keyway
3.1.1.4	Form, Pour & Finish Filter Walls
3.1.1.4.1	Form Walls
3.1.1.4.2	Rebar Placement @ 200lbs/CY Allowance
3.1.1.4.3	Place Walls
3.1.1.4.4	Plug & Patch Tie Holes
3.1.1.4.5	Rub Finish
3.1.1.4.6	Chemical Curing
3.1.1.4.7	Form Bulkheads
3.1.1.4.8	Place Waterstop at Bulkheads
3.1.1.4.9	Keyway at Bulkheads
3.1.1.4.10	Place Waterstop
3.1.1.4.11	Keyway
3.1.1.4.12	Form Concrete Fillet
3.1.1.4.13	Place Concrete Fillet
3.1.1.5	Form, Pour & Finish Influent Water Susp Slab
3.1.1.5.1	Form Slab Edge
3.1.1.5.2	Shore Slab
3.1.1.5.3	Rent Scaffolding
3.1.1.5.4	Form Boxouts
3.1.1.5.5	Rebar Placement @ 200lbs/CY Allowance
3.1.1.5.6	Place Elevated Slabs
3.1.1.5.7	Form Bulkheads
3.1.1.5.8	Broom or Float Finish Floors
3.1.1.5.9	Chemical Curing
3.1.1.5.10	Place Waterstop
3.1.1.6	Form, Pour & Finish Influent Channel Walls
3.1.1.6.1	Form Walls
3.1.1.6.2	Rebar Placement @ 200lbs/CY Allowance
3.1.1.6.3	Place Walls
3.1.1.6.4	Plug & Patch Tie Holes
3.1.1.6.5	Rub Finish
3.1.1.6.6	Chemical Curing
3.1.1.6.7	Form Bulkheads
3.1.1.6.8	Place Waterstop at Bulkheads
3.1.1.6.9	Keyway at Bulkheads
3.1.1.6.10	Place Waterstop
3.1.1.6.11	Keyway
3.1.1.7	Form, Pour & Finish Effluent Box Walls
3.1.1.7.1	Form Walls
3.1.1.7.2	Rebar Placement @ 200lbs/CY Allowance
3.1.1.7.3	Place Walls
3.1.1.7.4	Plug & Patch Tie Holes

- 3.1.1.7.5 Rub Finish
- 3.1.1.7.6 Chemical Curing
- 3.1.1.7.7 Form Bulkheads
- 3.1.1.7.8 Place Waterstop at Bulkheads
- 3.1.1.7.9 Keyway at Bulkheads
- 3.1.1.7.10 Place Waterstop
- 3.1.1.7.11 Keyway
- 3.1.1.8 Form, Pour & Finish Effluent Box Susp Slab
  - 3.1.1.8.1 Form Slab Edge
  - 3.1.1.8.2 Shore Slab
  - 3.1.1.8.3 Rent Scaffolding
  - 3.1.1.8.4 Form Boxouts
  - 3.1.1.8.5 Rebar Placement @ 200lbs/CY Allowance
  - 3.1.1.8.6 Place Elevated Slabs
  - 3.1.1.8.7 Broom or Float Finish Floors
  - 3.1.1.8.8 Chemical Curing
- 3.1.1.9 Form, Pour & Finish Main Level Susp Slab
  - 3.1.1.9.1 Form Slab Edge
  - 3.1.1.9.2 Shore Slab
  - 3.1.1.9.3 Rent Scaffolding
  - 3.1.1.9.4 Form Boxouts
  - 3.1.1.9.5 Rebar Placement @ 200lbs/CY Allowance
  - 3.1.1.9.6 Place Elevated Slabs
  - 3.1.1.9.7 Form Bulkheads
  - 3.1.1.9.8 Broom or Float Finish Floors
  - 3.1.1.9.9 Chemical Curing
- 3.1.1.10 Form, Pour & Finish 6" Handrail Curb
  - 3.1.1.10.1 SOG Edge Form
  - 3.1.1.10.2 Drill & Epoxy Dowels
  - 3.1.1.10.3 Rebar Placement @ 200lbs/CY Allowance
  - 3.1.1.10.4 Place Concrete (one pour)
  - 3.1.1.10.5 Chemical Curing
- 3.1.1.11 Form, Pour, & Finish El. 1015.33 Columns
  - 3.1.1.11.1 Form Columns
  - 3.1.1.11.2 Rebar Placement @ 220lbs/CY Allowance
  - 3.1.1.11.3 Place Columns
  - 3.1.1.11.4 Plug & Patch Tie Holes
  - 3.1.1.11.5 Rub Finish
  - 3.1.1.11.6 Chemical Curing
- 3.1.1.12 Form, Pour & Finish El. 1015.33 Beams
  - 3.1.1.12.1 Form Slab Edge
  - 3.1.1.12.2 Shore Slab
  - 3.1.1.12.3 Rent Scaffolding
  - 3.1.1.12.4 Rebar Placement @ 220lbs/CY Allowance
  - 3.1.1.12.5 Place Elevated Slabs
  - 3.1.1.12.6 Plug & Patch Tie Holes
  - 3.1.1.12.7 Chemical Curing
  - 3.1.1.12.8 Rub Finish
- 3.1.1.13 Form, Pour, & Finish El. 1023.92 Columns
  - 3.1.1.13.1 Form Columns
  - 3.1.1.13.2 Rebar Placement @ 220lbs/CY Allowance
  - 3.1.1.13.3 Place Columns
  - 3.1.1.13.4 Plug & Patch Tie Holes
  - 3.1.1.13.5 Rub Finish
  - 3.1.1.13.6 Chemical Curing
- 3.1.1.14 Form, Pour & Finish El. 1023.92 Beams
  - 3.1.1.14.1 Form Slab Edge
  - 3.1.1.14.2 Shore Slab
  - 3.1.1.14.3 Rent Scaffolding
  - 3.1.1.14.4 Rebar Placement @ 220lbs/CY Allowance
  - 3.1.1.14.5 Place Elevated Slabs
  - 3.1.1.14.6 Plug & Patch Tie Holes
  - 3.1.1.14.7 Chemical Curing
  - 3.1.1.14.8 Rub Finish
- 3.1.1.15 Form, Pour, Finish Ext Concrete Steps
  - 3.1.1.15.1 Edge Form
  - 3.1.1.15.2 Rebar Placement @ 200lbs/CY Allowance
  - 3.1.1.15.3 Place Footings
  - 3.1.1.15.4 Broom or Float Finish Floors
  - 3.1.1.15.5 Chemical Curing
  - 3.1.1.15.6 Rub Finish
- 3.1.1.16 Form, Pour & Finish Pipe Supports
  - 3.1.1.16.1 SOG Edge Form
  - 3.1.1.16.2 Drill & Epoxy Dowels
  - 3.1.1.16.3 Rebar Placement @ 200lbs/CY Allowance
  - 3.1.1.16.4 Place Concrete (one pour)
  - 3.1.1.16.5 Plug & Patch Tie Holes
  - 3.1.1.16.6 Trowel Finish Floors
  - 3.1.1.16.7 Chemical Curing
- 3.1.1.17 Form, Pour & Finish Stairwell Susp Slabs
  - 3.1.1.17.1 Form Slab Edge
  - 3.1.1.17.2 Shore Slab
  - 3.1.1.17.3 Rent Scaffolding
  - 3.1.1.17.4 Rebar Placement @ 200lbs/CY Allowance
  - 3.1.1.17.5 Place Elevated Slabs
- 3.1.2 **Chlorine Contact Basin**
- 3.1.2.1 Form, Pour & Finish Sump SOG/Basemats
  - 3.1.2.1.1 SOG Edge Form
  - 3.1.2.1.2 Rebar Placement @ 200lbs/CY Allowance
  - 3.1.2.1.3 Place SOG/Basemat
  - 3.1.2.1.4 Chemical Curing
  - 3.1.2.1.5 Trowel Finish Floors
  - 3.1.2.1.6 Place Waterstop
  - 3.1.2.1.7 Keyway
- 3.1.2.2 Form, Pour & Finish Sump Fdn Walls
  - 3.1.2.2.1 Form Walls
  - 3.1.2.2.2 Rebar Placement @ 200lbs/CY Allowance
  - 3.1.2.2.3 Place Walls
  - 3.1.2.2.4 Plug & Patch Tie Holes
  - 3.1.2.2.5 Chemical Curing
  - 3.1.2.2.6 Place Waterstop
  - 3.1.2.2.7 Keyway
- 3.1.2.3 Form, Pour & Finish El. 981.50 24" Basemat
  - 3.1.2.3.1 SOG Edge Form
  - 3.1.2.3.2 Rebar Placement @ 220lbs/CY Allowance

- 3.1.2.3.3 Place SOG/Basemat
- 3.1.2.3.4 Chemical Curing
- 3.1.2.3.5 Trowel Finish Floors
- 3.1.2.3.6 Place Waterstop
- 3.1.2.3.7 Keyway
- 3.1.2.3.8 Form Bulkheads
- 3.1.2.3.9 Place Waterstop at Bulkheads
- 3.1.2.3.10 Keyway at Bulkheads
- 3.1.2.4 Form, Pour & Finish El. 983.50 Basemat
- 3.1.2.4.1 SOG Edge Form
- 3.1.2.4.2 Rebar Placement @ 220lbs/CY Allowance
- 3.1.2.4.3 Place SOG/Basemat
- 3.1.2.4.4 Chemical Curing
- 3.1.2.4.5 Trowel Finish Floors
- 3.1.2.4.6 Form Bulkheads
- 3.1.2.4.7 Place Waterstop at Bulkheads
- 3.1.2.4.8 Keyway at Bulkheads
- 3.1.2.4.9 Place Waterstop
- 3.1.2.4.10 Keyway
- 3.1.2.5 Form, Pour & Finish El. 981.50 Walls
- 3.1.2.5.1 Form Walls
- 3.1.2.5.2 Rebar Placement @ 200lbs/CY Allowance
- 3.1.2.5.3 Place Walls
- 3.1.2.5.4 Plug & Patch Tie Holes
- 3.1.2.5.5 Rub Finish
- 3.1.2.5.6 Chemical Curing
- 3.1.2.5.7 Form Boxouts
- 3.1.2.5.8 Form Bulkheads
- 3.1.2.5.9 Place Waterstop at Bulkheads
- 3.1.2.5.10 Keyway at Bulkheads
- 3.1.2.5.11 Place Waterstop
- 3.1.2.5.12 Keyway
- 3.1.2.6 Form, Pour & Finish El. 983.50 Walls
- 3.1.2.6.1 Form Walls
- 3.1.2.6.2 Rebar Placement @ 200lbs/CY Allowance
- 3.1.2.6.3 Place Walls
- 3.1.2.6.4 Plug & Patch Tie Holes
- 3.1.2.6.5 Rub Finish
- 3.1.2.6.6 Chemical Curing
- 3.1.2.6.7 Form Boxouts
- 3.1.2.6.8 Form Bulkheads
- 3.1.2.6.9 Place Waterstop at Bulkheads
- 3.1.2.6.10 Keyway at Bulkheads
- 3.1.2.6.11 Place Waterstop
- 3.1.2.6.12 Keyway
- 3.1.2.7 Form, Pour & Finish El. 993.75 Susp Slab
- 3.1.2.7.1 Form Slab Edge
- 3.1.2.7.2 Shore Slab
- 3.1.2.7.3 Rent Scaffolding
- 3.1.2.7.4 Form Boxouts
- 3.1.2.7.5 Rebar Placement @ 200lbs/CY Allowance
- 3.1.2.7.6 Place Elevated Slabs
- 3.1.2.7.7 Form Bulkheads
- 3.1.2.7.8 Broom or Float Finish Floors
- 3.1.2.7.9 Chemical Curing
- 3.1.3 **Chemical Feed Vault**
- 3.1.3.1 Form, Pour & Finish El. 972.00 24" Basemat
- 3.1.3.1.1 SOG Edge Form
- 3.1.3.1.2 Rebar Placement @ 220lbs/CY Allowance
- 3.1.3.1.3 Place SOG/Basemat
- 3.1.3.1.4 Chemical Curing
- 3.1.3.1.5 Trowel Finish Floors
- 3.1.3.1.6 Place Waterstop
- 3.1.3.1.7 Keyway
- 3.1.3.2 Form, Pour & Finish El. 983.50 Walls
- 3.1.3.2.1 Form Walls
- 3.1.3.2.2 Rebar Placement @ 200lbs/CY Allowance
- 3.1.3.2.3 Place Walls
- 3.1.3.2.4 Plug & Patch Tie Holes
- 3.1.3.2.5 Rub Finish
- 3.1.3.2.6 Chemical Curing
- 3.1.3.2.7 Form Bulkheads
- 3.1.3.2.8 Place Waterstop at Bulkheads
- 3.1.3.2.9 Keyway at Bulkheads
- 3.1.3.2.10 Place Waterstop
- 3.1.3.2.11 Keyway
- 3.1.3.3 Form, Pour & Finish El. 993.75 Susp Slab
- 3.1.3.3.1 Form Slab Edge
- 3.1.3.3.2 Shore Slab
- 3.1.3.3.3 Rent Scaffolding
- 3.1.3.3.4 Form Boxouts
- 3.1.3.3.5 Rebar Placement @ 200lbs/CY Allowance
- 3.1.3.3.6 Place Elevated Slabs
- 3.1.3.3.7 Broom or Float Finish Floors
- 3.1.3.3.8 Chemical Curing
- 3.1.3.4 Form, Pour & Finish Pipe Supports
- 3.1.3.4.1 Form Walls
- 3.1.3.4.2 Rebar Placement @ 200lbs/CY Allowance
- 3.1.3.4.3 Place Walls
- 3.1.3.4.4 Plug & Patch Tie Holes
- 3.1.3.4.5 Rub Finish
- 3.1.3.4.6 Chemical Curing
- 3.1.4 **Site Concrete**
- 3.1.4.1 Form, Pour, Finish Blower Pad
- 3.1.4.1.1 Edge Form
- 3.1.4.1.2 Rebar Placement @ 200lbs/CY Allowance
- 3.1.4.1.3 Place Footings
- 3.1.4.1.4 Broom or Float Finish Floors
- 3.1.4.1.5 Chemical Curing
- 3.1.4.1.6 Install 1/2" Expansion Joint
- 3.1.4.2 Form, Pour, Finish Sidewalks/Steps/Landings
- 3.1.4.2.1 Edge Form
- 3.1.4.2.2 Rebar Placement @ 200lbs/CY Allowance
- 3.1.4.2.3 Place Footings
- 3.1.4.2.4 Broom or Float Finish Floors

- 3.1.4.2.5 Chemical Curing
- 3.1.4.2.6 Install 1/2" Expansion Joint
- 3.1.4.2.7 Control Joint Sawing
- 3.2 03415 Precast Prestressed Holow Core Planks
- 3.2.1 Filter Building
- 3.2.1.1 Furnish & Install Hollowcore
- 3.2.2 Chlorine Contact Tank
- 3.2.2.1 Furnish & Install Hollowcore

DIVISION 4 MASONRY TOTAL	
4.1	Masonry Subcontract - Filter Bldg
4.2	Interior CMU's
4.3	Exterior CMU's
4.4	Face Brick
4.5	Cast Stone Coping
4.6	Glass Block
4.7	* T.S.P. Masonry [REDACTED]

DIVISION 5 METALS TOTAL	
5.1	Miscellaneous Metals
	Buy Miscellaneous Metals -
5.1.1	* Pleasant Mt. Welding [REDACTED]
5.1.2	6' x 6' Access Hatch
5.1.3	5' x 5' Access Hatch
5.1.4	3' x 3' Access Hatch
5.1.5	2'4" x 3' Access Hatch
5.1.6	Stairs in Filter Building
5.1.7	2' x 2' Sump Covers (embeds/grating)
5.1.8	Aluminum Handrail
5.1.9	Handrails at Filter Building Entrance Stairs
5.1.10	9'6" Stair Nosings
5.1.11	Canopy Over Doors
5.1.12	CI2 Basin Overflow Weirs
5.1.13	Overflow w/ Security Shroud
5.1.14	Vent Assembly
5.1.15	3'4" x 3'4" Roof Scuttle
5.1.16	5" x 14" Steel Masonry Clips/ Anchors
5.1.17	Steel Lintels
5.1.18	22' Metal Trusses (8' OC)
5.1.19	27' Metal Half Trusses (8' OC) - Sub above
5.1.20	Metal Decking - Sub above
5.1.21	Stair Nosings at Site Steps
5.1.22	Handrail on Site Steps
5.1.23	Ladder in Chemical Feed Vault

DIVISION 6 WOODS & PLASTICS TOTAL	
6.1	06100 Rough Carpentry
6.1.1	2" x 8" Treated Nailers
6.1.2	2" x 4" Treated Nailers

DIVISION 7 THERMAL & MOISTURE PROTECTION TOTAL	
7.1	Waterproofing - * Jaco Waterproofing [REDACTED]
7.2	07150 Damproofing - * Jaco Waterproofing [REDACTED]
7.3	07190 Vapor Barrier
7.4	07210 Building Insulation
7.4.1	1-1/2" Wall Insulation
7.4.2	Roof Insulation
7.5	07270 Firestopping - Allowance
7.6	07415 Standing Seam Metal Roof & Wall Panels
7.7	07540 Single Ply Membrane Roofing
7.8	07600 Flashing & Sheet Metal
7.9	* Isaacs Roofing [REDACTED]
7.10	07900 Joint Fillers, Caulking and Sealants

DIVISION 8 DOORS & WINDOWS TOTAL	
8.1	08120 Aluminum Doors & Frames
8.1.1	Furnish & Install Doors & Frames
8.1.2	3' x 7'10" Aluminum Door and Frame
8.1.3	(2) 2'10" x 7'10" Aluminum Door and Frame
8.2	* Tri-County [REDACTED]

DIVISION 9 FINISHES TOTAL	
9.1	09900 Painting
9.2	* McKinney Painting [REDACTED]

DIVISION 10 SPECIALTIES TOTAL	
10.1	10400 Identifying Devices
10.2	10522 Fire Extinguishers
10.3	10523 First Aid Cabinets

DIVISION 11 EQUIPMENT TOTAL	
11.1	11153 Vertical Turbine Pumps
11.1.1	Buy Backwash Pumps - VFD's by electrical
11.1.2	Install Back Wash Pumps (M201)
11.1.3	* Guthrie - Flowserv [REDACTED]
11.2	11280 PD Blower Packages
11.2.1	Buy Blower - Kaeser
11.2.2	Buy Motor for existing - Kaeser
11.2.3	Install New Blower @ Filter Bldg (M102)
11.2.4	Relocate & Install Blower w/new motor
11.2.5	* BL Anderson [REDACTED]
11.3	11501 Chemical Injection & Diffuser Assemblies
11.3.1	*Saf-T-Flo - Buy Injectors, Diffusers, and Sampling Probes
11.3.2	Install Diffuser @ Filter Infl. Channel - Over Infl. Pipe, Wall Mount Bracket
11.3.3	Install Diffuser @ Water Control Vault - Near Weir, Wall Mount Bracket
11.3.4	Install Injectors @ Chemical Vault



11.3.5 Install Sampling Probes/Tap on 18" FLW Lines - Filter  
Gallery Exposed Pipe

**DIVISION 12 NOT USED**

**DIVISION 13 SPECIAL CONSTRUCTION TOTAL**

- 13.1 Buy Filter Equipment & Media
- 13.2 \* Guthrie - Roberts
- 13.3 Buy GAC Media
- 13.4 \* Calgon Carbon \$1.40/pound
- 13.5 13221 Filter Media - 8 filters 497 SF ea
- 13.5.1 Install 12" of Support Media
- 13.5.2 Install 12" of Filter Sand
- 13.5.3 Install 24" of GAC
- 13.5.4 Skimming
- 13.5.5 Dumpster - Pallet & Bag Disposal
- 13.6 13225 Filter Backwash Troughs
- 13.6.1 Install FRP Backwash Troughs
- 13.7 13400 Filter Underdrains
- 13.7.1 Install Underdrains - Roberts
- 13.7.2 Install Air Scour - 8 filters
- 13.8 13450 Disinfection of WTF
- 13.8.1 Disinfection of CCB
- 13.8.2 Disinfection of Media
- 13.8.3 Pipe Disinfection

**DIVISION 14 NOT USED**

**DIVISION 15 MECHANICAL SYSTEMS TOTAL**

- 15.1 **PIPING - Yard Pipe**
- 15.1.1 MATERIAL - UNDERGROUND
  - 15.1.1.1 DI Pipe and Fittings
  - 15.1.1.2 \* C&B Piping
  - 15.1.1.3 Bedding
  - 15.1.1.4 Material Balance - PVC, HDPE, Inlets, Downspouts
  - 15.1.1.5 Precast Manholes & Structure YI-1. \*Sherman Dixie
- 15.1.2 Exploratory Digging to Locate Existing Utilities
  - 15.1.2.1 Operator, Pipe Foreman, 580 Backhoe
- 15.1.3 Storm Drain (Sht. C02 & C03, Ditch Detail - Sht. C07)
  - 15.1.3.1 12" HDPE (HDPE Ditch & Trench Detail)
  - 15.1.3.2 PVC Inlet w/DI Frame & Grate (Detail Sheet C07)
  - 15.1.3.3 12" Headwall & Grate
  - 15.1.3.4 6" HDPE Perf. w/Sock, Layed Under Ditch (HDPE Ditch & Trench Detail)
  - 15.1.3.5 6" HDPE - Downspout Collector Pipe to Nearest Inlet Down Spout Connection w/Neenah M# (Downspout Collector/Boot Detail)
  - 15.1.3.6
- 15.1.4 High Service Pump Discharge - RELOCATION (Sheets C05)
  - 15.1.4.1 16" RJ DI Pipe, Route around New Structures to the North
  - 15.1.4.2 16" RJ DI Pipe, Tie-In to Existing Lines
- 15.1.5 Service Water (SW), Tie-In to New Filter Building
  - 15.1.5.1 48" RJ DI Pipe, Tie-in @ Existing SW to New Filter Building
  - 15.1.5.2 48" RJ DI Pipe, Tie-In to Existing Lines (DIV Backwash Wash Water (BWW), Filter Building to Structure "YI-1"
- 15.1.6
  - 15.1.6.1 20" RJ DI Pipe, Tie-In @ Existing MH "D"
  - 15.1.6.2 20" RJ DI Pipe, Existing MH "D" to Structure "Y-1"
  - 15.1.6.3 4' DIA MH's, Avg. Height = 6', Set Manholes Excavate and Prep Subgrade for 6'X4' Backwash Vault (TAG:YI-1"
  - 15.1.6.4 6'X4' Precast Vault - Set
  - 15.1.6.5 20" RJ DI Pipe, Wall Pipe @ Each Filter to "Y-1"
  - 15.1.6.6
- 15.1.7 Filter to Waste (FTW), Filter Building to Structure "YI-1"
  - 15.1.7.1 20" RJ DI Pipe, Structure "YI-1" to Wall Pipe @ Filter Building
- 15.1.8 Backwash Supply (BWS), Backwash Water Supply Pumps to Filter Building
  - 15.1.8.1 20" RJ DI Pipe, Backwash Pump Discharge to Filter Building
- 15.1.9 Filter Water (FLW)
  - 15.1.9.1 48" RJ DI Pipe, Filter Bldg Effluent to Chlorine Contact Tank
  - 15.1.9.2 48" RJ DI Pipe, Pipe Make-Up @ Chlorine Contact Tank
  - 15.1.9.3 48" RJ DI Pipe, Last Tee @ CL2 Contact Tank to Meter Vault
  - 15.1.9.4 48" RJ DI Pipe, Pipe Make-Up @ Meter Vault
  - 15.1.9.5 36" RJ DI Pipe, Pipe Make-Up @ Meter Vault
  - 15.1.9.6 48" RJ DI Pipe, Last Tee @ CL2 Contact Tank to Meter Vault
  - 15.1.9.7 48" RJ DI Pipe, Tie-In @ Existing High Service Pump Discharge (01520)
- 15.1.10 Filtered Water (FTW) - UNDER Filter Building
  - 15.1.10.1 48" RJ DI Pipe
  - 15.1.10.2 16" RJ DI Pipe
- 15.1.10.3 Reinforcing Steel - Concrete Encasement (Detail D08)
- 15.1.10.4 Fill Trench w/Lean Concrete
- 15.1.11 Air Scour (ASC)
  - 15.1.11.1 12" RJ Pipe, Turn up 90 Elbow & Riser from Wall Pipe
- 15.1.12 PVC
  - 15.1.12.1 1" PVC Sampling Lines w/3' of Cover
  - 15.1.12.2 1" PVC Chemical Feed Lines w/3' Cover
- 15.1.14 Pipe Testing - Buried Pipe

- 15.1.14.1 FM - High Service Pump Forcemain
  - 15.1.14.1.1 Install/Remove - 16" Caps @ Tie-Ins
  - 15.1.14.1.2 Fill and Pressure Test Line, 150 PSI test pressure
- 15.1.14.2 Service Water - Tie-Ins to Building
  - 15.1.14.2.1 Install/Remove - 48" Caps @ Tie-Ins
  - 15.1.14.2.2 Install/Remove - 48" Blind/Pancake @ Wall Pipe in Filter Building
  - 15.1.14.2.3 Fill and Pressure Test Line, 150 PSI test pressure
- 15.1.14.3 Filter Water Lines - UG System, Control Vault to Tie-IN
  - 15.1.14.3.1 Install/Remove - 48" Caps @ Tie-In, Existing FW Line
  - 15.1.14.3.2 Install/Remove - 48" Blind/Pancake @ Wall Pipe in Eff. Control Vault
  - 15.1.14.3.3 Fill and Pressure Test Line, 150 PSI test pressure
- 15.1.14.4 BWV / FTW
  - 15.1.14.4.1 Plug w/Inflatable and Test - 20", Structure YI-1 to Tie-In @ MH "D"
  - 15.1.14.4.2 Vacuum Test MHs
  - 15.1.14.4.3 Plug w/Inflatable and Test - 20", BWV Lines - Filters 1-4 to "YI-1"
  - 15.1.14.4.4 Plug w/Inflatable and Test - 20", BWV Lines - Filters 5-8 to "YI-1"
  - 15.1.14.4.5 Plug w/Inflatable and Test - 16", FTW Line - Bldg to "YI-1"
- 15.1.14.5 Sampling
  - 15.1.14.5.1 Fill and Pressure Test Line, 150 PSI test pressure
- 15.1.15 Pipe Testing - Exposed
  - 15.1.15.1 Filter Building Interior DI
    - 15.1.15.1.1 Visual Inspection Upon Filling Plant
- 15.2 **PIPING - Exposed Pipe**
  - 15.2.1 Material
    - 15.2.1.1 DI Pipe and Fittings, Flange Accessoires
    - 15.2.1.2 \* C&B Piping
    - 15.2.1.3 Material Balance - PVC, Tapping Saddles
    - 15.2.1.4 Gallery Pipe Supports - ALLOWANCE
  - 15.2.2 Install - Yard Structures
    - 15.2.2.1 Chemical Feed Vault (Sheets M050)
      - 15.2.2.1.1 44" Galv. Wall Slv.
      - 15.2.2.1.2 LS 500 Link Seal - Seal Penetration w/Link Seal
      - 15.2.2.1.3 36" Exp FL DI Pipe
      - 15.2.2.1.4 36" Pipe Support - Concrete - DIV 3
  - 15.2.3 Install - Filter Building
    - 15.2.3.1 Service Water (SW)
      - 15.2.3.1.1 48" DI Wall Pipe
      - 15.2.3.1.2 48" Exp FL DI Pipe
      - 15.2.3.1.3 20" DI Wall Pipe
      - 15.2.3.1.4 20" Exp FL DI Pipe
    - 15.2.3.2 Filtered Water (FLW)
      - 15.2.3.2.1 48" Wall Pipe
      - 15.2.3.2.2 30" Wall Pipe
      - 15.2.3.2.3 16" Wall Pipe
      - 15.2.3.2.4 30" Exp FL DI Pipe
      - 15.2.3.2.5 16" Exp FL DI Pipe
    - 15.2.3.3 Backwash Supply (BW)
      - 15.2.3.3.1 20" DI Wall Pipe
      - 15.2.3.3.2 30" Exp FL DI Pipe
      - 15.2.3.3.3 20" Exp FL DI Pipe
    - 15.2.3.4 Backwash Waste (BWW)
      - 15.2.3.4.1 20" DI Wall Pipe
    - 15.2.3.5 Filter to Waste (FTW)
      - 15.2.3.5.1 16" DI Wall Pipe
      - 15.2.3.5.2 16" Exp FL DI Pipe
    - 15.2.3.6 Air Scour (ASC)
      - 15.2.3.6.1 12" Exp FL DI Pipe @ Exterior Blowers
      - 15.2.3.6.2 12" DI Wall Pipe
      - 15.2.3.6.3 6" DI Wall Pipe
      - 15.2.3.6.4 12" Exp FL DI Pipe
      - 15.2.3.6.5 6" Exp FL DI Pipe
  - 15.2.4 Install - Chlorine Contact Basin
    - 15.2.4.1 6" DI Wall Pipe
    - 15.2.4.2 18" DI Wall Pipe
    - 15.2.4.3 42" DI Wall Pipe
    - 15.2.4.4 48" DI Wall Sleeve
    - 15.2.4.5 18" Exp FL DI Pipe
    - 15.2.4.6 48" Exp FL DI Pipe
  - 15.2.5 Install - Backwash Tank
    - 15.2.5.1 18" DI Wall Pipe
    - 15.2.5.2 18" Exp FL DI Pipe
- 15.3 **Small Pipe**
  - 15.3.1 Exposed Sampling Lines @ Chlorine Contact Tank
    - 15.3.1.1 Wall Sleeve & Link Seal
    - 15.3.1.2 1" PVC
  - 15.3.2 Exposed Sampling Line @ Effluent Control Structure
    - 15.3.2.1 Wall Sleeve & Link Seal
    - 15.3.2.2 1" PVC
    - 15.3.2.3 Sampling Line @ Filter Bldg. - Feed to Analyzers/Instruments
  - 15.3.3 Wall Sleeve & Link Seal
    - 15.3.3.1 Wall Sleeve & Link Seal
    - 15.3.3.2 1" PVC
  - 15.3.4 Chemical Feed @ Meter Vault
    - 15.3.4.1 Tapping Saddles, 30" X 1" w/Corp Stop
    - 15.3.4.2 Wall Sleeve & Link Seal
    - 15.3.4.3 1" PVC
    - 15.3.4.4 1" Braided Flex Hose & Fittings
  - 15.3.5 Chemical Feed @ Influent Pipe
    - 15.3.5.1 Wall Sleeve & Link Seal
    - 15.3.5.2 1" PVC
  - 15.3.6 Chemical Feed @ Effluent Control Structure Weir
    - 15.3.6.1 Wall Sleeve & Link Seal
    - 15.3.6.2 1" PVC
- 15.4 **Valves**
  - 15.4.1 Valves Purchase - \* Rawdon Myers
  - 15.4.2 Install - Yard
    - 15.4.2.1 48" MJ Butterfly Valves

15.4.2.2	36" MJ Butterfly Valves
15.4.3	Install - Filter Building
15.4.3.1	20" FL Butterfly Valve w/EMO floor stand operator (SW)
15.4.3.2	16" FL Butterfly Valve w/Modulating EMO (FLW)
15.4.3.3	16" FL Butterfly Valve w/EMO (FLW)
15.4.3.4	30" FL Butterfly Valve w/EMO (BW)
15.4.3.5	1" Air Release Valve (BW)
15.4.3.6	20" FL Butterfly Valve w/EMO (BWW)
15.4.3.7	20" FL Butterfly Valve w/EMO (FTW)
15.4.3.8	12" FL Swing Check Valve (ASC)
15.4.3.9	12" FL Butterfly Valve w/Lever Operator (ASC)
15.4.3.10	12" FL Butterfly Valve, EMO (ASC)
15.4.3.11	12" FL Swing Check Valve (ASC)
15.4.3.12	12" FL Butterfly Valve, Chain Wheel Operator (ASC)
15.4.4	Install - Chlorine Contact Basins
	42" FL Butterfly Valve, Floor Stand w/Hand-Crank Operator (Overflow)
15.4.4.1	6" FL Gate Valve, Extension Stem w/2" Nut Operator (Basin Drain)
15.4.4.2	18" FL Butterfly Valve w/Floor Stand, Open/Close EMO (BW Feed)
15.4.4.3	Install - Backwash Tank
15.4.5	18" FL Butterfly Valve w/Floor Stand w/Hand-Crank Operator (Future)
15.4.5.1	18" FL Butterfly Valve w/Floor Stand, Modulating EMO (CL2 Feed)
15.4.5.2	18" FL Butterfly Valve w/Floor Stand, Open/Close EMO (High Service Feed)
15.4.5.3	18" FL Check Valve (BW Pump Discharge)
15.4.5.4	4" FL Kinetic Combination Air Valve (BW Pump Discharge)
15.4.5.5	HEAT TRACE & INSULATION - EXTERIOR EXPOSED PIPE - ALLOWANCE
15.5	PLUMBING - ALLOWANCE
15.6	HVAC
15.7	HVAC Subcontractor
15.7.1	* Wigglesworth HVAC & Plumbing
15.7.2	2" Gas Line - Supply to FTB-AHU-1
15.7.3	

**DIVISION 16 ELECTRICAL TOTAL**

16.1	Division 16 - Electrical
16.1.1	Electrical Sub
16.1.2	Trenching & Concrete Ductbanks
16.1.3	* Jeff Hall Electric
16.2	16620 Packaged Engine Generator System
16.2.1	Buy Packaged Engine Generator System
16.2.2	Labor to Install Generator
16.2.3	Fuel for Generator Start-Up only
16.2.4	* Cummins

**DIVISION 17 INSTRUMENTATION TOTAL**

17.1	Instrumentation & Control - * Emerson
17.2	Install Field Mounted Instruments (17910 - Schedule)
17.2.1	17611 - Venturi Flow Tubes
17.2.1.1	10" Venturi - Filter 1-8
17.2.2	17670 - Level Switches
	Mercury Float Switch - BW Tank - Mount for Elect to Wire @ Hatch, E Side
17.2.2.1	17675 - Pressure Switches
17.2.3	Backwash Water Pressure Switch - Plumb w/1/2" SS pipe, Iso valves
17.2.3.1	17701 - Magnetic Flow Meters
17.2.4	
17.2.4.1	20" FL Magnetic Meter - Backwash Water @ Filter Bldg
17.2.4.2	30" FL Magnetic Meter - Finished Water Flow
17.2.5	17770 - Temperature Indicating Transmitters
17.2.5.1	Filtered Water Control Structure - Plumb from Sampling
17.2.6	17740 - Ultrasonic Level Measurement Systems
17.2.6.1	Filter 1-8 Level,
17.2.6.2	Filter 1,2 - Bed Expansion
17.2.7	17749 - Submersible Level (Pressure) Sensors
17.2.7.1	Backwash Tank Level - Flange Mounted Top of Tank
17.2.8	17760 - Pressure Indicating Transmitters
17.2.8.1	Filter 1-8 Loss of Head Guage, 0-10 ft. (Piping In DIV 15)
17.2.8.2	Filter 1-8 Effluent Rate (Allowance - SS tubing & ftgs - plumb block valve)
17.2.9	17801 - pH Meter - FIGURED INSTALL N. WALL OF FILTER BLDG.
17.2.9.1	pH Analyzer w/temperature
17.2.10	17821 - Turbidity Analyzers (Low Range)
17.2.10.1	0-10 NTU - Combined Filters Effluent Turbidity
17.2.10.2	0-10 NTU - Filter 1-8 Eff Turbidity
17.2.11	17831 - Chlorine Analyzers - INSTALL N. WALL OF FILTER BLDG.
17.2.11.1	Free Chlorine Analyzer - Filter Water Control Structure
17.2.11.2	Free Chlorine Analyzer - CT Basin, Cell 4/8

**CONTINGENCY**  
**TOTAL CONSTRUCTION ESTIMATE**

## SELF-PERFORMED WORK

Layne Heavy Civil, Inc. (Layne) is unique to the industry in our ability to self-perform most of the major construction work that is proposed for the Kentucky American Water (KAW) Richmond Road Station Filter Building Project. We believe this ability allows us to provide the best value to our customers – highlighted by improved site management/coordination, quality control, and potential cost savings. Presented below is a summary of the major construction disciplines anticipated to be involved with the project that are proposed to be self-performed by our team.

### Proposed Construction Work to be Self-Performed by Layne

- Site Excavations/Earthwork/Grading
- Sheeting/Earth Retention Systems
- Concrete Formwork
- Concrete Placement and Finishing
- Carpentry
- Underground Pipeline Installation
- Interior Process Piping
- Chemical Feed Equipment Installation
- Process Equipment Installation
- Seeding & Restoration
- Commissioning/Startup

### Proposed Construction Work to be Sub Contracted by Layne

- Ironwork (Reinforcing steel installation)
- Masonry
- Roofing
- HVAC
- Electrical
- Painting
- Instrumentation and Control

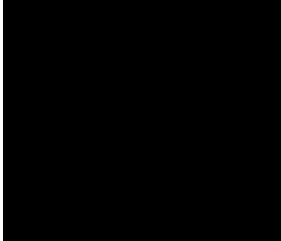
As also requested, we are providing anticipated hourly labor rates for the various labor classifications that are proposed to be used in the event that Layne is chosen to self-perform this work. See following page this information.

While we believe the labor rates provided are competitive to the industry, we do request caution be used during any comparison of such rates as a means to determine the lowest cost contractor to self-perform the work. The primary reason for this is there are several other factors, which vary from contractor to contractor, that also affect the overall cost of work. These include production rates and cost of materials to name a few. It is our belief that all of the cost of work factors must be considered before such a determination can be made. Over the years, Layne has consistently demonstrated our ability to be a low cost provider on projects of similar scope and magnitude. A more thorough representation of our expectation of project cost can be found in the Construction Cost Estimate section of this Proposal.

LABOR CLASSIFICATIONS AND RATES

KENTUCKY AMERICAN WATER-RICHMOND ROAD STATION FILTER BUILDING

**PROPOSED HOURLY RATES FOR SELF PERFORMED WORK LABOR CLASSIFICATIONS**

<u>Labor Classification</u>	<u>Hourly Wage</u>
Operator	
Carpenter	
Labor	

**Notes:**

1. Above hourly rates are based on current wages, fringes, payroll taxes, per diems, and workers comp, and are good through 7/1/16. Hourly rates will be adjusted beyond 7/1/16 if necessary.
2. The above labor classifications are intended cover the various work elements that Layne proposes to self-perform. In the event additional labor classifications are required, Layne will determine the hourly rate based on the appropriate wage and fringe benefits. Payroll taxes and insurance will be determined in a similar manner as indicated above.

MATERIAL AND EQUIPMENT RENTAL RATES/ SMALL TOOL ALLOWANCE

KENTUCKY AMERICAN WATER-RICHMOND ROAD STATION FILTER BUILDING

**MATERIAL AND EQUIPMENT RENTAL RATES**

Backhoe Case 580SM	-	[REDACTED]	Hour
Loader JD 644J	-	[REDACTED]	Hour
Excavator Cat 325DL	-	[REDACTED]	Hour
Excavator Cat 330DL	-	[REDACTED]	Hour
Excavator Cat 345CL	-	[REDACTED]	Hour
Crane Link Belt LS218H	-	[REDACTED]	Hour
Crane Link Belt LS238H	-	[REDACTED]	Hour
Crane Terex 555	-	[REDACTED]	Hour
Compactor Cat CP433E	-	[REDACTED]	Hour
Scissor Lift 30'	-	[REDACTED]	Hour
Boom Lift Genie Z60/34	-	[REDACTED]	Hour
Articulated Rear Dump Cat D350E	-	[REDACTED]	Hour
Truck, ¾ Ton, Crew, 4x4	-	[REDACTED]	Hour

**SMALL TOOL ALLOWANCE RATES**

Small Tool Allowance (2.5% of Labor Rate) -	[REDACTED]	Hour
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## **SUPERVISION & SUPERINTENDENCE OF CONSTRUCTION**

Listed below is a summary of the services and facilities that have been included in the Supervision and Superintendence lump sum amounts for the Kentucky American Water – Richmond Road Station Filter Building project. Our scope of services is as described below:

### Scope of Services

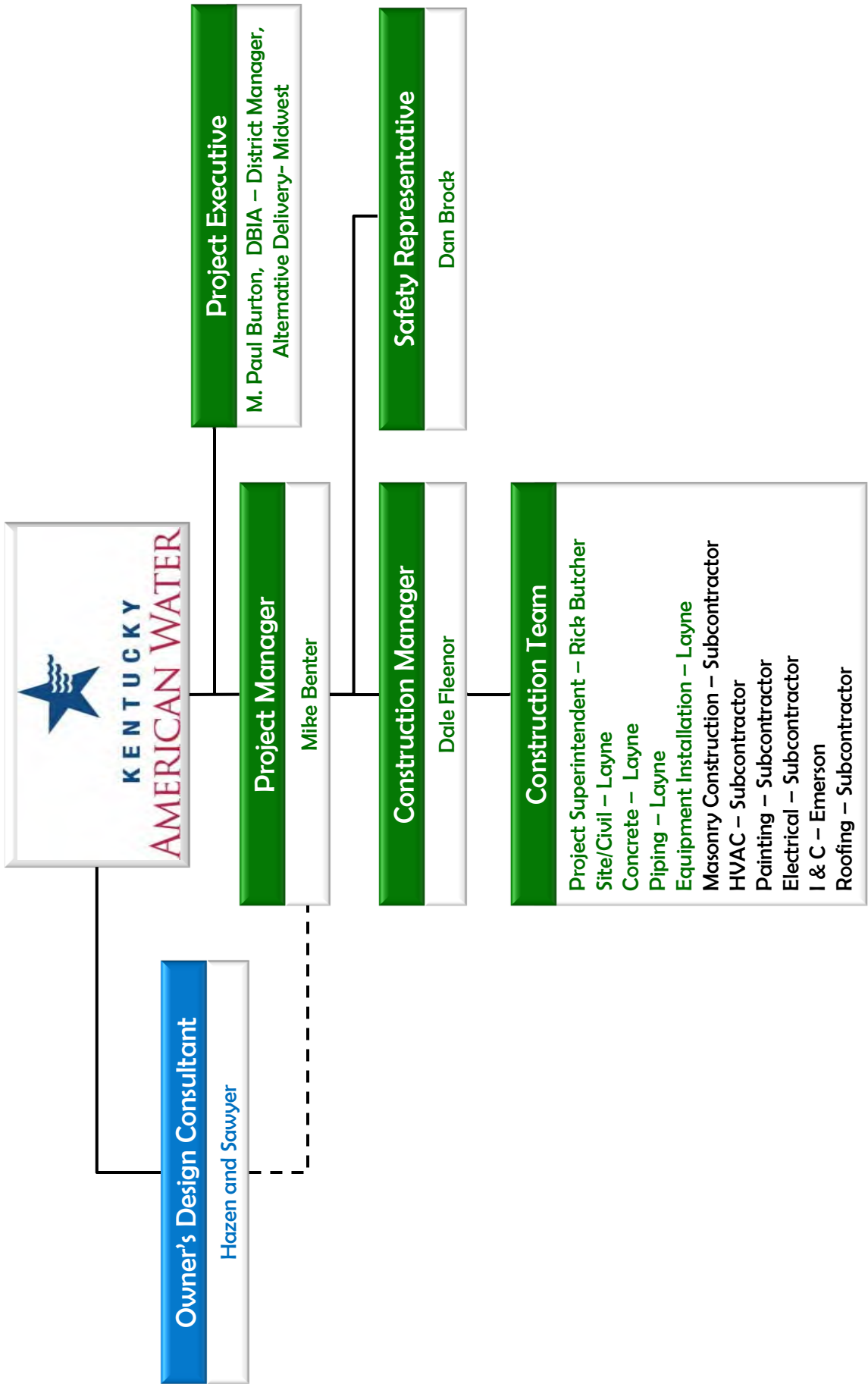
- Project Supervisory Personnel including:
  - One (1) Project Manager
  - One (1) Construction Manager, full time, on-site
  - One (1) Superintendent, full time, on-site.
- Home Office Administration
- Travel Expenses
- Temporary Housing Expenses
- Temporary Field Offices
- Temporary Utilities for Field Offices
- Temporary Power for Construction Activities, Excluding Startup and Operation
- Telephone Charges
- Temporary Sanitary Facilities
- Temporary Parking
- Temporary Lighting

**TEAM ORGANIZATION CHART:**

Kentucky American Water  
 Richmond Road Station Filter Building  
 June 26, 2014



WATER · MINERAL · ENERGY





**KEY PERSONNEL AVAILABILITY**

KENTUCKY AMERICAN WATER-RICHMOND ROAD STATION FILTER BUILDING

**KEY PERSONNEL AVAILABILITY**

The following tables list the percentage of time key personnel are available to perform their duties for the Richmond Road Station Filter Building Project as well as their location for this project.

<b>Key Personnel Percentage of Time Available and Location</b>			
<b>Role</b>	<b>Key Personnel</b>	<b>% of Time Available</b>	<b>Location</b>
Project Executive	M. Paul Burton, DBIA	25%	Orleans, IN
Project Manager	Mike Benter	100%	Orleans, IN
Construction Manager	Dale Fleenor	100%	On-site
Superintendent	Rick Butcher	100%	On-site
Safety Representative	Dan Brock	Monthly	On-site Monthly



M. PAUL BURTON, DBIA

Project Executive

**Education:**

B.S. Financial Management  
Purdue University

**Professional Affiliations:**

Design-Build Institute of  
America

**Total Years Experience:**

29

**Joined Layne Heavy Civil:**

1984

**References:**

Mark S. Gasvoda,

President

B.L. Anderson Company, Inc.  
(765) 463-1518

Andrew R. Dera,

Project Development Mgr

LS Power

(732) 249-6750

Mark W. Griffin,

Engineering Manager/

Central Region

American Water

(314) 996-2330

**Summary of Qualifications**

Mr. Burton currently serves as the Manager of Alternative Delivery Services for the Midwest Division of Layne Heavy Civil. In this capacity he is responsible for the day-to-day operation of all construction activities within this division. With over 29 years experience in the construction industry, Mr. Burton has served in a variety of roles with our company including: Laborer, Equipment Operator, Foreman, Estimator, and Project Management. His responsibilities include oversight of projects exceeding a volume of \$70 million with a specific emphasis on Design/Build work and Negotiated Proposals. His previous project experience includes: large scale water intakes facilities, intake gallery construction, collector well construction, water and wastewater treatment plant construction, water and sewer line installation, sheeted excavations and dewatering, airport de-icing facilities, HDPE liner installation and earthwork. Mr. Burton has a Bachelor of Science Degree in Financial Management from Purdue University.

**Relevant Project Experience**

- **Blendville Water Treatment Design Build: Missouri-American Water Company, Joplin, MO** - Project involved building extensive facilities while maintaining permit compliant treatment throughout the existing plant. Contract total for this project was approximately \$28,000,000.
- **Kiamichi Energy Facility Water Supply & Waste Water Discharge System: Tenaska, McAllister, OK** - Project included a new raw water intake and a 32 mile pipeline. Project was performed utilizing EPC Delivery with an approximate contract total of \$20,800,000.
- **City of Mankato Water Reclamation Facility: Calpine Corporation, Mankato, MN** - This project of grey water treatment & supply was awarded the 2007 Project of the Year Award from the American Public Works Association in MN. Contract total was approximately \$8,200,000.
- **Hanging Rock Energy Facility: Duke Energy, Ironton, OH** - Project consisted of raw water supply system & wastewater discharge line. Project contract was approximately \$4,300,000.
- **South Dearborn, Raw Water Supply System: PSEG-Lawrenceburg Energy Facility, Lawrenceburg, IN** - Project was located in an archeological significant area in a reduced construction zone and consisted of construction of the raw water supply system for this power facility. Contract total was approximately \$4,100,000.



## MIKE BENTER

Project Manager

### Education:

B.S. Building Construction & Contracting, Purdue University

### Total Years Experience:

21

**Joined Layne Heavy Civil:**  
2008

### References:

Leroy Warren  
Council Pres.  
Town of Brownstown  
Brownstown, Indiana  
812-358-5500

Jeff Ponist, P.E.  
Commonwealth Engineers  
Indianapolis, Indiana  
317-888-1177

Brad Robertson, P.E.  
Mitchell & Stark Const. Co. Inc  
Medora, Indiana  
812-966-2151

### Summary of Qualifications

Mr. Benter has over 20 years of experience in the construction industry. His education and experience has given him the ability to work on a wide variety of projects. His past work experience includes water and wastewater treatment plants, water distribution systems, wastewater collection systems, excavation and earthwork projects, and material handling systems. His current responsibilities include but are not limited to estimating, scheduling, budgeting, cost tracking and control, subcontractor and vendor coordination, and owner correspondence.

### Relevant Project Experience

- **Jacobson Reservoir Pump Improvements: Kentucky American Water, Lexington, KY** – Project Manager- Project consisted of design and construction of the following: changed the existing 2300 volt electric service to 480 volts; replaced existing switchgear; installed a standby generator; installed variable frequency drive on two of the pumps; replaced two 100 HP pumps and motor and one 400 HP pump and motor; installed a new potassium permanganate feed system and flow meter; and replaced existing building exhaust fans and lights. The scope included all associated instrumentation work. Cont Amnt \$3,160,732
- **Sandy Creek Energy Station Water Reclamation Supply System: Sandy Creek Services, LLC, Riesel, TX** - This project includes the construction of a 15 MGD reclaimed water pumping and distribution system. Notable features include a Reclaimed Water Pump Station, Effluent Water pipelines, and Terminal Storage Pond for a new coal fired power station. Cont Amnt \$23,729,730.00
- **James River Pump Station Modifications and Bear Garden Supply Pipeline: Tenaska- East Coast Transport, Inc., Buckingham County, VA** – Project Manager-This project included modifications to an existing raw water intake and an existing pump station. Components included the addition of two 150 horsepower each vertical turbine pumps and appurtenances, a new river intake structure, and a new 30" supply pipeline for the Bear Garden Generating Station. Cont Amnt \$2,442,145
- **Water Treatment Facilities Upgrade: City of Greensburg, IN** - Aging facilities and construction of a new Honda auto assembly plant required extensive upgrades to the City of Greensburg's water supply and treatment process. This project included upsizing and refurbishing the raw water pumping facilities on Flat Rock River and constructing a new chemical treatment plant and pumping facility to supply the distribution system. Cont Amnt \$6,200,000.00.
- **Wastewater Treatment Plant Improvements: City of Edinburg, IN** - This project included refurbishing the influent pump station and replacing aging treatment facilities with new screening equipment, a vertical loop reactor, clarifiers, aeration basins, and UV disinfection equipment. Cont Amnt \$5,450,000.00



DALE FLEENOR

Construction Manager

**Education:**

High School - Orleans, IN

**Total Years Experience:**

33

**Joined Layne Heavy Civil:**

1991

**References:**

Richard Burch  
Midwestern Engineers  
Loogootee, IN  
(812) 295-2800

**Continued Education:**

Chauffeur's Driver's License

CPR Certified

First Aid Training

Trenching & Excavation  
Competent Person Training

Accident and Investigation  
Training

Blood Borne Pathogens

Confined Space Training

E.I.T.

Yearly Concrete Construction  
Industry Seminars (World of  
Concrete)

Overhead Electrical Training

Fall Protection

Safety Training Seminar (NUCA  
2003)

United States Marine Corps  
(Aviation Crash, Fire, and Rescue  
Dept. 1977-1981)

T.A. Loving Construction  
Company (1981 – 1983)

Residential Construction (1983 –  
1990)

Reynolds Inc./Layne (1991 –  
Present)

**Summary of Qualifications**

Mr. Fleenor has over 30 years of experience in the construction industry. He has served in the capacity of Carpenter, Ironworker, Electrician, Laborer, Equipment Operator, Foreman, and was promoted to Superintendent in 1995. He was promoted to Project Manager in 2006 and his current duties include, but are not limited to: Shop drawing review, preparation of submittals to engineers, project scheduling, material purchasing, negotiations and issuance of subcontracts and purchase orders, project budgeting, and estimating.

**Relevant Project Experience**

- **Northern Division Connection, Phase 3: Kentucky American Water, Owenton, KY**– Project Manager- Project includes construction of two new water towers, one 300,000 gallon tank, and one 600,000 gallon tank; New EFI Booster Pump Station, Stand-by Generator and an Altitude Valve Vault with associated piping; and approximately 500LF of 16” ductile iron piping for connections to the Phase 1 and 2 portions of the Project. Both sites will have grade work to prepare for the tower construction, and holding ponds to receive tower overflows. Cont Amt \$3,862,230
- **Patoka Phase VII Ultraviolet Advanced Oxidation Process: Patoka Lake Regional Water & Sewer District, Dubois, IN** – Project Manager- Project consists of adding a new Equalization Tank, Quenching Tank, two new Weir Boxes, Reactor Room, Chemical Feed and Storage Rooms and a Future Pump Room to facilitate the additional treatment process. This includes 1750 cubic yards of concrete, 450 linear feet of 36-inch HDPE piping, 150-feet of 42-inch HDPE piping, associated 4 – 12-inch drain piping and 36 & 30-inch exposed ductile iron piping. The equipment being installed includes 6 new Trojan in-line UV reactors, two coolant water pumps as well as new chlorine and ammonia feed equipment. Cont Amt \$6,685,073
- **Rising Sun Wastewater Treatment Plant Expansion: Rising Sun Municipal Utilities, Rising Sun, IN** – Superintendent-Project consisted of construction of two new SBR basins, two new digester basins, new headworks structure, and a new 28’ deep raw water lift station. Extensive underground piping 22 to 28’ deep was installed on a tight site while maintaining existing treatment. Phased construction was required. The existing plant process train could not be modified until the new SBR process train was on-line and tested. A new lab and office building was constructed in the foot print of the demolished aeration tanks. Sludge dewatering was converted to a centrifuge based system. A new solids handling building was constructed to hold screw conveyor and dumpster loading facilities. The existing belt filter press was temporarily relocated to allow for construction of the solids handling building. Effluent discharge is into the Ohio, River. Ultraviolet disinfection was chosen to insure disinfection over a wide range of flow rates. Four existing clarifiers were converted to Equalization basins to store peak flows. Cont Amt \$7,384,816



## DAN BROCK

Safety Representative

### Total Years Experience:

20

### % of Time Fulfilling Duties as Safety Officer/Coordinator:

100%

### Mr. Brock Reports to:

Randy Murphy

### Joined Layne Heavy Civil:

1992

### References:

#### Dan Sheffer

Sheffer Engineering  
(770) 306-5050

#### Robert Summers

EMI Safety  
(404) 915-5204

#### David Saladin

R.A.E. Systems  
(770) 990-2566

### Summary of Qualifications

Mr. Brock has over 20 years of experience in the construction industry and has 18 years of experience with the Risk Management Department. He spent several years in the field serving as an on-site Safety Director. Mr. Brock is responsible for the safety activities of all divisions overseen by the corporate office. His current duties include: on-site safety and DOT inspections, coordinating on-site and corporate safety training, assisting project managers in safety planning, and overseeing the calibrations for all monitoring equipment. Mr. Brock is also involved in the ISO 9000 Certification for the InLiner Division of Layne and has instrumentation training.

### Continuing Education

- First Aid Training
- 40-hour Hazwoper (8-hour Updates Annually)
- Confined Space Entry Training
- Excavation Safety & the Competent Person
- Mobile Crane Inspection Course
- ISO 9000 Internal Auditor
- Basic Operator Training
- Air Monitor Training For Calibration and Repairs (CrowCon and BW Technologies)
- Cardinal Carrier Training-The-Driver Course
- OSHA 10-hour (Construction)
- OSHA 10-hour (General Industry)
- Entry Level Driver Training Course
- NPK Quick Attach Training
- Federal Motor Carrier Safety Regulations Training
- OTI 500 OSHA Course
- Rigging Awareness
- Smith Systems Driving Instructor
- Layne Christensen Advanced Driver Training
- E-ON-US Passport Instructor

### Training to Employees

- Fork Truck
- Confined Space Entry
- Fall Protection
- Stairways & Ladders
- Excavation Safety and the Competent Person
- OSHA 10-Hour
- OSHA 30-Hour
- Layne Annual General Safety Update




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**RICK BUTCHER**
**Project Superintendent**
**Total Years Experience:**

30

**Joined Layne Heavy Civil:**

1996

**References:**

Lance H. Weir, Mechanical  
Field Engineer - Sandy Creek  
Services  
Sandy Creek Energy Station,  
2161 Rattlesnake Road,  
Riesel, TX 76682  
Office - 254-896-4220  
Cell - 254-355-3717  
[lweir@sandycreekservices.com](mailto:lweir@sandycreekservices.com)

Wayne Henderson, City of  
Bloomington Utilities  
100 W Dillman Road,  
Bloomington, IN 47403  
Phone: (812) 824-4900 ext.  
101  
[hendersw@bloomington.in.gov](mailto:hendersw@bloomington.in.gov)

Scott Laughlin, Manager,  
Tenaska Drilling Services  
1701 E Lamar Blvd, Ste 100,  
Arlington, Texas 76006 USA  
Phone: 214 930 6943  
[slaughlin@tenaska.com](mailto:slaughlin@tenaska.com)

**Summary of Qualifications**

Mr. Butcher has over 30 years of experience in the construction industry and brings with him a multitude of knowledge. He has vast experience with concrete, spending the majority of his career in the cement sector of the construction industry. In addition to concrete work, Mr. Butcher also has experience with heavy equipment, grading, municipal water and sewer installations, landfill closures and has performed in the capacity of laborer, equipment operator, crew foreman, and superintendent. Recent projects have included the management and oversight of water and wastewater plant construction and renovations including Fox Energy Center in Wisconsin. Mr. Butcher currently oversees plant construction, from the buried piping going to the structure, to building the actual structure, in addition to managing the crews and equipment on multiple job-sites.

**Continuing Education**

- 2 years Brewton Parker Baptist College, Mt Vernon, GA
- First Aid Training
- CPR Training
- BBP Training
- Confined Space Entry Training
- Excavation Training
- Fall Protection Training
- Scaffolding Training

**Relevant Project Experience**

- **Sandy Creek Energy Station: L.S. Power, Riesel, TX** - Contract total was approximately, \$23,600,000.
- **Cross Generating Station Unit 3-4 Makeup Water Intake: Santee Cooper, Cross, SC** - Contract total was approximately \$8,000,000.
- **City of Mankato Water Reclamation Facility: Calpine Corporation, Mankato, MN** - This project of grey water treatment & supply was awarded the 2007 Project of the Year Award from the American Public Works Association in MN. Contract total was approximately \$8,200,000.
- **Dillman Rd Waste Water Treatment Plant Expansion: City of Bloomington, Bloomington, IN** - Contract total was approximately \$7,000,000.
- **Design-Build Riverwater Intake, Pump Station, & Pipeline: Bechtel Power Corp Agent for Prairie State Generating Co., LLC, Marissa, IL** - Contract was approximately \$24,400,000.



Construction of Two New Water Towers

#

## PROJECT PROFILE

**VALUE OF WORK PERFORMED**  
**\$3,915,318**

**PROJECT COMPLETION DATE**  
**March 13, 2014**

**OWNER REFERENCE**  
Kentucky American Water  
**Zachery B. Dukes**  
**859.268.6352**  
[Zachery.Dukes@amwater.com](mailto:Zachery.Dukes@amwater.com)

**ENGINEER REFERENCE**  
Strand Associates  
**Mark Askin**  
**502.583.7020**  
[mark.askin@strand.com](mailto:mark.askin@strand.com)

**LAYNE HEAVY CIVIL, INC.**  
4520 N. State Rd. 37  
Orleans, IN 47452  
Phone: 812.865.3232  
Website: [www.layne.com](http://www.layne.com)



## Kentucky American Water Northern Division Connection Phase 3 Owenton, KY

#

### Project Overview:

The Kentucky American Water Northern Connection Phase 3 Project consists of the construction of two new water towers; one 300,000 gallon tank at the Monterey Site, and one 600,000 gallon tank at the Owenton Site. The Monterey Site will also include a new EFI Booster Pump Station, Stand-by Generator and an Altitude Valve Vault with associated piping. We will be laying approximately 500LF of 16" ductile iron piping for connections to the Phase 1 and 2 portions of the Project. Both sites will have grade work to prepare for the tower construction, and holding ponds to receive tower overflows.

#



Improvements to the Jacobson Reservoir Pump

#

## PROJECT PROFILE

**VALUE OF WORK PERFORMED**  
**\$3,171,506**

**PROJECT COMPLETION DATE**  
**November 2013**

**OWNER REFERENCE**  
Kentucky American Water  
**Zachary Dukes P.E.**  
**859.268.6352**

**ENGINEER REFERENCE**  
Gannett Fleming  
**Timothy Glessner**  
**717.763.7211 x 2673**

**LAYNE HEAVY CIVIL, INC.**  
4520 N. State Rd. 37  
Orleans, IN 47452  
Phone: 812.865.3232  
Website: [www.layne.com](http://www.layne.com)



## Kentucky American Water Company Jacobson Reservoir Pump Improvements Lexington, KY

#

### Project Overview:

This project consisted of the design and construction of the following: changed the existing 2300 volt electric service to 480 volts; replaced existing switchgear; installed a standby generator; installed a variable frequency drive on two of the pumps; replaced two 100 HP pumps and motor and one 400 HP pump and motor; installed a new potassium permanganate feed system and flow meter; and replaced existing building exhaust fans and lights. The scope included all associated instrumentation work.#





Wastewater Treatment Plants Short-Term Improvements

## PROJECT PROFILE

### VALUE OF WORK PERFORMED

**\$5,645,552**  
Design/Build

### PROJECT COMPLETION DATE

**August 30, 2013**

### CAPACITY

**5.2 MGD**

### OWNER REFERENCE

American Water Operations and  
Maintenance, Inc.  
**Ralph Stillwell**  
**337.537.1424**

### ENGINEER REFERENCE

AECOM  
**Steve Melvin**  
**318.675.2873**

### LAYNE HEAVY CIVIL, INC.

4520 N. State Rd. 37  
Orleans, IN 47452  
Phone: 812.865.3232  
Website: [www.layne.com](http://www.layne.com)

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## American Water Operations & Maintenance Inc.

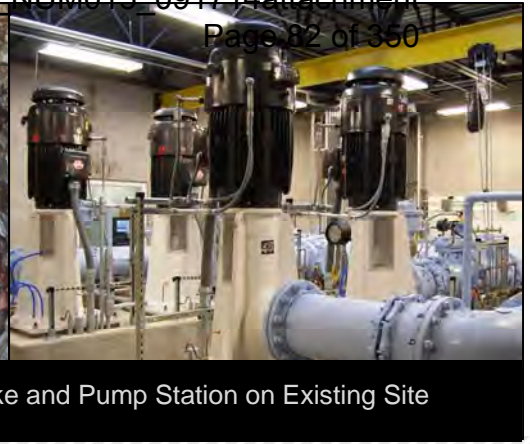
Fort Polk North & South Fort Wastewater  
Treatment Plants Short-Term Improvements  
Project  
Fort Polk, Louisiana

### Project Overview:

The Fort Polk Army Post is serviced by two (2) wastewater treatment plants that were originally constructed in the 1940's. The plants are referred to as the North and South Fort Wastewater Treatment Plants. The South Fort Wastewater Treatment Plant is a 3.8 mgd average day design facility that consists of preliminary treatment, primary treatment, trickling filters, secondary clarifiers, disinfection, and effluent ponds. The North Fort Wastewater Treatment Plant is a 1.4 mgd average day design facility that consists of preliminary treatment, primary treatment, a trickling filter (currently out of service), aeration tanks, secondary clarifier, secondary effluent pumping and disinfection. The aeration tanks were installed in the 1990's. Both treatment plants utilize aerobic digestion and sludge drying beds for their solids handling facilities.

The long range plan is for a new WWTP to be built. This would replace the two existing plants. Due to scheduling and funding constraints, this cannot happen in a timely manner which would allow for permit compliance with the existing plants. This project is being performed at the North and South Fort Wastewater Treatment Plants in order to improve their treatment performance and reliability and assure AW is in full compliance with all their permits. Contract delivery method is Design-Build.

#



New Raw Water Intake and Pump Station on Existing Site

## PROJECT PROFILE

**VALUE OF WORK PERFORMED**  
\$7,817,324

**PROJECT COMPLETION DATE**  
December 14, 2011

**CAPACITY**  
8.5 MGD

**OWNER REFERENCE**  
Missouri American Water Company  
Wynn Morgan  
314.996.2423  
[beatty.morgan@amwater.com](mailto:beatty.morgan@amwater.com)

**ENGINEER REFERENCE**  
Black & Veatch  
Bently Green  
636.532.7940  
[greenb2@bv.com](mailto:greenb2@bv.com)

**LAYNE HEAVY CIVIL, INC.**  
4520 N. State Rd. 37  
Orleans, IN 47452  
Phone: 812.865.3232  
Website: [www.layne.com](http://www.layne.com)



## Missouri American Water Raw Water Intake and Pump Station Construction Mgt. at Risk Jefferson City, Missouri

### Project Overview:

Layne constructed a new raw water intake and pump station on an existing site for an existing Water Treatment Plant. The purpose of the project was to replace the current raw water intake and pump station that was originally built and placed into service in the 1800's. We increased capacity and provided future capacity of 8.5 MGD in the new raw water intake.

The wet well is approximately 19' in diameter and 75' deep with a divider wall in the middle to allow complete dewatering of either side. Once the wet well, or shaft, was completed, we built a 7'x7' horseshoe shaped tunnel approximately 200' through bedrock to a point underneath the river. This tunnel houses the 20" ductile iron intake lines, 4" stainless steel hydroburst lines, and 1" stainless steel chemical lines. Prior to the tunnel reaching the river, our marine crews installed two 48" diameter vertical shafts in the location of the intake screens. The progression of the tunnel ran into these 48" shafts to complete the route from the wet well to the river. The tunnel method of construction was determined to be necessary due to the Union Pacific railroad track that is within 40' from the existing pump station.

The process equipment included in the project and that Layne installed are: 4 vertical turbine pumps, 2 sludge pumps, 1 hydroburst system, and 2 wedgewire intake screens (located in the river).

There was extensive site work performed prior to starting the wet well construction. Approximately 10,000 cubic yards of material was excavated, loaded, and hauled off site to make room for the new pump station facility.

#



Water Treatment Plant Upgrades

## PROJECT PROFILE

**VALUE OF WORK PERFORMED**  
\$4,134,096

**PROJECT COMPLETION DATE**  
December 15, 2010

**OWNER REFERENCE**  
Tennessee American Water  
Company  
Kristina McGee  
856-840-0750

**ENGINEER REFERENCE**  
CDM, Inc.

**LAYNE HEAVY CIVIL, INC.**  
4520 N. State Rd. 37  
Orleans, IN 47452  
Phone: 812.865.3232  
Website: [www.layne.com](http://www.layne.com)



## Tennessee American Water Citico Water Treatment Plant Upgrades Phase IA Chattanooga, Tennessee

### Project Overview:

The purpose of the project is to upgrade and expand treatment at Citico Water Treatment. The project will modify the existing basins with new flocculation and sedimentation equipment, and install site pipe work while continuously providing uninterrupted water supply to the entire distribution system. Modifications include: demolition of existing flocculators; construction of new chemical unloading area including installation of new double containment piping to existing chemical building. Site pipe work includes the construction of new 48-inch ductile iron pipe from existing 42-inch and 30-inch low service pipes to existing 48-inch pipe to plant, the installation of new 36-inch and 54-inch jet mixers, and construction of new 30-inch parallel ductile iron pipe from existing Aldrich units to Clearwell No. 2.

#



New 21 MGD Capacity Treatment Facility

#

## PROJECT PROFILE

### CONTRACT VALUES:

Target Cost: \$23,353,561

Final Contract: \$28,043,961

Explanation: Owner Directed Scope Changes and Owner Directed Change Orders

### PROJECT COMPLETION DATE

March 6, 2009

### CAPACITY

21 MGD Total After Project

### OWNER REFERENCE

Missouri American Water Company  
**Mark Griffin, P.E., Manager**  
 314.348.0216

### ENGINEER REFERENCE

Gannett Fleming  
**Jeff Raffensperger**  
 717.763.7211

### LAYNE HEAVY CIVIL, INC.

4520 N. State Rd. 37  
 Orleans, IN 47452  
 Phone: 812.865.3232



## Missouri American Water Company Blendville WTP Joplin, Missouri

#

### Project Overview:

This utilized a hybrid CMAR/Design-Build delivery model for the construction of this new 21 MGD capacity treatment facility. Our team did extensive in-house review work with the MO DNR to move the permitting process forward. Bypassing and interconnection shutdowns required close coordination with Owner and Engineer. Also, extensive and unforeseen issues arose related to the tie-in times and the ability to maintain permit compliance process flow with the first train while starting-up the new process train. Our team engaged the owner operations staff in elaborate planning sessions. Numerous owner driven ideas were incorporated. The new process train was constructed while maintaining permit compliant treatment through the existing plant. **Our team finished the project four months early.**

Significant features include:

- New Process Building including flocculators, high-rate plate settler clarifiers and filters.
- New Chemical and Administration Building including on-site hypochlorite generation.
- New Clearwell No 2.
- New UV Disinfection/Filter Effluent Transfer Pumping Facility.
- Wastewater Surge Basin & Pump Station
- New Lagoon
- Existing Control Building Modifications
- High Service Pump Replacements & Modifications
- 1 MG Pre-Stressed Potable Water Storage Tank

This is the first WTP in Missouri permitted for UV Disinfection and On-site Hypochlorite Generation.

## PROJECT UNDERSTANDING OF DESIGN DOCUMENTS

The purpose of the Richmond Road Station Filter Building project is to replace the existing filter building with a new structure that incorporates updated filter systems, process pipe/valves and a masonry superstructure. A chlorine contact basin is proposed in order to provide a filter backwash area as well as detention time for chemical reaction from the filter effluent flows prior to going to the clearwell. In developing a "Project Understanding", many items must integrate together for a complete plan of execution. Utilizing a team of material suppliers and subcontractors that performed work on previous projects for Layne in the Lexington region, we have developed a detailed estimate of cost and a detailed project schedule that meets the milestones established by Kentucky American Water. In addition, we are intimately familiar with the expectations that Hazen and Sawyer will require on the project including submittals, quality of work, O&M's and commissioning requirements from our working relationship established on the recent Indiana-American Jeffersonville Filter Upgrade project.

The simplified approach to this project is to break it down into two distinct parts. The first is to simultaneously construct the new filter building along with the chlorine contact basin. Ancillary items such as chemical feed lines/vault, underground process piping and electrical will be constructed as the project progresses. Upon completion and commissioning of the first part of the project, the second part is to demo the existing filter building and its appurtenances. With specific NTP and Substantial Completion dates delineated, Layne Heavy Civil recognizes this most important parameter and has developed our proposal with enough supervision, self-performing craftsmen and equipment to execute the work within that time frame.

To better understand our approach, one will need to review our project schedule, the detailed quantities in our construction estimate and the project specific details as listed below.

### Filter Building and Chlorine Contact Basin

With a construction release beginning on April, 2015 and a substantial completion date of April, 2016, this part of the project is the most challenging. Significant resources of people and materials will need to be properly organized, scheduled and executed to work in this area. A detailed sequence of construction with anticipated durations can be found on our project schedule. Specific process equipment included for this work is:

- (8) Filters
- (2) Blowers
- (2) Backwash Turbine Pumps
- (1) Lot of Field Instruments
- (1) Lot of Process Pipe
- (1) Lot of Process Valves
- (1) Stand-by Generator

Electrical switchgear including VFD's will be required to accommodate this new equipment. Even though we are working with 60% drawings, we have attempted to include the appropriate switchgear/electrical that will meet the standards/expectations set forth by AW's lead electrical engineer.

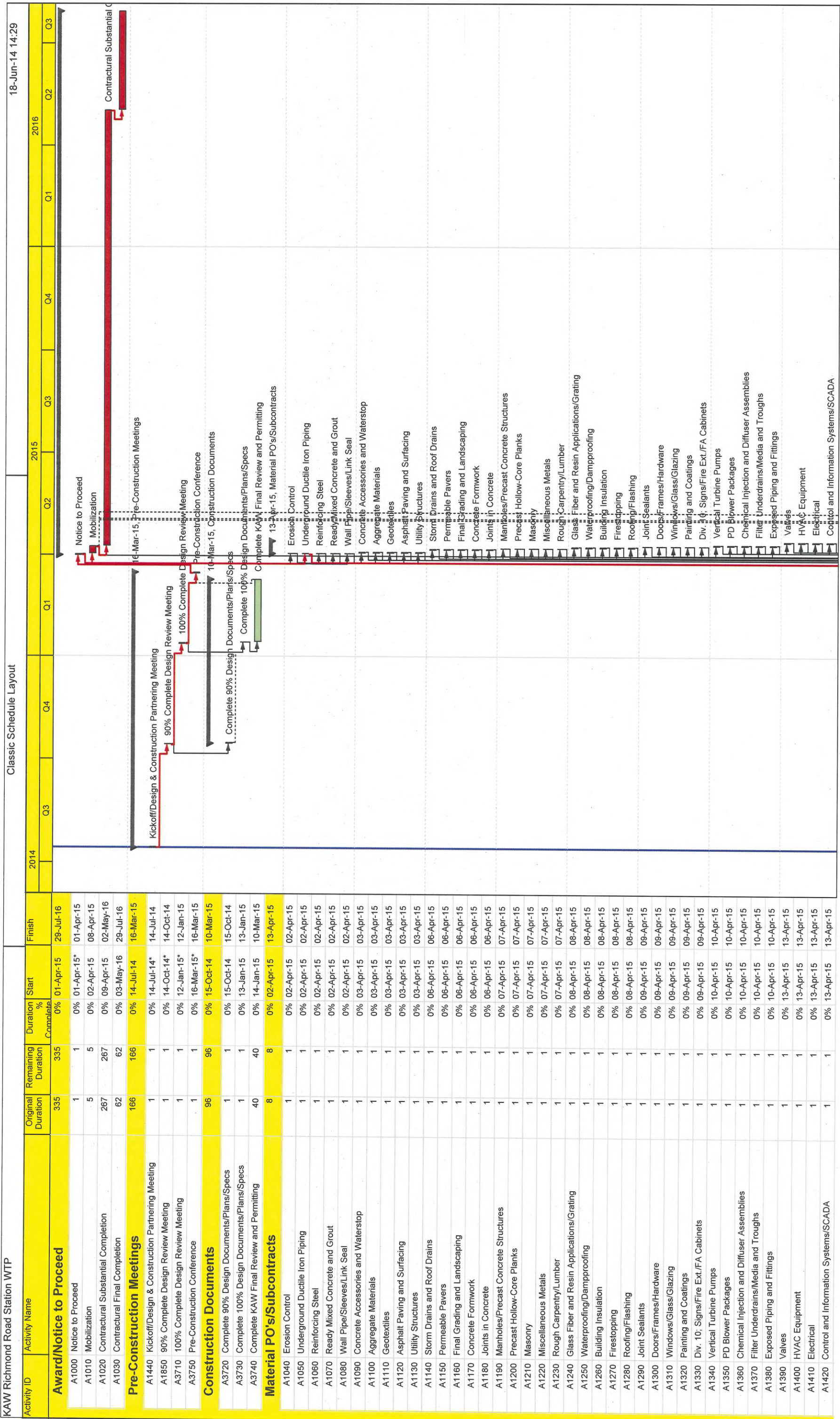
### Existing Filter Building

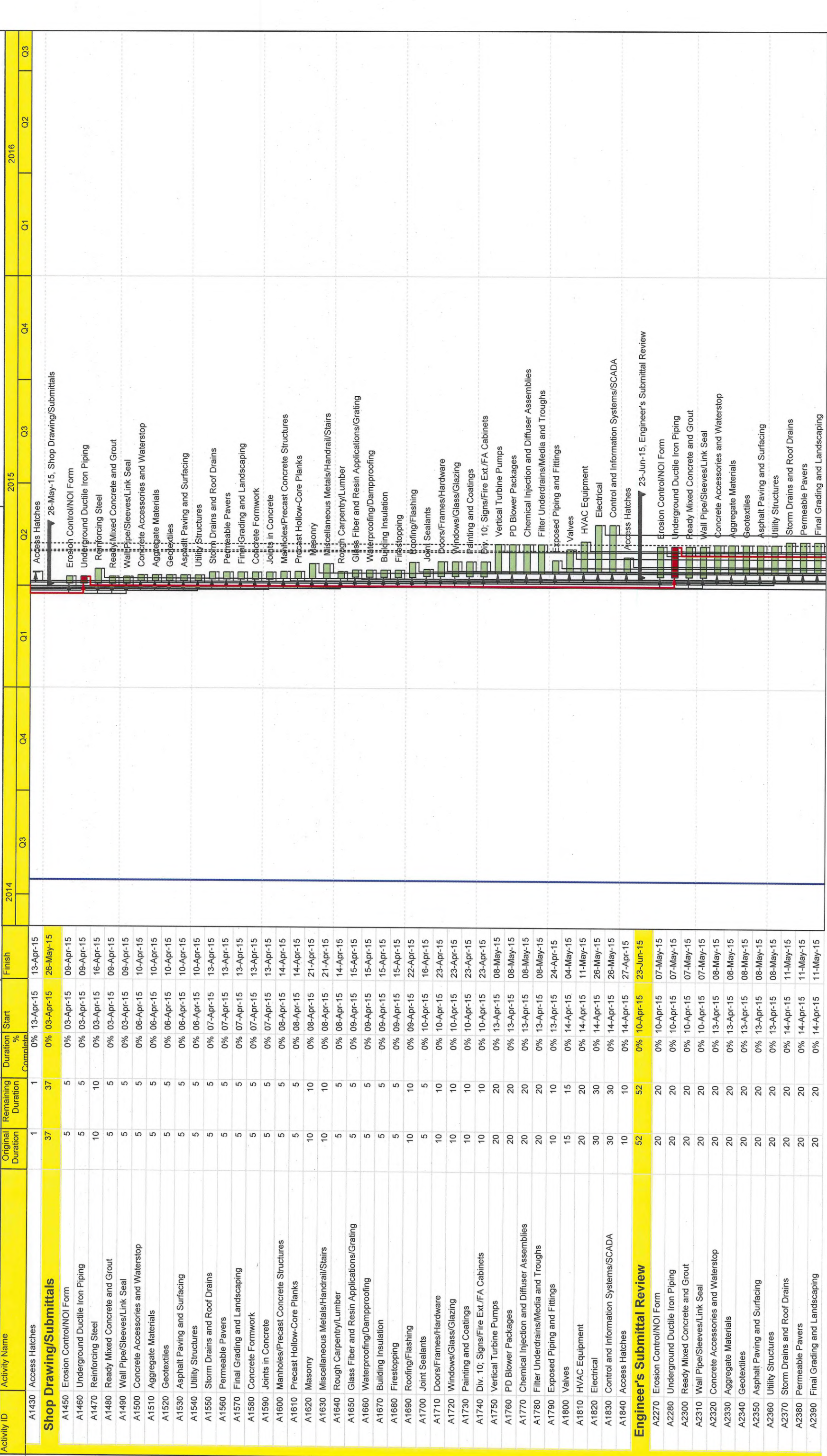
Upon substantial completion and commissioning of the new facilities, our construction sequence will turn to the existing filter building. We will allow KAW an opportunity to remove the items with which they want to keep prior to demolition activities. We will remove the existing masonry superstructure, the structural concrete including the clearwell top slab and clearwell walls to three feet below grade. Holes will be cored into the clearwell floor so that water will not accumulate with the structure. Upon completion, we will restore the site to an aesthetically pleasing appearance.

### General Comments

Our approach to this project was to provide as “real” of a construction estimate as you’ll find once design engineering is complete. Similar to the concepts taken with the electrical, we chose to forecast several areas of cost that are not currently shown on the drawings. An example of this would be the “waterproofing”. The specification indicates that walls below grade are to receive waterproofing but also mentions “as shown on the drawings”. We chose to include a quotation for this work in excess of \$90,000. Other areas, like plumbing, we chose to include allowance amounts for this work even though none is shown.

Our overall goal is to provide Kentucky American Water with the security of knowing that by selecting Layne for the construction of this Project that they will receive a product completed safely, on schedule and with the highest quality standards available in the market today. Layne will work with KAW and Hazen and Sawyer to select a final design that best suits the budget constraints of KAW on this most important project.







Classic Schedule Layout

18-Jun-14 14:29

Activity ID	Activity Name	2014				2015				2016		
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3		
A2400	Concrete Formwork											
A2410	Joints in Concrete											
A2420	Manholes/Precast Concrete Structures											
A2430	Precast Hollow-Core Planks											
A2460	Rough Carpentry/Lumber											
A2470	Glass Fiber and Resin Applications/Grating											
A2480	Waterproofing/Dampproofing											
A2490	Building Insulation											
A2500	Firestopping											
A2290	Reinforcing Steel											
A2520	Joint Sealants											
A2440	Masonry											
A2450	Miscellaneous Metals/Handrail/Stairs											
A2510	Roofing/Flashing											
A2530	Doors/Frames/Hardware											
A2540	Windows/Glass/Glazing											
A2550	Painting and Coatings											
A2560	Div. 10; Signs/Fire Ext./FA Cabinets											
A2610	Exposed Piping and Fittings											
A2660	Access Hatches											
A2620	Valves											
A2570	Vertical Turbine Pumps											
A2580	PD Blower Packages											
A2590	Chemical Injection and Diffuser Assemblies											
A2600	Filter Underdrains/Media and Troughs											
A2630	HVAC Equipment											
A2640	Electrical											
A2650	Control and Information Systems/SCADA											
<b>Material Release/Manufacture</b>		81										
A1860	Erosion Control/NOI Form	1										
A1870	Underground Ductile Iron Piping	20										
A1890	Ready Mixed Concrete and Grout	1										
A1900	Wall Pipe/Sleeves/Link Seal	20										
A1910	Concrete Accessories and Waterstop	5										
A1920	Aggregate Materials	1										
A1930	Geotextiles	5										
A1940	Asphalt Paving and Surfacing	1										
A1950	Utility Structures	15										
A1960	Storm Drains and Roof Drains	15										
A1970	Permeable Pavers	15										
A1980	Final Grading and Landscaping	5										
A1990	Concrete Formwork	10										
A2000	Joints in Concrete	5										
A2010	Manholes/Precast Concrete Structures	15										
A2020	Precast Hollow-Core Planks	20										
A2050	Rough Carpentry/Lumber	1										
A2060	Glass Fiber and Resin Applications/Grating	20										
A2070	Waterproofing/Dampproofing	1										
A2080	Building Insulation	1										
A2090	Firestopping	5										
A1880	Reinforcing Steel	20										
A2110	Joint Sealants	5										
A2030	Masonry	20										
A2040	Miscellaneous Metals/Handrail/Stairs	30										
A2100	Roofing/Flashing	5										

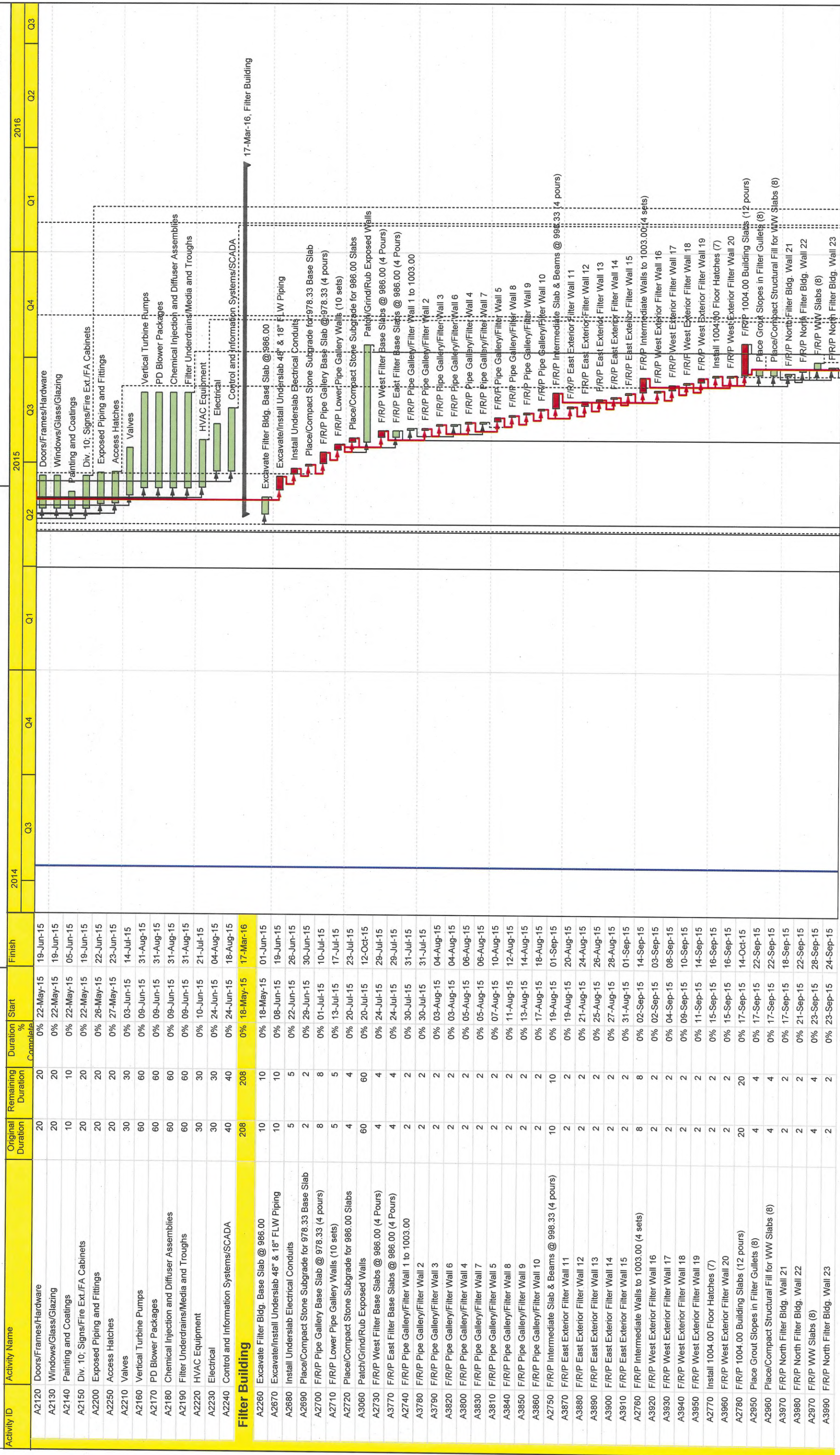
TASK filter: All Activities

Summary

█ Actual Work  
█ Remaining Work  
█ Critical Remaining Work  
◆ Milestone

KAW Richmond Road Station WTP Classic Schedule Layout

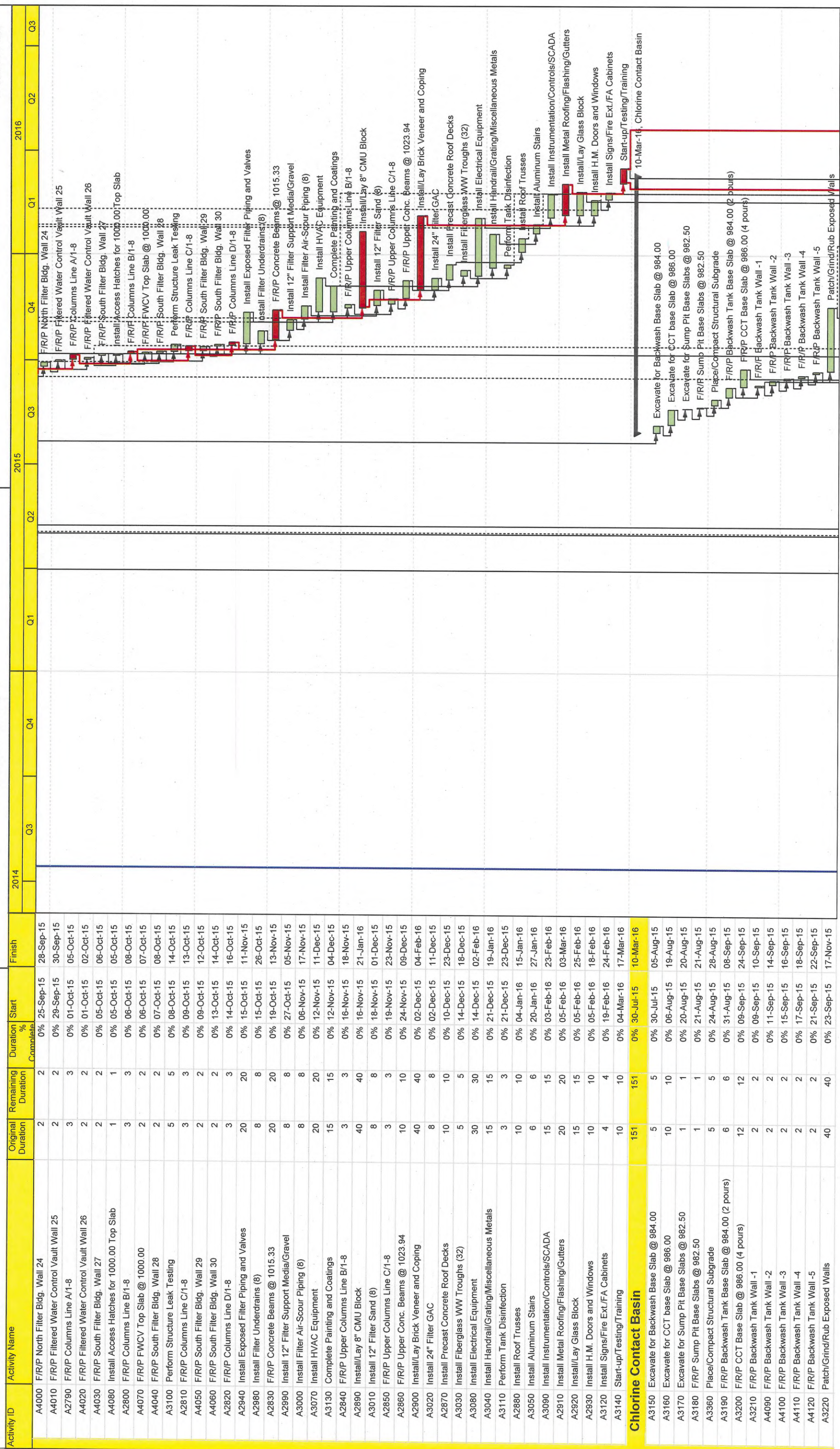
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KAW Richmond Road Station WTP

18-Jun-14 14:29

Classic Schedule Layout

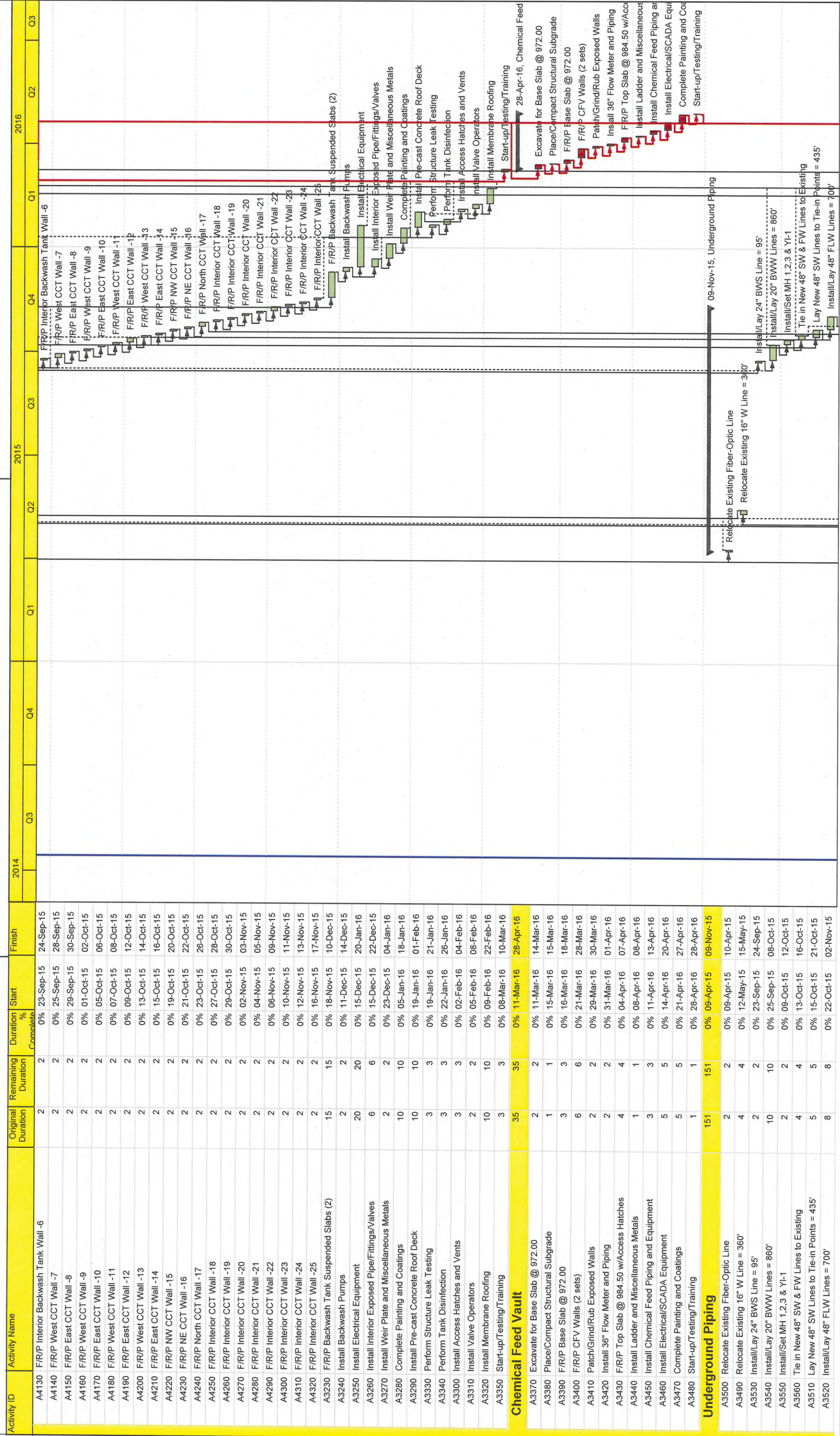


Activity ID	Activity Name	Original Duration	Remaining Duration	Duration % Complete	Start	Finish
A4000	F/R/P North Filter Bldg. Wall 24	2	2	0%	25-Sep-15	28-Sep-15
A4010	F/R/P Filtered Water Control Vault Wall 25	2	2	0%	29-Sep-15	30-Sep-15
A2790	F/R/P Columns Line A/1-8	3	3	0%	01-Oct-15	05-Oct-15
A4020	F/R/P Filtered Water Control Vault Wall 26	2	2	0%	01-Oct-15	02-Oct-15
A4030	F/R/P South Filter Bldg. Wall 27	2	2	0%	05-Oct-15	06-Oct-15
A4080	Install Access Hatches for 1000.00 Top Slab	1	1	0%	05-Oct-15	05-Oct-15
A2800	F/R/P Columns Line B/1-8	3	3	0%	06-Oct-15	08-Oct-15
A4070	F/R/P FWCV Top Slab @ 1000.00	2	2	0%	06-Oct-15	07-Oct-15
A4040	F/R/P South Filter Bldg. Wall 28	2	2	0%	07-Oct-15	08-Oct-15
A3100	Perform Structure Leak Testing	5	5	0%	08-Oct-15	14-Oct-15
A2810	F/R/P Columns Line C/1-8	3	3	0%	09-Oct-15	13-Oct-15
A4050	F/R/P South Filter Bldg. Wall 29	2	2	0%	09-Oct-15	12-Oct-15
A4060	F/R/P South Filter Bldg. Wall 30	2	2	0%	13-Oct-15	14-Oct-15
A2820	F/R/P Columns Line D/1-8	3	3	0%	14-Oct-15	16-Oct-15
A2940	Install Exposed Filter Piping and Valves	20	20	0%	15-Oct-15	11-Nov-15
A2980	Install Filter Underdrains (8)	8	8	0%	15-Oct-15	26-Oct-15
A2830	F/R/P Concrete Beams @ 1015.33	20	20	0%	19-Oct-15	13-Nov-15
A2990	Install 12" Filter Support Media/Gravel	8	8	0%	27-Oct-15	05-Nov-15
A3000	Install Filter Air-Scour Piping (8)	8	8	0%	06-Nov-15	17-Nov-15
A3070	Install HVAC Equipment	20	20	0%	12-Nov-15	11-Dec-15
A3130	Complete Painting and Coatings	15	15	0%	12-Nov-15	04-Dec-15
A2840	F/R/P Upper Columns Line B/1-8	3	3	0%	16-Nov-15	18-Nov-15
A2890	Install/Lay 8" CMU Block	40	40	0%	16-Nov-15	21-Jan-16
A3010	Install 12" Filter Sand (8)	8	8	0%	18-Nov-15	01-Dec-15
A2850	F/R/P Upper Columns Line C/1-8	3	3	0%	19-Nov-15	23-Nov-15
A2860	F/R/P Upper Conc. Beams @ 1023.94	10	10	0%	24-Nov-15	08-Dec-15
A2900	Install/Lay Brick Veneer and Coping	40	40	0%	02-Dec-15	04-Feb-16
A3020	Install 24" Filter GAC	8	8	0%	02-Dec-15	11-Dec-15
A2870	Install Precast Concrete Roof Decks	10	10	0%	10-Dec-15	23-Dec-15
A3030	Install Fiberglass WW Troughs (32)	5	5	0%	14-Dec-15	18-Dec-15
A3080	Install Electrical Equipment	30	30	0%	14-Dec-15	02-Feb-16
A3040	Install Handrail/Grating/Miscellaneous Metals	15	15	0%	21-Dec-15	19-Jan-16
A3110	Perform Tank Disinfection	3	3	0%	21-Dec-15	23-Dec-15
A2880	Install Roof Trusses	10	10	0%	04-Jan-16	15-Jan-16
A3050	Install Aluminum Stairs	6	6	0%	20-Jan-16	27-Jan-16
A3090	Install Instrumentation/Controls/SCADA	15	15	0%	03-Feb-16	23-Feb-16
A2910	Install Metal Roofing/Flashing/Gutters	20	20	0%	05-Feb-16	03-Mar-16
A2920	Install/Lay Glass Block	15	15	0%	05-Feb-16	25-Feb-16
A2930	Install H.M. Doors and Windows	10	10	0%	05-Feb-16	18-Feb-16
A3120	Install Signs/Fire Ext./FA Cabinets	4	4	0%	19-Feb-16	24-Feb-16
A3140	Start-up/Testing/Training	10	10	0%	04-Mar-16	17-Mar-16
<b>Chlorine Contact Basin</b>		<b>151</b>	<b>151</b>	<b>0%</b>	<b>30-Jul-15</b>	<b>10-Mar-16</b>
A3150	Excavate for Backwash Base Slab @ 984.00	5	5	0%	30-Jul-15	05-Aug-15
A3160	Excavate for CCT base Slab @ 986.00	10	10	0%	06-Aug-15	19-Aug-15
A3170	Excavate for Sump Pit Base Slabs @ 982.50	1	1	0%	20-Aug-15	20-Aug-15
A3180	F/R/P Sump Pit Base Slabs @ 982.50	1	1	0%	21-Aug-15	21-Aug-15
A3360	Place/Compact Structural Subgrade	5	5	0%	24-Aug-15	28-Aug-15
A3190	F/R/P Backwash Tank Base Slab @ 984.00 (2 pours)	6	6	0%	31-Aug-15	08-Sep-15
A3200	F/R/P CCT Base Slab @ 986.00 (4 pours)	12	12	0%	09-Sep-15	24-Sep-15
A3210	F/R/P Backwash Tank Wall -1	2	2	0%	09-Sep-15	10-Sep-15
A4090	F/R/P Backwash Tank Wall -2	2	2	0%	11-Sep-15	14-Sep-15
A4100	F/R/P Backwash Tank Wall -3	2	2	0%	15-Sep-15	16-Sep-15
A4110	F/R/P Backwash Tank Wall -4	2	2	0%	17-Sep-15	18-Sep-15
A4120	F/R/P Backwash Tank Wall -5	2	2	0%	21-Sep-15	22-Sep-15
A3220	Patch/Grind/Rub Exposed Walls	40	40	0%	23-Sep-15	17-Nov-15

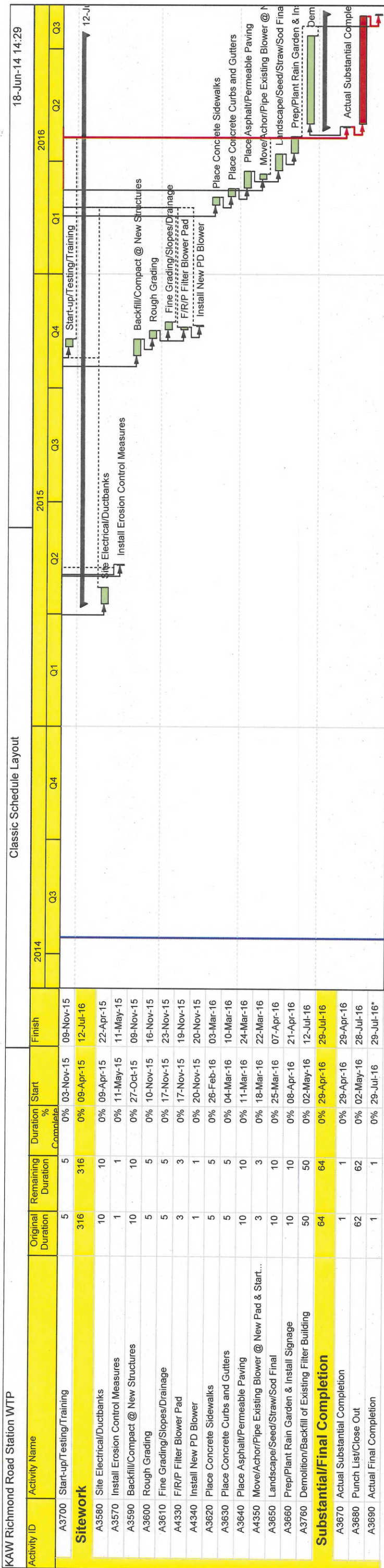
Classic Schedule Layout

KAW Richmond Road Station WTP

18-Jun-14 14:29



Activity ID	Activity Name	Original Duration	Remaining Duration	Duration % Complete	Start	Finish
A4130	F/R/P Interior Backwash Tank Wall -6	2	2	0%	23-Sep-15	24-Sep-15
A4140	F/R/P West CCT Wall -7	2	2	0%	25-Sep-15	28-Sep-15
A4150	F/R/P East CCT Wall -8	2	2	0%	29-Sep-15	30-Sep-15
A4160	F/R/P West CCT Wall -9	2	2	0%	01-Oct-15	02-Oct-15
A4170	F/R/P East CCT Wall -10	2	2	0%	05-Oct-15	06-Oct-15
A4180	F/R/P West CCT Wall -11	2	2	0%	07-Oct-15	08-Oct-15
A4190	F/R/P East CCT Wall -12	2	2	0%	09-Oct-15	12-Oct-15
A4200	F/R/P West CCT Wall -13	2	2	0%	13-Oct-15	14-Oct-15
A4210	F/R/P East CCT Wall -14	2	2	0%	15-Oct-15	16-Oct-15
A4220	F/R/P NW CCT Wall -15	2	2	0%	19-Oct-15	20-Oct-15
A4230	F/R/P NE CCT Wall -16	2	2	0%	21-Oct-15	22-Oct-15
A4240	F/R/P North CCT Wall -17	2	2	0%	23-Oct-15	26-Oct-15
A4250	F/R/P Interior CCT Wall -18	2	2	0%	27-Oct-15	28-Oct-15
A4260	F/R/P Interior CCT Wall -19	2	2	0%	29-Oct-15	30-Oct-15
A4270	F/R/P Interior CCT Wall -20	2	2	0%	02-Nov-15	03-Nov-15
A4280	F/R/P Interior CCT Wall -21	2	2	0%	04-Nov-15	05-Nov-15
A4290	F/R/P Interior CCT Wall -22	2	2	0%	06-Nov-15	09-Nov-15
A4300	F/R/P Interior CCT Wall -23	2	2	0%	10-Nov-15	11-Nov-15
A4310	F/R/P Interior CCT Wall -24	2	2	0%	12-Nov-15	13-Nov-15
A4320	F/R/P Interior CCT Wall -25	2	2	0%	16-Nov-15	17-Nov-15
A3230	F/R/P Backwash Tank Suspended Slabs (2)	15	15	0%	18-Nov-15	10-Dec-15
A3240	Install Backwash Pumps	2	2	0%	11-Dec-15	14-Dec-15
A3250	Install Electrical Equipment	20	20	0%	15-Dec-15	20-Jan-16
A3260	Install Interior Exposed Pipe/Fittings/Valves	6	6	0%	15-Dec-15	22-Dec-15
A3270	Install Weir Plate and Miscellaneous Metals	2	2	0%	23-Dec-15	04-Jan-16
A3280	Complete Painting and Coatings	10	10	0%	05-Jan-16	18-Jan-16
A3290	Install Pre-cast Concrete Roof Deck	10	10	0%	19-Jan-16	01-Feb-16
A3330	Perform Structure Leak Testing	3	3	0%	19-Jan-16	21-Jan-16
A3340	Perform Tank Disinfection	3	3	0%	22-Jan-16	26-Jan-16
A3300	Install Access Hatches and Vents	3	3	0%	02-Feb-16	04-Feb-16
A3310	Install Valve Operators	2	2	0%	05-Feb-16	08-Feb-16
A3320	Install Membrane Roofing	10	10	0%	09-Feb-16	22-Feb-16
A3350	Start-up/Testing/Training	3	3	0%	08-Mar-16	10-Mar-16
<b>Chemical Feed Vault</b>						
A3370	Excavate for Base Slab @ 972.00	2	2	0%	11-Mar-16	28-Apr-16
A3380	Place/Compact Structural Subgrade	1	1	0%	11-Mar-16	14-Mar-16
A3390	F/R/P Base Slab @ 972.00	3	3	0%	15-Mar-16	15-Mar-16
A3400	F/R/P CFV Walls (2 sets)	6	6	0%	16-Mar-16	18-Mar-16
A3410	Patch/Grind/Rub Exposed Walls	2	2	0%	21-Mar-16	28-Mar-16
A3420	Install 36" Flow Meter and Piping	2	2	0%	29-Mar-16	30-Mar-16
A3430	F/R/P Top Slab @ 984.50 w/Access Hatches	4	4	0%	31-Mar-16	01-Apr-16
A3440	Install Ladder and Miscellaneous Metals	1	1	0%	04-Apr-16	07-Apr-16
A3450	Install Chemical Feed Piping and Equipment	3	3	0%	08-Apr-16	08-Apr-16
A3460	Install Electrical/SCADA Equipment	5	5	0%	11-Apr-16	13-Apr-16
A3470	Complete Painting and Coatings	5	5	0%	14-Apr-16	20-Apr-16
A3480	Start-up/Testing/Training	1	1	0%	21-Apr-16	27-Apr-16
<b>Underground Piping</b>						
A3500	Relocate Existing Fiber-Optic Line	151	151	0%	09-Apr-15	09-Nov-15
A3490	Relocate Existing 16" W Line = 360'	2	2	0%	09-Apr-15	10-Apr-15
A3530	Install/Lay 24" BWS Line = 95'	4	4	0%	12-May-15	15-May-15
A3550	Install/Lay 20" BWW Lines = 860'	2	2	0%	23-Sep-15	24-Sep-15
A3550	Install/Set MH 1,2,3 & Y1-1	10	10	0%	25-Sep-15	08-Oct-15
A3560	Tie in New 48" SW & FW Lines to Existing	2	2	0%	09-Oct-15	12-Oct-15
A3510	Lay New 48" SW Lines to Tie-in Points = 435'	4	4	0%	13-Oct-15	16-Oct-15
A3520	Install/Lay 48" FLW Lines = 700'	5	5	0%	15-Oct-15	21-Oct-15
		8	8	0%	22-Oct-15	02-Nov-15

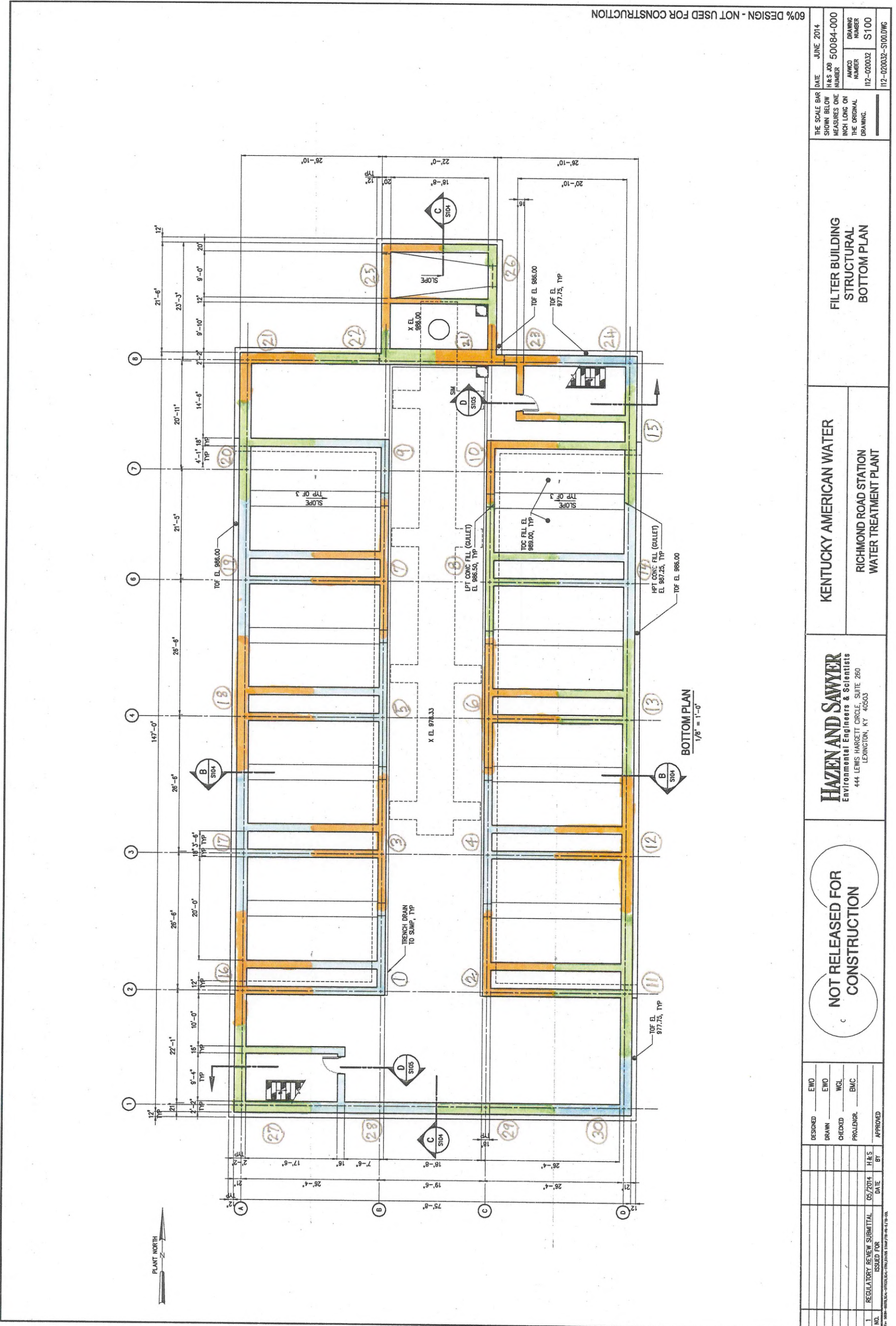


Page 7 of 7

TASK filter: All Activities

© Primavera Systems, Inc.

█ Actual Work   
 █ Critical Remaining Work   
 █ Remaining Work   
 ◆ Milestone   
 ▶ Summary



THE SCALE BAR SHOWN BELOW MEASURES ONE INCH LONG ON THE ORIGINAL DRAWING.

DATE	JUNE 2014
HAS JOB NUMBER	50084-000
AMC# NUMBER	112-000032
DRAWING NUMBER	S100
PROJECT NUMBER	112-000032-S100.DWG

KENTUCKY AMERICAN WATER  
RICHMOND ROAD STATION  
WATER TREATMENT PLANT

**HAZEN AND SAWYER**  
Environmental Engineers & Scientists  
444 LEWIS HARGETT CIRCLE, SUITE 260  
LEXINGTON, KY 40503

**NOT RELEASED FOR CONSTRUCTION**

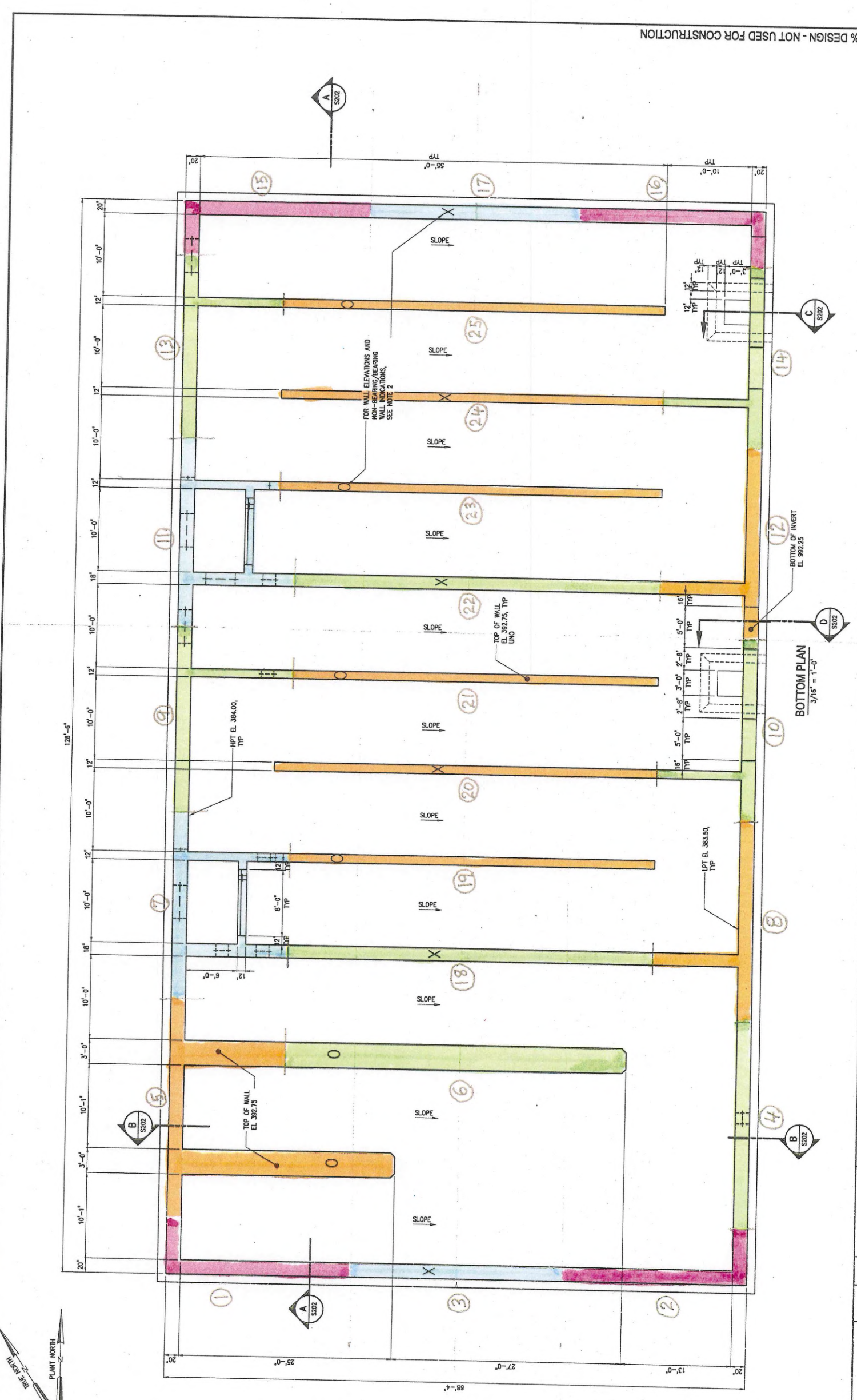
DESIGNED	EWO
DRAWN	EWO
CHECKED	WGL
PROJECT ENGR.	BMC
APPROVED	

NO.	REGULATORY REVIEW SUBMITTAL ISSUED FOR	DATE	BY
1			

FILE: 0:\90084\30\1\2014\000\KAWR\PSCDR1\15\091714\000032-S100.dwg BY: KENDRA Date: 6/2/2014 2:03 PM PLOT DATE: 6/2/2014 2:03 PM PLOT BY: KENDRA





THE SCALE BAR SHOWN BELOW MEASURES ONE INCH LONG ON THE ORIGINAL DRAWING.

DATE: JUNE 2014  
 H&S JOB NUMBER: 50084-000  
 DRAWING NUMBER: S200  
 AWCDC NUMBER: 112-020032  
 112-020032-S200.DWG

**CHLORINE CONTACT BASIN  
 STRUCTURAL  
 BOTTOM PLAN**

**KENTUCKY AMERICAN WATER**  
 RICHMOND ROAD STATION  
 WATER TREATMENT PLANT

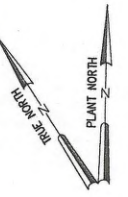
**HAZEN AND SAWYER**  
 Environmental Engineers & Scientists  
 444 LEWIS HARGETT CIRCLE, SUITE 260  
 LEWINGTON, KY 40503

DESIGNED: KAF  
 DRAWN: KAF  
 CHECKED: WCL  
 PROLENGR: BMC  
 APPROVED: \_\_\_\_\_

NO.	REGULATORY REVIEW SUBMITTED FOR	DATE	BY
1	REGULATORY REVIEW SUBMITTED	05/2014	H&S

**NOT RELEASED FOR CONSTRUCTION**

60% DESIGN - NOT USED FOR CONSTRUCTION



11/27/2014 2:22 PM  
 11/27/2014 2:22 PM  
 11/27/2014 2:22 PM  
 11/27/2014 2:22 PM



**EXCEPTIONS AND QUALIFICATIONS**

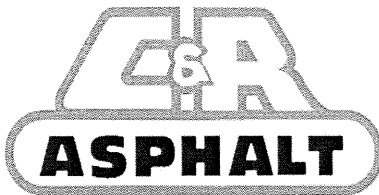
KENTUCKY AMERICAN WATER-RICHMOND ROAD STATION FILTER BUILDING

- 1.) Lien Releases:
  - a.) The lien release forms in Appendix B needs additional language. Any waiver must be reasonable and needs to be contingent upon our actual receipt of the applicable progress/final payment and should not be overly broad to include retention being held.
- 2.) Schedule:
  - a.) Article 3 of the Agreement specifies fixed substantial (SC) and final completion (FC) dates, yet our ability to proceed with the work is contingent upon receipt of written NTP's. SC and FC dates need to be revised if NTP date is later than listed in the RFP.
- 3.) Warranty:
  - a.) Contrary to GC-6.20A., the length of our warranty, not just the correction warranty (GC-12.07), should be specified.
  - b.) Regarding SC-5.01A, length of warranty? We are assuming the warranty period is 12 months after substantial completion or beneficial use by the Owner.
- 4.) Notice:
  - a.) *Regarding GC-16.01A, notice should not be effective until actual receipt of the notice by the party to be so notified.*
- 5.) *Contract Interpretation:*
  - a.) *Conflict of definition in SC-1.02. Engineer is Hazen and Sawyer. Why is terminology listed that "Water Company" is "Engineer"?*
- 6.) *Partnering:*
  - a.) *Note the additional costs associated with SC-2.06. We assume KAW will bear the costs for the partnering sessions.*
- 7.) *Our People:*
  - a.) *Suggest alternative language to the 2<sup>nd</sup> paragraph of SC-6.00.1. The sole discretion of the Engineer as to whether Contractor's representative is to be replaced should be modified, particularly in light of SC-16.01 and the obligations of good faith and fair dealing.*

## CONTRACT DOCUMENT CONCURRENCE

Layne Heavy Civil, Inc. has read the draft Agreement in the attachments of the RFP and, with the exception of the comments found in the Exceptions/Clarifications section contained herein, take no further exceptions to the proposed Contract.

**C&R Asphalt, LLC**  
415 Rebmann Ln  
Lexington, Ky 40504  
(859) 277-0464 Office  
(859) 255-2570 Fax  
(859) 621-1800 Mobile  
[www.asphaltanimals.com](http://www.asphaltanimals.com)



- \*Paving: Overlays and New Construction
- \*Asphalt Sealcoating and Striping
- \*Hot Rubber Crack and Joint Sealing
- \*Sealmaster Products Distributor
- \*Snow Removal /Tennis Courts
- \*Infrared Patching/Concrete Work
- \*Member Better Business Bureau

Proposal Submitted To <b>General Cont</b>		Phone		Fax	
Street		Contact Person			
City, State, & Zip Code		Project Location Lexington, KY		Project Name	
Terms: Net: Upon Completion		Proposal Number 14-JC-2122		Proposal Date 6/23/2014	
				Quotation Expires 7/15/2014	
Footage	Description				Amount
8080 SF	<b>KY AMERICAN WATER</b>				
	NEW ASPHALT				
	Install 9" of DGA rock				
	Install 4" of Asphalt Base Mix Install 1.5" of Asphalt surface mix				
	TOTAL:				
	MISC PATCHING Utility cut patching using ~4" of Grade 1 Asphalt Surface				
	Price per SF				
	Final Dressup by other		No seed/straw		
	no gravel driveway work is included		(can be added)		
	no signage is included				
All material is guaranteed for one year as specified, and the above work to be performed in accordance with the drawings and/or specifications submitted for above work and completed in a substantial workmanlike manner.					
C & R Asphalt, LLC.		Authorized Signature			
ACCEPTANCE OF PROPOSAL	The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above. Legal fees and court costs incurred in the collection of monies owed according to this contract will be borne by the customer. A service charge of 2% per month or 24% per annum will be added to all balances over 30 days.				
Signature _____		Date _____			

**Clift Contractors, Inc.**

P.O. Box 182  
 North Bend, Ohio 45052

**PROPOSAL**

DATE	PROPOSAL N...
6/25/2014	4938

NAME / ADDRESS

Layne Heavy Civil  
 4520 N. SR 37  
 Orleans, Indiana 47452

DESCRIPTION	AMOUNT
Scope of Work: Demolition  Job Location: KY American Water 2300 Richmond Road Lexington, KY 40502  Demolition of Two (2) Story Brick and Concrete Structure. Approximately 160' X 60" Removal of All Debris from Site. Removal of Foundations, Footings, and Slabs. ** All Permits To Be Obtained by Layne. All Cutting and Capping of Utilities to be performed by Layne.  *** All Salvage Rights To Be Retained By Clift Contractors, Inc. ***	

Phone #	Fax #
513-941-5832	513-941-5864

Prepared By:

*John Clift*



Thursday, June 26, 2014

Attn: Layne  
Jeff Berning

Mid South Quotation Number: kawrr

Re: KY American Water Richmond RD Station  
Kentucky

### **MID SOUTH PRESTRESS, LLC**

Thank you for the opportunity to quote Structural Precast on this project. The design specifications, layout and finish requirements make it an excellent project for Mid South Prestress to participate in. Mid South Prestress is a PCI Certified precaster/erector, and we hope that you will commission our expertise for the implementation of this project.

This proposal and price are based on drawings and specifications available to us at the time of quotation. The prices quoted include material, applicable taxes and freight that that is in effect as of the date of this proposal. **Prices are firm for 30 days**, after which they may be subject to change. In the event that the actual precast delivery date is delayed by more than 4 months from the estimated delivery date shown in this quote, the contracted amount may be adjusted to account for price increases of material and freight.

Drawings included in this quotation: **plans by Hazen and Sawyer dated 5/20/14**

Specifications included in this quotation: **03415**

Addendums included in this quotation: **NA**

#### **A. Structural Precast Scope:**

1. Scope of Structural Precast material and labor included:
  - a. Furnish, deliver, erect **per OSHA requirements & PCI specifications**, align, level, and standard groud keyways of Hollow-core with a design live load of 30 PSF.
  - b. Approximately 10,620 SF of 8" x 48" Hollow-core @ filter building
  - c. Approximately 7,700 SF of 8" x 48" Hollow-core @ chlorine contact basin
  - d. **TOTAL SF = 18,320**
  - e. Install loose #4 rebar @ 48" OC as details indicate. Rebar supplied by others.
  - f. Drill and epoxy #4 rebar @ 48" OC as details indicate. Rebar supplied by others.
  - g. Standard embedded weldments @48" OC as details indicate and welding them to the supporting steel bearing members.
  - h. Clean and patch Hollow-core **at exposed areas only**.
  - i. Plant formed or framed openings 10"x10" or larger (smaller openings core-drilled or cut by others)
  - j. Plant manufactured angled cut &/or notched slabs as necessary.
  - k. Korolath bearing pads as necessary.
  - l. Korolath core plugs.
  - m. PCI Qualified erector.
  - n. Prevailing wages as specified.
2. THE FOLLOWING EXCLUSIONS SHALL APPLY TO THIS PROPOSAL (PRECAST):
  - a. Topping/floor treatment on Precast Hollow-core.
  - b. Caulking.
  - c. **Other loose &/or embedded steel not specifically included above.**
    - i. **Galvanized or Stainless Steel.**
  - d. Sill seal.
  - e. Hanger tabs.
  - f. Cutting, casting or framing of any openings not specifically included above. *All core drilling (by others).*
  - g. Weep holes.
  - h. Sales tax. Project is figured to be tax exempt.

3. THE FOLLOWING QUALIFICATIONS SHALL APPLY TO THIS PROPOSAL (PRECAST):
  - a. Mid South Prestress, LLC. is a PCI Certified Prestress/Precast Plant & PCI Qualified Erector.
  - b. Mid South Prestress will supply the highest quality products in the industry along with the most comprehensive customer service available.

#### B. General Exclusions:

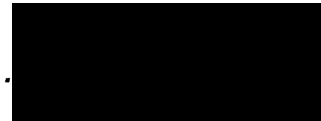
1. Bonds
2. Permits or Fees of any kind
3. Shop or Field overtime
4. Liquidated Damages

#### C. General Qualifications:

1. **Quotation is based upon 2 mobilization to the jobsite:**
  - i. **1 MOB per building.**
  - ii. **NO INSIDE ERECTION estimated.**
  - iii. **All Precast Hollow core erection must be completed before erection of framing above.**
2. Mid South Prestress must have direct access onto the jobsite and immediately adjacent to the area receiving the material to be erected so that a minimum sized crane can be used. **Access must be over a firm and level roadway suitable for tractor-trailer delivery vehicles and crane.** Any costs from delays due to insufficient access for crane, crew or delivery vehicles will be passed along to GC.
3. The General Contractor must supply Mid South Prestress with a preliminary precast erection date when subcontract is offered. The date of precast erection may change as needed to allow for flexibility of contractor construction schedules. Any such change will not be given priority over other conflicting events already on the erection calendar.
4. If area receiving precast is not adequately prepared (e.g. crane/truck access on site, locations of bearing surface) when erection crew arrives, fees for crew downtime, and/or delays caused to other jobs may be billed by Mid South Prestress. If rescheduling/re-mobilization is necessary, any unplanned visits will be charged a full mobilization fee for crane, crew, equipment and trucks.
5. This quotation was prepared with the information available on the documents listed herein. Mid South Prestress is not responsible for building dimensions or field measurements as we manufacture our product from shop drawings approved by the Architect &/or General Contractor. **If Mid South Prestress is required to take field measurements to verify plans for manufacturing &/or erection, Mid South Prestress will charge \$1000.00 per day, plus travel costs for these services.** In regards to openings &/or slab penetrations, if the actual openings required are different than those included in our quotation, a revised cost of our product will reflect those changes. **The responsibility to coordinate all dimensions & openings required on this project remains with the General Contractor/Customer.**
6. **We are confident that you will be pleased with the product and service provided by MSP. Please contact me if you have any questions, or need clarifications regarding our scope of work. We look forward to working with you on this project.**
7. **This proposal MUST be included as a part of the Working Contract.**

**D. PRICING:**

**i. TOTAL design build BUDGET PRICE..**



**Quote Submitted by:**

*Scott Hadder*

Sales Representative  
937-264-9569 (office)  
937-264-1969 (fax)  
937-477-0128 (mobile)  
shadder@msprestress.com



**CORPORATE OFFICE:**

**Mid South Prestress, LLC**  
2949 Joe Dowlen Road  
Pleasantview, TN 37146  
615-746-6606 (office)  
615-746-6607 (fax)

**Michael Benter**

---

**From:** tspmasonry@aol.com  
**Sent:** Wednesday, June 25, 2014 4:27 PM  
**To:** Michael Benter  
**Subject:** Fwd: KAWC: Masonry

Mike:

Please allow this E Mail to serve as T.S.P. Masonry LLC Budget Pricing for the Masonry Work for the KAWC Richmond Rd., Lexington, KY. WTP Improvements

The plans used were dated June 2014 and 60% complete.

CMU: [REDACTED]  
Brick: [REDACTED]  
Glass Block [REDACTED]  
Cast Stone [REDACTED]  
Total [REDACTED]

If you have any questions, or require any additional information at this time, please do not hesitate to contact me

Thank you

David J. Phillips  
T.S.P. Masonry LLC  
859-276-1883 (Tel)  
859-421-5469 (Cell)

-----Original Message-----  
From: Michael Benter <[Mike.Benter@Layne.com](mailto:Mike.Benter@Layne.com)>  
To: tspmasonry <[tspmasonry@aol.com](mailto:tspmasonry@aol.com)>  
Sent: Wed, Jun 25, 2014 3:59 pm  
Subject: RE: KAWC: Masonry

I got it.

**MIKE BENTER**  
Project Manager, Heavy Civil  
**LAYNE** | water + mineral + energy  
**4520 North State Road 37 | Orleans, IN | 47452**  
Office: 812-865-3232 | Cell: 812-583-5642 | Fax: 812-865-1490  
[www.layne.com](http://www.layne.com) | [www.layne.com](http://www.layne.com)

**From:** [tspmasonry@aol.com](mailto:tspmasonry@aol.com) [<mailto:tspmasonry@aol.com>]  
**Sent:** Wednesday, June 25, 2014 3:58 PM  
**To:** Michael Benter  
**Subject:** KAWC: Masonry



Test

David J. Phillips  
T.S.P. Masonry LLC  
859-276-1883 (Tel)  
859-421-5469 (Cell)

# PMWI

**Pleasant Mount Welding, Inc.**

45 Dundaff Street

Carbondale, PA 18407-1801

Phone: (570) 282-6164

Fax: (570) 282-7917 – Estimating Fax: (570) 281-5931 – Drafting

Fax: (570) 282-7920 – Purchasing, Shipping & Receiving

Fax: (570) 282-1231 – Accounting & Human Resources

# PROPOSAL

# 142606-2

**Date:** 6/26/2014

**Page:** 1 of 3

**Addendums:** # 2

**To:** Selected Bidders

**Job:** Lexington, KY-Richmond Road Station Water Treatment Plant

**Note:** *This proposal & scope of work is based on 60% design drawings*

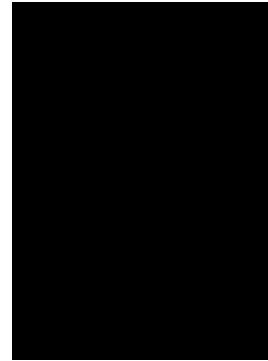
**PMWI is pleased to quote the following structural steel and/or miscellaneous metals.**

MISCELLANEOUS METALS:

HANDRAIL (Assembled):

ACCESS DOORS (*access hatch pricing included in miscellaneous metals price above*):

ABRASIVE STAIR NOSINGS:

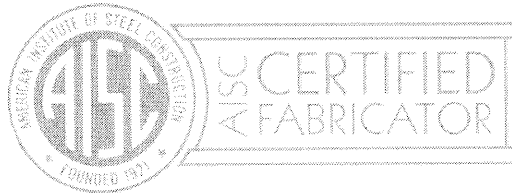


THE ABOVE PRICE(S) IS BASED ON THE PROJECT AS A WHOLE. REDUCTIONS IN THE SCOPE OF WORK OFTEN RESULT IN PRICE CHANGES IN OTHER SECTIONS.

PRICING BASED ON 2 SHIPMENT(S) TO THE SITE.  
ADDITIONAL SHIPMENTS WILL BE BILLED AT COST + 10%.

**\*\*\* SEE THE FOLLOWING PAGES FOR PROJECT SCOPE OF WORK \*\*\***

**\*\*\* PRICES DO NOT INCLUDE SALES TAX \*\*\***



***Serving the water and wastewater industry for over 25 years***

**Chemical Feed Vault**

- 1 Aluminum access door 60" x 60" (300# load rated) w/ safety grate
- 1 Aluminum access door 42" x 42" (300# load rated) w/ safety grate
- 1 Aluminum ladder w/ safety post

**Filter Building**

- 9 Sq/ft aluminum grating @ the sumps
- 9 Lin/ft aluminum embeds to support the above grating
- 6 Lin/ft aluminum shelf angle to support the above grating
- 2 Aluminum access hatches 60" x 60" w/ safety grates
- 2 Aluminum access hatches 28" x 36" w/ safety grates
- 4 Aluminum access hatches 36" x 36" w/ safety grates
- 1 Aluminum access hatch 72" x 72" w/ safety grate
- 548 Lin/ft 2-line aluminum guardrail around the filters
- 15 Lin/ft sloped 2-line aluminum guardrail w/ handrail for the north exterior concrete stair
- 10 Lin/ft 2-line aluminum guardrail for the above concrete stair landing
- 8 Embedded abrasive nosings for the above concrete stair
- 1 Triple flight aluminum stair (Stair 1) w/ 3 aluminum framed landings
- 42 Aluminum grating treads for the above stair
- 126 Sq/ft aluminum grating for the above stair landings
- 98 Lin/ft sloped 2-line aluminum guardrail w/ handrail for the above stair
- 12 Lin/ft 2-line aluminum guardrail for the above stair landings
- 1 Triple flight aluminum stair (Stair 2) w/ 3 aluminum framed landings
- 42 Aluminum grating treads for the above stair
- 126 Sq/ft aluminum grating for the above stair landings
- 98 Lin/ft sloped 2-line aluminum guardrail w/ handrail for the above stair
- 12 Lin/ft 2-line aluminum guardrail for the above stair landings
- 16 Galvanized steel beam & plate lintels @ glass block windows & glass block door surrounds
- 2 Galvanized steel beam lintels @ interior double doors
- 1 Galvanized steel single angle lintel @ exterior man door
- 4 Galvanized steel single angle lintels @ the HVAC fan & duct openings
- 24 Galvanized steel masonry wall to concrete beam connection bent plate assemblies
- 24 Galvanized steel shelf angles for wall to beam connection (sections A&B/A106)

**Chlorine Contact Basin**

- 5 Aluminum access doors 36" x 36" (300# load rated) w/ safety grates
- 16 Lin/ft 2-line aluminum guardrail @ the SE top slab edge

**INCLUDED:**

- Shop drawings
- Bolts & anchor bolts for materials supplied by PMWI
- Epoxy cartridges & / or capsules for epoxy or adhesive anchor systems
- Delivery to site
- Bitumastic coating on aluminum surfaces in contact w/ concrete
- Surface prep & shop primer on steel as per specifications

**EXCLUDED:**

- Grout
- Installation or erection
- Finish paint
- Tooling required for proper installation of epoxy or adhesive anchor systems
- Field measurements / anchor bolt survey
- Unloading at site
- Cost of testing or inspection of materials by an independent agency
- Pipe supports, braces, hangers or saddles
- Fiberglass fabrications unless noted otherwise
- Cast iron grates, covers or frames
- Anchor bolts @ wood plates
- Trusses, joists or metal decking
- Roof beams shown in section B/M103
- Precast plank connection plates
- Canopies
- Weir plates
- Overflow security shroud
- Stop logs or guides
- Engineered submittals beyond those specified

**NOTE:** Recently project engineers have been going to extreme lengths with their engineering requirements of submittals, often requiring design calculations, testing and sealed drawings above the requirements of the project specifications. Please be advised PMWI can no longer absorb these costs and will be pursuing change orders to cover any engineering costs that are deemed above the requirements of the projects written specifications.

By: *Vinny Talluto*  
Vinny Talluto  
Project Estimator

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

In the event you enter into a formal contract with PMWI, we will provide a schedule of values for the metal work related to this project. If materials are deleted after shop drawings have been prepared we can only offer a credit of approximately 90 % the scheduled value. If materials are deleted prior to shop drawing preparation then a 100% credit can be issued.

\*\*\*This proposal is submitted subject to the execution of a mutually acceptable subcontract or purchase order and acceptable credit investigations, payment bonds, progress payments, payment terms, lien releases, and other matters.\*\*\*

\*\*\*\*\* This proposal is subject to PMWI Contract Clauses & may be withdrawn after 30 days \*\*\*\*\*

### PMWI Contract Clauses And Conditions

- 1) The general contractor shall withhold no more percentage retention from the subcontractor than is withheld by the owner from the general contractor for the subcontractor's work. Once PMWI has completed 50 percent of its work, no further retention will be withheld from subsequent progress payments. Final payment shall become due 30 days after completion of the fabricated metal subcontractor's work. Inspection for acceptance shall be made within one week following a request by the subcontractor. In the event the completed work is not acceptable, deficiencies must be listed and this list mailed to the subcontractor within one week of inspection. After correction of the deficiencies, the subcontractor may request immediate additional inspection, as described above, in order to induce final payment and contract release.
- 2) Requisitions will be submitted by the 25th of the month or by general contractor's payment schedule for progress payments, with work completed projected to the end of month, in accordance with the list of items presented at the start of contract, verified by the project superintendent as to the percentages of completion. Payments will be made no later than the 15th of the month, never contingent on payment received by the general contractor or construction manager. If the general contractor does not receive payment for any cause which is not the fault of PMWI, the contractor shall pay PMWI on demand for final payment.
- 3) Purchased material in storage at the fabricator's premises is to be paid in full within the next and subsequent monthly requisition invoices, if accompanied by a formally itemized bill of sale, with proper fire, vandalism and theft insurance coverage, with the owner as beneficiary. Materials used will be of good quality.
- 4) Any alterations or deviations from the plans or specifications will be executed upon receiving a written change order for the alteration, whether it be drafting, design, substitutions, dimensions, additions, labor or materials and will be added or deducted from the contract price. Change orders must be authorized by the person with power granted from the general contractor's corporation by laws and in accordance with article 7 in AIA Document A201. Change order payments are never contingent on payment received by the general contractor or construction manager.
- 5) PMWI will and if needed agree to partial waivers of lien on past payments received "to induce current progress payments" if retention is not included in partial waivers of lien.
- 6) PMWI agrees to carry Workmen's Compensation and General Liability Insurance and to pay all taxes on material and labor furnished under this contract as required by governing federal and state laws. PMWI does not carry Hold-harmless coverage for limited, intermediate or broad forms for judgments of indemnification.
- 7) Any and all warranties will go into effect from the date PMWI has completed its contract agreement.
- 8) PMWI will not be responsible for supplying any temporary facilities and responsibility will rest with the general contractor.
- 9) In the event that a formal contract on this proposal is subsequently signed, these general conditions are to be considered part of the contract whether specifically mentioned or not.
- 10) In the event performance is delayed through no fault of subcontractor, subcontractor shall be entitled to an adjustment of its contract price to cover the cost incurred for labor, material, and reasonable overhead and profit.
- 11) Notwithstanding anything to the contrary contained in this agreement or any other contract document between general contractor and owner, subcontractor specifically reserves and does not waive, release, or relinquish any rights it may have under (relevant statute).

- 12) When PMWI submits shop drawings for the purpose of installation of the material herein, and the subcontractor's liability is limited solely to damages arising out of its failure to properly apply or install the material. Subcontractor is not a licensed architect, structural engineer, or design professional, renders no opinion regarding the structural integrity or suitability of the material for the project, and specifically disclaims any responsibility therefore. Receipt of a notice to proceed or similar directive from the architect shall be conclusive proof that the owner or general contractor has had this shop drawing verified and approved by a qualified structural engineer, architect, or other design professional as to the suitability or structural integrity of material to be used in this project.
  
- 13) Agreement To Arbitrate: All claims, disputes and other matters in question arising out of, or relating to this Contract or the breach thereof except for claims which have been waived by the making or acceptance of final payment shall be decided by Arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association or Commercial Arbitration Rules of the American Arbitration Association then in effect unless the parties mutually agree otherwise. Notwithstanding other provisions in this contract or choice of law provisions to the contrary this agreement to arbitrate shall be governed by the Federal Arbitration Act and shall not be superseded or supplemented by any other arbitration act, statute or regulation. Notice of the demand for arbitration shall be filed in writing with the other party to this contract and with the American Arbitration Association. The demand for arbitration shall be made within 2 years. The location of the arbitration proceedings shall be made at the office of the American Arbitration Association most convenient to both parties. The award rendered by the arbitrators shall be final and judgment may be entered upon it in accordance with the Federal Arbitration Act in any court having jurisdiction. In the event either party is required to enforce its rights under this agreement whether by arbitration or suit, the prevailing party shall be entitled to its reasonable attorneys fees, costs and related expenses all of which shall be incorporated into any arbitrators award or judgment.
  
- 14) Consent To Jurisdiction: All transactions made pursuant hereto shall be deemed to have been made and entered into in Carbondale, Pennsylvania. Any and all disputes arising directly or indirectly from such transactions and which cannot be resolved by Arbitration and the Construction Industry Arbitration Rules of the American Arbitration Association or Commercial Arbitration Rules of the American Arbitration Association then in effect, shall be resolved in the courts of the county of Lackawanna, State of Pennsylvania and any resulting judgment may be enforced by any court having jurisdiction of such an action.

Pleasant Mount Welding, Inc.

General Contractor

Seller: *Vinny Talluto*

Buyer: \_\_\_\_\_

Job: Richmond Road Station Water Treatment Plant

Location: Lexington, KY

Date: 6/26/2014



## Pleasant Mount Welding, Inc.



Serving the Water and Wastewater Industry for over 30 years

### PMWI Contact List (October 2, 2013)

PMWI has streamlined our contacts and electronic communications with our customers. Please use the following five e-mail addresses listed below. Thank you.

---

### Sales@PMWI.net

**Estimating Phone:** 570.282.8735

**Estimating FAX:** 570.282.7917

Frank O'Neill ext 12  
Pete Turonis ext 15  
Joe Woody ext 19

Ed Turano ext 14  
Vinny Talluto ext 20

Jim Toolan ext 11  
Greg Dombrosky ext 21

Tony Burns ext 23  
Mike Slis ext 13  
Adam Schaller ext 18

**Sales Office:** Mike Non 570.282.8735 ext 16

**Change Orders:** Carol Kielar 570.282.8735 ext 28

Your contact after project is bid

Any additions or deletions to original contract

**Contract Admin:** Yliana Dawson 570.282.6164 ext 16

**Accounting/Insurance:** Leo Skorupa 570.282.6164 ext 28

Contract and Change Order Documents

Certificates of Insurance, Sales Tax.

Request an invoice, and Release of Liens requests

---

**Front Office:**

### RFI@PMWI.net

Nicole Byrnes 570.282.6164 ext 34

Samples, documents required for submittal, RFI's etc.

### Submittal@PMWI.net

Amy Paulin 570.282.6164 ext 36

Submittal Lead Times, All submittals and Re-submittals

---

**Back Office/Manufacturing:**

### Delivery@PMWI.net

Paul McGraw 570.282.8735 ext 17

John Frye 570.282.6164 ext 22

Joel Williams 570.282.8735 ext 27

Tonya Dobosh 570.282.6164 ext 20

Releasing approved drawings, Monthly GC Reports, Delivery Schedule, Fabrication lead times of all materials

---

**All Other Issues**

### TechSupport@PMWI.net

Martin Maher 570.282.6164 ext 29

Victoria Bradley 570.282.6164 ext 25

PHONE: (513) 738-0084  
(800) 410-5226  
FAX: (513) 738-0087

**JACO WATERPROOFING LLC**  
P.O. Box 865  
Ross (Cincinnati), Ohio 45061

Bid Proposal: CE207-14  
Date: 6-25-14  
Page: 1 of 2

**BID PROPOSAL:** CE207-14

**PROJECT:** KY AMERICAN WATER RICHMOND RD.  
LEXINGTON, KY.

**ADDENDA:** 1, 2

**SCOPE:** Sheet Waterproofing, Crystalline Waterproofing, Dampproofing

**SPECIFICATION 07100**

**AS SPECIFIED:** we propose to furnish and install CCW 860 by Carlisle with Drainage Composite to exterior perimeter, below grade foundation walls at the Lower Level for the Filter Building and the Chemical Feed Vault. We propose to furnish and install Xypex to interior floors and walls for the 8 Filters; and the floor and interior side of exterior perimeter walls for the Chlorine Contact Basin.

**Total:** [REDACTED]

What we DO include in this scope:

- Application of waterproofing as stated above, per manufacturer's recommendations.

What we DO NOT include in this scope (this work, if required, is to be BY OTHERS):

- Cleaning/patching/preparation of surface to receive waterproofing.
- Work must be completed in a maximum of 17 mobilizations to the site; additional trips would be [REDACTED] each.
- Pricing above utilizes prevailing wage labor rates and includes sales tax on materials incorporated into the project.
- This pricing will be held for 6 months from the date of this proposal, after which it is subject to change.

**SPECIFICATION 07150**

**AS SPECIFIED:** we propose to furnish and install dampproofing to the inner wythe of exterior masonry cavity walls of the Filter Building.

**Total:** [REDACTED]

What we DO include in this scope:

- Application of dampproofing as stated above, per manufacturer's recommendations.

What we DO NOT include in this scope (this work, if required, is to be BY OTHERS):

- Cleaning/patching/preparation of surface to receive dampproofing.
- Installation of any sheeting/cmu to cover any gaps in substrate plane.
- Installation of any base, ledge, or roof thru-wall flashing - metal or other.
- Installation of rigid/spray foam insulation.
- Application of any seismic joints, caulking or expansive foam.
- Work must be completed in a maximum of 3 mobilizations to the site; additional trips would be [REDACTED] each.
- Pricing above utilizes prevailing wage labor rates and includes sales tax on materials incorporated into the project.
- This pricing will be held for 6 months from the date of this proposal, after which it is subject to change.



PHONE: (513) 738-0084  
(800) 410-5226  
FAX: (513) 738-0087

**JACO WATERPROOFING LLC**  
P.O. Box 865  
Ross (Cincinnati), Ohio 45061

Bid Proposal: CE207-14  
Date: 6-25-14  
Page: 2 of 2

**General Conditions of This Proposal**

- All cmu joints must be flush with no voids prior to the application of dampproofing. All surfaces must be clean and dry, with no efflorescence prior to application of dampproofing.
- All work areas must be accessible and safe for both personnel and equipment with tie-off points provided, if required. The job site must be free of hazards, equipment, and other trades that might hinder JACO WATERPROOFING's ability to complete the work.
- JACO WATERPROOFING is not responsible to repair, prior to the above proposed work being started or completed, any conditions found at any time during the application process that are not consistent with generally accepted construction practices, or that are determined to be detrimental to the proposed work. Should conditions result in JACO WATERPROOFING's inability to begin the work after being on the job site, a \$400 trip charge will be assessed.
- JACO WATERPROOFING is not responsible for any unknown conditions that existed at the time this proposal was made or during the application process. In addition, JACO WATERPROOFING is not responsible for any damage to or penetrations by others through the materials applied by JACO WATERPROOFING.
- JACO WATERPROOFING maintains Workers' Compensation Insurance and \$5 million Comprehensive General Liability Insurance.
- JACO WATERPROOFING's Federal ID No. is 31-1426320

Thank you for the opportunity to provide this proposal -- we look forward to working with you on this project.

Submitted By: JACO WATERPROOFING, LLC

*Eric Seflet*, Estimator



Phone: 859-661-0254 Fax: 877-474-0298  
Visit us online at [www.isaacsroofing.net](http://www.isaacsroofing.net)  
Email: [levi@isaacsroofing.net](mailto:levi@isaacsroofing.net)

June 25, 2014

JOB NAME: Kentucky American Water



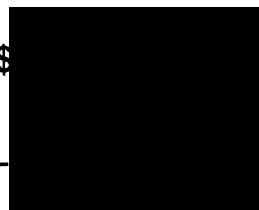
Isaacs Roofing and Sheet metal will provide all labor, material, and equipment necessary to complete the work as outlined below.

**SCOPE OF WORK: Filter Building**

- Install new synthetic underlayment over all roof areas.
- Install ice and water shield at all eaves, roof to wall transitions, and all penetrations.
- Install new .024 ga standing seam roof system.
- Install custom made .024 ga trim at all eaves, rakes, hips, valleys and ridges.
- All metal is precoated with a Kynar finish from manufacture; finish comes with a 30 year warranty.
- Roof is installed with no exposed fasteners for maximum water protection.
- Grounds to be tarped off in areas where tear off is taking place to protect landscaping as much as possible.
- All debris to be disposed of by Isaacs Roofing and Sheet metal at proper disposal facility.
- All grounds will be cleaned with a magnate in order to pick up all metal debris.
- All work to be done in a good workmanship manner and according to N.R.C.A.specifications.
- Job site to be cleaned at the end of every working day.
- This bid is based on 300 squares.

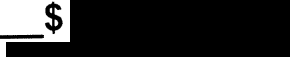
Total: \_\_\_\_\_ \$

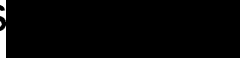
Add for Gutter System: \_\_\_\_\_



**SCOPE OF WORK: Flat Roof section:**

- Mechanically attach one layer of 1.5 inch ISO to metal deck.
- Mechanically attach GAF .060 mill TPO over insulation board.
- All field seams to be heat welded with factory approved leister automated welder.
- All wall flashings and penetrations to be flashed according to manufacture specifications.
- All debris to be disposed of by Isaacs Roofing and Sheet metal at proper disposal facility.
- All grounds will be cleaned with a magnate in order to pick up all metal debris.
- All work to be done in a good workmanship manner and according to N.R.C.A.specifications.
- Job site to be cleaned at the end of every working day.

**Total:** \_\_\_\_\_ \$ 

**Add for Gutter System:** \_\_\_\_\_ \$ 

**10 year material and labor warranty to be issued upon completion and final payment.**

**Payment Schedule: 40% to be paid when materials are delivered to job site. Remaining balance due upon completion.**

**Isaacs Roofing and Sheet Metal**  
**Authorized Signature** \_\_\_\_\_

**Authorized Acceptance** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Of Proposal**

# Tri County Glass & Mirror, Inc.

231 Legends Creek Way #205, Indianapolis, IN 46229

(317) 626-0428 (317) 898-0866 Fax

tricityglass8312@sbcglobal.net

6/25/2014

TO: ALL GENERAL CONTRACTORS  
ATTN: ESTIMATING DEPT.

**RE: PRICE QUOTE-KENTUCKY AMERICAN WATER-RICHMOND ROAD STATION**

TRI COUNTY GLASS AND MIRROR, INC. IS PLEASED TO QUOTE YOU THE SUM TOTAL OF [REDACTED] TO FURNISH AND INSTALL THE FOLOWING PER SECTION # 8400, 8710 AND 8800:

-(6) SINGLE 30710 AND (4) PAIRS 58710 CROSS ALUMINUM DOORS AND FRAMES WITH GLASS AND SPECIFIED HARDWARE ( INCLUDES ELECTRIC STRIKES AND ELECTRIC TRANSFERS.-SEE BELOW);

-INCLUDES PERIMETER CAULKING AS REQUIRED;

**EXCLUSIONS:**

-STATE SALES TAX( ADD [REDACTED] OF TAXABLE PROJECT);

-FINAL CLEANING;

-BOARD-UP

-EXCLUDES GLASS BLOCK WINDOWS;

-EXCLUDES THE ELECTRICAL WIRING AND HOOK-UPS OF ELECTRIC STRIKES AND ELECTRIC TRANSFERS WHERE REQUIRED. ( BY ELECTRICIAN);

WE APPRECIATE THE OPPORTUNITY TO BID YOU ON THIS PROJECT.

RESPECTFULLY,

  
JERRY D'ANGELO  
PRESIDENT

**McKinney Painting, Inc.**

104 Kuhlman Drive  
Versailles KY 40383  
(859) 873-6424 Phone  
(859) 873-1312 Fax

**Woman's Business Enterprise**

Email: [matt@mckinneypainting.com](mailto:matt@mckinneypainting.com)  
[www.mckinneypainting.com](http://www.mckinneypainting.com)

**Scope Of Work and Pricing**

*Please Review Scope Thoroughly, Call With Any Questions/Concerns*

**Project: Kentucky American Water - Richmond Road Station WTP Improvements**

**Date: June 26, 2014**

**No. Of Addendums Acknowledged: 0**

**Division of Work Section : 9900**

**Brand of Materials :**

**Area and Included Surfaces List:**

**Site and Misc.**

Labeling Per 9900

42" Piping

18" Piping

Backwash Pumps

Piping

Operators, Concrete, Walkways, Pump Columns - Prefinished

No Other Surfaces Shown

**Chemical Feed Vault**

New 36" Piping

No Other Surfaces Shown

**New Filter Building**

New 30" Piping

New 16" and 18" Piping

Operators, Gates, Handrails, Filter Equipment and Piping - Prefinished

Stairwell 1 & 2 Metals Prefinished also

48" Piping

**Building Architectural Surfaces Per Finish Schedule A01**

**Sheet:**

Exposed Concrete Ceilings

Interior CMU Walls

(Both Levels)

Remaining rooms and Filter gallery

No Floor Coatings Required or Included

HM Doors and Frames (Excluded due to being Aluminum Per Discussion).

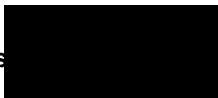
Add for Horizontal Concrete Beams in Ceilings

Pipe Gallery Concrete Ceiling

No Coatings for Filters Noted on Drawings so are EXCLUDED

No Other Surfaces Required or Shown

**Labor, Equipment and Materials**



**Alternates: None**

**Exclusions: Removal of Surface Concrete or Mud from other trades, dewatering of any structures and any items not listed on detailed scope above.**

**Clarifications:**

**Vice President/Estimator:**

**Matt Gamlin, ext. 129.**

**Please feel free to call with any questions or concerns. My cellular number is (859) 983-4515.**

# DELANEY & ASSOCIATES, INC.

## PROPOSAL

23 Erlanger Road, Erlanger, KY 41018-1717

FAX (859) 342-8331 PHONE (859) 342-4944

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To: Bidding Contractors

Proposal Date: June 25, 2014

RE: Kentucky American Water / Richmond Road Station  
Backwash Filter Pumps  
*Flowserve*

We are pleased to offer a Flowserve vertical turbine pump budgetary proposal for your consideration. The following information is included in the Appendix of this proposal.

- Hydraulic Curves
- Dimensional Drawing

The dimensional drawing does not call out the motor dimension but the estimated height from the baseplate to the top of the motor is 132 inches.

Design and scope details are provided below.

- Pump Quantity: Two (2)
- Pump Model: 20STM
- Speed / Stages: 1,185 RPM / 1
- Flow / Head: 9,933 GPM @ 31 FT TDH
- Driver Power: 150 HP Electric Motor for Vertical Solid Shaft
- Volts / Phase / Hertz: 460 / 3 / 60
- Construction
  - Bowl Construction: Flanged – Standard Wall / Unlined
  - Impeller Type: Enclosed
  - Suction Strainer: Not Supplied
  - Column
    - Construction: Flanged
    - Diameter (nominal): 20 IN
    - Pipe Length: 8.75 FT
    - Section Length: 120 IN
  - Lineshaft
    - Diameter: 1.5 IN
    - Coupling Type: Threaded
    - Bearing / QTY: Threaded / 1
    - Construction: Open
  - Discharge Size / Rating / Face: 20 IN / 150# ANSI / RF
  - Pump/Driver Coupling: Spacer

- Materials
  - Bowl: Cast Iron A48 CL30
  - Impeller: Bronze
  - Bowl Bearing: Bronze C84400
  - Bowl Shaft: 416SS A582 Gr 416
  - Bowl Wear Ring: 410SS
  - Impeller Wear Ring: 410SS
  - Column: Steel A53 Type E GrB
  - Lineshaft: Carbon Steel
  - Lineshaft Bearing: Rubber Buna-N
  - Discharge Head: Carbon Steel
  - Support Plate: Steel A36
- Hydraulic
  - Minimum Submergence: 48 IN
  - Hydraulic Power: 99.56 HP
  - Efficiency (CE = 1.00): 81.16%

Clarifications / Exceptions (Section 11153 Vertical Turbine Pumps)

- Item 1.05.S.4 & 5 [Exception]: These units will comply with the ANSI/HI-9.6.4- 2009 vibrations levels when operating at full speed, within the preferred operating range (80-115% of BEP) when measured at the specified location as provided in the standards.
- Item 2.02.C [Exception]: Quoted pump will have semi-open impellers.
- Item 2.02.D [Clarification]: Wear rings are not available with semi-open impellers.
- Item 2.02.J [Exception]: Requested RTDs do not apply with on the vertical turbine pump. RTDs will be installed on motor only.
- Item 2.04 [EXCEPTION]: Based on plan drawings, pumps are assumed to be wet-pit. Exception will be taken to providing pump cans.
- Item 2.05.D [Clarification]: Solid shaft has been quoted based on motor coupling requirement. Please request a revised quote if a hollow shaft motor is required.
- Item 3.01.B [Clarification]: Tests will not be performed with a vortex suppressor.

No piping, tubing, valves, fittings, chemicals, installation or other equipment are included unless specifically itemized above. Controls and electrical equipment specifically are excluded from the scope of supply.

One (1) day of start-up services is included in the price. Additional field services can be provided for [REDACTED] day.

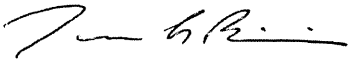
FCA Factory with freight allowed to jobsite (or nearest loading area) plus any taxes which may apply. Unloading by Buyer. Net 30 days from date of invoice if credit is approved.

Shipment: TBD ~ 26 weeks After Release to Manufacture

Price: [REDACTED]

Please let me know if you have any questions or need additional information.

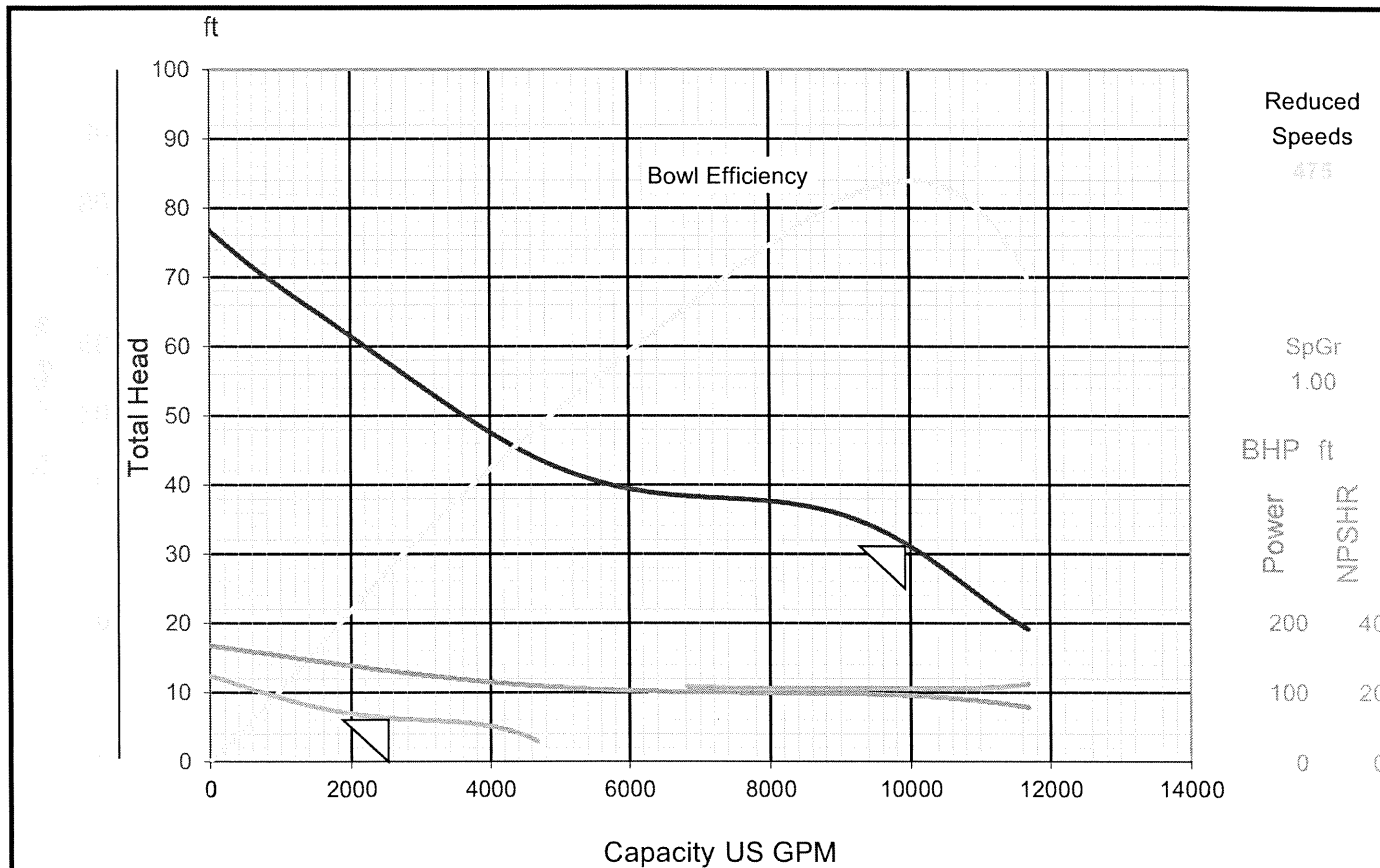
Best Regards,

A handwritten signature in black ink, appearing to read "Jason Bivins". The signature is fluid and cursive, with a long horizontal stroke at the end.

Jason Bivins  
Delaney & Associates, Inc.



## Appendix



Reduced Speeds  
475

SpGr  
1.00

BHP ft  
Power  
NPSHR

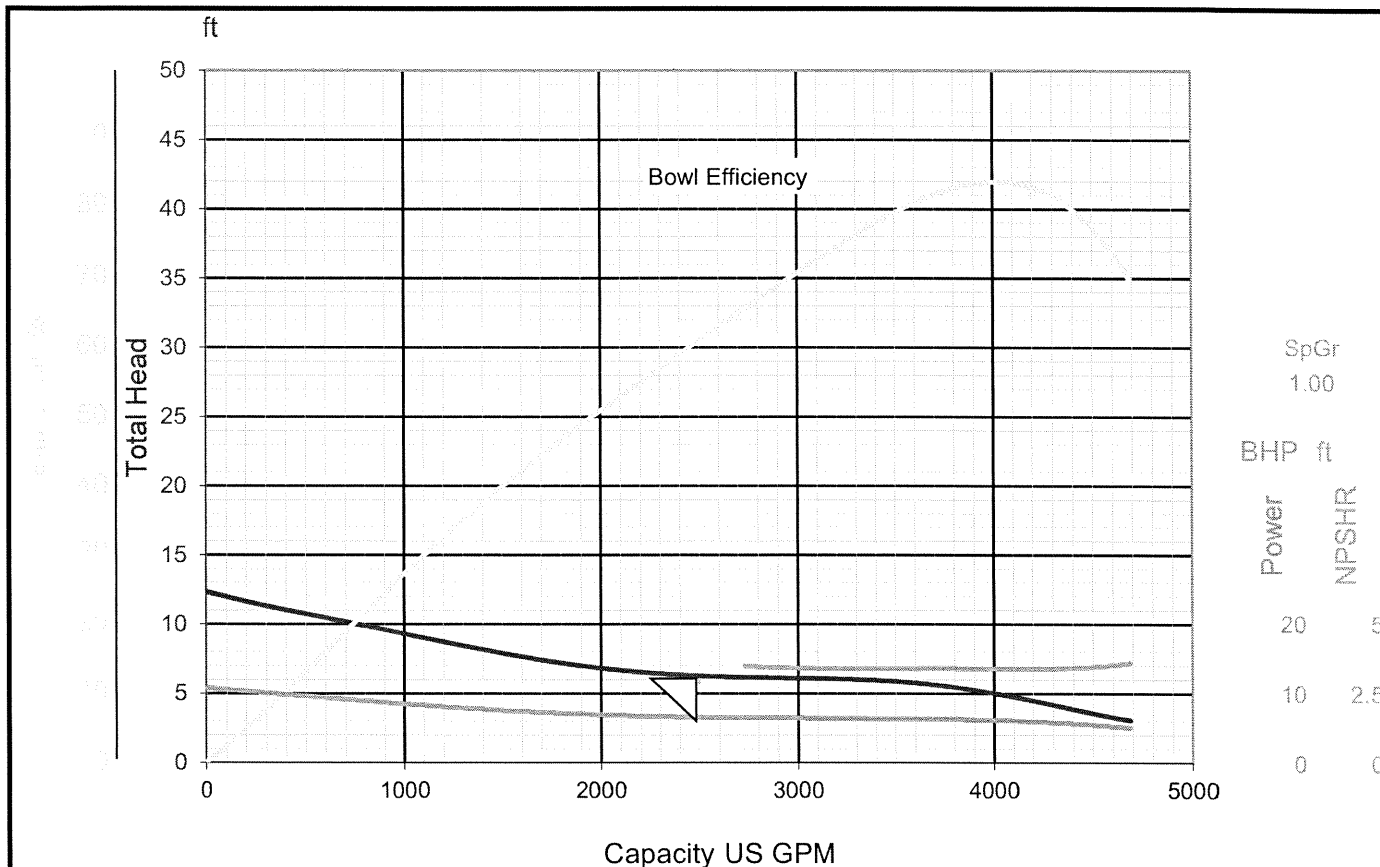
200 40  
100 20  
0 0

Capacity US GPM

Proposed Performance		
9933 gpm	31 ft	81.16% Efficiency
This curve shows the expected heads and efficiencies at other flows but this data is approximate only and not guaranteed.		



Curve No	EC-2266
Speed	1185
Model	Stg
<b>20TSM</b>	<b>1</b>

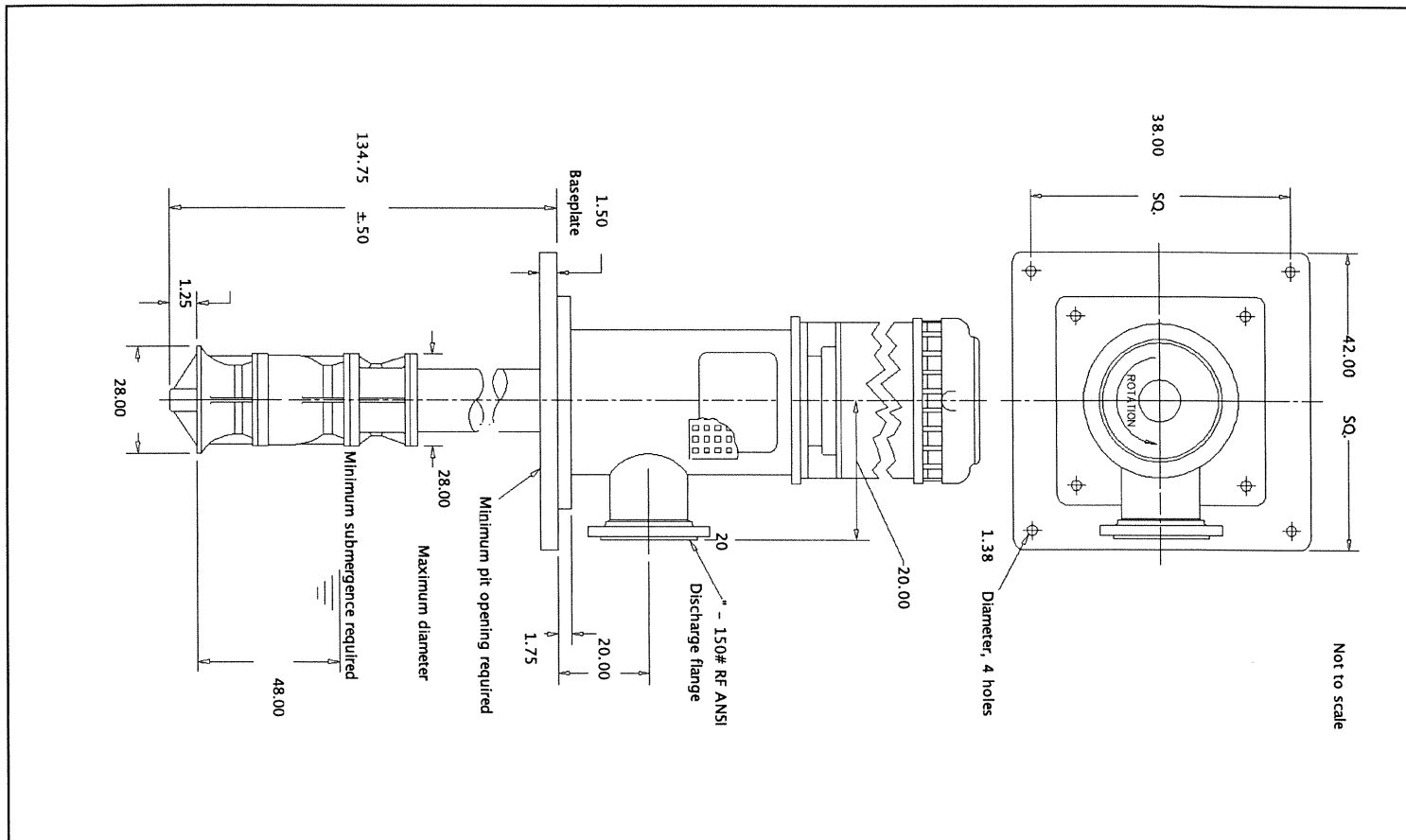


Capacity US GPM

<b>Proposed Performance</b>				Curve No	EC-2266
2483 gpm	6 ft	57.40% Efficiency		Speed	475
This curve shows the expected heads and efficiencies at other flows but this data is approximate only and not guaranteed.				Model	Stg
				<b>20TSM</b>	<b>1</b>



Full Page GA Drawing



All dimensions are in inches unless otherwise specified

Customer : Pending TPI Customer	Pump size & type : 20STM	Drawing number : -
Item number : 20STM KY American Water	Pump speed / Stages : 1185 rpm / 1	Date : June 24, 2014
Service :	Flow / Head : 9933 USgpm / 31.00 ft	Certified by / Date : -
Customer PO # : -	Driver power / Frame : 150 hp	
Flowserve reference :	Volts / Phase / Hz : 460.0 / 3 / 60.0	



## WORLDWIDE TERMS AND CONDITIONS OF SALE

1. **APPLICABILITY:** These Worldwide Terms and Conditions of Sale ("Terms") shall govern all sales of Seller's Equipment or Services to Buyer ("Order"). These Terms supersede any prior written or oral agreement, understanding, representation or promise, and any pre-printed or standard terms and conditions contained in Buyer's request for quote, purchase order, invoice, order acknowledgement, or similar document. These Terms may not be amended, supplemented, changed or modified except by concurrent or subsequent written agreement, signed by an authorized representative of Seller and Buyer. Seller's acknowledgement of Buyer's purchase order shall not constitute acceptance of any terms and conditions contained therein, regardless of how such terms and conditions may be prefaced or described.

2. **DEFINITIONS:**

"Buyer" means the company who accepted Seller's offer or is named in the Order.

"Equipment" means all equipment and parts manufactured and sold by Seller.

"Seller" means the company named on the Order for Equipment or Services.

"Service(s)" means work, direction of work, technical information or technical consulting and advice or other services furnished by Seller to Buyer.

3. **DELIVERY / SUSPENSION / FORCE MAJEURE:** For the delivery of Equipment within the United States, delivery shall be made EXW (in accordance with INCOTERMS 2010, as amended) Seller's plant. For the delivery of Equipment outside the United States, delivery shall be made FCA Seller's plant. Shipping dates are approximate and are based on prompt receipt of all necessary information. In case of delay in furnishing complete information, dates of shipment may be extended for a reasonable time. In the event Seller provides transport services these will be quoted as a lump sum price based on destination and shipping mode.

In the event Buyer requests a delay or suspension in completion and/or shipment of the Equipment or any part thereof for any reason, the parties shall agree upon any cost and/or scheduling impact of such delay and all such costs to Buyer's account. Any delay period beyond thirty (30) days after original scheduled shipment date shall require Buyer to (i) take title and risk of loss of such Equipment, and (ii) make arrangements for storage of such Equipment with the Seller or other party. Seller's invoice, which is contractually based on shipment, shall be issued upon Seller's readiness to ship the Equipment.

Seller shall not be liable for delay in delivery due to causes beyond its reasonable control including, but not limited to, acts of God, acts of government, acts of Buyer, fires, labor disputes, boycotts, floods, epidemics, quarantine restrictions, war, insurrection, terrorism, not, civil or military authority, freight embargoes, transportation shortages or delays, unusually severe weather or inability to obtain necessary labor, materials or manufacturing facilities due to such causes. In the event of any such delay, the date of delivery shall be extended for a length of time equal to the period of the delay.

4. **WARRANTY:** Subject to the limitations in Section 17 herein, Seller warrants that the Equipment shall be free from defects in material, workmanship, and title. If it appears within twelve (12) months from the initial Equipment startup or until eighteen (18) months after shipment, whichever occurs first, that the Equipment or any part thereof does not conform to this warranty, and Buyer so notifies Seller within a reasonable time after discovery, Seller shall thereupon promptly correct such nonconformity by repair or replacement EXW Seller's factory or service center. Seller's sole obligation and Buyer's sole remedy under this warranty is repair or replacement at Seller's election. Seller's warranty obligation for Services shall be the earlier of either ninety (90) days from the date of initial startup or six (6) months after completion of the Service work. Seller shall not be responsible for any on-site costs, including removal and reinstallation of any warranted Equipment. Buyer agrees to provide Seller reasonable and clear access to its Equipment which may include removal of materials or structures as well as supplying any equipment, materials or structures which are necessary to provide reasonable access to the Equipment being repaired or replaced. All Equipment repaired or replaced will be re-warranted only for the remainder of the original warranty period. **THE EXPRESS WARRANTY SET FORTH HEREIN IS THE EXCLUSIVE WARRANTY OF SELLER, AND NO OTHER WARRANTY, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE, SHALL APPLY.** Seller is not responsible for repairs or alterations made by others without mutual written agreement between Seller and Buyer. Seller does not warrant the Equipment or any repair/replacement part against the effects of erosion, corrosion, or normal wear and tear due to operation or the environment. The warranty and remedies set forth herein are conditioned upon proper storage, installation, use and maintenance of the Equipment in all material respects, and in accordance with Seller's written recommendations. Replacement parts or repairs furnished under this warranty shall be subject to the warranty provisions herein for the remaining original warranty period.

5. **PAYMENT:** All prices are net cash thirty (30) days from date of Seller's invoice, unless otherwise stated in Seller's proposal, quotation, or offer. Should Buyer for any reason default in the payment of the contract of purchase, Buyer agrees to pay all collection costs, attorney fees and expenses incurred in collecting payment, including interest on the amount due at the maximum legal rate. All transportation, insurance and similar charges incident to delivery shall be paid by Buyer. Seller shall issue its invoice upon shipment, or upon notice to Buyer that Seller is ready to ship, whichever is earlier. Depending on the value of the order, Seller may at its sole discretion require progress payments.

If Buyer's financial condition is or becomes unsatisfactory to Seller, Seller reserves the right to: (a) require payment from Buyer on a Cash In Advance (CIA) basis; (b) require a letter of credit or other acceptable security before shipment; or (c) cancel shipment at any time prior to delivery of the Equipment without further obligation or liability on the Seller's part.

6. **CHANGES:** Buyer may request modifications as to the amount, scope and/or nature of the Equipment to be supplied by a written change request. If, in the opinion of Seller, any modification will affect the agreed fixed price and/or time of delivery, Seller will notify Buyer thereof in writing and will not be obligated to perform any modification unless agreed to by Seller. Buyer shall confirm that such change is authorized and accepted by issuing an Order revision.

7. **BUYER CANCELLATION:** Buyer may cancel this Order only upon written notice and payment to Seller of reasonable and proper cancellation charges. Notwithstanding the foregoing, Buyer reserves the right to cancel any portion of an Order affected by any insolvency or suspension of Seller's operations or any petition filed or proceeding commenced by or against Seller under any state or federal law relating to bankruptcy, arrangement, reorganization, receivership or assignment for the benefit of creditors.

8. **SET-OFF:** All amounts that Buyer owes Seller under an Order shall be due and payable according to the terms of an Order. Buyer is prohibited from, and shall not set-off such amounts or any portion thereof, whether or not liquidated, against sums which Buyer asserts are due it, its parent affiliates, subsidiaries or other divisions or units under other transactions with Seller, its parent affiliates, subsidiaries or other divisions or units.

9. **NON-DISCLOSURE AND NON-USE OF SELLERS' INFORMATION:** Buyer agrees that it will not use Seller's data for the manufacture or procurement of Equipment which are the subject of an Order or any similar Equipment, or cause said Equipment to be manufactured by, or procured from, any other source or reproduce said data and information or otherwise appropriate them without the written authorization of the Seller. Buyer agrees that it will not disclose or make available to any third party any of Seller's data or other information

pertaining to this Order which is proprietary to Seller without obtaining Seller's prior written consent.

10. **SPECIAL TOOLING AND DATA:** Unless otherwise agreed in writing, all material, software, data processes, equipment, facilities and special tooling, which term includes but is not limited to jigs, dies, fixtures, molds, patterns, special taps, special gages, special test equipment, other special equipment and manufacturing aids and replacements thereof, used in the manufacture of the Equipment covered by an Order shall be and remains the property of Seller. Seller retains all rights, title and interest in drawings, engineering instructions, specifications, and all other written data, if any, furnished and/or specified to be supplied with the Equipment.

11. **EXPORT / IMPORT:** Buyer agrees that it will comply with all applicable import and export control laws and/or regulations, including without limitation those of the United States and/or other jurisdictions from which the Equipment and/or technology may be supplied or to which the Equipment and/or technology may be shipped. In no event shall Buyer use, transfer, release, import, export or re-export the Equipment and/or technology in violation of such applicable laws and/or regulations.

12. **TAXES:** Seller's price, unless otherwise agreed, shall be fixed and does not include, and Seller is not responsible for, payment of any tax levied for sales, use, excise, value-added, goods and services, business (franchise or privilege) or any duties, charges or other such taxes. Seller is only responsible for any tax imposed on Seller, by taxing authorities in Seller's jurisdiction, which are based on Seller's revenue, income, net income, net assets, net worth, or capital or any taxes imposed in lieu thereof. If Seller is required to pay any taxes or other charges that are the responsibility of the Buyer, then Buyer shall promptly reimburse Seller those amounts.

13. **ASSIGNMENT:** Neither party shall assign an Order or any portion thereof without the advance, written consent of the other party, which consent shall not be unreasonably withheld.

14. **WAIVER / SEVERABILITY:** Failure by Seller to assert all or any of its rights upon any breach of an Order shall not be deemed a waiver of such rights either with respect to such breach or any subsequent breach, nor shall any waiver be implied from the acceptance of any payment of service. No waiver of any right shall extend to or affect any other right Seller may possess, nor shall such waiver extend to any subsequent similar or dissimilar breach.

If any portion of these Terms are determined to be illegal, invalid, or unenforceable, for any reason, then such provision shall be deemed stricken for purposes of the dispute in question and all other provisions shall remain in full force and effect.

15. **APPLICABLE LAW / DISPUTES:** This Order shall be interpreted in accordance with the laws of the jurisdiction in which the Seller's facility accepting the Order hereunder is located, exclusive of any choice of law provisions. The Seller and Buyer expressly agree to exclude from this Order the United Nations Convention on Contracts for the International Sale of Goods, 1980, and any successor thereto and the Contracts (Rights of Third Parties) Act of 1999.

Except as otherwise specifically agreed in writing by Buyer and Seller, any dispute relating to an Order placed by a Buyer incorporated in the United States which is not resolved by the parties shall be adjudicated by a court of competent jurisdiction in the state of Texas. All disputes arising out of or in connection with an Order placed by a Buyer incorporated outside the United States that shall be finally settled by binding arbitration in London England, under the Rules of Arbitration of the International Chamber of Commerce then in effect by one or more arbitrators appointed in accordance with said Rules.

16. **COMPLIANCE WITH LAWS / ANTI-BRIBERY:** Seller and Buyer agree to comply with all applicable laws, regulations, codes and standards, including but not limited to those of the United States and other jurisdictions where the parties conduct business. Additionally, Buyer has not and will not offer, promise, authorize or make, directly or indirectly, any payments (in money or any other item of value), contributions or gifts to any non-U.S. government agency, department, official or government owned or controlled entity in order to obtain or retain business, or secure any other improper business advantage, which would violate the U.S. Foreign Corrupt Practices Act and/or any other applicable anti-bribery laws.

17. **LIMITATION OF LIABILITY / EXCLUSION OF CONSEQUENTIAL LOSS:** The remedies set forth herein are exclusive, and the total liability of the Seller with respect to this Order, or any breach thereof, whether based on contract, warranty, tort (including negligence), indemnity, strict liability or otherwise, shall not exceed the Order price of the specific Equipment or Service which gives rise to the claim.

In all cases where Buyer claims damages allegedly arising out of defective or nonconforming Equipment or Services, Buyer's exclusive remedies and Seller's sole liability shall be those specifically provided for under Section 4 "Warranty".

**IN NO EVENT, WHETHER ARISING BEFORE OR AFTER COMPLETION OF ITS OBLIGATIONS UNDER THE CONTRACT, SHALL SELLER BE LIABLE FOR SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES OF ANY KIND (INCLUDING BUT NOT LIMITED TO LOSS OF USE, REVENUE OR PROFITS, INVENTORY OR USE CHARGES, COST OF CAPITAL, OR CLAIMS OF CUSTOMERS) INCURRED BY THE BUYER OR ANY THIRD PARTY.**

18. **GENERAL PROVISIONS:** (a) No Action, regardless of form, arising out of transactions under the Order, may be brought by the Buyer more than one (1) year after the cause of action has accrued. (b) Any modification to these Terms must be set forth in a written instrument signed by a duly authorized representative of Seller. (c) In the event Buyer has reason to believe the Equipment could be subject to a claim for damages or personal injury, Buyer shall immediately provide Seller with written notice of such claim, and shall provide Seller reasonable opportunity to inspect said Equipment and/or investigate the basis for such potential claim. (d) **UNLESS OTHERWISE SPECIFICALLY PROVIDED IN SELLER'S QUOTATION, EQUIPMENT AND SERVICES HEREUNDER ARE NOT INTENDED FOR USE IN ANY NUCLEAR OR NUCLEAR RELATED APPLICATIONS. IF SELLER'S QUOTATION EXPRESSLY STATE THAT THE EQUIPMENT AND SERVICES ARE INTENDED FOR NUCLEAR OR NUCLEAR RELATED APPLICATIONS, SELLER'S ADDENDUM (P-62) FOR NUCLEAR LIABILITY PROTECTION IS HEREBY INCORPORATED.** Buyer (i) accepts the Equipment and Services in accordance with the restriction set forth in the immediately preceding sentences, (ii) agrees to communicate such restriction in writing to any and all subsequent purchasers or users, and (iii) agrees to defend, indemnify and hold harmless Seller from any and all claims, losses, liability, suits, judgments and damages, including incidental and consequential damages, arising from the use of the Equipment or Services in any nuclear or nuclear related applications, whether the cause of action be based in tort, contract or otherwise, including allegations that the Seller's liability is based on negligence or strict liability.

19. **TRANSLATIONS / GOVERNING LANGUAGE:** English shall be the legal language of this Order, and all parties waive any right to use and/or rely upon any other language, translation or interpretation. The parties specifically agree that in the case of any inconsistencies or interpretation disputes, the English language version shall control.



# Roberts Water Technologies, Inc.

Innovations for Generations

214 North Jackson Street • Media, PA 19063  
[www.robertsfilter.com](http://www.robertsfilter.com) • p 610.583.3131 • f 610.583.0117

June 20, 2014

## CONTRACTORS BIDDING

### Roberts' Quotation GF-14-1271-T

Kentucky American Water  
Richmond Road Station WTP Improvements  
Lexington, Kentucky

**Bid Date:** June 26, 2014

**Engineer:** Hazen And Sawyer

**Subject:** Section 13221 - Filter Media  
Section 13225 - Fiberglass Backwash Troughs  
Section 13400 - Filter Underdrain System

**Addenda:** No. 1

Gentlemen:

Roberts Water Technologies, Inc. ("Roberts") is pleased to offer the below scope of supply for the Richmond Road Station WTP Improvements project. Roberts shall furnish the following equipment for eight (8) new gravity filters, each measuring 20'-0" x 24'-10":

### Section 13221 - Filter Media

1. Graded gravel of the following configuration shall be furnished:

<u>Size</u>	<u>Material</u>	<u>Finished Depth</u>
3/4" x 1/2"	Silica Gravel	3"
1/2" x 1/4"	Silica Gravel	3"
1/4" x 1/8"	Silica Gravel	3"
1/8" x #10	Silica Gravel	3"

2. A sufficient quantity of silica sand shall be furnished for Contractor's installation for a finished depth of 12" Silica sand shall have an effective size of 0.45-0.55 mm and maximum uniformity coefficient of 1.4.

#### Notes:

- a. All support gravel and filter media shall meet or exceed AWWA B-100 Standard and be NSF 61 Listed.
- b. An extra 1" of silica sand shall be furnished for backwashing and skimming of fines.
- c. All support gravel and filter media shall be furnished in super sacks on pallets.

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- d. Roberts does not include any Granular Activated Carbon (GAC) which shall be furnished by others.
- e. Representative samples and/or test reports detailing the physical and chemical characteristics of the filter media shall be provided.
- f. Post-delivery sampling and testing of support gravel and filter media are not included and shall be by others.

#### Section 13225 - Fiberglass Backwash Troughs

1. Roberts shall furnish a total of thirty-two (32) fiberglass wash water troughs. Each trough shall measure 21'-6" long and have a minimum carrying capacity of 2,500 gpm with 2" of freeboard.
2. Mounting hardware fabricated of Type 316 stainless steel shall be furnished.

##### Note:

- a. Roberts' standard warranty shall be extended per specifications.

#### Section 13400 - Filter Underdrain System

##### Infinity® Filter Underdrain System:

1. Roberts shall furnish sufficient quantities of Infinity® underdrain laterals. Each Infinity® underdrain lateral shall arrive on the jobsite completely assembled. No assembly of individual lateral runs is required to assemble a complete lateral.
2. Flume openings are pre-cut into each lateral and custom flume blocks are not required, and each lateral is furnished with factory-installed end plates.
3. Mechanical hold-down anchors fabricated of Type 316 stainless steel shall be furnished.
4. Grout strips shall be furnished for installation over flume opening.

##### Notes:

- a. Roberts does not include epoxy material required for securing underdrain anchors into concrete floor which shall be furnished by others.
- b. Grout for installation of the filter underdrains is not included and shall be furnished by others.

##### Filter Air Wash Equipment:

1. The in-filter Air Grid® headers shall be furnished for each filter (two per filter). Air headers shall be fabricated of Schedule 10S, Type 316L stainless steel and shall commence at a flange connection within the filter basin.
2. The supports for the Air Grid® headers shall be furnished. Support hardware shall be fabricated of Type 316 stainless steel.
3. A sufficient quantity Aries® laterals shall be furnished fabricated of 18 gauge, Type 316 stainless steel.

Lexington, Kentucky  
Roberts' Proposal GF-14-1271-T

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**Supervisory Service:**

The services of a Roberts' Representative shall be provided to perform the following functions up to a maximum number of days and trips indicated:

**Section 13221 - Filter Media:**

Supervision of Media Unloading:	One (1) Day Service One (1) Round Trip
Installation Supervision:	Two (2) Days Service Two (2) Round Trips

**Section 13400 - Filter Underdrain System:**

Installation Supervision/Testing:	Sixteen (16) Days Service Four (4) Round Trips
Supervise & Check Media Installation:	Two (2) Days Service One (1) Round Trip
Final Inspection & Training:	Two (2) Days Service One (1) Round Trip

Service to be provided by Roberts shall be strictly limited to the number of days and trips as detailed above, regardless of contractor's or engineer's interpretation of service requirements contained within the specifications.

Additional services may be obtained at the per diem rate (plus living and travel expenses) in effect at the time services are rendered. The current per diem straight time rate is [REDACTED] plus living and travel expenses. Field services are provided in accordance with the terms and conditions on attached form M-100422A.

**Price:** [REDACTED]

To be advised by Roberts' Sales Representative copied below.

Price quoted is:

1. F.O.B. shipping points via motor freight with freight prepaid and allowed to the jobsite or nearest regular motor freight stop if jobsite delivery is not possible.
2. Exclusive of any State, Local Sales or Manufacturer's Use Taxes.
3. For acceptance within thirty (30) days from bid date.
4. Based upon return of approved submittal data within two (2) weeks of submittal.
5. Firm for delivery within 30 weeks. Should purchaser delay shipment beyond 30 weeks, price may be subject to escalation charges of 1-1/2% per month.
6. Cleaning of stainless steel components shall be per Roberts' standards and in accordance with ASTM A380.

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Roberts Water Technologies • Roberts Environmental • Roberts Services • Roberts Leotech • Roberts Filter International • Roberts of Puerto Rico



Lexington, Kentucky  
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**Drawings:**

Submittal shall be provided in four (4) to six (6) weeks after acknowledgment of order.

**Shipment:**

Equipment shipment within ten (10) to twelve (12) weeks after receipt of approved drawings or receipt of written notice to proceed with manufacturing.

**Terms:**

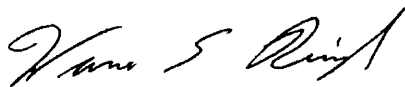
Please refer to the attached forms M6A-2/10 and M-100422A.

**Work & Materials Not Included:**

Roberts does not include any pipe, fittings, thimbles, valves, supports therefore, spare parts, misc. iron work, pumps, immersion cleaning of pipe fabrications, field wiring, instrumentation, field assembly nor installation, priming, painting, labor, start-up service, supervision, nor any other materials or services which are not covered within the above specified scope of this proposal.

We thank you for the opportunity of submitting this quotation. If you should have any questions, please contact the undersigned or our representative copied below.

Respectfully submitted,  
ROBERTS WATER TECHNOLOGIES, INC.



Warren E. Ringler  
Regional Sales Manager

WER:kpr

Enclosures: Forms M6A-2/10 and M-100422A

CC: Mr. Tim Walker  
J.T. Guthrie & Son, Inc.  
(615) 377-3952

Roberts Water Technologies, Inc.

A Unit of The Roberts Filter Group

## STANDARD TERMS & CONDITIONS OF SALE

### 1. QUOTATIONS

Seller may make quotations verbally or in writing. Verbal quotations which are not confirmed in writing by Seller shall expire in five (5) calendar days unless Seller receives Buyer's purchase order within that period. Written quotations, including written confirmations of verbal quotations, shall expire automatically within thirty (30) calendar days after the date of quotation unless Seller receives Buyer's purchase order within that period. Acceptance of Seller's quotation by Buyer is expressly limited to the terms contained herein. The terms and conditions set forth herein represent all of the promises, covenants, agreements, conditions and understandings between Buyer and Seller and supersede all prior and contemporaneous agreements, understandings, inducements or conditions, expressed or implied, oral or written, relating to the sale and purchase of the goods covered hereby.

### 2. ACCEPTANCE OF PURCHASE ORDERS

Purchase orders shall be made out to Roberts Water Technologies, Incorporated (herein called the "Seller"), Darby, PA, and shall be, notwithstanding any contrary language of Buyer's purchase order, subject to acceptance by an authorized employee at the seller's Darby, PA Plant.

### 3. TAXES

Unless otherwise noted, prices are exclusive of any taxes, including but not limited to local, State, Provincial, Federal Sales, Use or Manufacturer's Taxes or Customs and Duties of any sort; and such are to be borne by the Buyer.

### 4. CREDIT AND PAYMENT

- (a) The prices set forth on the quotation attached hereto constitute the effective prices, notwithstanding any price lists, prior quotations of prices or prices set forth in any purchase order.
- (b) In the United States and Canada, payment terms are net thirty (30) days from date of shipment or, if delivery is delayed by an act of Buyer, thirty (30) days from date material is ready for shipment.
- (c) If Buyer is located outside the United States or Canada, special terms may be available.
- (d) Any amounts not paid when due shall incur a service charge of 1-1/2% per month (18% per annum) until paid in full. Buyer shall pay all expenses incurred in collecting delinquent accounts, including attorneys' fees.
- (e) All credit and terms of payment are subject to approval of the Sellers Credit Department.
- (f) Buyer will be invoiced and make payment, according to the above terms, for partial shipments.
- (g) Buyer may not assign rights and purchase orders without Seller's written consent.

### 5. SHIPMENTS

- (a) Statements as to the expected dates of shipment represent Seller's best judgment, but shipment on those dates is not guaranteed. Failure to deliver pursuant to said shipment dates for any reason whatsoever whether in Seller's control or not shall not be cause for cancellation by Buyer or for the assertion of damages of any kind whatsoever including, but not limited to, consequential damages, against Seller.
- (b) Costs for demurrage, cartage, and unloading material between points of delivery by carrier and jobsite are borne by Buyer.
- (c) On shipments F.O.B. Seller's Plant or point of manufacture, it is the Buyer's responsibility to inspect and accept materials and enter and prosecute any claim for loss or damage during shipment.
- (d) Buyer may not reject, in whole or in part, Seller's goods without Seller's written consent and Buyer waives all incidental and consequential damages from any defect in the product during delivery. Buyer's sole remedy is Section 7 Warranty below.

### 6. TITLE

All goods purchased hereunder are shipped F.O.B., Darby, PA or point of manufacture. Title to the products and all risk of loss or damage with respect thereto shall pass to and be borne by Buyer upon delivery by Seller to the carrier. All shipping and insurance charges shall be borne by Buyer, and where prepaid by Seller shall be included in the invoice for the goods shipped. To secure payment by Buyer of the amounts due to Seller under this or any other contract between Seller and Buyer, Buyer hereby grants to Seller a security interest in the goods purchased hereunder. Buyer agrees to execute, deliver, and file any financing statements, security agreements or other documents, and to do any and all acts, which are requested by Seller to perfect, continue perfected, or evidence such security interest and any other security interests granted to Seller hereunder.

### 7. WARRANTY

- (a) If it is established, within one year after delivery to the Buyer, that any material or workmanship was defective at time of shipment, Seller will, at Seller's option, repair or replace such goods. The foregoing shall constitute the exclusive remedy of Buyer. It is expressly understood that Seller will not be liable for any special, indirect or consequential damages, losses or expenses arising in connection with the use or inability to use Seller's equipment for any purpose.

**SELLER DISCLAIMS AND MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, EXCEPT AS SET FORTH HEREIN, AND HEREBY SPECIFICALLY NEGATES ANY IMPLIED WARRANTY OF MERCHANTABILITY, IMPLIED WARRANTY OF INFRINGEMENT, OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE PRODUCTS SOLD HEREUNDER. BY SUBMITTING PURCHASE ORDER, BUYER AGREES THAT SELLER MAKES NO IMPLIED WARRANTIES AND ALL IMPLIED WARRANTIES ARE SPECIFICALLY EXCLUDED.**

- (b) To return a product purchased hereunder in connection with the assertion of a claim under the foregoing expressed warranty, the Buyer must obtain a return authorization from Seller prior to returning such product and must pay the costs of return transportation. Such transportation costs will be reimbursed to the Buyer by Seller only upon verification of the propriety of the claim by Seller.

### 8. FIELD SERVICE

Unless otherwise noted in the quotation, the services of a serviceman or field engineer are not included in the quoted price. Service may be available upon payment of current per diem rates plus all travel and living expenses.

### 9. CANCELLATION

Deferment or cancellation of an order by Buyer will be accepted only on prior written agreement by and reimbursement to Seller for incurred expenses. Seller shall confirm any such oral notice in writing within five (5) days. Upon such cancellation, Seller shall have no further obligation with respect to this contract nor shall Seller be liable for damages of any kind, including, but not limited to, consequential damages, provided, however, that cancellation shall not be deemed a waiver of Seller's rights to demand performance by Buyer of any obligation of Buyer pursuant hereto, accrued up to the date of cancellation.

### 10. GOVERNING LAWS

These terms and conditions shall be construed and enforced in accordance with the laws of the Commonwealth of Pennsylvania.

### 11. FORCE MAJEURE

Seller shall not be liable for any failure to discharge its obligations hereunder due to strikes, differences with workmen, accidents, Acts of God, fires, or shutdowns of its manufacturing plant or plants supplying it, orders of requirements of the United States Government, embargoes, inability to secure transportation facilities, or other contingencies beyond the control of Seller, including, but not limited to, those arising out of or due to national defense activities, or emergency conditions.

Roberts Water Technologies, Inc.

A Unit of The Roberts Filter Group

**DOMESTIC FIELD SERVICE TERMS & CONDITIONS**

**1. AUTHORIZATION**

Two to four weeks, prior to notice in writing to Roberts Water Technologies, Inc. ("Roberts") is normally required in requests for service by a Roberts' field representative. Services shall not commence without an acceptable Purchase Order. Services performed shall be limited to the maximum dollar amount or time authorized in the Purchase Order. Robert's will normally notify the customer when the amount of services performed have reached 75% or more of the maximum amount authorized in the Purchase Order. Additional written authorization in the form a supplemental Purchase Order is required in order to obtain services in excess of the maximum amount authorized in the original Purchase Order.

**2. RESPONSIBILITY**

Unless otherwise specifically authorized in writing, the field service representative shall act only in an advisory capacity, interpreting drawings, recommending sequence of work in erection, installation, start-up, and repairs, or other services specifically included in Roberts' proposals. The Roberts field representative shall not be responsible for any acts of omission, commission, or the quality of workmanship of other than Roberts' field employees. The representative shall not be responsible for any deficiencies caused by employees, contractors, subcontractors or agents of the Owner failing to follow the instructions or advice of the representative. If Roberts requests, Customer shall execute an agreement indemnifying Roberts from any and all claims against field representative.

**3. REPORTS**

For acknowledgment purposes, Daily Time Summary Reports prepared by Roberts' service representative require the signature of the Customer's job superintendent, or other authorized individual, acknowledging receipt. Any differences in interpretation of warranty responsibilities shall be indicated on each appropriate daily report.

**4. RATES**

The hourly rate for a Roberts' service representative, whether straight time or overtime, is determined by the day of the week, and/or time of the week that the service is performed, according to the following:

- (a) **Straight Time:** Straight time is defined as time worked on a regular schedule of eight hours per day; between 7:00 AM and 6:00 PM - Monday through Friday, or for time worked on any other agreed upon schedule of eight hours per day, Monday through Friday. Each hour of straight time shall be paid at the straight time rate.
- (b) **Overtime:** Overtime is defined as time worked in excess of or at times other than the regular straight time rate, except that hours worked in excess of sixteen per day, Monday through Saturday, and any hours worked on Sundays and holidays, shall be paid at two times the straight time rate. A "holiday" is any day observed by Roberts as a holiday.

**NOTE: STRAIGHT TIME AND OVERTIME RATES MAY BE ESTABLISHED ON A DAILY, WEEKLY OR MONTHLY BASIS, IF APPROPRIATE, RATHER THAN ON THE HOURLY BASIS UNDER SUB-PARAGRAPH (A), ABOVE.**

- (c) **Standby:** Standby time is defined as time, up to eight hours per day, Monday through Friday, during which the field service representative, during the course of his assignment is available for work, but is not working because of circumstances beyond Roberts' control. Each hour of standby time shall be paid at the straight time rate.

**NOTE: SHORTAGES OF MINOR ITEMS SUPPLIED BY ROBERTS SHALL NOT BE DEFINED AS STANDBY TIME CHARGEABLE TO ROBERTS.**

**5. TRAVEL TIME**

Travel time is charges at the straight time rates. Travel time to the jobsite destination may be dependent upon particular skills required to perform start-up and availability of the person closest to the particular jobsite, but may vary and shall be at Roberts' discretion. The maximum travel time charged within the Continental U.S. shall be eight hours in each direction.

**6. EXPENSES**

Roberts shall be paid, by the customer, upon invoicing by Roberts, for travel, living and incidental expenses as follows:

- (a) **Travel Expenses:** If the field service representative uses a personal or Company automobile for transportation to the jobsite and return, or for daily work transportation, travel expenses shall be calculated at Roberts' mileage rate prevailing at the time for such use, plus all tolls. If the field service representative does not use a personal or Company automobile, the actual cost of transportation (air or train fare, etc.) from/to Darby, PA shall be paid. Air or rail transportation will ordinarily be in coach, tourist or economy class accommodations. First class accommodations will only be used under special circumstances, e.g. unavailability, or unsuitability of lesser accommodations.
- (b) **Living Expenses:** Roberts shall be paid, upon billing, for field service representative's lodging, meals and any other incidental expenses, related to the job, while the field service representative is at the jobsite, and while traveling to and from the jobsite.

**7. INVOICING**

Invoices shall be rendered on a monthly basis and shall be payable within thirty (30) days. Roberts Water Technologies, Inc. reserves the right to refuse to provide field service for an account that is overdue. After (30) days, invoices past due shall be subject to finance charge of 1-1/2% per month (18% per annum) and Customer agrees to pay all costs of collection incurred by Roberts, including attorney's fees.



BL Anderson Company, Inc.  
8887 Eagle Ridge Court  
West Chester, OH 45069  
513.889.4746 Voice  
513.889.5333 Fax  
marty@blanderson.com  
www.blanderson.com

June 25, 2014

Proposal No. 1098 EO REV1

TO: Bidding Contractors

**SUBJECT: Kentucky American Water, Richmond Rd WTP  
Section 11280 Positive Displacement Blower Package**

**Bid Date: June 26, 2014**

BL Anderson is pleased to present this **REVISED** proposal for the subject project in accordance with specification section 11280 and related sections. Exceptions are noted in "Notes of Clarification" section below.

**Changes include the addition of one (1) 60 HP motor for the existing plant blower.**

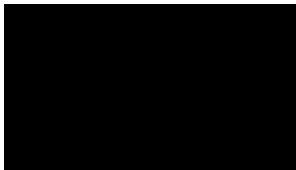
**QTY One (1) Kaeser Compak FB621C Blower Package, including:**

- Process performance per section 2.01
- 60 HP 460 volt, 3 phase, 60 Hz TEFC NEMA premium inverter duty motor
- Mechanical Seals
- Sound Enclosure
- Kaeser Standard Temperature and Pressures
- Air Filter Differential Pressure Switch
- Discharge Pressure Switch
- Kaeser Standard O&M Manuals
- Certified performance, noise, and sound test reports
- Spare parts per specification section 3.03.C (See note #2 in Notes of Clarification below)
- Additional 60 HP motor (in-kind) to that being furnished with new blower
- 2 days, 2 trips installation, inspection, start-up, & training per spec

**Not included:**

- Butterfly valves (per section 1.01.A & 2.01.N)
- Local control stations, disconnects, control enclosures, motor starters

**Blower Package Price:**



**Additional 60 HP Motor Price:**

**Proposal Validity:** 60 Days from proposal date

**Freight:** FOB Factory with freight prepaid and included



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**Delivery:** Submittals: 2-4 weeks following PO acceptance  
 Equipment: 10-12 weeks following submittal approval

**Warranty:** Package components, drive components, and motor warranted twelve (12) months from start-up not to exceed 18 months from date of shipment.

Sixty (60) month limited warranty on tri-lobe blower (when installed on Com-pak Plus™ Packages)

**Payment Terms** Net 30 days; F.O.B. factory with freight prepaid and included. Prices quoted do not include taxes. An interest charge of 1 ½% per month will be added to past due accounts.

#### Notes of Clarification

1. See Kaeser clarifications and exceptions to section 11280 per attached spec mark-up
2. Section 3.03 specifies spare belts and pulleys to reduce air flow to 1000 scfm. This package's speed may not be reduced enough to meet that flow (data sheet has been attached for 2400 rpm, which is the slowest available) and the associated flow of about 1130 scfm (worst case conditions)
3. Section 11000 2.05.B – Kaeser shall furnish Siemens 3600 rpm inverter rated TEFC premium efficient, class F insulated, temperature rise B, with 10:1 turndown capabilities
4. Proposal excludes conduit, piping, installation, interconnect wiring, and terminations (all by others)
5. Two days, two trips of startup included per spec. Additional field time required that is not the cause of the manufacturer or representative will be charged at current field service rates.
6. Anything not explicitly stated in this proposal is not included.

Should you have questions or need additional information, please don't hesitate to contact me.

Sincerely,

**B.L. ANDERSON CO., INC.**

Marty Davidson  
 Sales Manager, Eastern Sales Office

SECTION 11280

POSITIVE DISPLACEMENT BLOWER PACKAGE

PART 1 -- GENERAL

provided by others

1.01 THE REQUIREMENT

- A. The Contractor shall furnish one (1) positive displacement blower packages. The blower package shall be provided for filter air scour and shall consist of one (1) positive displacement blower housed in a close-fitting acoustical enclosure complete with all accessories including motors, steel bases, inlet filters, inlet silencers, discharge silencers, pressure relief valves, check valves, butterfly valves, pressure gauges, flexible connectors, V-belt drives, belt guards, vibration isolation, and other components for a complete blower package as shown on the Contract Drawings and as specified herein.
- B. Contractor shall relocate existing air scour blower from current location near the existing filter building to the new location north of the new filter building. The existing enclosure shall be reused. A new motor shall be provided and installed within the existing enclosure. Contractor shall be responsible for all electrical and piping connections required to return the relocated blower to service in its new location.
- C. Blowers shall be as furnished by Kaeser, no exceptions.

1.02 SUBMITTALS

- A. In addition to the submittal requirements specified in Section 01300 - Submittals and Section 11000 - Equipment General Provisions, submit the following:
  - 1. Complete shop drawings and operation and maintenance manuals.
  - 2. Support locations and loads that will be transmitted to bases and foundations. Weights of all system components and the total weight of the operating blowers.
  - 3. Complete electrical field termination drawings.
  - 4. Electrical equipment product data sheets.
  - 5. Overall equipment layout and piping interconnection drawings.
  - 6. Copies of certified shop test reports.
  - 7. Field test results.

1.03 OPERATION AND MAINTENANCE MANUALS

standard manuals will be provided

- A. Furnish Operation and Maintenance manuals, shop drawings and other material required as specified in Section 01300 and Section 11000.

- B. The Contractor shall submit a complete list of additional spare parts beyond those specified herein, which the manufacturer recommends to be kept on hand and as specified in Section 11000.

#### 1.04 CONTRACTOR'S RESPONSIBILITY

- A. The Manufacturer shall provide the services of qualified service persons with at least five (5) years of experience who are regularly involved in the inspection, installation, start-up, troubleshooting, testing, maintenance, and operation of positive displacement blower systems. The service persons shall:

1. Witness and check installation.
2. Assist the Contractor in conducting field tests and preparing a written report as specified below.
3. Witness and check start-up of the system.
4. Assist the Contractor in making adjustments and modifications as necessary to optimize operation of system components.
5. Troubleshoot and correct any mechanical or control problems which are noted during tests and start-up.
6. Submit written certification that the system has been properly installed, tested, and adjusted; and that all controls and protective devices operate properly, including date of final acceptance test, as well as a listing of all persons present during the tests.
7. Investigate and supervise correction of any operating problems which may arise up to the end of the guarantee period of the equipment.
8. Instruct Owner personnel in the operation and maintenance of the equipment.

- B. The services of a qualified manufacturer's technical representative shall be provided at no additional cost to the Owner for a period of not less than two (2) days as follows:

1. At least one trip of one (1) day during installation of the equipment.
2. At least one trip of one (1) day after acceptance of the equipment for start-up purposes.

- C. Any additional time required to achieve successful installation and operation shall be at the expense of the Manufacturer.

#### 1.05 FACTORY TESTING

- A. After assembly, each blower system shall be factory lubricated, aligned and operationally tested. Run time on each blower shall be at least one (1) hour after which each blower shall be rechecked for alignment and tension of V-belts and adjusted if necessary. If adjustments are made, the blower(s) shall be restarted and run an additional 15 minutes, shut down and rechecked again.

- B. A report on each blower system, shall be furnished with the O&M manuals giving as a minimum the following readings taken at/or near the end of the one hour run time:
1. Motor current, per phase.
  2. Applied motor voltage, phase-to-phase
  3. Discharge pressure, psi
  4. Air Flow, scfm
  5. Surface temperatures of motor bearings and blower bearings and blower discharge air.
  6. Blower discharge air temperature
  7. Noise level in dbA measured at 3 ft from the blower system in the following six (6) locations: one on each short side of the blower, and two on each long side of the blower.
  8. Vibration levels in inch/second of blower and motor bearing housing in horizontal, vertical and axial direction and in six (6) locations specified for noise level measurement, but on the common base.

Not provided

## PART 2 -- PRODUCTS

### 2.01 EQUIPMENT REQUIREMENTS

- A. The Contractor shall furnish one (1) positive displacement blower packages complete with all accessories. Each blower shall provide 1,300 scfm at 5.8 psig discharge pressure at the following local conditions:

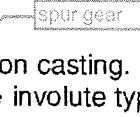
Maximum inlet temperature	105°F
Maximum relative humidity	90%
Elevation	1000' above MSL

Blower speed shall be a maximum of 1625 rpm. Blower motor horsepower shall be 60 horsepower. Blower discharge pressure specified above is the required pressure downstream of the discharge isolation butterfly valve. Blower manufacturer shall be responsible for design of the blower for inlet losses and discharge losses including the discharge isolation valve. Blower speed shall not exceed 80% of the recommended maximum speed for the selected blower.

integral drive end headplate

- B. The blower casing shall be of one piece with separate headplates, and shall be made of close-grained cast iron suitably ribbed to prevent distortion under the specified operating conditions.
- C. Each lobe shall be made from a ductile iron casting. Shafts shall be alloy steel forgings. The lobes shall be of the straight, tri-lobe involute type and shall operate without rubber



- 
- C. Each lobe shall be made from a ductile iron casting. Shafts shall be alloy steel forgings. The lobes shall be of the straight, tri-lobe involute type and shall operate without rubber or liquid seals or lubrication and shall be positively timed by a pair of accurately machine heat-treated alloy steel, helical tooth timing gears. The timing gears shall be mounted on the lobe shafts with a press fit and keyed. One gear shall be equipped with a hub and a gear to facilitate accurate and easy timing. Each lobe/shaft shall be supported by cylindrical roller bearings sized for a minimum of 100,000 hours B-10 life.
- D. The lube oil system shall be supplied with sight glasses and ample oil reservoir capacity. Piston ring oil seal shall be provided at each bearing, designed to prevent lubricant from leaking into the air stream. Rotary piston ring shaft seals shall be provided at the point where the shaft passes through the head plate (air seal). A total of 16 piston ring seals are to be provided for each blower. Further provision shall be made to vent the rotor side of the air seal to atmosphere to eliminate carryover of lubricant into the air stream. Lip seals inside the blower are not acceptable. Lip seal is allowed at the drive shaft only complete with wear sleeve.
- E. The timing gears and the bearings shall be splash oil lubricated from oil slingers mounted on the driven shaft and dipping in oil. Grease lubricated bearings are not acceptable. To further reduce oil leaks, each bearing must be equipped with an oil deflector disc.
- F. Each blower must be provided with stiffener ribs and heavy-duty casings, end plates and reinforced inlet and discharge flanges, so that blowers can be directly mounted on the base without using blower feet.
- G. Each blower shall be given a factory mechanical test to assure mechanical integrity. If the test indicates that adjustments are necessary to insure conformance to the manufacturer's standards, such adjustments shall be made prior to shipment.
- H. A welded steel fabricated base discharge silencer combination shall be provided for each blower. The base shall support the blower and a pivoting frame supporting the motor. The motor shall be mounted on the pivoting base complete with (2) springs to fine tune belt tension. The complete blower package shall be designed for placement inside an acoustical enclosure. Blower noise level without the acoustical enclosure shall be a maximum of 95 dbA within three feet of the blower. Installation shall conform to recommendations of the blower and V-belt components including motor, V-belt drive, guard, controls, and all necessary items.
- I. The motors shall be TEFC suitable for 460V, 3-phase, 60 Hz operation. Motors shall include three normally closed temperature switches embedded in the motor windings. Motor base shall be capable of sliding on the pivoting shaft for proper sheave alignment. Motors shall provide minimum efficiencies and power factors as follows:

60 Horsepower Motor

Percent of Full Load	Minimum Efficiency	Minimum Power Factor
100	95	84
75	96	82
50	95	75

J. Ten inch diameter inlet air filter/silencers shall be provided on the inlet of each blower. Inlet filter/silencer shall include sound absorbing materials. Inlet air filter shall be rated and sized to filter 150% of the maximum calculated airflow at specified local conditions. Filter element shall be immediately upstream of the blower inlet so no foreign materials enter the blower. Filter element shall be removable without the use of any tools. With the filter element removed, clear view of the blower rotors shall be provided.

not offered

K. Inlet and outlet expansion joints shall be provided for each blower constructed of synthetic elastomer with split steel retaining rings suitable for the pressure and vacuum service conditions and rated for 300°F continuous service. Outlet expansion joints shall be of the single wide arch design to allow 3/4-inch of lateral movement, and shall be located inside the acoustical enclosure.

Expansion joints provided external to enclosure, at inlet and outlet connections.

L. Pressure relief valve shall be provided for each blower. Pressure relief valve shall be installed as close to the blower discharge as feasible but outside of the acoustical enclosure. The pressure relief valve shall have an initial set pressure 1.0 psi over the specified design operating pressure. Pressure relief valve shall be weighted type relief valves, cast iron construction, as manufactured by United Blower, or approved equal. Pressure relief valve shall be rated and sized to relieve 110% of the maximum calculated airflow at the specified local conditions.

8" check valve

spring type

M. Ten inch diameter discharge check valves shall be provided on the discharge of each blower unit, outside of the acoustical enclosure and shall be Tozen Style CV-SST. Check valve shall be ductile iron with 316 SST shaft and plate, Inconel springs, and EPDM sealing member suitable for 300°F.

standard flap type check valve will be provided.

N. Ten inch diameter butterfly valves shall be provided on the discharge of each blower unit, outside of the acoustical enclosure and shall be Tozen wafer style butterfly valves. Butterfly valve shall be cast iron with 410 SST shaft, aluminum bronze disc, and EPDM seat.

provided by others

O. Provide molded, synthetic rubber and cork, vibration isolation pads for each blower, sized to fit the structural steel base. Isolators shall be as manufactured by Korfund or equal.

P. Provide a differential pressure gauge to indicate pressure drop through the air filter for each blower. Gauge shall be Model 2015 by Dwyer Instruments, Inc. or approved equal.

1. Range: 0 to 15 inches water gauge.
2. Accuracy: 2% of full scale.

Kaeser will provide standard gauges

3. Dial: 4-1/2"; 120° scale; 0.5 WC minor divisions.
  4. Mounting: Vertical
  5. Construction: Die cast aluminum case; silicone rubber diaphragm; calibrated range spring; samarium-cobalt magnet; heli of high magnetic permeability mounted in sapphire bearings; clear plastic cover with O-ring seal and zeroing screw; litho-printed scale; red-tipped pointer with rubber pointer stops.
  6. Vacuum gauge shall be located outside of the acoustical enclosure.
- Q. Provide a liquid filled pressure gauge for each blower. Gauge shall be Type 1008A manufactured by Ashcroft or approved equal.
1. Range: 0 to 15 psig.
  2. Accuracy: 1% of full scale.
  3. Dial: 4-inch diameter; 270° scale; heavy gauge aluminum with white background and black markings; 0.25 psig minor divisions.
  4. Case: Stainless steel.
  5. Ring: Stainless steel.
  6. Movement: Stainless Steel
  7. Bourdon Tube: Phosphor bronze, large bore tubing which is silver soldered to socket and tip.
  8. Connection: Forged brass 1/4" NPT black connection.
  9. Pressure gauge shall be located outside of the acoustical enclosure on the discharge piping.
- R. Provide a liquid filled bimetal thermometer for each blower manufactured by Ashcroft or approved equal.
1. Range: 50 to 300°F Series EL discharge and - 40 to 160°F inlet.
  2. Accuracy: 1% full span.
  3. Dial: 3" diameter; 270° scale; heavy gauge stainless steel with white background and black markings; 5°F minor divisions.
  4. Case: Stainless steel.
  5. Ring: Stainless steel.
  6. Movement: Stainless steel.

7. Actuating Element: Type 304 stainless steel, precision rolled, fully annealed tubing.
  8. Compensation: Bimetal compensator to offset ambient temperature changes in case area.
  9. Thermometer shall be located outside of the acoustical enclosure on the discharge piping.
- S. A high temperature switch for each blower shall be provided as manufactured by Ashcroft, Type 400, T4 Series, or approved equal with an operating range of 150° to 325°F. The maximum temperature capability shall be 400°F. Sensor is to be capillary type with remote 3-3/4" brass bulb. Contractor shall provide 1/2" FPT in discharge piping near blower for thermostat well. Piping under 4 inches will require a tee with bushings to mount the well. Piping 4 inches and over may be drilled and tapped. Temperature switch shall be installed by the blower manufacturer on the outside of the acoustical enclosure on the discharge piping installed by others. installed inside enclosure in blower block
- standard Kaeser switch installed in blower block
- T. A high pressure switch for each blower shall be provided as manufactured by Ashcroft, Type 400, B4 Series, or approved equal. Pressure switch operating range shall be from 1 to 20 psig. Actuator seal shall be Viton. Pressure switches shall have adjustable deadband, hermetically sealed switching element, and 316 stainless steel pressure port. Pressure switch shall be installed by the blower manufacturer on the outside of the acoustical enclosure on the discharge piping installed by others.
- U. Control of the positive displacement blower packages shall be as described in Section 17950 – Functional Control Descriptions.

## 2.02 ACOUSTICAL ENCLOSURE

- A. An individual acoustical close-fitting enclosure shall be provided for the blower package as specified herein and as shown on the Drawings. The acoustical enclosure shall be compatible with the positive displacement blower system furnished in this specification section and shall comprise a complete system. The acoustical enclosure shall reduce blower noise level to a maximum of 79 dbA within 3 feet of the enclosure. 73dBa
- B. The enclosure shall be constructed to easily accommodate service and maintenance functions. The enclosure shall have removable front and side panels.
- C. The enclosure shall include a removable 1-piece roof panel with 4 lifting eyes, which shall permit removal of blower and/or the motor without removal of the enclosure. The roof top shall be secured to the enclosure aluminum tubular frame with rotating latches (2 per side).
- D. Cooling air shall be drawn from outdoor air and shall be vented through louvers at the top of the vertical panels. Louvers shall be sized in conjunction with air draw. Blower supplier shall be responsible for ventilation system and shall provide details of design during Shop Drawing Submittal. Temperature shall be maintained to within 15°F of filter building ambient temperature in the enclosure by the ventilation system.
- E. Each close fitting enclosure shall be provided with four vertical panels secured to an aluminum tubular frame with quick connecting latches. The sub frame shall provide for

bolted

forklift pickup complete with two channels for the blower package support. Enclosure and blower package shall be shipped as an integral unit. In addition the (4) corner plates shall be welded to the sub base frame to provide anchor bolt holes. The roof frame shall be removable to remove blowers and motors vertically upwards.

F. Sound Absorption Panel Construction

16 gauge steel

1. Sound absorbing panels shall be minimum 2" thick and furnished in lengths, widths, and height as required. Panels shall consist of a 14 gauge galvanized steel perimeter channel frame and front face. All galvanizing shall be in accordance with Section 05035 – Galvanizing. Panel shall be adequately reinforced inside with stiffeners, to prevent twisting and racking during shipment and installation.
2. Each panel shall contain minimum 2" thick sound absorbing polyurethane foam, 4 lbs. PCF, applied in the factory.
3. Galvanized panels shall be welded construction and shall contain sound absorbing and insulating fill material with ratings not less than the following when tested in accordance with ASTM E84050T, NFPA Standard 255 or UL 723.

Flame Spread	-	15
Smoke Developed	-	0
Fuel Contribution	-	0

- G. Acoustical sound traps (foam lined) shall be furnished and installed, as required, to achieve the specified sound level. Sound trap construction shall conform to the following:

1. Outer casing shall be of 16 gauge galvanized steel, foam liner to be 2 inch.

- H. All enclosure fasteners and anchor bolts shall be Type 316 stainless steel.

### PART 3 -- EXECUTION

#### 3.01 INSTALLATION AND TESTING

- A. The equipment shall be installed in accordance with the instructions and drawings of the manufacturer and Section 11000 - Equipment General Provisions.
- B. All supports, fasteners, anchors, equipment, hardware, and other devices shall be furnished for a complete installation.
- C. Prior to field testing of blower equipment, the Contractor shall take all necessary precautions to insure that the piping is completely clean and free of any debris, dirt, or other foreign materials which could clog the underdrain system or interfere with acceptable operation.
- D. After each blower unit and its accessories have been completely installed and the electrical connections have been made, it shall be subjected to field tests conducted by the Contractor and witnessed by the Engineer to determine if it is free from all

objectionable vibration, bearing heating, noise or other defects. Vibration shall not exceed 3 mils at any bearing in any plane. Noise level shall be measured along each side of the enclosure to verify conformance to the maximum noise level specified. Each blower unit shall be subjected to running tests under actual operating conditions for a period of 4 hours during the field test. The Contractor shall make such changes or alterations to the blower units or their auxiliaries necessary for satisfactory operation as directed by the Engineer based on the results of the field tests.

### 3.02 PAINTING

- A. Painting shall be as specified in Section 09900 unless otherwise specified herein. Blowers shall be coated with the manufacturer's recommended premium paint system suitable for the blowers' intended use.
- B. All inaccessible surfaces of the equipment, which normally require painting, shall be finished painted by the manufacturer. The equipment and motor shall be painted with a high quality epoxy polyamide semi-gloss coating specifically resistant to chemical, solvent, moisture, and acid environmental conditions, unless otherwise specified.
- C. Gears, bearing surfaces, and other unpainted surfaces shall be protected prior to shipment by a heavy covering of rust-preventive compound sprayed or hand applied which shall be maintained until the equipment is placed in operation. This coating shall be easily removable by a solvent.

### 3.03 SPARE PARTS

- A. Furnish all special tools and appliances necessary to disassemble, service, repair and adjust the equipment and appurtenances.
- B. All materials shall be properly packed, labeled and stored where directed by the manufacturer or Engineer.
- C. Spare parts which are identical and interchangeable with the original parts shall be furnished in clearly identifiable and labeled containers. The Contractor shall provide the following spare parts:
  - Two (2) filter elements
  - One (1) year supply of manufacturers recommended oil
  - Complete set of seals, gaskets, and V-belts.
  - Spare sheaves as required to reduce air flow to 1000 scfm

### 3.04 EQUIPMENT IDENTIFICATION

- A. The blowers shall be provided with a substantial brass or stainless steel nameplate, securely fastened in a conspicuous place, and clearly inscribed with the manufacturer's name, year of manufacture, serial number, design air flow, pressure and rpm.

- END OF SECTION -



**OMEGA PLUS ROTARY BLOWERS**  
**- PACKAGE RECOMMENDATIONS -**

06/20/14  
 PAGE: 1

**Customer:** Richmond Rd WTP

**Prepared By:** D Breon

**INPUT DATA:**

Operating mode: Gauge pressure	Flow medium: Humid Air
Kind of package: Com-paK Plus	Specific heat constant $\kappa$ : 1.40
Inlet temperature : 105 °F	Specific weight at standard conditions : 0.076 lb/ ft <sup>3</sup>
Inlet pressure : 14.2 psi	Pressure difference : 5.8 psig
Air humidity: 90 [%]	Discharge pressure : 20.0 psi

Note: Temperature is above 104 °F . Please check with Kaeser!

**Technical data:**

NOTE: ACCESSORIES SHOWN ARE INTENDED FOR AIR USE ONLY.

<b>Package:</b> FB 621C	Blower speed: 2820 rpm
Blower: OMEGA 63P	Connection ANSI: 8"
Motor power: 60.0 hp	% of maximum speed: 81
Operating voltage: 460V/60Hz	Volumetric efficiency: 0.90

**Performance data:**

	<b>max. load</b>	<b>design point</b>
Blower: OMEGA 63P		
Pressure difference $\Delta p$ :	6.2 psig	5.8 psig
Inlet flow Q1*:	1606 icfm	1612 icfm
Inlet air flow Q1 (standard) : Standard conditions 14.7 psia, 68°F and 0 % RH		1356 scfm
Discharge temperature*:	183 °F	178 °F
Motor shaft power :	62.8 bhp	59.3 bhp
Blower shaft power*:		53.1 bhp
	<u>without sound enclosure</u>	<u>with sound enclosure</u>
Sound pressure level** :	90 dB(A)	73 dB(A)
Sound power level** :	107 dB(A)	91 dB(A)
Dimension [inches] (W x L x H)	58x 58 x 68	64x 75 x 76
Estimated Weight	ca. 2452 lbs	ca. 3576 lbs

\* Performance data to DIN ISO 1217, part 1, annex C  
 \*\*Measured to DIN EN ISO 2151, figures  $\pm 3$  dB(A), with sound isolated pipework  
  
 Motor shaft power includes belt losses in addition to dirty filter losses of 0.6 psig (40 mbar).



OMEGA PLUS ROTARY BLOWERS

06/20/14

- PACKAGE RECOMMENDATIONS -

PAGE 2

Customer: Richmond Rd WTP

Prepared By: D Breon

Kind of package: Com-paK Plus

Operating mode: Gauge pressure

Inlet temperature : 105 °F

Inlet pressure : 14.2 psi

Valve set pressure: 7.5 psig

Input inlet flow: 1545 icfm

Package: FB 621C

Blower speed: 2820 rpm

Blower: OMEGA 63P

Connection ANSI: 8"

Motor power: 60.0 hp

% of maximum speed: 81

Operating voltage: 460V/60Hz

Fan voltage: 115V/1Ph/60Hz

NOTE: ACCESSORIES SHOWN ARE INTENDED FOR AIR USE ONLY.

Accessories:

Unloaded start up valve: AFE45

Check plate: 8"

Instruments/ sensor:

Temperature gauge with switch point:

Pressure gauge:

Filter differential pressure switch:

oil level sensor:

speed monitor:

yes no

yes no

Sound enclosure:

Inlet silencer-suction from ambient:

Inlet silencer-suction from pipe:

Optional for package with sound enclosure

Sound enclosure for outdoor installation:

Auxiliary heating:

Omega P-GRD:

Standard equipment with s. encl.: 2x 2 1/2"

Blowoff valve, pressure gauge, filter with maintenance indicator

Standard equipment without s. encl.: 2x 2 1/2"

Blowoff valve, filter with maintenance indicator

Comments for project:





**OMEGA PLUS ROTARY BLOWERS**  
**- PACKAGE RECOMMENDATIONS -**

06/20/14  
 PAGE: 1

**Customer:** Richmond Rd WTP

**Prepared By:** D Breon

**INPUT DATA:**

Operating mode: Gauge pressure	Flow medium: Humid Air
Kind of package: Com-paK Plus	Specific heat constant $\kappa$ : 1.40
Inlet temperature : 105 °F	Specific weight at standard conditions : 0.076 lb/ ft <sup>3</sup>
Inlet pressure : 14.2 psi	Pressure difference : 5.8 psig
Air humidity: 90 [%]	Discharge pressure : 20.0 psi

Note: Temperature is above 104 °F . Please check with Kaeser!

**Technical data:**

NOTE: ACCESSORIES SHOWN ARE INTENDED FOR AIR USE ONLY.

<b>Package:</b> FB 621C	Blower speed: 2400 rpm
Blower: OMEGA 63P	Connection ANSI: 8"
Motor power: 60.0 hp	% of maximum speed: 69
Operating voltage: 460V/60Hz	Volumetric efficiency: 0.88

**Performance data:**

**design point**

Blower: OMEGA 63P		
Pressure difference $\Delta p$ :	7.7 psig	5.8 psig
Inlet flow Q1*:	1319 icfm	1346 icfm
Inlet air flow Q1 (standard) :		1132 scfm
Standard conditions 14.7 psia, 68°F and 0 % RH		
Discharge temperature*:	207 °F	180 °F
Motor shaft power :	62.3 bhp	49.4 bhp
Blower shaft power*:		44.1 bhp
	<u>without sound enclosure</u>	<u>with sound enclosure</u>
Sound pressure level** :	88 dB(A)	74 dB(A)
Sound power level** :	105 dB(A)	92 dB(A)
Dimension [inches](W x L x H)	58x 58 x 68	64x 75 x 76
Estimated Weight	ca. 2452 lbs	ca. 3576 lbs

\* Performance data to DIN ISO 1217, part 1, annex C  
 \*\*Measured to DIN EN ISO 2151, figures  $\pm 3$  dB(A), with sound isolated pipework  
 Motor shaft power includes belt losses in addition to dirty filter losses of 0.6 psig (40 mbar).



OMEGA PLUS ROTARY BLOWERS

06/20/14

- PACKAGE RECOMMENDATIONS -

PAGE 2

Customer: Richmond Rd WTP

Prepared By: D Breon

Kind of package: Com-paK Plus

Operating mode: Gauge pressure

Inlet temperature : 105 °F

Inlet pressure : 14.2 psi

Valve set pressure: 9.0 psig

Input inlet flow: 1189 icfm

Package: **FB 621C**

Blower speed: 2400 rpm

Blower: OMEGA 63P

Connection ANSI: 8"

Motor power: 60.0 hp

% of maximum speed: 69

Operating voltage: 460V/60Hz

Fan voltage: 115V/1Ph/60Hz

NOTE: ACCESSORIES SHOWN ARE INTENDED FOR AIR USE ONLY.

**Accessories:**

Unloaded start up valve: AFE45

Check plate: 8"

**Instruments/ sensor:**

Temperature gauge with switch point:

Pressure gauge:

Filter differential pressure switch:

oil level sensor:

speed monitor:

yes no

yes no

Sound enclosure:

Inlet silencer-suction from ambient:

Inlet silencer-suction from pipe:

**Optional for package with sound enclosure**

Sound enclosure for outdoor installation:

Auxiliary heating:

Omega P-GRD:

Standard equipment with s. encl.: 1x 3"

Blowoff valve, pressure gauge, filter with maintenance indicator

Standard equipment without s. encl.: 1x 3"

Blowoff valve, filter with maintenance indicator

**Comments for project:**

77) Dimensions in the table in Inch

17) Model	18) Motor	X*	Y*	Z*	19) Weight**
FB 441 C pr	40 hp	30 23/32	36 7/32	30 23/32	~ 3296 lbs
	50 hp	31 3/32			~ 3351 lbs
	60 hp	31 1/2			~ 3417 lbs
	75 hp	32 9/32		31 3/32	~ 3648 lbs
	100 hp	35 1/32	36 5/8		~ 3770 lbs
FB 821 C pr	125 hp	36 7/32	37	31 1/2	~ 4321 lbs
	40 hp	30 23/32	35 7/16	30 5/16	~ 3461 lbs
	50 hp	31 3/32	35 13/16		~ 3516 lbs
	60 hp	31 1/2	36 7/32		~ 3582 lbs
	75 hp	32 9/32	36 5/8	30 23/32	~ 3814 lbs
	100 hp	33 15/32	37		~ 3935 lbs
	125 hp	35 1/32	37 13/32	31 3/32	~ 4486 lbs
FB 791 C pr	150 hp	35 7/16	37 25/32		~ 4619 lbs
	175 hp	37 13/32	40 5/32	31 1/2	~ 5236 lbs
	40 hp	29 17/32	35 13/16	30 5/16	~ 3803 lbs
	50 hp	29 29/32	36 7/32		~ 3858 lbs
	60 hp	31 3/32	36 5/8		~ 3924 lbs
	75 hp	31 1/2	37	30 23/32	~ 4156 lbs
	100 hp	32 9/32	37 13/32		~ 4277 lbs
125 hp	33 15/32	37 25/32	31 3/32	~ 4828 lbs	
150 hp	34 1/4	38 3/16		~ 4960 lbs	

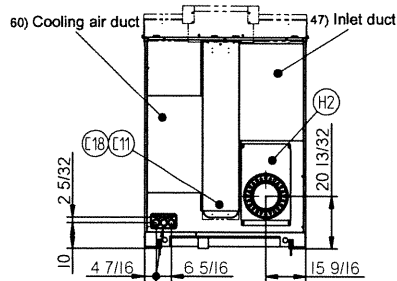
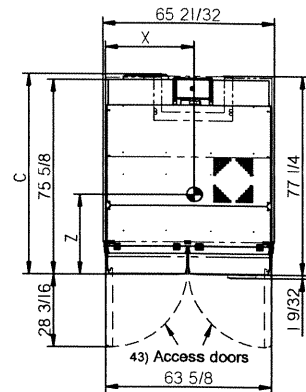
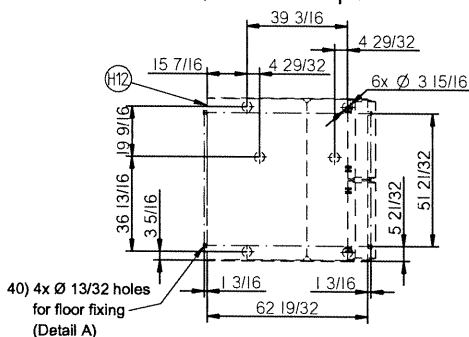
20) \* Center of gravity coordinates are approximate  
21) \*\* Guide value, actual weight can vary according to manufacturer.

Übersichtsbild des Kompressors

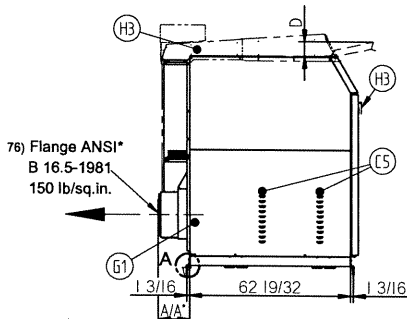
Einzelansichten der Kompressoren. Die in der Abbildung gezeigten Maße sind für die angegebenen Modelle. Die Maße der anderen Modelle sind in der Tabelle angegeben. Die Maße sind in Zoll angegeben.

Die Zeichnung zeigt die Kompressoren mit den angegebenen Optionen. Die Maße der anderen Modelle sind in der Tabelle angegeben. Die Maße sind in Zoll angegeben.

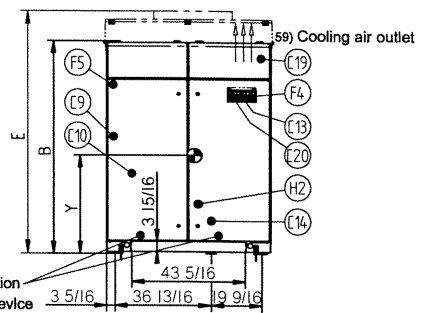
38) Foundation plan



61) Cable leadthrough  
3x grommets Ø 2 15/32  
5x grommets Ø 25/32



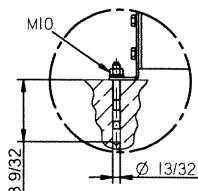
78) Flange ANSI\*  
B 16.5-1981,  
150 lb/sq.in.



84) Remove transportation securing device after installation!

7) Option	22) Option code
23) Oil level switch	C5
24) Pressure switch	C9
25) Speed monitor	C10
26) Unloaded start valve	C11
27) Temperature gauge switch	C13
28) Pressure sensor	C14
67) Pressure control start valve	C18
29) Thermostat	C19
30) Pressure gauge	C20
31) Filter maintenance indicator	F4
32) Filter pressure differential switch	F5
33) Check valve	G1
34) Auxiliary heating	H2
35) Outdoor installation	H3
36) Sound enclosure	H12

37) Detail A



1) Translation of texts in the installation/operating instructions

77) Dimensions in the table in Inch.

17) Model	ANSI	A / A*	B	C / C*	D	E
FB 441 C pr	8	9 1/16 / 8 15/32	75 19/32	74 13/16 / 74 7/32	8 27/32	87 13/32
FB 621 C pr						
FB 791 C pr	10	12 7/32 / 11 5/8	82 11/16	77 15/16 / 77 3/8	5 23/32	94 1/2

81) \*Dimensions without check plate (optional)

Änderungs-Nr.	Projektion	Maßstab	Datum	Name	KAESER KOMPRESSOREN	
	☉	1:37	Gez	15.10.2012	MYSRK1	
Dokument 1ZM 10234714 USE 00	Original	Bearb	07.12.2012	MYSRK1	Sprache	Baufr
Dokument 7ZB 10234714 D 00	Freigegeben	Freigegeben	07.12.2012	MYSRK1	USE	1 von 1
Status FREIGEgeben		Bezeichnung FBC.2 pr H12		Dimension and connection dim.		

810234714

**Jeff Berning**

---

**From:** Michael J. Donaway <[mdonaway@calgoncarbon-us.com](mailto:mdonaway@calgoncarbon-us.com)>  
**Sent:** Wednesday, June 25, 2014 11:38 AM  
**To:** Jeff Berning  
**Subject:** Re: KAW Richmond Rd WTP

Jeff, The budget price for GAC is as follows:

For the 8 filters, we would supply 8000 cuft (240,000#) F820 GAC as specified in 1000# supersacks on flatbed trucks. We would also provide (3) days field service supervisor on-site.. [REDACTED] delivered [REDACTED] total.

Note: (not included)  
Does not include any sand or gravel.  
Unloading of GAC from trucks by contractor.  
Installation of GAC by contractor... (we can loan eductor/hopper equipment for install)  
GAC sampling and analysis by contractor.

As discussed, if they want a pH stable product (not called for in the specification) add [REDACTED]

If you have any questions please let me know.

thanks,

Mike Donaway  
Calgon Carbon Corporation  
ph: 732-424-2089  
fx: 732-926-0597  
[www.calgoncarbon.com](http://www.calgoncarbon.com)

Jeff Berning <[Jeff.Berning@Layne.com](mailto:Jeff.Berning@Layne.com)>

To "[mdonaway@calgoncarbon-us.com](mailto:mdonaway@calgoncarbon-us.com)" <[mdonaway@calgoncarbon-us.com](mailto:mdonaway@calgoncarbon-us.com)>  
cc

06/25/2014 10:33 AM

Subject KAW Richmond Rd WTP

Please review and send over confirm email quote today. Include the pH stable info in the quote too for them to review.

Thanks

**JEFF BERNING**

Director of Preconstruction Services  
LAYNE | water + mineral + energy  
4520 N. SR 37 | Orleans, Indiana | 47455  
Office: 812-865-3232 | Cell: 812-889-1234 | Fax: 812-865-2234  
[jeff.berning@layne.com](mailto:jeff.berning@layne.com) | [layne.com](http://layne.com)

For more information please visit <http://www.symanteccloud.com>

[attachment "13221

Filter Media.pdf" deleted by Michael J. Donaway/HQPGH/CCC]

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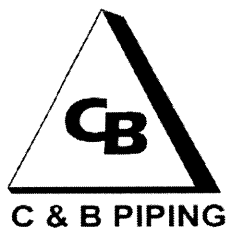
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**C&B PIPING, INC.**

ALAN FOOTE  
(205) 699-0455  
FAX (205) 699-0773  
[afoote@cbpiping.com](mailto:afoote@cbpiping.com)

PROJECT: (FOR LAYNE ONLY)  
RICHMOND ROAD STATION WATER TREATMENT PLANT  
BID: 6/26/14 @ 2 PM

REVISION:

ADDENDA:

ESTIMATOR: CUSTOMER'S LIST

OT

NET

14-062022

We are pleased to offer for your consideration, our proposal covering ductile iron pipe and fittings for the above referenced project.

The bill of material listed in our proposal is our interpretation of the contract drawings. It is offered as assistance in preparing your total estimate but is not guaranteed as to the final material that would actually be required. We could furnish you with piping layout drawings detailing all the the above with a bill of material which would be for approval prior to ordering and manufacturing.

C&B Piping, Inc. is a fabricator of ductile iron pipe. We will furnish and fabricate flange pipe, wall pipe and factory restrained joint cut/weld pieces for this project.

All prices are FOB factory with full truckload freight allowed to jobsite. We do not include sales or use taxes. Our payment terms are less 2% if paid in 10 days and full payment in 30 days. All past due invoices will be charged 1-1/2% interest per month.

**\*\* ESCALATION CLAUSE \*\***

Push-On and Restrained Joint pipe prices are firm for 90 days from bid date. Fabricated pipe & all fitting prices are firm for 6 months from bid date. All prices are subject to increase if not ordered within the above mentioned time periods.

Note the following:

PIPE - CLASS 350

Specification Specifics...

15000, Para. 2.01, D – All pipe exterior buried pipe restrained joint.

15006, Para. 1.01, A – Acceptable manufacturers.

15006, Para. 2.01, K&L – List acceptable restrained joints. I am choosing to use Mega-lug restrained glands at valves and wall pipe, as I believe will be approved by engineer these locations.

15006, Para. 2.01, F – Gaskets 1/8" rubber. I'm requesting Full Face for pricing and not ring called out. Bolts and Nuts ASTM A307, Grade B. I'm choosing at wetted or submerged locations to bid 304 SS hardware. Air scour pipe asking for full face Viton gaskets.

15390 – Schedules and Pressure Classes

Lastly, I good on valves, as specified manufacturers reps working

**IMPORTANT INFORMATION CONCERNING FLANGED PIPE**

30"-64" Flange Pipe fabricated by C&B Piping, Inc will be furnished with FLANGE-TYTE® Gaskets. Failure to use this gasket will result in voiding the manufacturer's warranty.

FLANGE-TYTE® GASKET

FULL FACE -1/8" THICKNESS - 3 O-RING SEAL FEATURE

Approximate Bolt Torque (ft-lb)

04" 06" 08" 10" 12" 14" 16" 18" 20" 24" 30" 36" 42" 48" 54" 60" 64"

150 PSI ---->

550 600 600

250 PSI ---->

90 90 90 90 90 110 110 120 120 130 140 160 585 625

350 PSI ---->

110 110 110 130 130 150 160 180 200 220

SEQ MARK	QUAN	UNIT	DESCRIPTION	TOTAL WEIGHT	UNIT PRICE	TOTAL PRICE
----------	------	------	-------------	--------------	------------	-------------

SEQ MARK	QUAN	UNIT	DESCRIPTION	TOTAL WEIGHT	UNIT PRICE	TOTAL PRICE
10						
20			EXPOSED PIPING			
30						
40			<b>FILTER BUILDING</b>			
50			<b>Chemical Feed Vault (Sheets M050)</b>			
60	1	EA	36"x 5' 6" FLG x PE DIP CL53 CL/PC			
70	1		36" FL Magnetic Flow Meter			
80	1		36" Restrained Flange Coupling Adapter			
90	1	EA	36"x 7' 6" FLG x PE DIP CL53 CL/PC 2- (1"NT)			
100	1	EA	36"x 12' 6" FLG x PE DIP CL53 CL/PC 2- (1"NT)			
110	4		36"x1" Tapping Saddle			
120	3	EA	36" FLG PAK RR GSKT & (A307B ) 32-1-1/2x7			
130	2		44.5" Galv. Steel Sleeve w/WC			
140	33		NA LS-500 Link Seal, Model S-316			
150						
160			<b>Service Water (SW)</b>			
170			<b>Feed to Influent Flumes</b>			
180	1	EA	48"x 4' 0" TF x WC x TMJ DIP CL53 CL/PC			
190	1	EA	48" MJ ACC SET C153 W/STUDS			
200	1	EA	48"x 1' 0" FLG x FLG DIP CL53 CL/PC			
210	1	EA	48" FLG 90 C110 CL/PC			
220	1	EA	48"x 1' 9" FLG x WC x FLG DIP CL53 CL/PC			ASSUMED FLG X FLG
230			<b>Flumes to Individual Filters</b>			
240	8	EA	20"x 1' 0" TF x WC x PE DIP CL53 CL/PC			
250	8	EA	20"x 5' 0" FLG x FLG DIP CL53 CL/PC			
260	8	EA	20"x 1' 6" TF x TF DIP CL53 CL/PC			
270	8	EA	20"x 0' 6" FLG x FLG DIP CL53 CL/PC			
280	8		20" X 3.5' FL Butterfly Valve w/EMO floor stand operator			
290	16	EA	20" FLG PAK RR GSKT & (A307B ) W/ STUD B&N			
300	8	EA	20" FLG PAK RR GSKT & (304SS) W/ STUD B&N			SUBMERGED
310	8	EA	20" FLG PAK RR GSKT & (304SS) 20-1-1/8x5			SUBMERGED
320						
330			<b>Filtered Water (FTW)</b>			
340	8	EA	30"x 1' 6" TF x WC x TF DIP CL53 CL/PC			
350	8	EA	30"x 0' 9" FLG x FLG DIP CL53 CL/PC			
360	8	EA	30" FLG CROSS C110 CL/PC			
370	8	EA	30" BLIND FLG C110 /PC			
380	8	EA	30x16" FLG CON RED C110 CL/PC			
390	8	EA	16" FLG BASE 90 C110 CL/PC			
400	8		16" Restrained Flange Coupling Adapter			
410	8	EA	16"x 7' 9" FLG x PE DIP CL53 CL/PC 1- (1"NT)			
420	8		16" FL Butterfly Valve w/EMO - Modulating			
430	8	EA	16"x 1' 0" FLG x FLG DIP CL53 CL/PC			
440	8	EA	16" FLG BASE TEE C110 CL/PC			
450	8	EA	16"x 1' 6" FLG x FLG DIP CL53 CL/PC			
460	8		16" FL Butterfly Valve w/EMO			
470	8	EA	16" FLG 90 C110 CL/PC			
480	8	EA	16"x 5' 6" FLG x WC x PE DIP CL53 CL/PC			
490	1	EA	48"x 14' 0" PE x WC x PE DIP CL53 CL/PC			
500	8	EA	30" FLG PAK RR GSKT & (A307B ) W/ STUD B&N			
510	24	EA	30" FLG PAK RR GSKT & (A307B ) 28-1-1/4x6.5			
520	80	EA	16" FLG PAK RR GSKT & (A307B ) 16-1x4.5			
530						
540			<b>Backwash Supply (BW)</b>			
550	1	EA	20"x 2' 3" TF x WC x TMJ DIP CL53 CL/PC			
560	1	EA	20" MJ ACC SET C153 W/STUDS			
570	1	EA	20"x 0' 6" FLG x FLG DIP CL53 CL/PC			
580	2	EA	20" FLG 90 C110 CL/PC			
590	1	EA	20"x 1' 0" FLG x FLG DIP CL53 CL/PC			



SEQ MARK	QUAN	UNIT	DESCRIPTION	TOTAL WEIGHT	UNIT PRICE	TOTAL PRICE
600	1	EA	30x20" FLG CON RED C110 CL/PC			
610	1	EA	30"x 16' 6" FLG x PE DIP CL53 CL/PC			
620	1		30" Restrained Flange Coupling Adapter			
630	1		30" FL Magnetic Flow Meter			
640	1	EA	30"x 7' 3" FLG x FLG DIP CL53 CL/PC			
650	1	EA	30" FLG 90 C110 CL/PC			
660	3	EA	30" FLG CROSS C110 CL/PC			
670	1	EA	30" FLG TEE C110 CL/PC			
680	4	EA	30"x 17' 6" FLG x FLG DIP CL53 CL/PC			
690	1	EA	30"x 2' 8" FLG x FLG DIP CL53 CL/PC			
700	3	EA	30"x 5' 0" FLG x FLG DIP CL53 CL/PC			
710	8		30" FL Butterfly Valve w/EMO			
720	8	EA	30"x 2' 0" FLG x FLG DIP CL53 CL/PC 1- (1"NT)			ASSUMED 2' LONG
730	8		36x1" Tapping Saddle			
740	8		1" Air Release Valve			
750	48	EA	30" FLG PAK RR GSKT & (A307B ) 28-1-1/4x6.5			
760	4	EA	20" FLG PAK RR GSKT & (A307B ) 20-1-1/8x5			
770	1	EA	20" FLG PAK RR GSKT & (A307B ) W/ STUD B&N			
780						
790			<b>Backwash Waste (BWW)</b>			
800	8	EA	20"x 2' 3" TF x WC x TMJ DIP CL53 CL/PC			
810	8	EA	20" MJ ACC SET C153 W/STUDS			
820	8	EA	20"x 0' 9" FLG x FLG DIP CL53 CL/PC			
830	8		20" FL Butterfly Valve w/EMO			
840	8	EA	20" FLG PAK RR GSKT & (304SS) W/ STUD B&N			SUBMERGED
850	8	EA	20" FLG PAK RR GSKT & (304SS) 20-1-1/8x5			SUBMERGED
860						
870			<b>Filter to Waste (FTW)</b>			
880	8	EA	16"x 1' 0" FLG x FLG DIP CL53 CL/PC			
890	8		20" FL Butterfly Valve w/EMO			
900	8		16" Restrained Flange Coupling Adapter			
910	8	EA	16"x 9' 6" FLG x FLG DIP CL53 CL/PC			
920	12	EA	16" FLG 90 C110 CL/PC			
930	1	EA	16"x 8' 0" FLG x FLG DIP CL53 CL/PC			
940	1	EA	16" FLG TEE C110 CL/PC			
950	4	EA	16"x 17' 6" FLG x FLG DIP CL53 CL/PC			
960	3	EA	16"x 6' 0" FLG x FLG DIP CL53 CL/PC			
970	3	EA	16" FLG CROSS C110 CL/PC			
980	1	EA	16"x 12' 6" FLG x FLG DIP CL53 CL/PC			
990	1	EA	16"x 1' 6" FLG x FLG DIP CL53 CL/PC			
1000	1	EA	16"x 15' 0" FLG x FLG DIP CL53 CL/PC			
1010	1	EA	16"x 0' 6" FLG x FLG DIP CL53 CL/PC			
1020	1	EA	16"x 4' 0" FLG x WC x TMJ DIP CL53 CL/PC			
1030	1	EA	16" MJ ACC SET C153 W/STUDS			
1040	1	EA	16" FLG PAK RR GSKT & (A307B ) W/ STUD B&N			
1050	61	EA	16" FLG PAK RR GSKT & (A307B ) 16-1x4.5			
1060						
1070			<b>Air Scour (ASC)</b>			
1080			<b>Blower Discharge</b>			
1090	2		12" FL Swing Check Valve			
1100	1	EA	12"x 1' 0" FLG x FLG DIP CL53 UNL/PC			
1110	2		12" FL Butterfly Valve w/Lever Operator			
1120	4	EA	12" FLG 90 C110 UNL/PC			
1130	2	EA	12"x 6' 0" FLG x FLG DIP CL53 UNL/PC			
1140	2	EA	12"x 3' 0" FLG x FLG DIP CL53 UNL/PC			
1150	1	EA	12" FLG TEE C110 UNL/PC			
1160	1	EA	12"x 17' 6" FLG x PE DIP CL53 UNL/PC			
1170	17	EA	12" FLG PAK FKM GSKT & (A307B ) 12-7/8x4			
1180			<b>Filter Bldg. Exterior Wall &amp; Gallery</b>			



SEQ MARK	QUAN	UNIT	DESCRIPTION	TOTAL WEIGHT	UNIT PRICE	TOTAL PRICE
1190	1	EA	12"x 2' 0" TF x WC x TMJ DIP CL53 UNL/PC			
1200	1	EA	12"x 17' 6" FLG x FLG DIP CL53 UNL/PC			
1210	1	EA	12"x 8' 6" FLG x FLG DIP CL53 UNL/PC			
1220	1	EA	12" FLG 90 C110 UNL/PC			
1230	1	EA	12"x 1' 6" TF x WC x TF DIP CL53 UNL/PC			
1240	1	EA	12"x 1' 0" FLG x FLG DIP CL53 UNL/PC			
1250	7	EA	12" FLG TEE C110 UNL/PC			
1260	3	EA	12" FLG 90 C110 UNL/PC			
1270	8	EA	12"x 17' 6" FLG x FLG DIP CL53 UNL/PC			
1280	6	EA	12"x 7' 0" FLG x FLG DIP CL53 UNL/PC			
1290	8	EA	12"x 0' 6" FLG x FLG DIP CL53 UNL/PC			
1300	8		12" FL Butterfly Valve w/EMO			
1310	8	EA	12" FLG TEE C110 UNL/PC			
1320	16		12" FL Swing Check Valve			
1330	16		12" FL Butterfly Valve, Chain Wheel Operator			
1340	8	EA	12"x 1' 0" FLG x FLG DIP CL53 UNL/PC			
1350	8	EA	12"x 9' 0" FLG x FLG DIP CL53 UNL/PC			
1360	16	EA	16x12" FLG 90 C110 UNL/PC			
1370	16	EA	06"x 1' 6" TF x WC x TF DIP CL53 UNL/PC			
1380	16	EA	06" FLG PAK FKM GSKT & (A307B ) W/ STUD B&N			
1390	3	EA	12" FLG PAK FKM GSKT & (A307B ) W/ STUD B&N			
1400	115	EA	12" FLG PAK FKM GSKT & (A307B ) 12-7/8x4			
1410						
1420			<b>CHLORINE CONTACT BASIN</b>			
1430			<u>Influent/Effluent</u>			
1440	4	EA	48"x 1' 6" TMJ x WC x TMJ DIP CL53 CL/PC			
1450	4	EA	48" MJ ACC SET C153 W/STUDS			
1460	2	EA	48"x 7' 6" FLG x PE DIP CL53 CL/PC			
1470	2	EA	48" FLG BASE 90 C110 CL/PC			
1480	2	EA	48" FLG PAK RR GSKT & (A307B ) 44-1-1/2x8			
1490			<u>Overflow</u>			
1500	1	EA	42"x 2' 0" FLG x WC x PE DIP CL53 CL/PC			ASSUMED 2' LONG
1510	1		42" X 6.08' FL Butterfly Valve w/Floor Stand w/Hand-Crank Operator			
1520	1	EA	42" FLG PAK RR GSKT & (A307B ) 36-1-1/2x7.5			
1530			<u>Basin Drains</u>			
1540	1	EA	06"x 1' 6" FLG x WC x PE DIP CL53 CL/PC			
1550	1		06" X 5' 0" FL Gate Valve w/Extension Stem w/2" Nut Operator			
1560	1	EA	06" FLG PAK RR GSKT & (304SS) 8-3/4x3.5			SUBMERGED
1570			<u>Backwash Tank Feed Lines</u>			
1580	2	EA	18"x 1' 6" TF x WC x TF DIP CL53 CL/PC			
1590	2	EA	18"x 2' 0" TMJ x WC x TMJ DIP CL53 CL/PC			ASSUMED 2' LONG
1600	2	EA	18" MJ ACC SET C153 W/STUDS			
1610	3	EA	18"x 1' 0" FLG x FLG DIP CL53 CL/PC			
1620	1		18" X 9.0' FL Butterfly Valve w/Floor Stand, Open/Close EMO			
1630	1	EA	18"x 12' 6" FLG x PE DIP CL53 CL/PC			
1640	2	EA	18" EBAA MEGAFLANGE 2100 REST FCA			IN LIEU OF FCA
1650	1	EA	18"x 17' 6" FLG x FLG DIP CL53 CL/PC			
1660	1	EA	18"x 9' 0" FLG x PE DIP CL53 CL/PC			
1670	7	EA	18" FLG PAK RR GSKT & (304SS) 16-1-1/8x5			SUBMERGED
1680	4	EA	18" FLG PAK RR GSKT & (304SS) W/ STUD B&N			SUBMERGED
1690						
1700			<b>BACKWASH TANK</b>			
1710			<u>Future Reservoir Connection</u>			
1720	1	EA	18"x 1' 6" TF x WC x TF DIP CL53 CL/PC			
1730	1	EA	18"x 1' 0" FLG x FLG DIP CL53 CL/PC			
1740	1		18" X 9.0' FL Butterfly Valve w/Floor Stand w/Hand-Crank Operator			
1750	1	EA	18" FLG PAK RR GSKT & (304SS) 16-1-1/8x5			SUBMERGED
1760	1	EA	18" FLG PAK RR GSKT & (304SS) W/ STUD B&N			SUBMERGED
1770			<u>Backwash Tank Influent - Contact Tanks</u>			

SEQ MARK	QUAN	UNIT	DESCRIPTION	TOTAL WEIGHT	UNIT PRICE	TOTAL PRICE
1780	1	EA	18"x 1' 6" TF x WC x TF DIP CL53 CL/PC			
1790	1	EA	18"x 1' 0" FLG x FLG DIP CL53 CL/PC			
1800	1		18" X9.0' FL Butterfly Valve w/Floor Stand, Modulating EMO			
1810	1	EA	18" FLG PAK RR GSKT & (304SS) 16-1-1/8x5			SUBMERGED
1820	1	EA	18" FLG PAK RR GSKT & (304SS) W/ STUD B&N			SUBMERGED
1830			<b><u>Backwash Tank Influent - High Service Pumps</u></b>			
1840			<b><u>NOTE: Pipe in CHLORINE CONTACT BASIN above</u></b>			
1850	1		18" X 9.0' FL Butterfly Valve w/Floor Stand w/EMO??			
1860			<b><u>Backwash Pump Discharge</u></b>			
1870	2	EA	18"x 2' 0" FLG x PE DIP CL53 CL/PC			
1880	2	EA	18" EBAA MEGAFLANGE 2100 REST FCA			IN LIEU OF FCA
1890	2	EA	18x06" FLG TEE C110 CL/PC			IN LIEU OF 18X4" FLG TEE
1900	2	EA	06x04" FLG CON RED C110 CL/PC			IN LIEU OF 18X4" FLG TEE
1910	2		18" FL Check Valve			
1920	2	EA	18"x 2' 6" FLG x FLG DIP CL53 CL/PC			
1930	2	EA	18" FLG 90 C110 CL/PC			
1940	2	EA	18"x 7' 0" FLG x PE DIP CL53 CL/PC			
1950	12	EA	18" FLG PAK RR GSKT & (A307B ) 16-1-1/8x5			
1960						
1970			<b>TOTAL FOR EXPOSED PIPING</b>			
1980						
1990						
2000						
2010			<b>YARD PIPING</b>			
2020						
2030			<b><u>High Service Pump Discharge - RELOCATION (Sheets C05)</u></b>			
2040	2	EA	16" MJ SLV SP C153 TL/TC 2-WRDIS			IN LIEU OF RJ SHORT SLEEVE
2050	1	EA	16" R.J. TEE CL/TC			
2060	350	FT	16" R.J. DIP CLASS 350 17'9 NOM CL/TC			
2070	1	EA	16" R.J. 45 CL/TC			
2080	3	EA	16" R.J. 90 CL/TC			
2090	1	EA	16" R.J. 22.5 CL/TC			
2100	1	EA	16" MJ CAP C153 CL/TC			
2110						
2120			<b><u>Service Water (SW), Tie-In to New Filter Building</u></b>			
2130	2	EA	30" MJ SLV SP C153 TL/TC 2-WRDIS			IN LIEU OF RJ SHORT SLEEVE
2140	2	EA	30" R.J. TEE (C) CL/TC			
2150	2	EA	48x30" R.J. CON RED CL/TC			
2160	430	FT	48" R.J. DIP CLASS 350 19'6 NOM CL/TC			
2170	2	EA	48" R.J. 45 (C) CL/TC			
2180	1	EA	48" R.J. WYE CL/TC			
2190	1	EA	48" R.J. 11.25 (C) CL/TC			
2200	1	EA	48" MJ SLV SP C153 TL/TC 2-WRDIS			IN LIEU OF RJ SHORT SLEEVE
2210						
2220			<b><u>Backwash Wash Water (BWW), Filter Building to Structure "YI-1"</u></b>			
2230			<b><u>Filter Building to Structure "YI-1"</u></b>			
2240	350	FT	20" R.J. DIP CLASS 350 17'8 NOM CL/TC			
2250	3	EA	20" R.J. 90 CL/TC			
2260	6	EA	20" R.J. TEE CL/TC			
2270	2	EA	20" MJ SLV SP C153 TL/TC 2-WRDIS			IN LIEU OF RJ SHORT SLEEVE
2280			<b><u>Structure "YI-1" to Existing MH "D"</u></b>			
2290	520	FT	20" P.O. JOINT DIP CLASS 350 20' NOM CL/TC			
2300						
2310			<b><u>Filter to Waste (FTW), Filter Building to Structure "YI-1"</u></b>			
2320	40	FT	16" R.J. DIP CLASS 350 17'9 NOM CL/TC			
2330	1	EA	16" R.J. 90 CL/TC			
2340						
2350			<b><u>Backwash Supply (BWS), Backwash Water Supply Pumps to Filter Building</u></b>			
2360	106	FT	24" R.J. DIP CLASS 350 17'8 NOM CL/TC			

SEQ MARK	QUAN	UNIT	DESCRIPTION	TOTAL WEIGHT	UNIT PRICE	TOTAL PRICE
2370	1	EA	24" R.J. 90 CL/TC			
2380	2	EA	24" R.J. TEE CL/TC			
2390	1	EA	24" R.J. PLUG CL/TC			
2400						
2410			<b>Filter Water (FLW)</b>			
2420	590	FT	48" R.J. DIP CLASS 350 19'6 NOM CL/TC			
2430	6	EA	48" R.J. TEE (C) CL/TC			
2440	5	EA	48" R.J. 45 (C) CL/TC			
2450	6		48" MJ Butterfly Valve			
2460	12	EA	48" WEDGE RESTRAINT SET (DI)			
2470	6		Valve Boxes			
2480	3	EA	48" R.J. 90 (C) CL/TC			
2490	2	EA	48x36" R.J. CON RED CL/TC			
2500	2		36" MJ Butterfly Valve			
2510	2	EA	36" MJ ACC SET C153			
2520	2		Valve Boxes			
2530	1	EA	48x30" MJ CON RED BB C153 CL/TC			
2540	1	EA	30" MJ SLV SP C153 TL/TC			
2550	1	EA	30" MJ TEE C153 CL/TC			
2560						
2570			<b>Filtered Water (FTW) - UNDER Filter Building</b>			
2580	4	EA	48x16" R.J. CROSS CL/TC			
2590	8	EA	16" R.J. 90 CL/TC			
2600	1	EA	48" R.J. TEE (C) CL/TC			
2610	60	FT	48" R.J. DIP CLASS 350 19'6 NOM CL/TC			
2620	20	FT	16" P.O. JOINT DIP CLASS 350 20' NOM CL/TC			
2630	1	EA	48"x 9' 0" PE x PE DIP CL53 CL/PC			
2640	3	EA	48"x 3' 0" PE x PE DIP CL53 CL/PC			
2650	2	EA	48" R.J. PLUG (C) CL/TC			
2660						
2670			<b>Air Scour (ASC)</b>			
2680	1	EA	12" R.J. 90 CL/TC			
2690						
2700			<b>TOTAL FOR YARD PIPING</b>			
2710						
2720			<b>TOTAL FOR EXPOSED AND YARD PIPING - MATERIALS LISTED ABOVE</b>			
2730						
2740						



CORPORATE OFFICE  
200 42nd Avenue North  
Nashville, Tennessee 37209  
800-737-0707

759 Phillips Lane  
Lexington, KY 40504  
859-254-4242  
www.shermandixie.com

**To: All Bidders**

**From: Dan Tilghman**

**Bid Date: 6/20/14**

**Date: 6/20/14**

**Re: KY American Water-Richmond Road  
Lexington, Kentucky**

**Quote: 442303**

Gentlemen

Sherman-Dixie is pleased to quote the above captioned project. We wish you success on your bid and trust that we may be of service to you.

See attached detail for item information. Terms outlined below pertain to all quotes unless otherwise specified.

**EXTRAS:**

No provision has been made for cut-outs, holes, special shapes, fixtures, etc. as may be required by other trades unless indicated on quotation or pre-arranged prior to fabrication of precast products.

- **CUSTOMER MUST VERIFY CASTING TYPE, SIZE AND QUANTITY WHEN PLACING ORDER.**

**DELIVERY:**

Unless noted, the prices quoted are **F.O.B jobsite** in truckload quantities on vendor's trucks as near The Buyer's job-site as can be reached by a fully loaded truck under its own power. Customer to offload Precast Material, unless previously agreed upon in writing.

**TAXES:**

Prices quoted **DO NOT** include any state or local sales tax which may be applicable.

**DELAYS:**

It is understood that all agreements are contingent upon strikes, lock-outs, embargoes, delays of carriers, acts of God, inability to secure labor or materials, restrictions imposed by any governmental agency, and other delays beyond our control. If delivery of all or part of the merchandise within the contract time is prevented by any of the foregoing causes, then this contract shall be void without penalty to either party for any undelivered portion.

**DURATION OF PRICES QUOTED:**

Prices are based on acceptance of the entire attached quotation within thirty (30) days of the bid date for the project described in the attached quotation and the approval of our submittals or shop drawings by the Engineer or Contractor and the Seller's acceptance of the Buyer's credit qualifications.

**DURATION OF PRICES:**

Prices are guaranteed for ninety (90) days from time of order. Price is subject to change after ninety (90) days.

**PAYMENT TERMS: Net 30 days.**

Very truly yours,

*Dan Tilghman*

*Cell Phone 502-645-8070*

Sherman-Dixie Concrete Industries

ACCEPTED:

By: \_\_\_\_\_ Date: \_\_\_\_\_ Firm: \_\_\_\_\_

\*\*\* SALES QUOTE \*\*\*

BID Date: 6/20/2014  
Quote: 442303

To:  
All Bidders



Sherman Dixie Concrete Ind., Inc.  
Phone: (800) 737-0707  
Email: sales@shermamdixie.com

Re:  
KY AMERICAN WATER-RICHMOND RD  
LEXINGTON, KENTUCKY  
ENGINEER: HAZEN & SAWYER

Quantity	Description	Unit Price	CK KY41 Ext. Price
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**NOTE: PRICES INCLUDE DELIVERY IN FULL TRUCKLOAD QUANTITIES WITH CUSTOMER OFF-LOADING PRECAST MATERIAL UNLESS OTHER ARRANGEMENTS ARE PREVIOUSLY AGREED UPON IN WRITING.**

PLEASE CONFIRM CASTING TYPE AT TIME OF ORDER/SALE.

PRICES DO NOT INCLUDE ENGINEERING RELATED, FEES, SERVICES, CALCULATIONS OR DESIGN.

QUOTES ARE FOR REFERENCE ONLY. CONTRACTORS ARE RESPONSIBLE FOR THE ACCURACY OF THEIR OWN TAKEOFFS.

ALL DELIVERIES SUBJECT TO APPLICABLE FUEL SURCHARGES AT TIME OF DELIVERY. DELIVERIES UNDER 25,000#'s OR \$3,000.00 WILL BE SUBJECT TO DELIVERY CHARGES.

PLEASE ADD SALES TAX.

PRICES ARE BASED ON ITEMS TAKEN FROM **PLANS DATED 6/2014**. ACTUAL FIELD VARIANCES MAY ALTER PRICES.

DURATION OF PRICES: PRICES ARE GUARANTEED FOR NINETY (90) DAYS FROM TIME OF ORDER. PRICE IS SUBJECT TO CHANGE AFTER NINETY (90) DAYS.

By signing this quote, you acknowledge placing this order with SDCI with the instruction to proceed with the manufacture of these products.

Accepted:

Date:

P. O. Number

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\*\*\* SALES QUOTE \*\*\*

Page 1 of 2

BID Date: 6/20/2014  
Quote: 442303

To:  
All Bidders



Sherman Dixie Concrete Ind., Inc.  
Phone: (800) 737-0707  
Email: sales@shermandidixie.com

Re:  
KY AMERICAN WATER-RICHMOND RD  
LEXINGTON, KENTUCKY  
ENGINEER: HAZEN & SAWYER

CK KY41  
Ext. Price

Quantity	Description	Unit Price	Ext. Price
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\*\*\* PROPOSED STORM DRAINAGE - RCP PER ASTM C-76 \*\*\*

504 FT 12" C3 RCPx8'

\*\*\* PRECAST CONCRETE STORM STRUCTURES PER ASTM C913 \*\*\*

- 1 EA 12" SBO TYPE 1 HDW
- 1 EA SET GRATES
- 9 EA YARD INLETS
- 9 EA JBS 4075 FRAME/GRATE

PRICES DO NOT INCLUDE SHAPED INVERTS.

\*\*\* PRECAST CONCRETE MANHOLES PER ASTM C478 \*\*\*  
(FOR SANITARY USE)

- 3 EA 4' DIA SANITARY MANHOLE - 6.00' AVG HT  
FOR ADDITIONAL 48" RISERS, ADD..... [REDACTED] VF
- 3 EA JBS 1140 SANITARY FRAME/COVER

NOTE: MANHOLE PRICES INCLUDE XYPEX. EXCLUDES CONSHIELD.

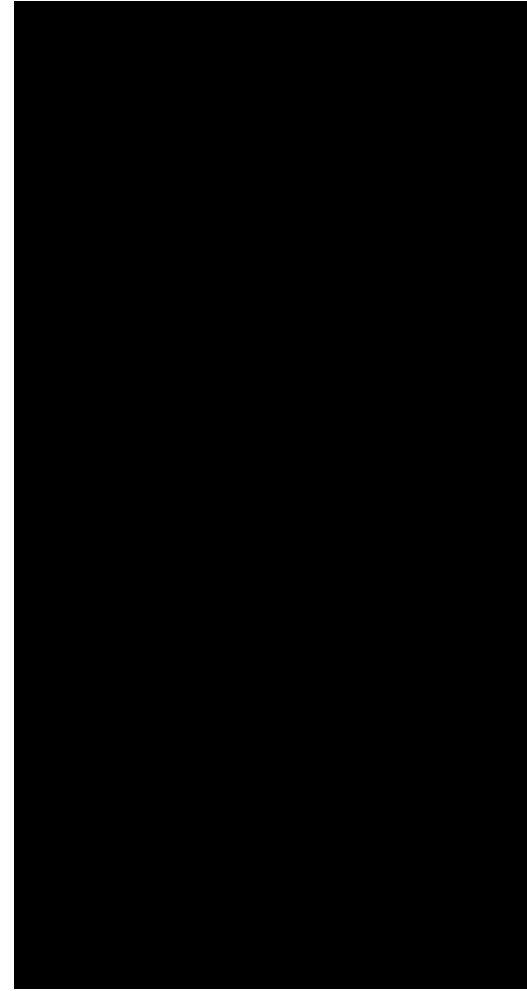
- 1 EA 8'x4' BACKWASH WATER VAULT - 7.90' HT  
(IN LIEU OF 6'x4')
- 1 EA 30"x30" APS 300# PSF ALUMINUM HATCH

HATCH PRICING INCLUDES ALL ACCESSORIES SPECIFIED,  
INCLUDING THE REQUIRED SKIRT.  
ALL HATCHES TO BE CAST INTO TOP SLABS REQUIRE SKIRTS.

Manhole Prices Include: Base Sections, Risers, Tops, Butyl Joint Sealant, Xypex Admixture, Pipe Connectors and Shaped Inverts.  
Manhole Prices DO NOT Include Cost of Frames and Covers, Conshield nor Coating.

PUMPS, ELECTRIC, VALVES, ETC. BY OTHERS.  
PRICE DOES NOT INCLUDE ANY NON-PRECAST CONCRETE ITEMS.  
PRICES DO NOT INCLUDE COATINGS THAT MAY BE REQUIRED,

Terms Set Forth by Sherman Dixie





300 Milford Parkway • Milford OH 45150 • (513) 965-5300 Phone • (513) 965-5314 Fax  
www.rawdonmyers.com

<b>TO:</b>	<b>Layne Construction – Ted Wagner</b>	<b>Date:</b>	<b>June 23, 2014</b>
<b>RE:</b>	<b>KY American – Richmond Road</b>	<b>Page:</b>	<b>1</b>
<b>Quote No:</b>	<b>062314-01</b> <b><u>BUDGETARY ONLY</u></b>	<b>By:</b>	<b>Al Sheldon</b> <b>asheldon@rawdonmyers.com</b>

We are pleased for the opportunity to quote as follows.

Butterfly Valves: DeZurik  
O-C EMOs: Auma  
Modulating: Beck or Rexa  
Check Valves: Apco  
Air Valves: Apco

#### Buried Valves

Qty. 2 36" butterfly valve, mj less accessories, class 150B, with gear, extension and nut.  
Qty. 6 48" butterfly valve, mj less accessories, class 150B, with gear, extension and nut.

#### Flanged Filter Valves

Qty. 8 12" butterfly valve, class 150B, open-closed EMO.  
Qty. 24 20" butterfly valve, class 150B, open-closed EMO.  
(8 of these with floorstand and extension)  
Qty. 8 16" butterfly valve, class 150B, open-closed EMO.  
Qty. 8 16" butterfly valve, class 150B, modulating Beck or Rexa.  
Qty. 8 30" butterfly valve, class 150B, open-closed EMO.

Other

- Qty. 8        2" threaded air release valve.
- Qty. 2        12" double door air service check valve.
- Qty. 2        12" air service butterfly valve with manual gear.
- Qty. 16       12" air cushioned swing check valve, flanged.
- Qty. 16       12" butterfly valve, flanged, class 150B, with chainwheel and chain.
- Qty. 1        42" butterfly valve, class 150B, with extension, floorstand and handwheel.
- Qty. 2        6" gate valve, flanged, with extension and nut.
- Qty. 3        18" butterfly valve, class 150B, floorstand, extension and open-closed EMO.
- Qty. 1        18" butterfly valve, class 150B, floorstand and modulating Beck or Rexa.
- Qty. 2        18" air cushioned swing check valve, flanged.
- Qty. 2        4" combination air valve, flanged.

Total Current Budget Price 

**Price does not contain adjustments for inflation beyond 2015. We estimate to add 5% if valves will ship in the year 2016.**

TERMS

Prices are based on receipt of an order for all items.  
Payment: Net 30 days.  
FOB shipping point with truck freight prepaid and allowed to jobsite.  
No taxes are included.  
We do not guarantee accuracy in quantities or sizes.  
Any items not specifically named in our quotation are considered to be furnished by others.  
Complete terms and conditions are included in the next page.  
Rawdon Myers Inc. does not enter into subcontract agreements. Purchase orders are the only acceptable form of ordering.





# WIGLESWORTH PLUMBING & HEATING, INC.

5439 Stewart Road  
Lexington, Kentucky 40516  
(859) 299-7484 Fax: 293-2533

Since 1939

Fax # (812) 865-2130

6/26/14

Layne Co ADD Ted Wagner

Page ①

Re Ky American Water

Filter Buldy - Chlorine Contact Basin  
Based on 6070

## HVAC

All HVAC on Pages H01 to H03 H100 to

H101

TOTAL QUOTE

## Process

Chemical Feed Vault P.M050

Flowid, Chlorine, Phosphate, Ammonia Piping in  
Vault w/ Injection Quits \* NO Trapping Saddles

Filtred Water Contact Vault Sample Line P.M100

Chlorine Contact Basin Sample Line P.M100

Chlorine Feed Piping in Effluent Contact Vault P.M101

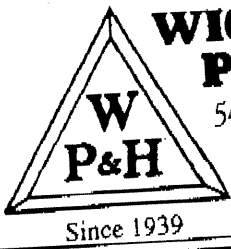
Chlorine Feed 1" Filter Influent Line 48" Settled Water  
Line P.M101

Chlorine Contact Basin Sample Lines (2) P.M200

Chlorine Analyzer to hook up P.I200

Turbidity meters to hook up Total of 9 P.I100





# WIGLESWORTH PLUMBING & HEATING, INC.

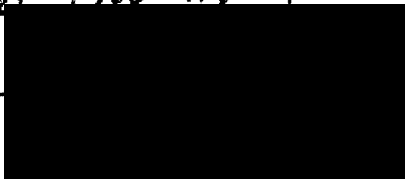
5439 Stewart Road  
Lexington, Kentucky 40516  
(859) 299-7484 Fax: 293-2533

Page 2

Filter Loss of Heads Transmitters to hook up  
TOTAL of 8 P.I 100

Filter Rate of Flow Transmitters to hook up  
TOTAL of 8 P.I 100

PH Meter to hook up P.I 200  
Sample Pumps to hook up P.I 100 (no Pumps)  
TOTAL Quote



### \* Exclusions

All Small piping stub out 5'-0" from  
Structure

Did not figure any underground gas  
piping to make up Air Unit outside  
Filter Building. Had money in budget  
to hook up unit above ground

Have any question let me  
know

*Paul Wiglesworth*



JEFF HALL ELECTRIC INC  
P.O BOX 212  
ORLEANS, IN 47452  
PH: 812-865-4020 FAX: 812-865-4321  
mark@jeffhallelectric.com

ELECTRICAL SCOPE: RICHMOND ROAD STATION WATER TREATMENT PLANT

BID PRICE: [REDACTED]

DATE: 6/25/14

ITEMS COVERED IN SCOPE

1. ELECTRICAL SCOPE PER PLANS AND SPECS, EXCEPTIONS LISTED BELOW
2. SWITCHGEAR, START-UP, TRAINING AND STUDY BY SQUARE D
3. ELECTRICAL TESTING PER SPECS 16000 SECTION 1.09
4. ALLOWED FOR 100 FOOT OF TWO EMPTY 4 INCH CONDUITS FOR PRIMARY POWER FROM UTILITY COMPANY
5. 50 FOOT FROM CHEMICAL BUILDING #2 TO NEW GENERATOR AS WELL AS EMERGENCY SOURCE DISCONNECT AND ASSOCIATED DISTRIBUTION PANELBOARD
6. FURNISH AND INSTALL LOW VOLTAGE MOTOR CONTROL EQUIPMENT INCLUDING INDIVIDUALLY ENCLOSED VARIABLE FREQUENCY DRIVES AND REDUCED VOLTAGE SOLID STATE STARTERS
7. FURNISH AND INSTALL POWER PANELBOARDS, LIGHTING PANELBOARDS, DRY TYPE TRANSFORMERS, PACKAGED POWER CENTERS, AND OTHER LOW VOLTAGE ELECTRICAL POWER DISTRIBUTION EQUIPMENT
8. FURNISH AND INSTALL ALL ABOVEGROUND AND UNDERGROUND RACEWAY SYSTEMS INCLUDING CONDUIT, FITTINGS, BOXES, AND OTHER PERTINENT COMPONENTS
9. INSTALL NEW FIELD INSTRUMENTATION, NEW CONTROLS EQUIPMENT, AND CONTROL EQUIPMENT RELOCATED FROM EXISTING FILTER BUILDING TO THE NEW FILTER BUILDING
10. FURNISH AND INSTALL NEW LIGHTING SYSTEMS AND WIRING DEVICES
11. FIXTURE SCHEDULE:
  - 34-LITHONIA #DMW 2 54T5HO MVOLT GEB10PS90 LP841
  - 3-LITHONIA #ECR LED HO
  - 4-LITHONIA #EU2 LED M12
  - 1-LITHONIA #ELA LED WP M12
  - 1-LITHONIA #TWR1 LED 50K MVOLT DDB
12. FURNISH AND INSTALL FIBER OPTIC CABLE FROM FILTER BUILDING PLC TO EXISTING FIBER ENCLOSURE
13. GROUNDING SYSTEM WITH GROUND MAT AND TEST WELLS \*(NOT IN 60%--- [REDACTED])
14. LIGHTNING PROTECTION
15. COUNTY ELECTRICAL INSPECTION FEE [REDACTED]
16. TEMPORARY ALLOWANCE [REDACTED] (WIRING UP JOB TRAILERS)
17. SALES TAX 6% [REDACTED]

ITEMS NOT COVERED IN SCOPE

1. HVAC
2. GENERATOR AND AUTOMATIC TRANSFER SWITCH
3. INSTALLATION OF UNDERGROUND PULL BOXES
4. EXCAVATION AND BACKFILL, NO CONCRETE
5. NO FIELD DEVICES, VALVES, PUMPS, MOTORS, NO ITEMS OF THIS KIND
6. NO INSTRUMENTATION FURNISHED OR INSTALLED: IE. FLOW MEASURING, LEVEL MEASURING, FLOATS, ETC. WIRE ONLY
7. CONCRETE PADS AND POLE LIGHT BASES
8. FEES: POWER CO. PHONE CO., ETC

Our energy working for you™



## Quotation

Cummins Crosspoint, LLC.  
 9820 Bluegrass Pkwy  
 Louisville KY 40299 United States  
 Direct: (502)495-0677

June 24, 2014

Project Name: KAW

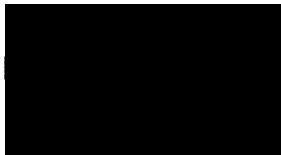
Quotation: 110000000249937

Thank you for your inquiry. We are pleased to quote as follows:


Item	Description	Qty
	<b>Diesel Genset: 60Hz-500/455kW</b>	
500DFEK	Genset-Diesel,60Hz,500kW-Standby Rating	1
A331-2	Duty Rating-Standby Power	1
L090-2	Listing-UL 2200	1
L225-2	OSHPD Seismic Certification	1
L170-2	EmissionCert,EPA,Tier 2,NSPS CI Stationary Emergency	1
F202-2	Enclosure-Steel,SndAtt,Level 2,Base Mtd,w/ExhSys	1
C209-2	Fuel Tank-Subbase,1700 Gallon,UL142 Compliant	1
R002-2	Voltage-277/480,3 Phase,Wye,4 Wire	1
B246-2	Alternator-60 Hz, 12 Lead, Limited Range, 125/105C	1
H643-2	SET CONTROL-PCC 2100	1
H536-2	Display Language-English	1
H605-2	Display-Control,Graphical	1
H606-2	Meters-AC Output,Analog	1
KP60-2	Interface-CommunicationsNtwk,FTT-10	1
H679-2	Control Mounting-Front Facing	1
A292-2	Heater-Alternator, 120 Volt AC	1
KU94-2	CB or EB or TB-Right Only	1
KC64-2	Circuit Breaker-600A,Right Side,3-Pole, UL 600,IEC 690, 100%	1
KB72-2	CB or EB or TB-Bottom Entry, Right	1
P175-2	Enclosure Color-Green,Steel Enclosure	1
L163-2	Listing, ULC-S601-07	1
H657-2	Distribution Panel-Prewired AC Features	1
K102-2	ServiceReceptacle-120V,20A,ExternalGFCI,NEMA 5-20R	1
C127-2	Separator-Fuel/Water	1
B786-2	Battery Charger-12 Amp, Regulated	1
E074-2	Engine Cooling-Radiator, 50C Ambient	1
H389-2	Shutdown-Low Coolant Level	1
H557-2	Coolant Heater-208/240/480V, Below 40F Ambient Temp	1
D041-2	Engine Air Cleaner-Normal Duty	1
L028-2	Genset warranty- Base, Standby 2 years	1
0541-0814-02	Annunciator Kit-w/Enclosure	1
600 amps	Russelectric ATS per specs	1
3 hour	load bank test	1

4 hour	build load test	1
start up & test	after installation	1
oil sample	kits	10
spare	filters	1
insulating	rubber mats	1
step down	transformer for housing electric package	1

**Grand Total**



**Notes/Adders:**

1. If spare parts are required for transfer switch add  to above price.

All start-ups are quoted using normal working hours. Premium hours to include weekend, holiday, or overtime are not used unless specified above.

We must receive your purchase order within 30 days to guarantee this price.

This quotation does not include any applicable tax or permits. Taxes will be charged on this project unless a current tax exempt form is provided with purchase order.

This quotation is F.O.B. job site, off-loading by others. Equipment will be invoiced at time of shipment

This quotation does not include common pipe, conduit or wire required for installation.

This quotation does not include any installation costs.

This quotation does not include fuel.

This quotation includes (1) set of Operation & Maintenance Manuals.

Our payment terms are Net 30 unless otherwise specified.

Start up will not be scheduled or completed until the full invoice less retainage has been paid.

All purchases are final. Cummins Crosspoint LLC has a no return policy on all commercial power generation products.

We have detailed the equipment proposed. Please check to be certain that it meets your requirements as we reserve the right to correct errors or omissions

**Submitted by**

**Jason Schneider , Area Account Manager**

[jason.g.schneider@cummins.com](mailto:jason.g.schneider@cummins.com)

**Cell: 502-648-8575**

**Fax: (502)499-7499**



Emerson Process Management  
Power & Water Solutions, Inc.  
Water Automation Solutions  
200 Beta Drive  
Pittsburgh, PA 15238  
Tel 1 (412) 963-4000

**June 25, 2014**

**Layne**  
**4520 North State Road 37**  
**Orleans, IN 47452**  
**T. 812-865-3232**

**Attention:** Jeff Berning

**Reference:** KAW Lexington, KY - Richmond Road Station WTP Improvements.  
Emerson Process Management Power & Water Solutions, Inc.,  
Offer No. WAM14060205

Dear Mr. Berning

Emerson Process Management Power & Water Solutions Inc., Water Automation Solutions (Emerson) is pleased to submit this offer to Layne for its equipment and services on the above referenced project.

Emerson's offer is based on the final 60% Submission Contract documents for this project, the attached Terms and Conditions of Sale (Form B), and any clarifications, exceptions, or exclusions submitted with this offer.

**Scope of work:**

1. Project Management
2. Kick-Off Meeting
3. Instrumentation Submittal
4. Hardware Submittal
5. Software Submittal
6. ControlWave RTU Programming
7. Existing Iconics Gen32 HMI Programming
8. Factory Acceptance Test
9. On-Site Progress Meeting (estimate 1)
10. Instrument Commissioning
11. RTU Hardware Commissioning including Input/Output Checkout
12. On-Site Start-Up / Testing of items 5 & 6
13. Site Acceptance Test
14. Punch-List
15. Operations & Maintenance Manual (electronic and 4 hard copies included)
16. On-Site Training (estimate 1 week)

**Scope of supply:**

1. Manufacture and supply one complete ControlWave RTU cabinet (FB) with control buttons and lights on the front Panel
2. Supply a set of field instruments as per section 17000 (See Appendix B for a detailed list)
3. Hard copies of O&M Manuals
4. Although not required in the 60% design documents, Emerson's proposal includes 1 week of on-site training for Instruments and Controls.

**General Clarifications and Exclusions**

**1. Materials not included**

No Spare Instruments or control equipment (RTU) are included in this offer.

Emerson's scope of supply is exclusive of any Filter Consoles.

Emerson's scope of supply is exclusive of any surge protection devices or signal isolators on either RTU I/O or field instrumentation side.

Any electrical wire (power, signal, communications, grounding or other), fiber optic cable, fiber optic patch panels, conduit, junction boxes, and/or other material and hardware pertaining to the installation of equipment, including but not limited to, ground wires, ground lugs, ground rods, wire labels, wire lugs and/or connectors.

Any mounting, fastening and support hardware and materials (such as nuts, bolts, washers, Unistrut, channels, antenna mounting hardware, cable hanging kits, etc.), custom installation hardware, special brackets and U-bolts/V-bolts, lightning rods, antenna towers, poles, and masts of any kind, mounting stands, pipe stands, etc. for instruments and/or other equipment, and concrete bases that may be required to mount panels, instruments and/or other equipment unless explicitly mentioned in the bill of material.

**2. Services**

All physical installation and electrical installation (including but not limited to moving, mounting and fastening of equipment, signal wiring and terminations, Fiber Optic cable testing and termination, communication wiring and terminations, power wiring and terminations, and ground wiring and terminations), will be by others.

**3. General**

Emerson's scope is exclusive of any interdisciplinary site coordination.

All on site shipments, receiving, handling, safe storage, and local transportation will be by others.

Except for the materials and services specifically defined in Emerson's bill of material, all materials and services are excluded from Emerson's scope of supply.

Delivery shall be subject to confirmation after receipt of a purchase order.

Emerson's standard warranty as defined in its standard terms and conditions shall apply.

Thank you for the opportunity to submit this budgetary offer. Should you have any questions or require additional information, please feel free to contact your local representative, Roger Labrecque 860-778-3672, or me at 412-963-3871.

Very truly yours,

*Daniel Kippelen*

Daniel Kippelen  
Senior Proposal Engineer  
Emerson Process Management  
Power & Water Solutions, Inc.

Attachment(s): Commercial Description  
Appendix A – Accessories  
Appendix B – Field Instruments  
Terms and Conditions of Sale Form B (01 08)  
Emerson Software License Agreement

**Commercial Description**

This document defines the commercial basis under which Emerson makes this offer to Layne for the supply, programming, and startup of a Panel and Instruments for the Richmond Road WWTP new filter building.

<b>Terms and Conditions</b>	This budgetary offer expressly limits acceptance to the terms of this offer including the terms and conditions set forth in the Emerson Process Management Terms and Conditions of Sale Form B (01 08) and the Software Licensing Agreement, as included with this offer.
<b>Pricing</b>	The price for the system, as offered, is [REDACTED] Delivery shall be FOB jobsite (Lexington, KY). Any optional field service pricing included in this offer is valid up to 90 days after the last major product shipment.
<b>Services</b>	Field engineering and training offered by Emerson and accepted by the Contractor that are not used within three (3) months of the delivery of the system will expire and become unavailable. If expired services are prepaid, a pro-rated portion of the fees for such expired services will be refunded.
<b>Terms of Payment</b>	Emerson Process Management would like to work with you in developing a mutually agreeable milestone payment schedule. A typical payment schedule is shown below.  Invoices will be issued for each of the following deliverable line items with payment due net 30 days from the date of the invoice. The amount of each invoice shall be calculated by applying the percentages (%) shown below against the total Purchase Order price including any changes.  5%     Upon Contract Award 20%    Upon Initial Drawings Submittal 45%    Upon Factory Acceptance Test 25%    Upon System Shipment (on pro rata basis) 5%     Upon Customer Acceptance (but in any event not later than 90 days after last major product shipment)
<b>Delivery</b>	Emerson will deliver the offered system based upon a mutually agreed upon delivery schedule.  If, after the project has started, the Contractor requests a delay in delivery, installation, or acceptance testing of any of the products or services purchased under this offer, then Emerson reserves the right to invoice for payment for all goods and services provided to date, and close out the project. Upon Emerson's request, the Contractor will issue a new purchase order for any remaining scope of supply using the previously offered pricing.
<b>Bid Validity</b>	This offer shall remain valid for ninety (90) days from the date of this letter, unless otherwise extended, modified, or withdrawn in writing by Emerson. The return of a purchase order acceptable to Emerson during such validity period will be sufficient to form an agreement based exclusively on the terms and conditions of this offer.
<b>Proprietary Information</b>	This offer and any subsequent communications relative to this offer are considered to be proprietary information of Emerson. Accordingly, please do not publish, use, reproduce, transmit, or disclose to others outside your organization any information contained in this offer without prior written consent by Emerson.



**Appendix A – RTU Cabinets Accessories**

Item	Description	Reference or P/N	Qty
1	ControlWave PAC 8-slot Chassis	CW Seg 10 - 3	1
2	24VDC Power Supply	CW Seg 20-3	1
3	CPU, 1-ENET, 3-RS 232, 1-RS 485	CW Seg 30-02	1
4	8 AI, 4-20 mA - Int. or Ext. powered AI	CW Seg 50-03	1
5	8 AO, Without read back 4-20 mA	CW Seg 50-07	1
6	32 DI, Sel. Int or Ext powered Dry Contact	CW Seg 50-09	1
7	32 DO, Open Drain - 500 mA	CW Seg 50-11	1
8	16 DO Without read back, 500 mA	CW Seg 50-12	1
9	FL Switch SMCS 14TX/2FX	2700997	1
11	3U Patch Panel Fiber connector housing	1X00114H01	1
12	6 Fiber ST Ceramic MM Conn. Insert	1X00117H01	1

**Appendix B – Field Instruments**

Item	Buyout	Spec No.	QTY
1	Venturi Flow Tubes 10"	17611	8
2	Level Switches	17670	4
3	Pressure Switches	17675	2
4	Magnetic Flow Meter 20"	17701	1
5	Magnetic Flow Meter 36"	17701	1
6	Ultrasonic Water Level Measurement	17740	8
7	Ultrasonic Bed Expansion Systems	17740	2
8	Submersible Level Sensor	17749	1
9	Differential Pressure Indicating Transmitters	17760	16
10	Temperature Indicating Transmitter	17770	1
11	Resistance Temperature Detector	17772	1
12	PH Meter, Complete Kits	17801	2
13	Turbidity Analyzers, Complete Kits	17821	9
14	Chlorine Analyzers, Complete Kits	17831	2

## TERMS AND CONDITIONS OF SALE

These terms and conditions, the attendant quotation or acknowledgment, and all documents incorporated by reference therein, binds seller (i.e. Fisher Controls International LLC, Rosemount Inc., Fisher-Rosemount Systems Inc., or other Emerson Process Management Group Company) hereinafter the Seller, and the buyer, hereinafter Buyer, and constitutes the entire agreement (Agreement) between Buyer and Seller for the provision of services (Services) and/or the sale of goods (Goods) including (except as provided in Section 10) firmware incorporated therein.

1. **PRICES:** Unless otherwise specified by Seller, Seller's price for the Goods and/or Services shall remain in effect for thirty (30) days after the date of Seller's quotation or acceptance of the order for the Goods/Services, whichever is delivered first, provided an unconditional, complete authorization for the immediate manufacture and shipment of the Goods and/or provision of Services pursuant to Seller's standard order processing procedures is received and accepted by Seller within such time period. If such authorization is not received by Seller within such thirty (30) day period, Seller shall have the right to change the price for the Goods/Services to Seller's price in effect for the Goods/Services at the time the order is released to final manufacture. Prices for Goods do not cover stoning, installing, starting up or maintaining Goods unless expressly stated in Seller's quotation. Notwithstanding the foregoing, the price for Goods/Services sold by Seller, but manufactured by others, shall be Seller's price in effect at the time of shipment to Buyer.

2. **DELIVERY, ORDER ACCEPTANCE AND DOCUMENTATION:** All shipping dates are approximate and are based upon Seller's prompt receipt of all necessary information from Buyer to properly process the order. Notwithstanding any provisions to the contrary in this or other documents related to this transaction, and regardless of how price was quoted, whether FOB, FAS, CIF or otherwise, legal title to the Goods and risk of loss thereto shall transfer to Buyer as follows: for sales in which the end destination of the Goods is within the United States, upon delivery to the freight carrier at the shipping point, for sales in which the end destination of the Goods is outside of the United States, immediately after the Goods have passed beyond the territorial limits of the United States. Acceptance of all orders placed by Buyer pursuant to this Agreement shall take place exclusively in Austin, Texas. Seller shall provide Buyer with that data/documentation which is specifically identified in the quotation. If additional copies of data/documentation or non-standard data/documentation are to be provided by Seller, they shall be provided to Buyer at Seller's price then in effect. Data/documentation marked as confidential or proprietary may not be reproduced or used for any purpose other than the purpose for which it was provided and may not be disclosed to third parties without the prior written permission of Seller.

3. **EXCUSE OF PERFORMANCE:** Seller shall not be liable for delays in performance or for non-performance due to failure or interruption of computer or telecommunication systems, acts of God, war, not, fire, terrorism, labor trouble, unavailability of materials or components, explosion, accident, compliance with governmental requests, laws, regulations, orders or actions, or other unforeseen circumstances or causes beyond Seller's reasonable control. In the event of such delay, the time for performance or delivery shall be extended by a period of time reasonably necessary to overcome the effect of the delay.

4. **TERMINATION AND SUSPENSION BY BUYER:** Buyer may terminate or suspend its order for any or all of the Goods/Services covered by the Agreement only upon Seller's written consent or pursuant to Seller's applicable policy or practices covering such termination or suspension.

5. **LIMITED WARRANTY:** Subject to the limitations contained in Section 6 herein, Seller warrants that the licensed firmware embodied in the Goods will execute the programming instructions provided by Seller, and that the Goods manufactured by Seller will be free from defects in materials or workmanship under normal use and care and Services will be performed by trained personnel using proper equipment and instrumentation for the particular Service provided. The foregoing warranties will apply until the expiration of the applicable warranty period. Goods are warranted for twelve (12) months from the date of initial installation or eighteen (18) months from the date of shipment by Seller, whichever period expires first. Consumables and Services are warranted for a period of 90 days from the date of shipment or completion of the Services. Products purchased by Seller from a third party for resale to Buyer ("Resale Products") shall carry only the warranty extended by the original manufacturer. Buyer agrees that Seller has no liability for Resale Products beyond making a reasonable commercial effort to arrange for procurement and shipping of the Resale Products. If Buyer discovers any warranty defects and notifies Seller thereof in writing during the applicable warranty period, Seller shall, at its option, correct any errors that are found by Seller in the firmware or Services or repair or replace F.O.B. point of manufacture that portion of the Goods or firmware found by Seller to be defective, or refund the purchase price of the defective portion of the Goods/Services. All replacements or repairs necessitated by inadequate maintenance, normal wear and usage, unsuitable power sources or environmental conditions, accident, misuse, improper installation, modification, repair, use of unauthorized replacement parts, storage or handling, or any other cause not the fault of Seller are not covered by this limited warranty, and shall be at Buyer's expense. Seller shall not be obligated to pay any costs or charges incurred by Buyer or any other party except as may be agreed upon in writing in advance by Seller. All costs of dismantling, reinstallation and freight and the time and expenses of Seller's personnel and representatives for site travel and diagnosis under this warranty clause shall be borne by Buyer unless accepted in writing by Seller. Goods repaired and parts replaced by Seller during the warranty period shall be in warranty for the remainder of the original warranty period or ninety (90) days, whichever is longer. This limited warranty is the only warranty made by Seller and can be amended only in a writing signed by Seller. THE WARRANTIES AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE. THERE ARE NO REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, AS TO MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE OR ANY OTHER MATTER WITH RESPECT TO ANY OF THE GOODS OR SERVICES.

6. **LIMITATION OF REMEDY AND LIABILITY:** SELLER SHALL NOT BE LIABLE FOR DAMAGES CAUSED BY DELAY IN PERFORMANCE. THE REMEDIES OF BUYER SET FORTH IN THIS AGREEMENT ARE EXCLUSIVE. IN NO EVENT, REGARDLESS OF THE FORM OF THE CLAIM OR CAUSE OF ACTION (WHETHER BASED IN CONTRACT, INFRINGEMENT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE), SHALL SELLER'S LIABILITY TO BUYER AND/OR ITS CUSTOMERS EXCEED THE PRICE TO BUYER OF THE SPECIFIC GOODS MANUFACTURED OR SERVICES PROVIDED BY SELLER GIVING RISE TO THE CLAIM OR CAUSE OF ACTION. BUYER AGREES THAT IN NO EVENT SHALL SELLER'S LIABILITY TO BUYER AND/OR ITS CUSTOMERS EXTEND TO INCLUDE INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES. THE TERM "CONSEQUENTIAL DAMAGES" SHALL INCLUDE, BUT NOT BE LIMITED TO, LOSS OF ANTICIPATED PROFITS, REVENUE OR USE AND COSTS INCURRED INCLUDING WITHOUT LIMITATION FOR CAPITAL, FUEL AND POWER, AND CLAIMS OF BUYER'S CUSTOMERS.

7. **PATENTS:** Subject to the limitations contained in Section 6, Seller shall defend any suits brought against Buyer based on a claim that use of the Goods manufactured by Seller constitutes an infringement of a valid patent of the United States, and shall pay any damages awarded therein against Buyer, provided that Buyer promptly notifies Seller in writing of the filing of such suit or the threat thereof, permits Seller to control completely the defense or compromise of such claim of infringement, and provides all reasonable assistance and cooperation requested by Seller for the defense of such suit. In the event that only the Goods manufactured by Seller are held to be infringing in such suit and their use is enjoined, Seller shall, at its sole option and expense, provide a commercially reasonable alternative, including, but not limited to, procuring for Buyer the right to continue using the Goods, replacing them with a non-infringing product or modifying them so they become non-infringing. Buyer agrees that Seller shall not be liable for infringement, and that Buyer shall fully indemnify Seller therefore, if infringement is based upon the use of Goods in connection with goods not manufactured by Seller or in a manner for which the Goods were not designed by the Seller or if the Goods were not designed by the Seller or if the Goods were designed by the Buyer or were modified by or for the Buyer in a manner to cause them to become infringing.

8. **TAXES:** Any tax or governmental charge payable by the Seller because of the manufacture, sale or delivery of the Goods, or provision of Services, may at Seller's option be added to the price herein specified. The foregoing shall not apply to taxes based upon Seller's net income.

9. **TERMS OF PAYMENT:** Unless otherwise agreed by Seller, and subject to the approval of Seller's Credit Department, terms are F.O.B. shipping point, net 30 days from date of Seller's invoice in U.S. currency, except for applicable milestone payments or export shipments for which Seller may require other arrangements. Freight charges may include shipping and handling charges, and Buyer shall pay all such charges. If any payment owed to Seller hereunder is not paid when due, it shall bear interest, at a rate to be determined by Seller which shall not exceed the maximum rate permitted by law, from the date on which it is due until it is received. Seller shall have the right, among other remedies, either to terminate the Agreement or to suspend further deliveries under this and/or other agreements with Buyer in the event Buyer fails to make any payment hereunder when due. Buyer shall be liable for all expenses attendant to collection of past due amounts, including attorneys' fees.

10. **SOFTWARE AND FIRMWARE:** Notwithstanding any other provision herein to the contrary, Seller or applicable third party owner shall retain all rights of ownership and title in its respective firmware and software, including all copyrights relating to such firmware and software and all copies of such firmware and software. Except as otherwise provided herein, Buyer is hereby granted a nonexclusive, royalty free license to use firmware and software, and copies of firmware and software, incorporated into the Goods only in conjunction with such Goods and only at the Buyer's plant site where the Goods are first used. Buyer's use of certain firmware (as specified by Seller) and all other software shall be governed exclusively by Seller's and/or third party owner's applicable license terms.

11. **BUYER SUPPLIED DATA:** To the extent that Seller has relied upon any data or information supplied by Buyer to Seller ("Data") in the selection or design of the Goods and/or provision of the Services and the preparation of Seller's quotation, and the Data is inadequate or inaccurate, any warranties or other provisions contained herein which are affected by such conditions shall be null and void.

12. **EXPORT/IMPORT:** Buyer agrees to comply with all applicable import and export control laws, regulations, orders and requirements, including without limitation those of the United States and the European Union, and the jurisdictions in which the Seller and Buyer are established or from which items may be supplied.

**GENERAL PROVISIONS:** (a) Buyer shall not assign its rights or obligations under the Agreement without Seller's prior written consent. (b) There are no understandings, agreements or representations, express or implied, not specified in the Agreement. (c) No action, regardless of form, arising out of transactions under the Agreement, may be brought by either party more than two (2) years after the cause of action has accrued. (d) Any modification of these terms and conditions must be set forth in a written instrument signed by a duly authorized representative of Seller. (e) The Agreement is formed and shall be construed, performed and enforced under the laws of the State of Missouri. However, Buyer and Seller agree that the proper venue for all actions arising under the Agreement shall be only in the USA and in the State where the Goods involved in such actions were manufactured. (f) UNLESS OTHERWISE SPECIFICALLY PROVIDED IN SELLER'S QUOTATION, GOODS AND SERVICES HEREUNDER ARE NOT INTENDED FOR USE IN ANY NUCLEAR OR NUCLEAR RELATED APPLICATIONS. Buyer (i) accepts Goods and Services in accordance with the restriction set forth in the immediately preceding sentence, (ii) agrees to communicate such restriction in writing to any and all subsequent purchasers or users and (iii) agrees to defend, indemnify and hold harmless Seller from any and all claims, losses, liabilities, suits, judgments and damages, including incidental and consequential damages, arising from use of Goods and Services in any nuclear or nuclear related applications, whether the cause of action be based in tort, contract or otherwise, including allegations that the Seller's liability is based on negligence or strict liability. (g) The 1980 United Nations Convention on Contracts for the International Sale of Goods does not apply to this Agreement. (h) If any provision of the Agreement is invalid under any statute or rule of law, such provision, to that extent only, shall be deemed to be omitted without affecting the validity of the remainder of the Agreement. (i) Seller specifically objects to the application of any Federal Acquisition Regulation ("FAR") or other governmental procurement provision or clause to the Agreement. (j) The rights, remedies and protections afforded to Seller under this Agreement, including but not limited to indemnification of Seller, limitation of remedy and liability and limited warranty shall extend to Seller and to its affiliates, subsidiaries or related companies performing or supplying work, services or products under this Agreement or any agreement into which it is incorporated by reference. (k) Seller does not agree to: (i) indemnify Buyer, or (ii) name Buyer as an additional insured.



**KENTUCKY**  
**AMERICAN WATER**

**Construction Management at Risk Proposal**

**Richmond Road Station Filter Building  
Lexington, KY**

June 26, 2014





June 26, 2014

Mr. Zachery Dukes  
Kentucky American Water Company  
2300 Richmond Road  
Lexington, KY 40502

Dear Mr. Dukes and Members of the Selection Committee:

Ensuring high quality water and future reliable capacity is a critical component of supporting a community's economic engine, quality of life and public health. Kentucky American Water is a leader in providing this type of award winning service to residents and businesses across its service area, as well as planning for the needs of future customers. The commitment to continue this mission is evident in the proposal improvements to the Richmond Road Station Filter Building.

W. Rogers Company's longstanding relationship with American Water and its 43 years of experience in the industry makes us the ideal candidate to utilize as Construction Manager - At Risk (CMAR) for the Richmond Road Station Filter Building in Lexington. Our extensive treatment plant experience, including specific water treatment and infrastructure improvement projects with American Water, assures an extremely competent, responsive and smooth project delivery under an accelerated construction schedule.

Enclosed you will find two (2) Proposal documents and one (1) pdf copy on compact disk.

W. Rogers Company believes we offer unique qualifications for this project given our ability to support pre-construction, construction and post-construction activities by all levels of our Management Team on a moment's notice. We appreciate the opportunity to present this proposal and would enjoy working with you on this project. We are ready to begin work with KAW and the Designer on design completion and pre-construction activities immediately.

Very truly yours,

A handwritten signature in black ink, appearing to read "Warren P. Rogers", written in a cursive style.

Warren P. Rogers  
President

A handwritten signature in black ink, appearing to read "W. Boyd Rogers", written in a cursive style.

W. Boyd Rogers  
Vice President



**W. Rogers Company  
649 Bizzell Drive  
Lexington, Kentucky  
40510**



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**Kentucky American Water  
Richmond Road Station Filter Building  
Lexington, Kentucky**

**CONSTRUCTION MANAGER AT RISK  
PROPOSAL FORM**

**P-1 PROJECT IDENTIFICATION:**

The project consists of Construction Manager At Risk services for the Richmond Road Station Filter Building in Lexington, KY.

**P-2 THIS PROPOSAL IS SUBMITTED TO:**

Mr. Zach Dukes  
Kentucky American Water Company  
2300 Richmond Road  
Lexington, KY 40502

**P-3 PROPOSER'S OBLIGATIONS & REPRESENTATIONS**

3.01 The undersigned Proposer agrees and proposes, if this Proposal is accepted, to enter into an Agreement with the Owner in the form included in the Contract Documents to perform all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Times indicated in this Proposal and in accordance with the other terms and conditions of the Contract Documents.

3.02 Proposer accepts all of the terms and conditions of the Proposal documents. This Proposal will remain subject to acceptance for 60 days after the day of Proposal opening. Proposer will sign and deliver the required number of counterparts of the Agreement attached to the Owner.

3.03 In submitting this Proposal, Proposer represents and agrees, as more fully set forth in the Agreement, that:

A. Proposer has examined and carefully studied the Proposal Documents including but not limited to the Drawings, Specifications, Geotechnical Baseline Report, and the following Addenda (receipt of all which is hereby acknowledged)

Addendum No. 1, dated: June 11, 2014

Addendum No. 2, dated: June 18, 2014



B. Proposer has visited the Site and became familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Proposer is familiar with all applicable federal, state and local Laws and Regulations that may affect cost, progress, and performance of the work.

D. Proposer has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in Paragraph 4.02 of the General Conditions, and (2) reports and drawings of Hazardous Environmental Conditions at the Site which have been identified in the Supplementary Conditions as provided in Paragraph 4.06 of the General Conditions.

E. Proposer has considered the information known to the Proposer, information and observations obtained from visits to the Site, information commonly known to contractors doing business in the locality of the Site, the Bidding Documents, and the reports and drawings identified in the Bidding Documents and referred to in Paragraph 4.07.D above with respect to the effect of such information and observations on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Proposer, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Proposer's safety precautions and programs.

F. Proposer has agreed at the time of submitting its Proposal that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Proposal for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Proposal;

G. Proposer is aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work for which this Proposer is submitted as indicated in the Contract Documents.

H. Proposer is prepared to comply with the applicable requirements of Owner's safety or security programs, if any.

I. Proposer has promptly given the Owner written notice of all conflicts, errors, ambiguities, or discrepancies that Proposer discovered in the Bidding Documents and confirms that the written resolution thereof by Owner is acceptable to Proposer.

J. Proposer has determined that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

K. This Proposal is genuine and not made in the interests of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Proposer has not directly or indirectly



induced or solicited any other Proposer to submit a false or sham Proposal; Proposer has not solicited or induced any individual or entity to refrain from submitting a Proposal; and Proposer has not sought by collusion to obtain for itself any advantage over any other Proposer or over Owner.

**P-4 CONTRACT PRICE**

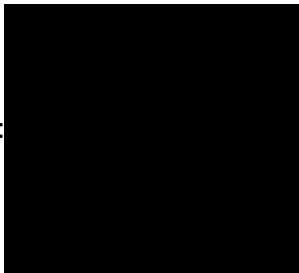
4.01 Proposer will complete the Work in accordance with the Contract Documents for the following price(s):

**A. COST OF THE WORK**

1. The Cost of all Work other than Unit Price Work shall be determined as provided in Paragraph 11.01 of the General Conditions, as revised or amended by the Supplementary Conditions and shall include the following amounts subject to increases or decreases for changes in Work as provided in the Article of the Agreement.

**2. LUMP SUM FEE – FILTER BUILDING & CHLORINE CONTAINMENT BASIN**

- A. Pre-Construction Services during Design Phase
- B. Construction Supervision and Superintendence:
- C. Contractor's Fixed Fee:



**P-5 CONTRACT TIMES**

5.01 Proposer agrees that the Work will be substantially completed and ready for final payment in accordance with paragraphs 14.04 and 14.07 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

5.02 Proposer accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified in the Agreement.



**P-6 SUBMISSION**

SUBMITTED on June 26, 2014.

**Proposer's Certificate of Existence:**

**Commonwealth of Kentucky  
Alison Lundergan Grimes, Secretary of State**

Alison Lundergan Grimes  
Secretary of State  
P. O. Box 718  
Frankfort, KY 40602-0718  
(502) 564-3490  
<http://www.sos.ky.gov>

**Certificate of Existence**

Authentication number: 152314  
Visit <https://app.sos.ky.gov/ftshow/certvalidate.aspx> to authenticate this certificate.

I, Alison Lundergan Grimes, Secretary of State of the Commonwealth of Kentucky, do hereby certify that according to the records in the Office of the Secretary of State,

**W. ROGERS COMPANY**

is a corporation duly incorporated and existing under KRS Chapter 14A and KRS Chapter 271B, whose date of incorporation is May 14, 1970 and whose period of duration is perpetual.

I further certify that all fees and penalties owed to the Secretary of State have been paid; that Articles of Dissolution have not been filed; and that the most recent annual report required by KRS 14A.6-010 has been delivered to the Secretary of State.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal at Frankfort, Kentucky, this 25<sup>th</sup> day of June, 2014, in the 223<sup>rd</sup> year of the Commonwealth.



*Alison Lundergan Grimes*  
Alison Lundergan Grimes  
Secretary of State  
Commonwealth of Kentucky  
152314/0044824



**Proposer's Contractor Registration:**

**Proposer:** W. Rogers Company  
**License Number:** 11113  
**License Classification:** General Contractor  
**Expiration Date of License:** December 31, 2014

**LEXINGTON-FAYETTE URBAN COUNTY  
CONTRACTOR REGISTRATION**



Be It Known That  
W ROGERS COMPANY  
is hereby granted  
Registration # 11113  
as a  
General Contractor  
in Lexington-Fayette County  
Expiration Date: 12/31/14

If Proposer is:

A Corporation

By: W. Rogers Company (SEAL)  
(Corporation Name)

Kentucky  
(State of Incorporation)

By: *Warren P. Rogers* (SEAL)  
(Name of Person Authorized to Sign)  
Warren P. Rogers

President  
(Title)

Attest: *W. Rogers*  
(Secretary)

Business Address: 649 Bizzell Drive  
Lexington, Kentucky 40510

Phone: 859-231-6290

Facsimile No: 859-231-6296

Direct questions regarding this Proposal to:

Boyd Rogers - 859-410-7220  
Michael Bailey - 859-410-7212



## **Construction Cost Estimate**

### **Division 1 – General Conditions**

### **Division 2 - Sitework**

Erosion Control

Tree Removals

Sitework and Haul Roads

Structural Excavation and Backfill

Landscaping

Paving

Exterior Piping:

- Concrete Encasement of Underslab Piping
- 48" DIP RJ Settled Water (SW)
- 48" DIP RJ Filtered Water (Underslab - FLW)
- 48" DIP RJ Filtered Water (Yard Pipe - FLW)
- 48" DIP RJ Finished Water (FW)
- 16" DIP RJ Backwash Tank Supply (BWTS)
- 20" DIP RJ Backwash Waste (BWW)
- 24" DIP RJ Backwash Supply (BWS)
- 16" DIP RJ Filter to Waste (FTW)
- 12" DIP RJ Air Scour (ASC)
- 6" DIP RJ Potable Water (PW)
- 4" MJ DIP Drain
- PVC/HDPE (Water, Chemical and Gas)
- Site Drainage, Storm & Roof Drains
- Precast Concrete Structures
- Locating Existing Utilities
- Demolition

### **Division 3 - Concrete**

Chemical Feed Vault

Filter Building

Chlorine Contact Tank

Hollow Core Decking

### **Division 4 - Masonry**

### **Division 5 - Metals**

Ladders & Ladder-Up Devices

Filter Building - Structural & Seismic Metals

Stair Nosings

Filter Building Stairs

Handrails

Access Hatches and Fall Through Protection

**Division 6 – Wood & Plastics**

Rough Carpentry  
FRP Weirs

**Division 7 – Thermal and Moisture Protection**

Firestopping and Caulking  
Retrofit System and Standing Seam Metal Roofing  
PVC Membrane Roofing

**Division 8 – Doors and Windows**

Hollow Metal Doors & Finish Hardware

**Division 9 - Painting**

**Division 10 - Specialties**

Signage, Fire Extinguishers, First Aid Cabinets

**Division 11 – Process Equipment**

Vertical Turbine Pumps  
Positive Displacement Blowers  
Sample Pumps  
Chemical Injection & Diffuser Assemblies

**Division 12 – N/A**

**Division 13 – Special Construction**

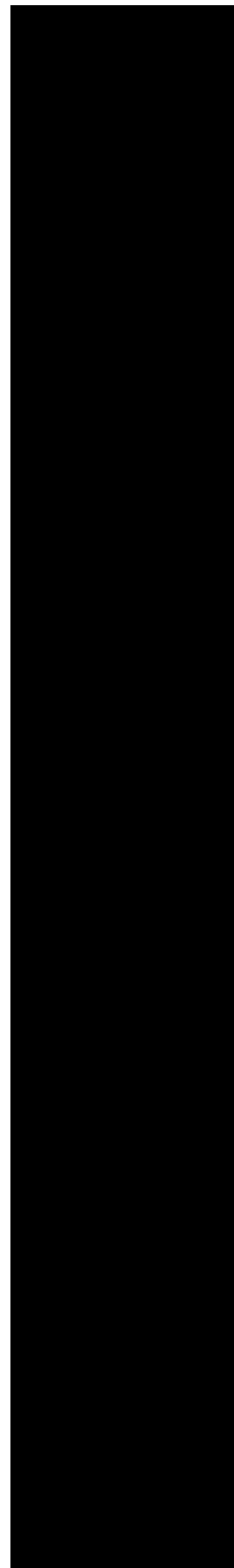
Filter Equipment and Media  
(Includes GAC Media cost @ \$340,000.00)

**Division 14 – N/A**

**Division 15 - Mechanical**

Interior Flanged DI Pipe  
Process Valves  
Flange Adapter Couplings  
Pipe Hangers and Supports  
Stainless Steel Air Piping  
HVAC  
Small Process, Chemical and Instrument Piping  
Mechanical and Process Insulation

**Division 16 – Electrical**



**Division 17 – Control and Information Systems**

Total @



## CONSTRUCTION COST ESTIMATE NARRATIVE

The Construction Cost estimate is based upon the 60% design documents. With design not yet complete, certain assumptions are necessary to determine the total construction cost of the planned facility. Following are comments regarding W. Rogers Company's observations and assumptions upon which the Construction Cost estimate is based.

### Division 2

The Construction Cost estimate includes demolition of the existing 1929 Filter Building and removal of all material down to soil. This includes complete removal of the existing clearwell. The site will then be refilled to existing grades with excess material left from excavation of the filter building and chlorine contact tank. This differs from the approach discussed at the pre-proposal meeting and follows subsequent directive by KAW personnel. We also believe this approach delivers KAW with the best value and most potential going forward.

The Construction Cost estimate includes establishing a temporary haul road 20' wide from the north side of the construction area and continuing up the hill to the waste area behind the plant. To prevent dust influence on process operations and minimize nuisance to KAW personnel, the road will have a geotextile underlayment and 6" of dense grade aggregate. The temporary haul road would be removed at the end of construction.

The Construction Cost estimate includes four (4) hoe-ram machines working simultaneously to meet the duration established in the preliminary schedule. More detail on this activity is provided in the preliminary schedule narrative.

For KAW and the Designer's information, we have included cross-sections and cut and fill presentations resulting from digitizing the site and structural excavation. Please see Section 13, item d.

The Backwash Pump discharge is shown as 18" DI on the Mechanical plan (M201). The underground BWS is noted as 20" and 24" by the 60% documents. The Construction Cost Estimate assumes each pump discharge will be 24" and the BWS will remain 24" until transitioning to 30" inside the filter building. We note from review of Backwash Pump proposals differing opinions exist for the pump nozzle diameter at the rated conditions.

The 60% documents show 48" SW yard piping from the existing Sedimentation Basins joined into a single line just south of the NE corner of the basin. This connection is detailed using a 48" DI restrained joint wye. Due to availability and cost concerns, the Construction Cost estimate accomplishes this connection utilizing a 48" DI Restrained Joint Tee and 48" DI Restrained Joint 45 Bend.

The Construction Cost estimate for exterior piping applies Detail 02222102 (Type B) for all exterior piping. Trenches in paved areas include crushed stone backfill full depth.



The Construction Cost estimate includes concrete encasement of under slab piping per plan details. The Construction Cost estimate includes 625 CY for such purpose.

AHU-1 is an indirect natural gas fired unit. Site piping does not indicate any gas piping and we are not aware of the closest possible point of service. Given this unknown, we have included an allowance of [REDACTED] for natural gas service.

The Construction Cost estimate contemplates backfilling with #57 crushed stone from the top of mud mat/bottom of footer to within 2'-0" of grade. The final 2'-0" will consist of a clay cap to mitigate water infiltration.

Section 4.2 of the Design Memorandum states that surface drainage will be accommodated with minimal or no storm sewer piping. Conversely, Drawing C03 includes a Storm Structure Table containing eleven (11) structures and approximately 500 feet of corrugated HDPE pipe. All labor and materials to install these structures and piping are included in the Construction Cost estimate.

### Division 3

The Division 3 value assumes an average of 250 lbs of reinforcing steel per cubic yard of concrete at a delivered price of \$[REDACTED] ton.

As discussed in the schedule narrative, this project substantial completion date will necessitate two (2) shifts during concrete pouring operations. The Construction Cost estimate includes a [REDACTED] budget for costs required to keep the concrete plant open after 4:00 PM for 50 days between June 15, 2015 and November 15, 2015. Other additional costs for second shift operations, (portable lights, etc.) are also included.

### Division 4

The masonry budget is based on the following allowances: brick @ [REDACTED]/thousand; glass block @ [REDACTED] hundred and cast stone @ [REDACTED]/lump sum.

### Division 5

Aluminum ladders with ladder up devices have been included under each hatch over the Filter Influent Channel and Filtered Water Effluent Control Vault. Aluminum ladders with ladder up devices have also been included for each hatch in the Chlorine Contact Basin.

The Construction Cost estimate assumes seismic angles measuring 6" x 6" x 3/8" at the interior interface of masonry walls and hollow core decking on exterior walls on both levels. Reference undefined angle shown in Section B/A103, Sheet A106.

### Division 7

The Construction Cost estimate assumes no waterproofing of exterior below grade walls and no crystalline waterproofing (Xypex) of interior wall surfaces.

### Division 8

An allowance of [REDACTED] has been included if needed for coordination of ADT supplied security system devices with doors and hardware.

### Division 9

The Construction Cost estimate assumes all concrete walls and ceilings in the lower level of the filter building are painted per the finish schedule on Sheet A01. It also includes the cost of painting all CMU, concrete columns and beams and hollow core ceiling on the top floor per the filter building finish schedule on sheet A01.

### Division 11

The backwash pump specification requires stainless steel suction cans. Since 60% documents layout a wet well installation, we have not included the cost of a stainless steel suction can.

An allowance of [REDACTED] has been included for the purpose of supporting any post-filter chlorine upgrades which may be required due to relocation of the feed point (see Design Memorandum, Part 5.5).

### Division 15

The P&ID for the CT Basin (I200) shows motor actuators for one (1) 18" and (1) 16" Backwash Tank Fill Valve. This differs from the Electrically Operated Valve Schedule in Section 15390 requiring (1) 16" and (2) 18" Open/Close and (1) 18" Modulating. At the 60% point, neither the Basis of Design Memorandum (Draft 2) nor Section 17950 – Functional Control Description resolves this difference. The reader should note the Construction Cost Estimate reflects the requirements of Section 15390 and costs for all four (4) actuators.

The 60% documents furnished do not define the material required for the interior 12" ASC. Following design practices utilized for the Pool 3 plant, we have priced this material as 304L stainless steel per Section 15012, Article 2.04.

### Division 16

Review of 60% documents reveals the exact source of power for the new filter building has yet to be determined. Accordingly the Construction Cost estimate includes an allowance of [REDACTED] for costs related to utility company charges (if applicable) and all trenching, backfill, [REDACTED] encasement and pavement repair related to bringing power to the electrical room in the filter building.

Division 17

The Draft Design Memorandum discusses reusing four (4) of the existing eight (8) recently-installed ControlWave-based PLC enclosures in the new filter building and installing such adjacent to new four (4) new filter consoles with manual controls and displays. The Emerson proposal we received does not reflect this arrangement but instead follows the basic filter control architecture utilized for the Pool 3 Water Plant. Emerson's proposal approach includes one (1) panel for all filters. Emerson advises this approach was taken after discussion with KAW operations personnel.

The Division 17 value contains a [REDACTED] allowance for yet to be determined spares.

## WORK TO BE PERFORMED BY CONSTRUCTION MANAGER

W. Rogers Company would desire to perform the following project elements with its own forces either through negotiation or successful competitive bidding:

- Site Grading, Structural Excavation (including Drill & Shoot if Allowed) and Backfilling
- Site Piping – including large diameter process piping, connections, relocations and chemical piping
- Structural and Site Concrete - Form, Pour and Finish
- Miscellaneous Metals Installation
- Process Equipment Installation including Pumps, Blowers Filter Underdrain, Troughs and Media
- Interior Process Piping (ductile)
- Field Instrument Installation (exclusive of Electrical)

### Potential Subcontractors

During the Pre-Proposal Conference we were asked to identify Subcontractors we intend to use if selected.

At this point W. Rogers Company only wishes to commit to one subcontract trade – electrical. If selected we intend to secure the Services of Glenwood Electric. The schedule demands of the KAW RRS Filter Building and Glenwood Electric's demonstrated history of performance on numerous KAW projects, including Pool 3 WTP, make them a unique choice for this specific project.

We have enclosed Glenwood Electric's recent project resume and company information are included in Section 13 Exhibits, item c.

Although subcontractor assistance was obtained when preparing the construction cost estimate, we believe too much design remains to be completed before committing to other subcontract trades. Our intent is to solicit hard proposals once design for masonry, roofing, painting and HVAC progresses to the 90% stage. Subcontract firms we expect to solicit at that point include:

### Masonry

Hume Masonry  
290 Shannon Oaks  
Harrodsburg, Kentucky 40330

Mason Structures  
845 Angliana Avenue  
Lexington, Kentucky 40508

Turpin Masonry  
660 Beaumont Avenue  
Harrodsburg, Kentucky 40330

Roofing

To be determined after specification and design reaches 90%. Product manufacturer selections impact potential subcontractors available.

Painting

McKinney Painting  
104 Kuhlman Drive  
Versailles, Kentucky 40383

Radden Painting  
1018 East New Circle Rd  
Lexington, Kentucky 40505

Odle Painting  
2560 Kilgore Ave  
Muncie, Indiana 47307

HVAC

Prewitt Mechanical Contractors  
636 Bizzell Drive  
Lexington, Kentucky 40510

Koehring & Sons, Inc.  
1126 Prospect Street  
Indianapolis, Indiana 46203  
Note: Koehring & Sons served as HVAC subcontractor for the Pool 3 Water Plant

Perfection Group, Inc.  
2514 Regency Road, Suite 105  
Lexington, KY 40503

Wiglesworth Plumbing and Heating  
5439 Stewart Road  
Lexington, Kentucky 40516



## LABOR CLASSIFICATIONS & RATES FOR SELF-PERFORMED WORK

For self-performed work, the following labor classifications and associated hourly unit costs would be utilized. The stated rates include wages and all applicable payroll overhead (fringe benefits, payroll taxes, insurances, etc.) as defined by the General Conditions, Article 11.01 A. 1.

Classification	Minimum Std Hourly Rate	Minimum O.T. Hourly Rate	Maximum Std Hourly Rate	Maximum O.T. Hourly Rate
Laborer				
Cement Mason (Concrete Finisher)				
Carpenter				
Operator				

W. Rogers Company, as an Open Shop Company, compensates employees based on merit, not according to labor classification. Accordingly, actual labor cost for self-performed work would vary within the above ranges dependent upon the individuals assigned to the project.



## MATERIAL & EQUIPMENT RENTAL AND SMALL TOOL ALLOWANCE RATES

Equipment rental rates to be used on self-perform work shall be as follows. Items highlighted in blue note machines that are included in the construction cost estimate:

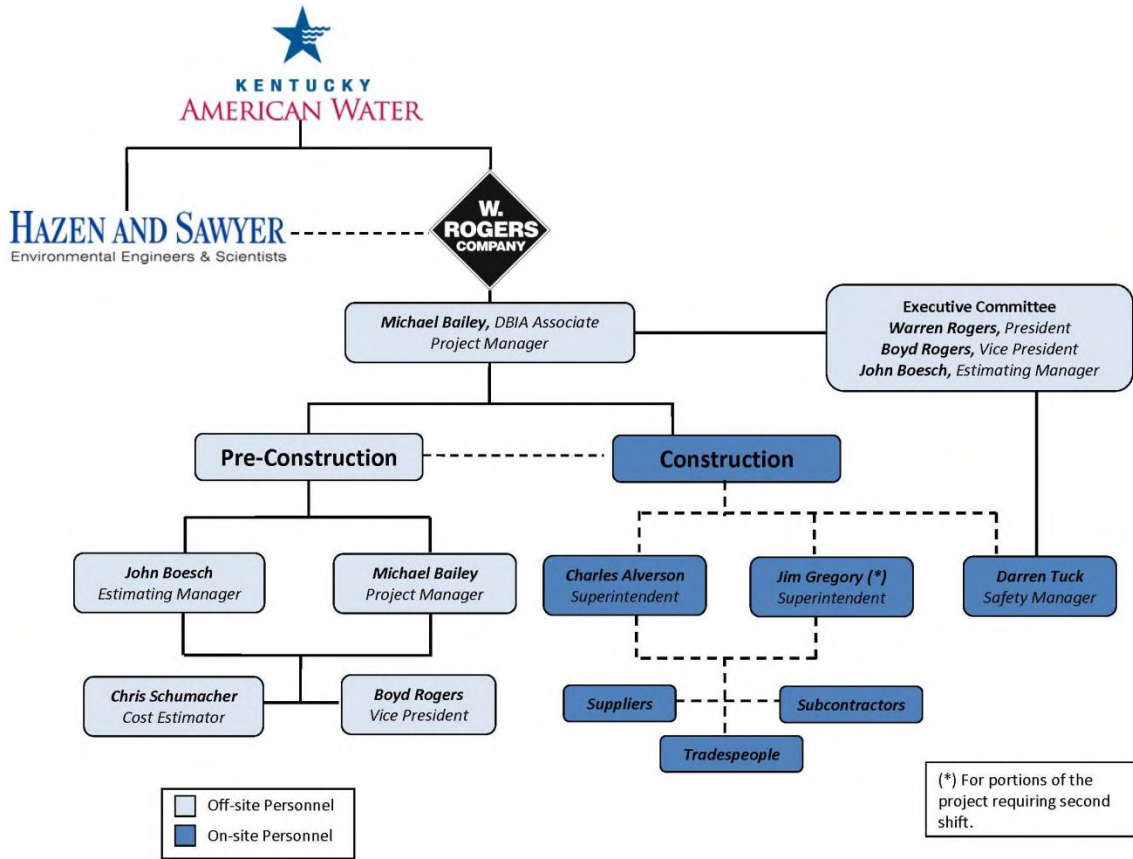
SELF CONTAINED HYDRAULIC DRILL	MO
HYDRAULIC HAMMER FOR MINI-EXCAVATOR	MO
CRAWLER EXCAVATORS-55,000# (PC 220)	MO
CRAWLER EXCAVATORS-75,000# (PC 300)	MO
CRAWLER EXCAVATORS-90,000# (PC 400)	MO
CRAWLER EXCAVATOR (PC210) W/ HOE RAM	MO
CRAWLER LOADER	MO
RUBBER TIRE LOADER – 4 CY	MO
RUBBER TIRE LOADER- 2.5 CY	MO
KOMATSU SKID STEER LOADER - WHEELED	MO
KOMATSU SKID STEER LOADER - TRACKED	MO
CRAWLER CRANE 40-TON (LS 98A)	MO
CRAWLER CRANE 45-TON (LS 108B)	MO
CRAWLER CRANE 45-TON (AMERICAN 4260)	MO
CRAWLER CRANE 60-TON (LS 118)	MO
CRAWLER CRANE 150-TON (LS-518)	MO
RT CRANE - 40-TON (HSP 8040)	MO
RT CRANE - 50-TON (HSP 8050)	MO
TRUCK CRANE 65-TON (HC 138)	MO
TRUCK CRANE 100-TON (HC 218A)	MO
CRAWLER DOZER-SMALL (D-39)	MO
CRAWLER DOZER-LARGE (D6)	MO
ARTICULATING TRUCK - 30 TON	MO
SKYTRACK TELEHANDLER	MO
EXTENDING STRAIGHT BOOM MANLIFT (ML004)	MO
SCISSOR LIFT, ELECTRIC, LARGE PLATFORM	MO
SCISSOR LIFT, ELECTRIC, SMALL PLATFORM	MO
STRAW BLOWER	MO
TRENCH BOX	MO
VIBRATORY ROLLER, SMOOTH DRUM	MO
VIBRATORY COMPACTOR, PAD FOOT	MO
TRENCH COMPACTOR	MO
WELDER	MO
TRASH PUMP, CENTRIFUGAL, 6" DRI-PRIME	MO
HYDRAULIC SUBMERSIBLE - 4"	MO
HYDRAULIC SUBMERSIBLE - 8"	MO
GENERATOR (17 KW)	MO
LOWBOY TRAILER AND TRACTOR	MILE
RENTAL EQUIPMENT	
FUEL, LUBRICANTS AND MAINTENANCE	

The Small tool allowance rate for self-perform work shall be 1.5% of standard labor rates.





## ORGANIZATIONAL CHART



## CMAR TEAM OVERVIEW

**Warren Rogers**  
**Executive Committee**  
**Years of Experience: 37**

As President of W. Rogers Company, Warren is responsible for market development and strategic alliances for the long-term success of the Company. On this project, he will provide corporate oversight for the project team. Warren will also provide KAW with direct access to W. Rogers Company's senior-most leadership. He has full authority to commit company resources as required for the successful delivery of your project.

**Boyd Rogers**  
**Executive Committee**  
**Years of Experience: 37**

As Vice President of W. Rogers Company, Boyd will provide technical input and corporate oversight for the project team. With thirty-five years of experience in the construction industry, Boyd is adept at developing innovative solutions to complex construction problems, guiding vendor and subcontractor negotiations, managing quality of work issues, owner relations, and safety. Boyd has provided executive leadership and/or been responsible for estimating of an impressive list of water and wastewater treatment plants and has directed W. Rogers' efforts on each of their design/build and alternative delivery water and wastewater projects. Many of these projects have been expansions and upgrades to existing facilities requiring continuous plant operations throughout the construction duration. He fulfills an important role in the development and implementation of the company's strategic plan. Over the years, Boyd has gained a reputation as an expert in the procurement of water and wastewater treatment plant equipment and has been consulted on many occasions for his expertise in the field.

**John Boesch**  
**Executive Committee/Estimating Manager**  
**Years of Experience: 27**

John has over twenty-seven years of project management and estimating experience, the last twenty with W. Rogers Company. He has an excellent working relationship with American Water as he was the project manager on the Indiana American Water design/build project of the Stage 2 DBP Improvements in Kokomo and Richmond, Indiana. He has extensive experience overseeing project estimators and ensuring that take-offs and pricing are complete and accurate. Throughout his years at W. Rogers Company, he has overseen numerous value engineering exercises, constructability reviews, and alternate systems studies including cost and schedule impacts. In addition, he also assists the project management team in procuring major subcontracts and material purchases and preparing schedules on successfully negotiated and competitively bid projects

**Michael Bailey**  
**Project Manager**  
**Years of Experience: 14**

Michael has extensive experience in successfully completing more than \$75 million worth of projects for W. Rogers Co. In this project, he will be responsible for the successful completion of all project construction, including development and maintenance of the schedule, establishment and use of control systems, management of the project budget as bid packages are let, and the coordination of purchasing. He will work directly with John Boesch on pre-construction services. As the project moves to the field, the project manager will coordinate all site construction activities and provide owner's design engineers with a single point of contact for all communication with the field.

## CMAR TEAM OVERVIEW (CONTINUED)

**Chris Schumacher**  
**Cost Estimator**  
**Years of Experience: 8**

Chris brings valuable experience to this project as cost estimator due to his work as a WRC superintendent on two of the Company's largest projects prior to joining the estimating team. He will work in concert with Michael Bailey and John Boesch during pre-construction assisting with estimating, value engineering and bid packages. As Pre-Construction services culminate with the development of the GMP, he will assist in final quantity take-offs and bidding of self-perform work packages.

**Darren Tuck**  
**Safety Manager**  
**Years of Experience: 8**

As safety director, Darren will provide corporate-level safety oversight, support and training for the project. He will review all safety documentation for the project and perform site safety audits on a routine basis in compliance with KAW and W. Rogers' safety standards.

**Charles Alverson**  
**Superintendent**  
**Years of Experience: 20**

Charles has extensive experience in our industry serving as the superintendent on Kentucky American Water's \$67 million Pool 3 Water Treatment Plant. He also recently completed \$26 million membrane water treatment plant project in Clarksville, Tennessee. On this project, he will be responsible to the project manager for supervision of all onsite construction activities including subcontractors, craft foremen, and material receipt and control. Charles will also be responsible for the onsite management of the Q/C and safety programs and will lead the planning efforts and work execution.

**Jim Gregory**  
**Superintendent**  
**Years of Experience:**

Jim is also an experienced superintendent for W. Rogers Company serving in this capacity for 20 years. Jim's most recent water treatment plant similar to KAW's plant was a 16 MGD expansion to a 35 MGD plant for Harpeth Valley Utility District in Nashville, Tennessee. Like the Richmond Road Station Plant, portions had to be constructed on a fast track basis. Jim not only met the timeline put was able to bring twice the filtration capacity on line at the milestone date. On this project, Jim will serve the same functions as Charles Alverson for any second shift work required to meet the substantial completion deadline.

**William Boyd Rogers, Jr.**  
**Vice President and Engineering Phase Lead**



## **EXPERIENCE**

### **W. Rogers Company – Vice President (1992 – Present)**

- Responsible for procurement of new projects and directing the Estimating department staff. This includes identifying potential markets, qualifying projects for acceptability and evaluating potential Owners. Oversight of estimating staff during solicitation of projects, including MBE & WBE solicitation. Directly involved in solicitation and estimating of process equipment for all projects.
- Responsible for negotiating to reduce cost on acceptable terms and arrangements with Owners and Engineers when projects are over-budget or changes are desired for other reasons.
- Cooperate with and assist Project Managers when negotiating change orders on active projects with Owners and Engineers.
- Assist Owners and Consulting Engineers with evaluating estimated cost, constructability issues and schedule requirements during design phase.
- Oversight responsibility for Company construction equipment operations working with Company Equipment Manager to determine long term and short term equipment needs, equipment acquisitions and liquidations.
- Cooperate with other Corporate Officers in determining Company policy, operations and business direction.

### **W. Rogers Company – Other Positions Held:**

- Purchasing Manager, 1983 – 1992
- Buyer, 1982 – 1993
- Assistant Buyer, 1980 – 1982
- Shop Laborer, 1976 – 1980

## **EDUCATION**

**Engineering Technology Degree** – Lexington Technical Institute, KY (May 1979)

**Business Administration Degree** – University of Kentucky, Lexington, KY (May 1978)

**Graduate** – Bourbon County High School, Paris, KY (May 1975)



John Boesch  
Project Executive & Lead Estimator



## EXPERIENCE

### W. Rogers Company - Project Executive & Lead Estimator (2000 to Present)

#### **Stage 2 DBP Improvements (Design/Build)**

- Kokomo, IN (Indiana American Water)
- Contract Amount: \$ 4,147,693
- Completed: 2011

#### **Northwest Wastewater Treatment Plant**

- Collierville, TN
- Contract Amount: \$19,992,000
- Completed: 2009

#### **Oostanaula Wastewater Treatment Plant**

- Athens, TN
- Contract Amount: \$15,433,000
- Completed: 2005

#### **Green River Wastewater Treatment Plant**

- Cave City, KY
- Contract Amount: \$4,346,300
- Completed: 2005

#### **Harpeth Valley Water Treatment Plant**

- Nashville, TN
- Contract Amount: \$14,568,700
- To Be Complete: 2010

#### **Water Treatment Plant (Membrane)**

- Alcoa, TN
- Contract Amount: \$24,329,000
- Completed: 2007

#### **South Hopkins Wastewater Treatment Plant**

- Nortonville, KY
- Contract Amount: \$4,427,000
- Completed: 2006

#### **J.M. Cranor Water Treatment Plant**

- Hendersonville, TN
- Contract Amount: \$7,105,120
- Completed: 2004

Prior to 2004, John completed seven projects, including water treatment plants, wastewater treatment plants and raw water intakes, ranging up to \$7.1 million.

### Other positions held:

- W. Rogers Company, Lexington, KY – Superintendent (1991-1993)
- Traylor Brothers, Inc., Evansville, IN – Project Engineer/General Superintendent (1990-1993)
- Guy P. Atkinson, San Francisco, CA – Field Engineer/Rebar Superintendent (1988-1990)
- Inberg-Miller Engineers, Riverton, WY – Technician (1986-1988)

## EDUCATION

**Bachelor's of Science in Civil Engineering** – University of Wyoming, Laramie, Wyoming



**Michael Bailey**  
**Project Manager**



**EXPERIENCE**

**W. Rogers Company - Project Manager (2006 – Present)**

**26 MGD Membrane Water Treatment Plant**

- Clarksville, TN
- Contract Amount: \$24,581,133
- To Be Complete: 2013

**Deep Springs Pumping Station**

- Lexington, KY
- Contract Amount: \$1,786,000
- Completed: 2012

**Ohio County Wastewater Treatment Plant**

- Beaver Dam, KY
- Contract Amount: \$9,172,000
- Completed: 2008

**Bee Creek Wastewater Treatment Plant**

- Murray, KY
- Contract Amount: \$1,374,000
- Completed: 2008

**Pitman Creek Wastewater Treatment Plant**

- Somerset, KY
- Contract Amount: \$12,687,000
- Completed: 2012

**Turkey Creek Wastewater Treatment Plant**

- FUD of Knox County; Knoxville, TN
- Contract Amount: \$18,637,641
- Completed: 2010

**North Elkhorn Pumping Station**

- Lexington, KY
- Contract Amount: \$4,006,000
- Completed: 2009

**W. Rogers Company - Superintendent (2005 – 2006)**

**Oostanaula Wastewater Treatment Plant**

- Athens, TN
- Contract Amount: \$15,433,000
- Completed: 2006

**Other Positions Held:**

- W. Rogers Company – Project Engineer (Jan. 2003 to Aug. 2005)
- W. Rogers Company – Construction Intern (Summer 2002)
- PDR Engineers – Survey Crew (1999 to 2000)

**EDUCATION**

**Bachelor's of Science in Civil Engineering (Infrastructure Track)** – Virginia Tech, Blacksburg, VA

**Other skills:** AutoCAD, Microstation, Total Station, GPS, WinEx Pro (Earth quantity takeoff software), Microsoft Office



**Charles Alverson**  
**Superintendent**



**EXPERIENCE**

**W. Rogers Company - Superintendent (2006 – Present)**

**26 MGD Membrane Water Treatment Plant**

- Clarksville, TN
- Contract Amount: \$24,581,133
- To Be Complete: 2013

**Kentucky American Water Co.**

**Pool #3 Water Treatment Plant**

- Owenton, KY
- Contract Amount: \$27,744,848
- Completed: 2010

**Ohio County Regional WWTP**

- Beaver Dam, KY
- Contract Amount: \$9,172,000
- Completed: 2008

**Montgomery Martin (Memphis, TN) - Superintendent (2004 – 2006)**

**First Source Bank**

- Germantown, TN

**Winston Hills Retail Shops**

- Hendersonville, TN

**Peters Construction (Owensboro, KY) - Superintendent (1993 – 2004)**

**Wastewater Treatment Plant**

- Smyrna, TN
- Contract Amount: \$16,500,000

**District Courthouse**

- Lexington, KY
- Contract Amount: \$4,750,000

**Groundwater Treatment Plant**

- Houston, TX

**Ground Water Treatment Plant**

- Houston, TX

**EDUCATION**

**Graduate** – Greenville High School, Greenville, KY

**Certification** – CPR/First Aid Training

**Certification** – OSHA 10-Hour Training



**Jim Gregory**  
**Superintendent**



**EXPERIENCE**

**W. Rogers Company - Superintendent (1994 – Present)**

**Water Treatment Plant & Raw Water Intake**

- Loudon, TN
- Contract Amount: \$9,229,005
- To Be Complete: 2014

**Wastewater Treatment Plant Expansion**

- Mt. Washington, KY
- Contract Amount: \$12,944,000
- Completed: 2012

**Harpeth Valley 16.0 MGD WTP Expansion**

- Nashville, TN
- Contract Amount: \$14,568,700
- Completed: 2010

**Strodes Creek Wastewater Treatment Plant**

- Winchester, KY
- Contract Amount: \$18,785,000
- Completed: 2008

**Oostanaula Wastewater Treatment Plant**

- Athens, TN
- Contract Amount: \$15,433,000
- Completed: 2005

**J.M. Cranor Water Treatment Plant**

- White House, TN
- Contract Amount: \$7,105,120
- Completed: 2004

**Projects completed prior to 2004**

**Wastewater Treatment Plant**

- Clinton, TN

**Water Treatment Plant**

- Portland, TN

**Water Treatment Plant**

- McCreary Co., KY

**Water Treatment Plant**

- Hazard, KY

**Water Treatment Plant**

- Danville, KY

**Wastewater Treatment Plant**

- Church Hill, TN

**St. Leon Wastewater Treatment Plant**

- West Harrison, IN

**Sewage Treatment Improvements**

- Natural Bridge State Park; Slade, KY

**Other Positions Held:**

- W. Rogers Company - Carpenter (1987-1994)
- Gamble Brothers Cabinet Factory (1985-1987)
- Jim Ray Construction – Co-Owner (1980-1985)

**EDUCATION**

**Graduate** – Wayne County High School, Monticello, KY





## **SUPERVISION AND SUPERINTENDENCE OF CONSTRUCTION SERVICES AND PERSONNEL AVAILABILITY**

Services and facilities included in the stated proposal values for Supervision and Superintendence of Construction:

- Superintendence Salary (including second Superintendent for periods identified in the preliminary construction schedule narrative)
- Superintendence Fringe Benefits (health insurance, retirement, vacation, etc)
- Superintendence Subsistence (lodging, meals)
- Superintendence Travel (includes vehicle, fuel, lubricants and maintenance)
- Pre and Post Construction Video Recording
- Construction Progress Photos
- Safety Officer Jobsite Visits, Employee Training and Safety Supplies
- Superintendence Field Office conforming to 01500, 1.10, A
- Miscellaneous Supplies, Furniture and Equipment to Support Superintendent
- Temporary Electric Installation for Superintendence and RPR Field Office lighting, heating and air conditioning, including monthly cost for services
- Temporary Water Installation for Superintendence
- Temporary Sanitation Facilities for Superintendence, including monthly cost for services
- Temporary Phone and Internet Service Installation for Superintendence Field Office
- Parking Area for Superintendent with security lighting
- Office Trailers and Office Compound Housekeeping
- Assistant to Superintendent to assist with management of deliveries, housekeeping, material deliveries, on-site logistics and other tasks necessary.
- Site housekeeping.

Proposed Project Manager and Superintendent Current Assignments

Michael Bailey is currently the assigned Project Manager for two (2) on-going design-bid-build projects:

Wastewater Treatment Plant Improvements in Centerville, TN which has a current contract value of \$2,697,997. As of May 2014 the project is 86% complete. The current schedule indicates the project will be complete in August 2014. The project is managed in the field by one of W. Rogers Company's more experienced and capable Superintendents thus reducing Michael's daily involvement in site activities and allowing him to monitor financial and schedule progress. The project requires roughly 15% of Michael's time month over month.

Wet Weather Detention Facilities and Pump Station in Frankfort, KY which has a current contract value of \$7,329,000. As of June 25, 2014 the project is 75% complete and ahead of schedule. The current contract completion date is November 2014 however our internal schedule indicates completion in early October 2014. The project requires 20% of Michael's time month over month.

Both Charles Alverson and Jim Gregory will have completed current project assignments before the end of 2014 and we expect them fully available for this project.

## BRIEF NARRATIVE OF PROJECT UNDERSTANDING

The Kentucky American Water Richmond Road Station Filter Building proposed herewith consists of two primary structures:

- Filter Building
- Chlorine Contact Tank (CT Tank)

The structures will be constructed on KAW's existing Richmond Road Station Facilities in an area to the north of the existing office and Chemical Building #2. Structure excavation will require approximately 20,000 cy of earth and rock excavation. The reinforced concrete structures consist of more than 3,750 cy in the filter building, 1,250 cy in the CT Tank and 50 cy in the chemical feed vault.

The filter building contains a new electrical room, storage areas, stairwells and 3,973 square feet of filters. The building will be enclosed with masonry walls and glass block. A new air scour blower and relocation/retrofit of an existing unit is included. The column and beams above the operating floor support hollow core decking upon which a light gauge retrofit truss and metal roofing will be installed.

CT Tank contains two (2) backwash pumps and necessary pipe and valve infrastructure to support operation in series or parallel. The tank will have a PVC roof over hollow core decking.

The project also includes a cast in place chemical feed vault for feeding four (4) distinct chemicals and magnetic flow meter for finished water.

Site work includes new exterior piping for chemicals, potable water, drainage, settled water, filtered water and finished water.

All supporting mechanical, electrical and instrumentation/SCADA is included in the project scope.

After the new process is placed on line the existing 1929 building will be demolished and the area regarded to existing contours.

The proposal scope includes furnishing assistance to the Owner and Design Engineer with cost and constructability issues during completion of design. This proposal anticipates furnishing estimates at required milestones and being available to the Owner and/or Engineer at any point between to assist with delivering the best possible project.

Further definition of W. Rogers Company's understanding of the project can be determined by reviewing the enclosed Construction Cost Estimate, Preliminary Construction Schedule and Critique of Documents.

## SCHEDULE NARRATIVE

Construction of the filter building over a 12 month period from Notice to Proceed to Substantial Completion poses a significant schedule challenge. In order to assure delivery within the stated time, W. Rogers Company believes it will be necessary to perform certain portions of the project using a second shift. The following comments should be considered when reviewing the detailed schedule in Exhibit A.

- Excavation crew schedules are based on six (6) day weeks working 10 hours per day.
- Schedule allows 24 days for rock removal whether performed via mechanical removal or drill and shoot operations discussed in the Critique of Documents.
  - Hoe-ramming is based on working four (4) machines in two shifts of 8 hours each and assumes each machine can remove 3 cy/hr. We are limited to 16 hour days due to compliance with local noise ordinances.
  - Drill and shoot operations would be based on working two crews 10 hours per day 6 days per week.
- Considering specification requirements and best practices for slab pour dimensions and wall pour dimensions, we find 10 slab pours, 66 wall pours of varied height, dimension and configuration and an additional 8 supported slab pours to reach finished floor elevation of 1004.00. It is imperative to reach this elevation and milestone as quickly as possible for two main reasons: (a) the balance of structural concrete is very time consuming as the remaining columns and beams will require 60 days to complete, (b) provide sufficient time for remaining trades (masonry, roofing, process, HVAC, electrical, etc) to complete their work. In order to meet and maintain the schedule with certainty, it is necessary to maintain two shifts.
  - The schedule is predicated on the first shift working 6:00 AM to 2:00 PM and the second shift working from 2:00 PM to 10:00 PM.
  - Filter Building Form & Pour Crews will work 8 hour shifts, 2 shifts per day. Each shift will have a minimum of 3 crews performing form and pour activities.
  - The Filter Building concrete operation will be supported by two (2) cranes over both shifts.
- The schedule allows a maximum of 30 calendar days for submittal review by the Engineer and KAW.
  - When reviewing activities and tasks, W Rogers Company determined the actuated valves in the filter gallery play a critical role in meeting the schedule. Given the piping configuration and schedule, the filter gallery piping will need to be preassembled as much as possible outside the structure and ‘flown’ into place. This is particularly critical for the 30” backwash header. Attempting to erect in place would be very time consuming given its proximity to the influent trough and supporting beams
  - In order to accomplish this preassembly, filter valves will be required no later than the 15<sup>th</sup> week after notice to proceed. In order to accomplish this schedule, the

valves would need to be submitted and approved PRIOR to the Notice to Proceed so they can be released for manufacture and delivery the date of the NTP.

- Weather will play a critical role in meeting the schedule deadlines. W. Rogers Company considered historical weather when compiling the schedule. Rather than simply deducting a number of days from each month's available working days, we applied the lost days to the actual critical path activities that would be performed at the time. Weather day is defined as the number of days per month where rainfall equals or exceeds 0.10 inches. Data based on NOAA Historical (1981 to 2010) readings at Bluegrass Airport. As a consequence we built the following days into our schedule:
  - Site Work - Remove Existing Trees: 2 weather days
  - Yard Piping - Relocate Existing 16" Force Main: 2 weather days
  - Filter Building - Excavate Earth to Rock: 3 weather days
  - Filter Building - Rock Removal - Hoe Ram: 4 weather days
  - Filter Building - Under slab Piping: 1 weather day
  - Filter Building - Form & Pour Slab On Grade @ 978.33: 2 weather days
  - Filter Building - Form & Pour 25'-3" Walls to 1004.00: 7 weather days
  - Filter Building - Form & Pour Filter Bottom Slabs On Grade @ 986.00: 2 weather days
  - Filter Building - Form & Pour 18'-0" Filter Walls to 1004.00: 10 weather days
  - Filter Building - Flanged Piping: 10 weather days
  - Filter Building - Form & Pour Supported Trough Slab @ 998.33: 4 weather days
  - Filter Building - Form & Pour Supported Slab @ 1004.00: 6 weather days
  - Filter Building - Form & Pour 9'-4" Columns to 1013.33: 2 weather days
  - Filter Building - Form & Pour Supported Beams @ 1013.33: 6 weather days
  - Filter Building - Form & Pour 6'-8" Columns to 1021.94: 1 weather days
  - Filter Building - Masonry: 7 weather days
  - Filter Building - Form & Pour Supported Beams @ 1021.94: 4 weather days
  - Filter Building - Standing Seam Metal Roof: 2 weather days

The Chlorine Contact Tank operations will be supported by a separate crane of 1 crew working single 10 hour shifts

The Preliminary Construction Schedule is included in Section 13 Exhibits, item a.

## CRITIQUE OF DOCUMENTS

W. Rogers Company reviewed the 60% design documents extensively when preparing the proposal and offers the following observations and potential revisions for consideration.

### Site Pavement

The site drawings indicate defined areas for new pavement. Although construction activity ingress and egress will be from the northwest, we suggest discussion occur during remaining design for complete repaving of the access road between Chemical Building #2 and Settling Basins. Currently only portions are replaced as a result of exterior piping installation. We also believe it may be beneficial to KAW's operations to widen this access road.

Based on borings and site knowledge, the only exterior line known to be in rock is the 48" and 16" FLW underneath the Filter Building. We expect the potential for rock in trenches around the Chemical Feed Vault and suggest additional exploration be performed during the remaining design period to verify or deny this potential cost.

### Exterior and Under Slab Piping

The connection between CT Cell 1 and CT Cell 2 Influent includes three (3) 48" DI restrained vertical bends so the line may pass under CT Cell 1 Finished Water to Clearwell. If acceptable to KAW and the Designer, the branch of both tees could be rolled below vertical and one of the vertical fittings eliminated. This would yield an approximate savings of [REDACTED]

The Construction Cost estimate includes 625 cy of pipe encasement concrete. If acceptable to the Owner and Designer, substitution of crushed stone would yield a savings estimated in excess of [REDACTED]. When considering this option please recognize the piping configuration with header and laterals underneath the filter gallery will require a trench approaching the width of the pipe gallery (> 20') over much of its distance. One should also recognize the trench is well below the existing rock line so crushed stone will be confined by the limits of rock excavation adding to structural support of the bottom slab. Please refer to the excavation profile included as Exhibit "A."

The Filtered Water below grade piping contains four (4) 48" x 16" Restrained Joint Crosses. As with all restrained joint fittings in 48" these represent a substantial cost, however it is more acute for reducing crosses. If this header is changed to restrained joint pipe with welded-on restrained joint outlets, a potential savings in excess of [REDACTED] is available.

### Rock Excavation

The 60% design documents prohibit the uses of explosives for rock excavation. The Construction Cost estimate has been prepared on the basis of mechanical rock removal. The Construction Cost estimate is based on pre-drilling and hoe-ramming. We also requested and evaluated proposals for rock sawing but determined this was not a cost effective method for this application. W. Rogers Company also considered the cost to pre-split and drill and shoot

the structural and pipeline rock. W. Rogers Company self-perform such operations using its own equipment and personnel. We have extensive experience performing such operations in tight conditions at existing plant facilities. We are confident such work could be performed for this project without incident or disruption to KAW's operations, property and personnel. Further, if allowed to drill and shoot the rock our evaluation indicates a savings in excess of [REDACTED] could be returned to KAW. The change to drill and shoot does not reduce the schedule duration for this activity.

### Building Configuration and Elevation

When preparing the Construction Cost estimate, W. Rogers Company considered alternatives to the proposed building structure. One consideration was the use of steel in lieu of concrete for the structural framing above elevation 1004.00. When considering all related costs for a steel structure (painting, factory and field testing, construction time, reliance on subcontract trades, etc.) the overall construction cost savings are insignificant. However when considering the long term maintenance cost of painted structural steel to KAW, this option becomes much less desirable. We believe structural concrete framing with poured in place concrete beams and hollow core decking is a very prudent design given the building application.

However, in the course of review we considered a change in the actual building layout. It appears the new building has been designed to mirror the existing 1929 structure with an open center above the operating floor. Although structural design is not completed and beams are not sized, we assume the beams at elevation 1015.33 will be no less than 18" deep and most likely 24". This yields headroom in the operating floor below the beams of 9'-9" and 9'-3". We expect this rather low clearance is why the mechanical drawings place the HVAC duct along column line B and note the bottom to be 7'-0" AFF. We offer for your consideration the following concept:

- Raise top of beam elevation for first floor ceiling to 1016.67 (1'-6" increase) and increase exterior walls to this elevation.
- Eliminate open area above elevation 1016.67 and maintain top of beam – bottom of hollow core elevation at this elevation between column lines B and C.
- Continue metal roofing on constant 1:12 pitch to ridge in the center of the structure between column lines B and C.
- Maintain façade at entries on east and west end ends to maintain existing appearance. Eliminate glass block above entry canopies.

Benefits derived from this change include the following:

- Potential cost savings of [REDACTED]
- Reduction in concrete forming, shoring and pouring operations of approximately five (5) weeks. Note that every week saved at this point in the schedule is a week less that a second shift is required. Depending on schedule choices made by KAW and W. Rogers Company a potential exists for additional saving.
- Opportunity to locate HVAC duct in the center of the operating floor and thus maintain better distribution over all areas. Although HVAC will be balanced during the contract,

we have concern the existing duct location may result in heat rise to the center and unsatisfactory air distribution to the east side of the building. From the standpoint of long term operations and cost, the open center core above elevation 1015.33 is an unusable area representing over 20,000 cubic feet that will be heated over the life of the building.

### GAC Media

Although practice varies depending on water characteristics and operations choices, it is generally necessary to remove GAC media, regenerate and reinstall with supplemental virgin material. We understand the frequency of such operation can be at intervals of 8 to 12 years depending on several variables. The most effective and safest manner in which to accomplish these tasks is by pneumatic conveyance of material using self unloading trailers. Dry handling of the GAC can pose safety issues in enclosed areas due to oxygen depletion and poses a nuisance due to dust. Our review indicates the planned pavement layout is not conducive to access near the filter building with tractor trailers and would require revision. We also suggest stainless steel piping be incorporated extending from the building exterior into the filter tubs with blind flanges at each filter. A similar arrangement exists at the Pool 3 plant. A fire hydrant would need to be located near the building to facilitate pneumatic conveyance. Numerous options exist on how to accomplish this change and we would work with KAW and the Designer during final design to accomplish the most effective means.

### Backwash Pumps

Upon receipt of proposals for the backwash pumps we were surprised by the budgetary costs from named manufacturers approaching [REDACTED]. Discussion with Flowserve indicates the range of the curve, in particular the low flow design point, is a concern impacting cost. Since this information was not received until June 25<sup>th</sup>, we have not had an opportunity to fully explore available options. At the very least, the pump selection should be reviewed with other vertical turbine manufacturers acceptable to KAW beyond those named in the 60% documents. If the low flow design point is truly an issue for all manufacturers, we believe it may be worthy to consider use of split case centrifugal pumps in the lower floor of the filter building under the electrical room. However is best to resolve the unacceptable cost of these pumps, W. Rogers Company is committed to working with KAW and the Designer to determine the best approach.

### Flange Adapter Couplings

The Construction Cost estimate was compiled following the directive for flange coupling adapters to be harnessed per Detail 1516402 (Sheet D15). The pipe pressures applicable to this project are quite low regardless of the assumed design pressures. With the larger diameter flange coupling adapters the additional harnesses represent an additional cost. Subject to KAW and the Designer's acceptance EBBA Series 2100 MegaFlange Adapters may be substituted for a over [REDACTED]. The MegaFlange Adapter provides restraint in the same manner as MegaLug adapters with MJ fittings.



## **CONFIRMATION**

W. Rogers Company confirms that we have read the Proposed Contract Documents included in the Attachments and are prepared to enter into this Agreement should our proposal be accepted by the Owner.



## COST OF PERFORMANCE AND PAYMENT BONDS

### Richmond Road Station Water Plant

Cost of Bond Premiums:

(Based on Construction Estimate Plus  
Plus Supervision & Superintendence  
Plus Fee)

Premium unit Price

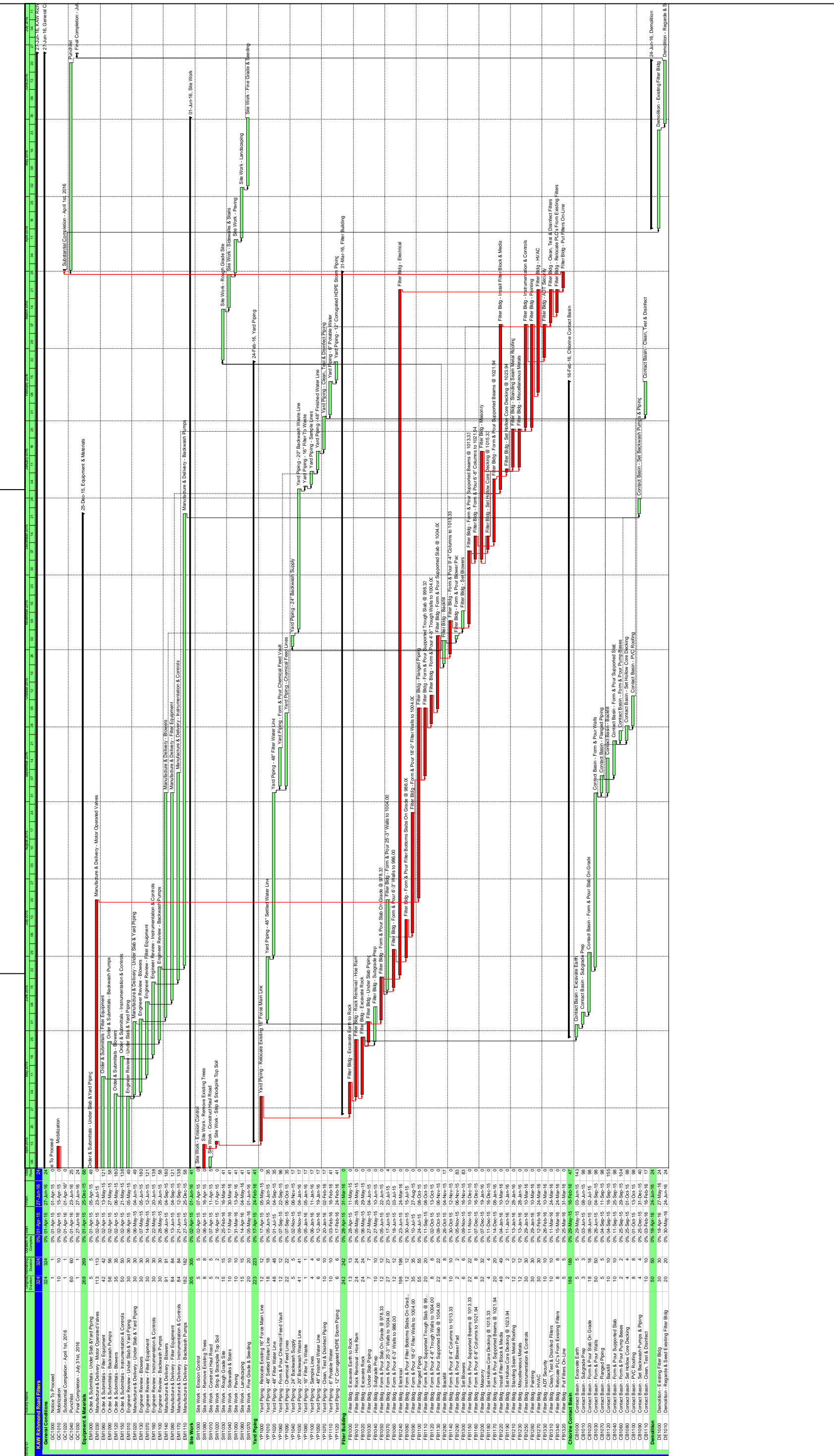
Range:

per  
to



KAW Richmond Road Filters

26-Jun-14 09:58



**Actual Work** █ **Critical Remaining Work** █ **Remaining Work** █ **Milestone** ◆

Design Concept Baseline Schedule

TASK filter: All Activities

© Oracle Corporation

# Excavation



## Color Legend:

- Green - Existing Grade
- Red - Rock Elevation
- Teal - Subgrade



**LEGEND**

- EXISTING SANITARY SEWER
- EXISTING UNDERGROUND TELEPHONE
- EXISTING UNDERGROUND FIBER OPTIC CABLE
- EXISTING UNDERGROUND WATER
- EXISTING UNDERGROUND ELECTRIC
- CHAINLINK FENCE
- EXISTING TREE
- FIRE HYDRANT
- WATER VALVE
- UTILITY POLE
- LIGHT POLE
- WATER METER
- ELECTRIC MANHOLE
- CHEMICAL CONDUIT MANHOLE
- CONCRETE PAVEMENT
- ASPHALT PAVEMENT
- EXISTING CONTOUR INTERVAL
- EXISTING CONTOUR INDEX AND LABEL
- PROPOSED CONTOUR INTERVAL
- PROPOSED CONTOUR INDEX AND LABEL
- DITCH CENTERLINE
- SLOPED AND STRAIGHT OUTLET HEADWALL
- NYLOPLAST VARD INLET WITH NEENAH GRATE AND CONCRETE COLLAR
- APPROX. LIMITS OF CONSTRUCTION REFER TO SWPP PLAN FOR SILT FENCE LOCATIONS
- PERMEABLE PAVEMENT BLOCKS - REFER TO DETAILS
- TURF REINFORCEMENT MAT (24 MONTH LONGEVITY)

NAME	NORTHING	EASTING	AREA (SQ. FT.)	PERIMETER (FEET)	STRUCTURE TYPE	INVERT ELEVATION	OUTLET ELEVATION
EX-CH1	187310.26	1578296.01	984.45	981.54	N/A	N/A	N/A
VI-A-1	187310.26	1578296.01	984.45	981.54	12" STORM	997.00	997.00
VI-A-2	187310.26	1578296.01	984.45	981.54	12" STORM	997.00	997.00
VI-A-3	187285.73	1578296.01	991.20	987.50	N/A	N/A	N/A
VI-A-4	187285.73	1578296.01	991.20	987.50	N/A	N/A	N/A
VI-A-5	187314.14	1578296.01	991.00	991.00	N/A	N/A	N/A
HD-UM-B-1	187371.09	1578296.01	993.00	993.00	N/A	N/A	N/A
HD-UM-B-2	187371.09	1578296.01	993.00	993.00	N/A	N/A	N/A
HD-UM-B-3	187371.09	1578296.01	993.00	993.00	N/A	N/A	N/A
HD-UM-B-4	187371.09	1578296.01	993.00	993.00	N/A	N/A	N/A
VI-B-1	187325.39	1578296.01	1000.50	997.50	N/A	N/A	N/A
VI-B-2	187325.39	1578296.01	1000.50	997.50	N/A	N/A	N/A
VI-B-3	187325.39	1578296.01	1000.50	997.50	N/A	N/A	N/A
VI-B-4	187325.39	1578296.01	1000.50	997.50	N/A	N/A	N/A
VI-B-5	187325.39	1578296.01	1000.50	997.50	N/A	N/A	N/A

NAME	STRUCTURE	UP-STRUCTURE	DOWN-STRUCTURE	UP-INVERT (FT.)	DOWN-INVERT (FT.)	SLOPE (%)	SIZE (IN.)
PI	EX-CH1	VI-A-1	VI-A-1	998.12	998.12	8.078	12.0
PI	VI-A-1	VI-A-2	VI-A-2	997.00	997.00	1.706	12.0
PI	VI-A-2	VI-A-3	VI-A-3	997.00	997.00	29.31	12.0
PI	VI-A-3	VI-A-4	VI-A-4	997.50	997.50	28.46	12.0
PI	VI-A-4	VI-A-5	VI-A-5	997.50	997.50	1.889	12.0
PI	VI-B-1	VI-B-2	VI-B-2	993.00	993.00	2.030	12.0
PI	VI-B-2	VI-B-3	VI-B-3	993.00	993.00	59.74	12.0
PI	VI-B-3	VI-B-4	VI-B-4	993.00	993.00	41.10	12.0
PI	VI-B-4	VI-B-5	VI-B-5	997.00	997.00	6.735	12.0
PI	VI-B-5	VI-B-4	VI-B-4	997.00	997.00	58.67	12.0
PI	VI-B-4	VI-B-5	VI-B-5	997.00	997.00	1.000	12.0
PI	VI-B-5	VI-B-4	VI-B-4	997.00	997.00	39.59	12.0

**NOT RELEASED FOR CONSTRUCTION**

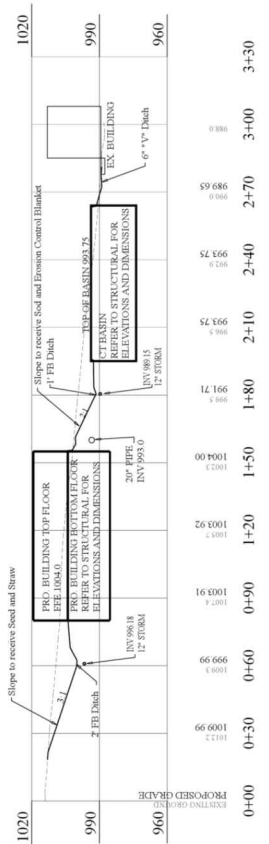
**HAZEN AND SAWYER**  
Environmental Engineers & Scientists  
444 LEWIS HARGETT CIRCLE, SUITE 260  
LEXINGTON, KY 40503

KENTUCKY AMERICAN WATER  
RICHMOND ROAD STATION  
WATER TREATMENT PLANT

**Grading and Erosion Control Plan**

THE SCALE BAR	DATE	JUNE 2014
SHOWN BELOW	HAS FOR	50084-000
MEASURES ONE	INCH LONG ON	DRAWING
THE ORIGINAL	NUMBER	112-020032
DRAWING	NUMBER	C03

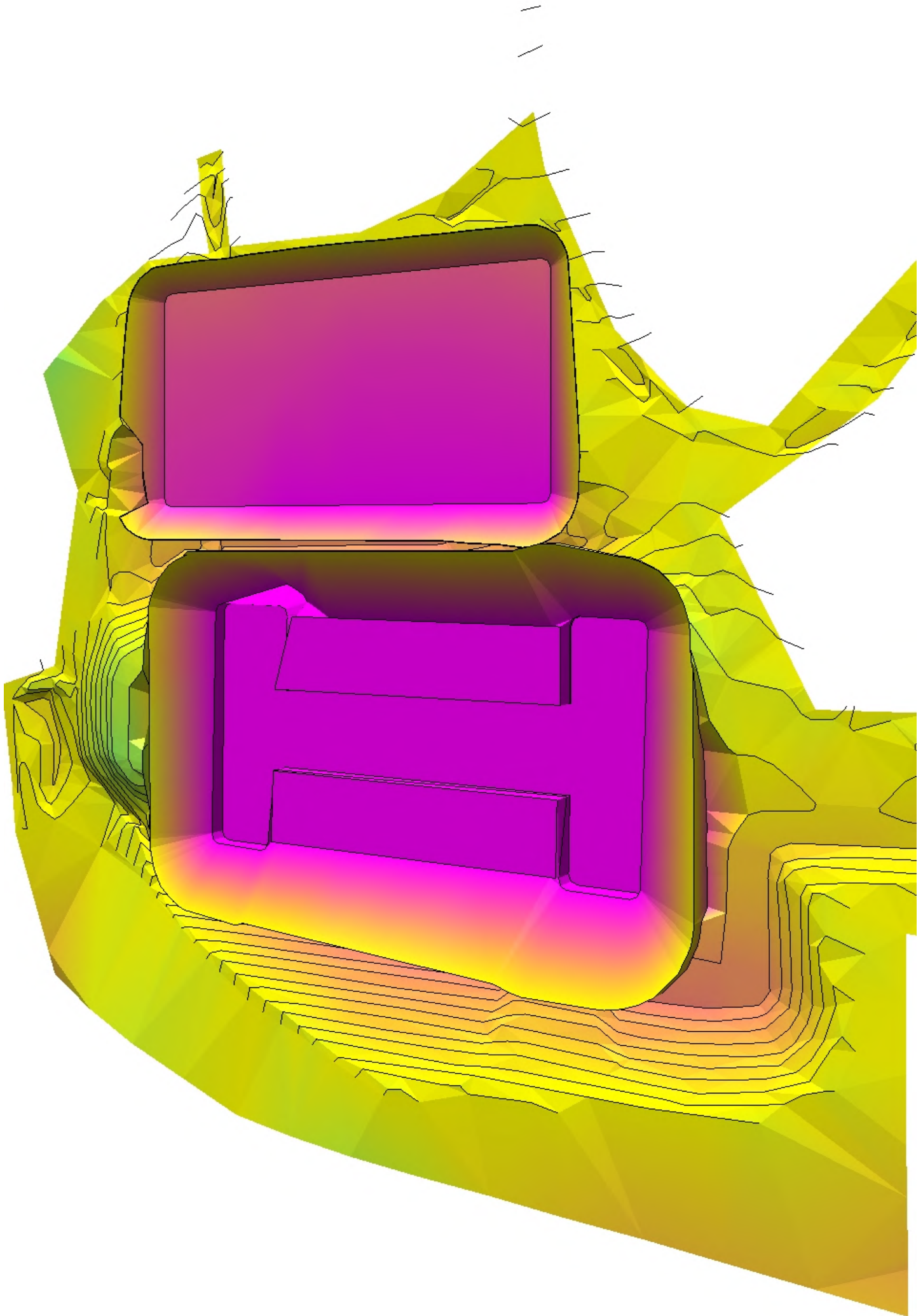
**SECTION "A"**



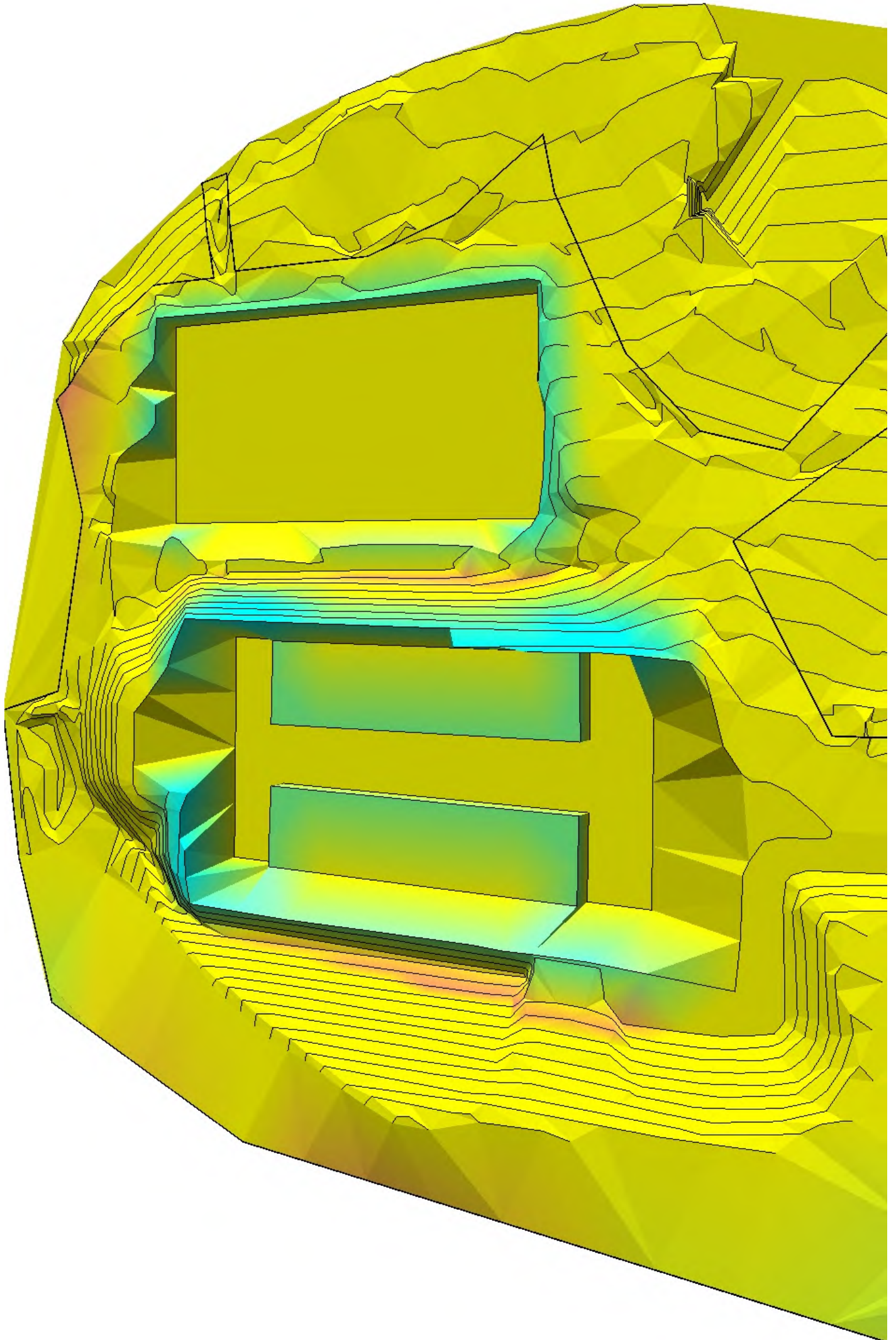
60% DESIGN - NOT USED FOR CONSTRUCTION

Rev. 000000

# Excavation



**Backfill**





12250 Chandler Drive, Walton, Kentucky 41094

Phone 859-485-3700 - Fax 859-485-3701

OH License # 31620; KY License # CE13046

www.glenwoodelectric.com

*An Equal Opportunity Employer*

## CONTRACTOR QUALIFICATION STATEMENT

Glenwood Electric is a Commercial, Industrial and Institutional Electrical Contractor. We are a family owned business founded on August 31, 1977. We were originally organized as a corporation in the State of Ohio. We moved our location to Kentucky in 2010 and are now a corporation organized in the state of Kentucky. We specialize in all types of electrical installations for new construction, remodels and maintenance, including but not limited to: high voltage work, DC power, generators, fire alarm, security, voice/data and fiber optics, communications cabling, audio visual. We have many years experience with work at power plants, utilities and substations, waste water and water treatment facilities, health care facilities, schools and universities, data centers, heavy industrial and manufacturing facilities, and office buildings.

Glenwood Electric is a union contractor signatory to the IBEW, International Brotherhood of Electrical Workers. All of our journeyman electricians and telecommunications technicians have completed a 5 to 6 year apprenticeship program and have received 10 hour OSHA training. Our company is a member of NECA (National Electrical Contractors Association) and BICSI. Our communications technicians are BICSI certified and we have full time RCDD personnel. We are also a member of ISNetworld, a global network of contractors and suppliers recommended by subscribing owner/clients.

<b>ANNUAL SALES:</b>	<u>Year</u>	<u>Revenue</u>
	2013	\$19.8 million
	2012	\$16.2 million
	2011	\$17.7 million
	2010	\$17.5 million
	2009	\$26.2 million

**OFFICERS:** Phil Thaman, President  
Mark Thomson, Vice President  
Paul Thaman, Secretary  
Stephen Thaman, Treasurer

**JURISDICTIONS:** Ohio (LIC #31620), Kentucky (LIC #CE13046), Indiana

**EXPERIENCE:** *Lists of work in progress and past completed work are available.*

**CLAIMS AND SUITS:** Glenwood Electric (1) has never failed to complete any work awarded to it; (2) has no judgments, claims, arbitration proceedings or suits pending or outstanding against its organization or its officers; (3) has not filed any law suits or requested arbitration with regard to construction contracts; (4) has no officers or principals who have ever failed to complete a construction contract.

### TRADE REFERENCES:

<b>1. CUSTOMERS:</b>	Hunt Builders Corporation, Marty Jones	(513)579-9770
	Building Crafts, John Zalla	(859)781-9500
	Cincinnati Bell Telephone, Randy Wooten	(513)235-7790
	Cincinnati Bell Wireless, Stephen Sander	(859)802-9136
	Duke Energy, Miami Fort Station, Joe Schlomer	(513)467-4942
	Duke Energy, Eastbend Station, Kevin Moeller	(513)467-4821
	Duke Energy, Substations, John Richey	(513)287-1016



Cyrus One - Midwest, Russ Foxx	(513)841-5175
BDHP Architects, Brad Dunn	(513)527-0253
Layne Heavy Civil, Inc., Chuck Berry	(812)865-3232
Freedom Center (NURFC), Richard Buller	(513)383-7773

2. **SUPPLIERS**

Wesco Distribution	(513)542-4300
F.D. Lawrence Electric Supply	(513)542-1100
Richards Electric Supply	(513)242-8800
Gexpro	(513)326-2100
Graybar	(513)621-0600

3. **BANK REFERENCES:** The Huntington Bank (513)762-5181  
 105 East 4<sup>th</sup> St., Suite 200A  
 Cincinnati, OH 45202  
 Contact: John Tremoulis  
 Acct. No. 01651214150

Commercial Line of Credit:  
 The Huntington Bank (513)762-5191  
 105 East 4<sup>th</sup> St., Suite 200A  
 Cincinnati, OH 45202  
 Contact: Bill Cosby

4. **SURETY:**

**Bonding Company:**  
 Travelers Casualty and Surety Company of America  
**Agent:**  
 Neace Lukens, Mark Nelson (513)624-1746  
 4000 Smith Road, Suite 4, Cincinnati OH 45209  
*Letter of recommendation from Bonding Company is available.*

5. **FINANCIALS:**

**Accountant:**  
 Barnes Dennig  
 150 East Fourth Street  
 Cincinnati OH 45202  
 (513)241-8313  
*Financial Statements are available on request.*

**OSHA/SAFETY INFORMATION:**

- Ohio BWC Drug Free Workplace/Safety Program Policy No. 684992
- NAICS- SIC Code: 238210 - 1731

<u>YEAR</u>	<u>#Employees</u>	<u>Hrs Worked</u>	<u>OH EMR</u>	<u>KY EMR</u>
2013	168	192732	.73	.88
2012	129	173956	.92	.93
2011	152	183302	.85	1.00
2010	127	178542	.64	1.00
2009	238	251550	.44	1.00

If you have questions or need further information, please contact:  
 Leslie March, Controller  
 Glenwood Electric Inc.  
[let@glenwoodelectric.com](mailto:let@glenwoodelectric.com)  
 Direct (859)485-3385

**GLENWOOD ELECTRIC, INC.**  
12250 Chandler Drive, Walton KY 41094

**Phone: (859)485-3700**  
**Fax: (859)485-3701**

**WATER TREATMENT PLANT/PUMP STATION PROJECTS COMPLETED**

**Arcadia Pump Station, BCI PO No. 0604-S03, Alexandria KY**

Project Completed: April 2014  
Contract Amount: \$180,737.00  
OWNER: Sanitation District No. 1, 1045 Eaton Dr., Ft. Wright KY 41017  
GENERAL: Building Crafts Inc., PO Box 286, Highland Heights KY 41076  
Contact: Rob Birkenhauer, (859)781-9500, rbirkenhauer@buildingcrafts.com  
ENGINEER: Viox & Viox, Erlanger KY

**MSDGC Millcreek Wastewater Treatment Plant, Contract 73  
1600 Gest Street, Cincinnati OH 45204**

Project Completed: May 2014  
Contract Amount: \$444,702.00  
OWNER: Metropolitan Sewer District of Greater Cincinnati  
GENERAL: Layne Heavy Civil, Inc., 4520 N. State Rd. 37, Orleans IN 47452  
Contact: Chuck Berry, (812)865-3232  
ENGINEER: Wade Trim, 895 Central Ave., Cincinnati OH 45202; Joe Walker (513)381-3243

**Dry Creek Waste Water Treatment Plant, HHO Project, PO #0582-S01  
2999 Amsterdam Road, Villa Hills KY 41017**

Project Completed: December 2013  
Contract Amount: \$1,890,172.00  
OWNER: Sanitation District No. 1, 1045 Eaton Dr., Ft. Wright KY 41017  
GENERAL: Building Crafts Inc., PO Box 286, Highland Heights KY 41076  
Contact: Darryl Geiman, (859)781-9500, dgeiman@buildingcrafts.com  
ENGINEER: Hazen & Sawyer, 11211 Cornell Park Dr., Cincinnati OH 45242

**Emerson – Kentucky American Water RTU Upgrade Project, Emerson PO 4121034891  
Kentucky River Station 1, 6300 Cedar Creek Lane, Lexington KY 40515**

Project Completed: December 2013  
Contract Amount: \$137,588.00  
OWNER: Kentucky American Water Co., 2300 Richmond Rd., Lexington KY 40502  
GENERAL: Emerson Process Management, 200 Beta Drive, Pittsburgh PA 15238  
CONTACT: Toni Hristov, (860)417-8253

**Lakeview Pump Station – Pump Replacement Project, Job No. 12-4-812  
1045 Eaton Drive, Ft. Wright KY 41017-9655**

Project Completed: October 2013  
Contract Amount: \$1,334,801.00  
OWNER: Sanitation District No. 1, 1045 Eaton Dr., Ft. Wright KY 41017  
GENERAL: Dugan & Meyers Construction, 11110 Kenwood Rd., Cincinnati OH 45242  
Contact: Dave Morman, (513)891-4300, Dmorman@dugan-meyers.com  
ENGINEER: HDR Engineering, 9987 Carver Road, Suite 200, Cincinnati OH 45242

**Greater Cincinnati Water Works, Richard Miller Water Treatment Plant  
UV Disinfection Facility, 5651 Kellogg Avenue, Cincinnati OH 45228**

Project Completed: August 2013  
Contract Amount: \$3,276,243.00  
OWNER: Greater Cincinnati Water Works  
GENERAL: Adams Robinson Enterprises, 2735 Needmore Rd., Dayton OH 45414  
Tom Sauers, (937-274-5318  
ENGINEER: CDM (Camp Dresser McKee), 8805 Governors Hill Dr., Cincinnati OH 45249  
Joseph Crowley, (513)583-9800

**MSD 1600 Gest Street. Cincinnati OH 45204 – Generator Installation**

Project Completed: September 2013  
Contract Amount: \$123,885.00  
OWNER: Metropolitan Sewer District of Greater Cincinnati  
Contact: Rob Dennerline, [ronald.dennerline@cincinnati-oh.gov](mailto:ronald.dennerline@cincinnati-oh.gov), (513)557-7140

**Northern Kentucky Water District – VFD Replacement Project  
Waterworks Road and U. S. 27 Pump Stations, Campbell County, Kentucky**

Project Completed: September 2013  
Contract Amount: \$140,694.00  
OWNER: Northern Kentucky Water District, 2835 Crescent Springs Rd., Erlanger KY 41018  
Dave Enzweiler, [denzweiler@nkywater.org](mailto:denzweiler@nkywater.org)

**Greater Cincinnati Water Works, Richard Miller Water Treatment Plant  
Rewind Transformer No. 2, Contract No. 121C009072  
5651 Kellogg Avenue, Cincinnati OH 45228**

Project Completed: June 2013  
Contract Amount: \$173,000.00  
OWNER: Greater Cincinnati Water Works, Contact: Robert Tuck PE, (513)624-5865

**Kentucky American Water Company, Kentucky River Station 1 Upgrades  
6300 Cedar Creek Lane, Lexington KY 40515**

Project Completed: January 2013  
Contract Amount: \$342,857.00  
OWNER: Kentucky American Water, 2300 Richmond Rd., Lexington KY 40502  
Contact: Michael Moler, [michael.moler@amwater.com](mailto:michael.moler@amwater.com)

**Emerson – Kentucky American Water RTU Upgrade Project, Emerson PO 4121024771  
Richmond Road Facility, 2300 Richmond Road, Lexington KY 40502**

Project Completed: November 2012  
Contract Amount: \$60,319.00  
OWNER: Kentucky American Water Co., 2300 Richmond Rd., Lexington KY 40502  
GENERAL: Emerson Process Management, 200 Beta Drive, Pittsburgh PA 15238  
CONTACT: Mark Rogers, (860)417-8387)

**Narrows Road Diversion Pump Station  
3750 Narrows Road, Erlanger KY 41018**

Project Completed: October 2012  
Contract Amount: \$715,000.00  
OWNER: Sanitation District No. 1, 1045 Eaton Dr., Ft. Wright KY 41017

GENERAL: Building Crafts Inc., PO Box 286, Highland Heights KY 41076  
Contact: Tom Moore, (859)781-9500, tmoore@buildingcrafts.com  
ENGINEER: HDR Engineering, 9987 Carver Road, Suite 200, Cincinnati OH 45242

**Greater Cincinnati Water Works, Bolton Water Treatment Plant Sanitary Sewer Installation  
Contract No. 111C909011, 6800 River Road, Fairfield OH 45014**

Project Completed: June 2012  
Contract Amount: \$36,116.63  
OWNER: Greater Cincinnati Water Works  
GENERAL: Winelco, Inc., 6141 Centre Park Drive, West Chester OH 45069  
Contact: Dale Hodge, (513)755-8050, [dalehodge@winelco.com](mailto:dalehodge@winelco.com)  
ENGINEER: HDR Engineering, 9987 Carver Rd., Suite 200, Cincinnati OH 45242

**Glendale Water Treatment Plant Improvements, Phase II  
2279 E. Sharon Road, Sharonville OH 45241**

Project Completed: April 2012  
Contract Amount: \$117,061.66  
OWNER: Village of Glendale, 30 Village Square, Glendale OH 45246  
GENERAL: Winelco, Inc., 6141 Centre Park Drive, West Chester OH 45069  
Contact: Dale Hodge, (513)755-8050, [dalehodge@winelco.com](mailto:dalehodge@winelco.com)  
ENGINEER: Hazen & Sawyer, 11211 Cornell Park Dr., Cincinnati OH 45242

**Kentucky American Water Company, Electrical System Survey  
Richmond Road, KRS1, and Owenton Facilities**

Project Completed: December 2011  
Contract Amount: \$216,500.00  
OWNER: Kentucky American Water, 2300 Richmond Rd., Lexington KY 40502  
Contact: Michael Moler, michael.moler@amwater.com

**Emerson – Kentucky American Water RTU Upgrade Project, Emerson PO 4121013025  
Richmond Road Facility, 2300 Richmond Road, Lexington KY 40502**

Project Completed: December 2011  
Contract Amount: \$46,200.00  
OWNER: Kentucky American Water Co., 2300 Richmond Rd., Lexington KY 40502  
GENERAL: Emerson Process Management, 200 Beta Drive, Pittsburgh PA 15238  
CONTACT: Mark Rogers, (860)417-8387)

**Williamstown/Dry Ridge Regional Water Reclamation Facility, Contract 1  
3300 Stewartsville Road, (KY 36W), Williamstown KY 41097**

Project Completed: December 2011  
Contract Amount: \$566,229.00  
OWNER: City of Williamstown, Kentucky  
GENERAL: 3D Enterprises Contracting, 3257 Lochness Dr., Lexington KY 40517  
Contact: Mike Klein, (859)272-6618

**Dry Creek Waste Water Treatment Plant, Final Clarifier Modifications, PO #0562-S01  
2999 Amsterdam Road, Villa Hills KY 41017**

Project Completed: October 2011  
Contract Amount: \$568,243.00  
OWNER: Sanitation District No. 1, 1045 Eaton Dr., Ft. Wright KY 41017

GENERAL: Building Crafts Inc., PO Box 286, Highland Heights KY 41076  
Contact: John Ivan, (859)781-9500  
ENGINEER: Hazen & Sawyer, 11211 Cornell Park Dr., Cincinnati OH 45242

**Dry Creek Waste Water Treatment Plant, SCADA Network & CCTV Improvements  
2999 Amsterdam Road, Villa Hills KY 41017**

Project Completed: November 2011  
Contract Amount: \$144,469.00  
OWNER: Sanitation District No. 1, 1045 Eaton Dr., Ft. Wright KY 41017  
ENGINEER: Hazen & Sawyer, Jerry McClary, jmclary@hazenandsawyer.com

**Middle East Fork Waste Water Treatment Plant Evaluation & Renovation, Contract 651-00344,  
Batavia Township, Clermont County, Ohio**

Project Completed: April 2011  
Contract Amount: \$605,900.00  
OWNER: Clermont Co. Water Resources Dept., 4400 Haskell Ln Batavia OH 45102 Contact:  
Matt Smith, (513)732-8864  
ENGINEER: Burgess & Niple, (513)579-0042, Jim Zupich

**Kentucky River Pool 3 Water Treatment Plant  
16035 Highway 127 South, Owenton KY 40359**

Project Completed: October 2010  
Contract Amount: \$8,190,976.00  
OWNER: Kentucky American Water Company  
GENERAL: Reynolds Inc., 4520 N. State Road 37, Orleans IN 47452-0186  
Contact: Chuck Berry, (812)865-3232  
ENGINEER: Gannett & Fleming

**Ft. Thomas Water Treatment Plant – Pretreatment Building  
700 Alexandria Pike (US 27), Ft. Thomas, KY 41075**

Project Completed: October 2009  
Contract Amount: \$170,690.00  
OWNER: The Northern Kentucky Water Service District  
GENERAL: Building Crafts Inc., Tom Moore, (859)781-9500  
P.O. Box 286, Highland Heights KY 41076

**Riley Road Pump Station, 7650 Four Mile Road, Alexandria KY 41001**

Project Completed: May 2009  
Contract Amount: \$572,606.00  
OWNER: Sanitation District No. 1 of N. Ky., 1056 Eaton Dr, Ft. Wright KY 41017  
GENERAL: Building Crafts Inc., P.O. Box 286, Highland Heights KY 41076  
Contact: Shane Paxton, (859)781-9500  
ENGINEER: Malcom Pernie, Steve Moss, (513)583-8333

**Tate Monroe Water Treatment Plant, 1865-A U.S. 52, Moscow, Ohio 45153**

Project Completed: December 2008  
Contract Amount: \$1,344,108.00  
OWNER: Tate Monroe Water Association, 2599 State Route 232, Bethel OH 45106  
GENERAL: Dugan & Meyers Const Co. , 11110 Kenwood Rd., Cincinnati OH 45242  
Jason Fisher, (513)579-0042

## KENTUCKY AMERICAN WATER

### RICHMOND ROAD STATION FILTER BUILDING

Addendum No. 1

Dated: June 11, 2014

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The following interpretations, changes or additions to the Contract Drawings and Specifications shall be an integral part of the above referenced project and must be taken into account in rendering any proposal for this work. Each BIDDER shall acknowledge this Addendum by number on their proposal. Failure to refer to each and all addenda may constitute reason for disqualification of the bid.

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#### REVISIONS TO INSTRUCTIONS TO BIDDERS

(1) ARTICLE 13 – PREPARATION OF BID

1. Add:

13.10.N – Construction cost estimate shall include work and cost associated with demolition and removal of the existing filter building, piping gallery, clear well and appurtenances, not including removal and disposal of hazardous materials. The below grade void left by the demolition shall be backfilled to existing grade. If hazardous materials are encountered, a competitive bid for removal will be required with the most responsive bidder being awarded a change order.

(2) ARTICLE 22 – SALES AND USE TAXES

1. Remove 22.01 and Replace with:

22.01 – Owner is not exempt from Kentucky state sales and use taxes for the Richmond Road Station Filter Building project.

(3) ATTACHMENTS

1. Add:

D. 60% Drawings and Specification for Filter Building Replacement  
E. Basis of Design Memo – Draft 2  
F. Geotechnical Exploration Report – Dated May 27, 2014

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## KENTUCKY AMERICAN WATER

### RICHMOND ROAD STATION FILTER BUILDING

Addendum No. 2

Dated: June 18, 2014

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The following interpretations, changes or additions to the Contract Drawings and Specifications shall be an integral part of the above referenced project and must be taken into account in rendering any proposal for this work. Each BIDDER shall acknowledge this Addendum by number on their proposal. Failure to refer to each and all addenda may constitute reason for disqualification of the bid.

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#### REVISIONS TO 60% CONTRACT DOCUMENTS AND SPECIFICATIONS – JUNE 2014

(1) SECTION 17000 – CONTROL AND INSTRUMENTATION SYSTEM SCOPE AND GENERAL REQUIREMENTS

1. Remove 1.04.C and Replace with:

**Acceptable instrumentation and control system subcontractors shall be Emerson.**

#### RESPONSES TO QUESTIONS

(1) DRAWINGS

1. What is the size of the existing Settled Water (SW) lines we are tying into to feed new Filter Building?

**Response: Existing Settled Water lines are 30-inch.**

2. What is the size of the existing Finished Water (FW) line we are tying into at Clearwell No. 2?

**Response: Existing Finished Water line is 30-inch.**

3. Can you provide details of Structure "YI-1" fed by the filter backwash & filter to waste lines? Is this planned to be a precast structure or cast-in-place?

**Response: YI-1 shall be a 6-ft x 4-ft structure. Rim elevation 1003.00, Inv 995.00. Pipe elevations as noted below. Structure to have 4-ft (w) x 1.5-ft (h) opening on east wall at INV 997.00. The structure can be precast, or cast-in-place.**

**(N) INV IN: 996.80**

**(W) INV IN: 995.20 [20" BWW]**

**(W) INV IN: 999.00 [16" FTW]**

**(S) INV OUT: 995.10**

4. Are the stairs at the entrance of the Filter Building to be concrete or aluminum? They are shown as metal/aluminum on Structural sheets, shown and/or appearing as concrete on the Architectural sheets. Please clarify.

**Response: The stairs on the north side of the filter building shall be concrete.**

(2) GEOTECHNICAL REPORT

1. Please clarify the foundation requirements under the Filter Building. The Soils Report in Paragraph 8.3 recommends that at the Filter Building, all clay soils encountered below the foundation elements be over excavated down to bedrock and backfilled with lean concrete to the design foundation bearing elevation. This will occur mainly under the filters on the east side of the building as the west side is already in or close to the bedrock elevation. We do not find any reference to these recommendations in plan notes or earthwork specifications.

**Response: Contractor shall over excavate under the filter building down to bedrock and backfill with lean concrete to the design foundation bearing elevation. In addition, the Contractor shall cap the exposed rock after excavation with a mudmat. The mudmat should be a 1,500 psi lean concrete, 3" thick, placed within 24 hours of rock exposure. The Contractor will need to cover all rock bearing surfaces within the footprint of structures.**

(3) CMAR RFP MEETING

1. Request to clarify time between concrete pours:

**Response: Specifications require 72 hours between adjacent concrete pours. This is to minimize shrinkage cracking.**

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RICHMOND ROAD STATION FILTER BUILDING  
 RICHMOND ROAD STATION FILTER BUILDING  
 LEXINGTON, KENTUCKY

SUMMARY OF PROPOSALS

Description	Bowen Indianapolis, IN	Layne Christensen Orleans, IN	W. Rogers Lexington, KY
<b>LUMP SUM FEES</b>			
<b>Pre-Construction Services During Design</b>			
New Filter Building Project	\$		
<b>Construction Supervision &amp; Superintendence Fee</b>			
New Filter Building Project	\$		
<b>CM at Risk Fixed Fee</b>			
New Filter Building Project	\$		
<b>Total of Lump Sum Fees</b>	<b>\$</b>		
<b>CONSTRUCTION COSTS</b>			
<b>CM at Risk Cost Estimate of Work</b>			
New Filter Building Project	\$		
<b>Difference</b>	<b>\$</b>		
<b>CLASSIFICATION OF LABOR TO BE EMPLOYED (hourly rates)</b>			
Small Tool Allowance			
Straight Time Labor Rates (Min.)			
Straight Time Labor Rates (Max.)			





Scoring criteria & mechanics are in the schedule sheets  
See scoring instructions below

**Kentucky American Water  
Richmond Road Station Filter Building  
Bidders Score Table**

Item	Description	Max. Possible Weighted Score	TEAM 1 Score	TEAM 2 Score	TEAM 3 Score	Weighted Score	Comments
<b>COMPOSITE TOTAL</b>							
100.0%			50.5	50.5	50.5	62.0	
a	Supervision & Supervisance Fee and Field Fees	15%	3.00	3.00	3.00	3.00	
b	Estimated Cost of Work	4%	3.00	3.00	3.00	3.00	
c	Equipment Rental Schedules	8%	3.00	3.00	3.00	3.00	
d	Equipment Rates Schedules	8%	3.00	3.00	3.00	3.00	
<b>2</b>							
a	Quality of technical information including critique of the contract documents	5%	3.00	3.00	3.00	3.00	
b	Understanding Scope of Work	5%	3.00	3.00	3.00	3.00	
c	Alternatives	5%	3.00	3.00	3.00	3.00	
<b>3</b>							
a	Schedule (High to Low)	20%	3.00	3.00	3.00	3.00	
b	Bidder understand contract mechanisms?	4%	3.00	3.00	3.00	3.00	
c	Were adequate activities included?	5%	3.00	3.00	3.00	3.00	
d	Bidder understand Permit Schedule identified?	3%	3.00	3.00	3.00	3.00	
e	Are key milestones identified?	5%	3.00	3.00	3.00	3.00	
<b>4</b>							
a	Qualifications (Score from 5000 Evaluation)	10%	4.00	4.00	4.00	4.00	
b	Does the contractor have adequate past experience with KAWC/AMC?	4%	4.00	4.00	4.00	4.00	
c	Does the contractor have adequate past experience with major KAWC involvement?	3%	4.00	4.00	4.00	4.00	
d	Bidder successfully managed subcontractors with major KAWC involvement?	3%	4.00	4.00	4.00	4.00	
<b>5</b>							
a	Resources (High to Low)	6%	3.00	3.00	3.00	3.00	
b	Is the Project Management Staff adequate?	5%	3.00	3.00	3.00	3.00	
c	Is the bidder's self perform work adequate to companies resources?	5%	3.00	3.00	3.00	3.00	
d	Is the Construction Staff adequate?	5%	3.00	3.00	3.00	3.00	

Score Definition:  
5 Above Expectations  
4 Meets Expectations  
3 Meets Expectations  
2 Below Expectations  
1 Below Expectations  
0 Unacceptable

Item	TEAM 1 Score	TEAM 2 Score	TEAM 3 Score	Weighted Score	Comments
1	50.5	50.5	50.5	62.0	
2	3.00	3.00	3.00	3.00	
3	3.00	3.00	3.00	3.00	
4	4.00	4.00	4.00	4.00	
5	3.00	3.00	3.00	3.00	

Item	TEAM 1 Score	TEAM 2 Score	TEAM 3 Score	Weighted Score	Comments
1	50.5	50.5	50.5	62.0	
2	3.00	3.00	3.00	3.00	
3	3.00	3.00	3.00	3.00	
4	4.00	4.00	4.00	4.00	
5	3.00	3.00	3.00	3.00	

Item	TEAM 1 Score	TEAM 2 Score	TEAM 3 Score	Weighted Score	Comments
1	50.5	50.5	50.5	62.0	
2	3.00	3.00	3.00	3.00	
3	3.00	3.00	3.00	3.00	
4	4.00	4.00	4.00	4.00	
5	3.00	3.00	3.00	3.00	

Item	TEAM 1 Score	TEAM 2 Score	TEAM 3 Score	Weighted Score	Comments
1	50.5	50.5	50.5	62.0	
2	3.00	3.00	3.00	3.00	
3	3.00	3.00	3.00	3.00	
4	4.00	4.00	4.00	4.00	
5	3.00	3.00	3.00	3.00	

Item	TEAM 1 Score	TEAM 2 Score	TEAM 3 Score	Weighted Score	Comments
1	50.5	50.5	50.5	62.0	
2	3.00	3.00	3.00	3.00	
3	3.00	3.00	3.00	3.00	
4	4.00	4.00	4.00	4.00	
5	3.00	3.00	3.00	3.00	

Item	TEAM 1 Score	TEAM 2 Score	TEAM 3 Score	Weighted Score	Comments
1	50.5	50.5	50.5	62.0	
2	3.00	3.00	3.00	3.00	
3	3.00	3.00	3.00	3.00	
4	4.00	4.00	4.00	4.00	
5	3.00	3.00	3.00	3.00	



Scoring criteria & mechanisms are on the previous worksheets  
See scoring definitions below

**Kentucky American Water**  
**Richmond Road Station Filter Building**  
**Bidders' Score Table**

Item	Description	Max. Possible Weighted Score	TEAM 1 Bowen TEAM 2 W. Rogers TEAM 3 Bowen	TEAM 2 Layne TEAM 3 W. Rogers	TEAM 3 Bowen TEAM 2 W. Rogers TEAM 3 W. Rogers
<b>COMPOSITE TOTAL</b>					
<b>100.0%</b>					
1	<b>Commercial (5-High to 0-Low)</b>	35%	1.0	2.0	3.0
a	Supervision & Superintendence Fee and Fixed Fees	15%	2.0	6.0	highest 1148500
b	Estimated Cost of Work	4%	3.0	4.8	068855
c	Labor Rates Schedules	8%	3.0	4.8	not
d	Equipment Rental Rates Schedules	8%	3.0	4.8	not
2	<b>Technical (5-High to 0-Low)</b>	15%	3.0	3.0	3.0
a	Quality of technical information including critique of the contract documents	5%	3.0	3.0	3.0
b	Understanding Scope of Work	5%	3.0	3.0	3.0
c	Alternatives	5%	3.0	3.0	3.0
3	<b>Schedule (5-High to 0-Low)</b>	20%	3.0	1.8	3.0
a	Bidder understand contract mechanisms?	2%	3.0	2.4	3.0
b	Are adequate activity times included?	2%	3.0	3.0	3.0
c	Bidder understand Permit Schedule identified?	3%	3.0	1.8	3.0
d	Are key milestones identified?	5%	3.0	2.0	not really
4	<b>Qualifications (Score from 500-Evaluation)</b>	10%	4.0	0.2	4.0
a	Does the contractor have adequate past experiences with KAWC/AWC?	4%	3.0	0.1	3.0
b	Bidder understands intended scope of work and works to reduce change orders?	3%	3.0	0.1	3.0
c	Bidder successfully managed subcontractors with minor KAWC involvement?	3%	3.0	0.1	3.0
5	<b>Resources (5-High to 0-Low)</b>	20%	3.0	3.0	3.0
a	Is the bidder's project organizational structure adequate?	5%	3.0	3.0	3.0
b	Is the Project Management Staff adequate?	5%	3.0	3.0	3.0
c	Is the Bidder's Staff adequate to complete the work?	5%	3.0	3.0	3.0
d	Is the Construction Staff adequate?	5%	3.0	3.0	3.0

Score Definitions  
5 Fair/Above Expectations  
4 Meets Expectations  
3 Above Expectations  
2 Below Expectations  
1 Fair Below Expectations  
0 Unacceptable

Item	Weighted Score	Comments	NOTES
1	3.0	W. Rogers	
2	3.0	Layne	
3	3.0	Bowen	

**Kentucky American Water Company  
Richmond Road Station Filter Building  
Pre-Proposal Meeting  
June 5, 2014**

**AGENDA**

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**I. INTRODUCTION**

A. Purpose

The purpose of this pre-bid meeting is to bring to the bidders attention certain specific features of the project and bidding documents. In addition, this pre-bid meeting will afford the bidders an opportunity to raise questions pertaining to the plans and specifications and for the OWNER or their representatives to clarify those points.

The bidding documents as issued stand. Although the OWNER or their representative will endeavor to answer all questions fully, nothing discussed during this meeting will be construed to have changed the intent of the bidding documents. Any potential modifications to the bidding documents that may be discussed will not become official until issued in a written formal addendum to the plans and specifications.

B. OWNER – Kentucky American Water (KAW)  
OWNER’s CONSULTANT – Hazen and Sawyer (HS)

C. Richmond Road Station Filter Building

Kentucky American Water Company (KAW) is undertaking a project to replace the existing filter building with a new filter building at their 25 mgd Richmond Road Station Water Treatment Plant (RRS WTP) located in Lexington, KY. The project also includes a new chlorine contact basin (CT basin) and filter backwash tank and pumps.

**II. BIDDING DOCUMENTS**

A. Invitation to Bid

1. Sealed Bids **Thursday, June 26, 2014 at 2:00PM**  
**Kentucky American Water**  
**2300 Richmond Road**  
**Lexington, Kentucky 40502**  
**Attention: Zach Dukes**
2. Private Bid Opening
3. Remain Subject to Acceptance – 90 days

B. Instructions to Bidders

1. Examination of Contract Documents and Site
2. Bid Bonds – Not Required
3. Critical Substantial Completion Date – April 1, 2016
4. Subcontractors
5. Preliminary Cost Estimate
  - i. Separate Lump Sum Amounts
    - Superintendence and Supervision
    - Fixed Fee

- ii. List of Self Performed work
- iii. Classifications of Labor, Rates
- iv. Material and rental equipment rates; Small tool allowance
- v. Identify Services of Superintendence Fee
- vi. Understanding of Project, Critique of Design Documents
- vii. Cost of Bonds
- viii. Concurrence that you have read and understand Agreement
- 6. Submission of Bids
- 7. Award of Contract
- 8. Sales Tax

C. Agreement

- 1. Read and understand the Contract Agreement prior to submitting bid.
- 2. Payment Procedure, Contract Times, Liquidated Damages
- 3. Payment and Performance Bond

**III. GENERAL CONDITIONS**

Based on the Standard General Conditions of the Engineers Joint Contract Documents Committee with modifications to be consistent with American Water System policies.

- A. Article 4.2 - Subsurface and Physical Conditions

**IV. SUPPLEMENTAL CONDITIONS**

- A. Commencement of Contract Times
- B. Partnering
- C. Contractors Liability Insurance
- D. Builder's Risk Insurance
- E. Contractor's Responsibilities
- F. Subcontractors
- G. Permits
- H. Sales Tax
- I. Resident Project Representative
- J. Cost of the Work

**V. SPECIFICATIONS**

- A. Summary of Work (Sect. 1000)
- B. Submittal (Sect. 1300)
- C. Temporary Facilities (Sect. 1500)

**VI. QUESTIONS**

**VII. SITE WALK THROUGH**

**VIII. ADDITIONAL QUESTIONS / SUMMARY**



Scoring criteria & mechanism are on the previous worksheets  
See scoring definitions below

**Kentucky American Water  
Richmond Road Station Filter Building  
Bidders' Score Table**

Item	Description	Max. Possible Weighted Score	TEAM 1 Bowen			TEAM 2 Layne			TEAM 3 W. Rogers		
			Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments
<b>COMPOSITE TOTAL</b>				<b>77.7</b>		<b>80.7</b>		<b>85.6</b>		<b>85.6</b>	
1	<b>Commercial (5-High to 0-Low)</b>	35%	4.05	12.2	Highest	4.39	13.2	lowest	5.00	15.0	lowest
	a Supervision & Supervisance Fee and Fixed Fees	15%									
	b Estimated Cost of Work	4%									
	c Labor Rates Schedules	8%	4.00	6.4	Included foreman categories others did not	4.00	6.4		4.50	7.2	lowest
	d Equipment Rental Rates Schedules	8%	3.00	4.8	highest (hourly and monthly)	3.50	5.6	hourly table	4.00	6.4	lowest (monthly table)
2	<b>Technical (5 High to 0-Low)</b>	15%	4.00	4.0		4.00	4.0		5.00	5.0	most detailed
	a Quality of technical information including critique of the contract documents	5%	4.00	4.0		4.00	4.0		4.00	4.0	
	b Understanding Scope of Work	5%	3.00	3.0		3.50	3.5		4.00	4.0	
	c Alternatives	5%	4.00	2.4		4.00	2.4		4.00	2.4	
3	<b>Schedule (5 High to 0 - Low)</b>	20%	4.00	2.4		4.00	2.4		4.00	2.4	
	a Bidder understand contract mechanisms?	3%	4.00	3.2		4.00	3.2		4.00	3.2	
	b Bidder understand sequence of work required?	4%	4.00	4.0	81 line items	4.00	4.0	over 200 line items	4.00	4.0	most detailed discussion of schedule
	c Were adequate activity times included?	5%	4.00	2.4		4.00	2.4		4.00	2.4	
	d Bidder understand Permit Schedule identified?	3%	4.00	4.0	called out in narrative	4.00	4.0		4.00	4.0	
	e Are key milestones identified?	5%	4.00	2.4		4.00	2.4		4.00	2.4	
4	<b>Qualifications (Score from SOQ Evaluation)</b>	10%	4.00	3.2		4.00	3.2		4.00	3.2	
	a Does the contractor have adequate past experience with KAW/CAWC?	4%	4.00	2.4		4.00	2.4		4.00	2.4	
	b Bidder understands intended scope of work and works to reduce change orders?	3%	4.00	2.4		4.00	2.4		4.00	2.4	
	c Bidder successfully managed subcontractors with minor KAWC involvement?	3%	4.00	2.4		4.00	2.4		4.00	2.4	
5	<b>Resources (5 - High to 0 - Low)</b>	20%	4.00	4.0		4.00	4.0		4.00	4.0	discussed pre-con team
	a Is the bidder's project organizational structure adequate?	5%	4.00	4.0		4.00	4.0		4.00	4.0	
	b Is the Project Management Staff adequate	5%	4.00	4.0		4.00	4.0		4.00	4.0	
	c Is the bidder's self perform work adequate to companies' resources?	5%	4.00	4.0		4.00	4.0		4.00	4.0	
	d Is the Construction Staff adequate?	5%	4.00	4.0		4.00	4.0		4.00	4.0	
<b>Score Definitions</b>											
	5 Far Above Expectations										
	4 Above Expectations										
	3 Meets Expectations										
	2 Below Expectations										
	1 Far Below Expectations										
	0 Unacceptable										

**NOTES**  
**W. Rogers**  
Appears to not have any exceptions or clarifications. Included a detailed project understanding and discussion of the schedule. Detailed comments on engineer's drawings with suggested revisions (VE) and estimated savings. Lowest fixed fees. Close to lowest estimated construction cost. No contingency in estimate?

**NOTES**  
**Layne**  
Included list of exceptions and clarifications (7 items, more contractual than technical). Lowest estimated construction cost. 2.5% contingency in estimate. Detailed schedule with over 200 line items. Project understanding not very detailed.

**NOTES**  
**Bowen**  
Included list of clarifications and exceptions (more technical than contractual). Highest estimated construction cost. 3% contingency in estimate. Highest fixed fees and equipment costs. Project understanding provided value engineering suggestions to reduce cost, but did not estimate savings.



Scoring criteria & mechanisms are on the previous worksheets  
See scoring definitions below

**Kentucky American Water  
Richmond Road Station Filter Building  
Bidders' Score Table**

Item	Description	Max. Possible Weighted Score	TEAM 1 Bowen			TEAM 2 Layne			TEAM 3 W. Rogers			
			Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	
<b>COMPOSITE TOTAL</b>			100.0%									
1	<b>Commercial (5 High to 0 Low)</b>	35%	2.00	0.00		3.00	0.00		4.00	0.00		
	a. Supervision & Superintendence Fee and Fixed Fees	15%	0.00	0.00		0.00	0.00		0.00	0.00		
	b. Estimated Cost of Work	4%	0.00	0.00		0.00	0.00		0.00	0.00		
	c. Labor Rates Schedules	8%	0.00	0.00		0.00	0.00		0.00	0.00		
	d. Equipment Rental Rates Schedules	6%	0.00	0.00		0.00	0.00		0.00	0.00		
2	<b>Technical (5 High to 0 Low)</b>	15%	3.00	0.00		3.00	0.00		4.00	0.00		
	a. Quality of technical information including critique of the contract documents	5%	0.00	0.00		0.00	0.00		0.00	0.00		
	b. Understanding Scope of Work	5%	0.00	0.00		0.00	0.00		0.00	0.00		
	c. Alternatives	5%	0.00	0.00		0.00	0.00		0.00	0.00		
3	<b>Schedule (5 High to 0 - Low)</b>	20%	3.00	0.00		3.00	0.00		3.00	0.00		
	a. Bidder understand contract mechanisms?	3%	0.00	0.00		0.00	0.00		0.00	0.00		
	b. Bidder understand project requirements?	3%	0.00	0.00		0.00	0.00		0.00	0.00		
	c. Were adequate activity lines included?	5%	0.00	0.00		0.00	0.00		0.00	0.00		
	d. Bidder understand Permit Schedule identified?	3%	0.00	0.00		0.00	0.00		0.00	0.00		
	e. Are key milestones identified?	5%	0.00	0.00		0.00	0.00		0.00	0.00		
4	<b>Qualifications (Score from 500 Evaluation)</b>	10%	1.00	0.00		3.00	0.00		3.00	0.00		
	a. Does the contractor have adequate past experiences with KAWC/AWC?	4%	0.00	0.00		0.00	0.00		0.00	0.00		
	b. Bidder understands intended scope of work and works to reduce change orders?	3%	0.00	0.00		0.00	0.00		0.00	0.00		
	c. Bidder successfully managed subcontractors with minor KAWC involvement?	3%	0.00	0.00		0.00	0.00		0.00	0.00		
5	<b>Resources (5 - High to 0 - Low)</b>	20%	3.00	0.00		3.00	0.00		3.00	0.00		
	a. Is the bidder's project organizational structure adequate?	5%	0.00	0.00		0.00	0.00		0.00	0.00		
	b. Is the Project Management Staff adequate?	5%	0.00	0.00		0.00	0.00		0.00	0.00		
	c. Are the bidders' resources adequate to complete the work?	5%	0.00	0.00		0.00	0.00		0.00	0.00		
	d. Is the Construction Staff adequate?	5%	0.00	0.00		0.00	0.00		0.00	0.00		
<b>Score Definitions</b>												
5 Fair/Above Expectations												
4 Meets Expectations												
3 Above Expectations												
2 Below Expectations												
1 Fair Below Expectations												
0 Unacceptable												

Notes

Notes

Notes



Scoring criteria & mechanisms are on the previous worksheets  
See scoring definitions below

**Kentucky American Water  
Richmond Road Station Filter Building  
Bidders' Score Table**

Item	Description	Max. Possible Weighted Score	TEAM 1 Bowen	TEAM 2 Layne	TEAM 3 W. Rogers
<b>COMPOSITE TOTAL</b>					
<b>100.0%</b>					
1	<b>Commercial (High to Low)</b>	35%	1.0	2.0	3.0
a	Supervision & Superintendence Fee and Fixed Fees	15%	5.0	4.0	3.0
b	Estimated Cost of Work	4%	15.0	12.0	9.0
c	Labor Rates Schedules	8%	3.0	4.0	5.0
d	Equipment Rental Rates Schedules	8%	3.0	4.0	5.0
2	<b>Technical (High to Low)</b>	15%	78.2	87.8	93.0
a	Quality of technical information including critique of the contract documents	5%	4.0	4.0	4.0
b	Understanding Scope of Work	5%	4.0	4.0	4.0
c	Alternatives	5%	3.0	3.0	5.0
3	<b>Schedule (High to Low)</b>	20%	4.0	4.0	4.0
a	Bidder understand sequence of work required?	4%	4.0	4.0	4.0
b	Bidder understand sequence of work required?	4%	4.0	4.0	4.0
c	Were adequate activity times included?	5%	4.0	4.0	4.0
d	Bidder understand Permit Schedule identified?	3%	4.0	4.0	4.0
e	Are key milestones identified?	5%	4.0	4.0	4.0
4	<b>Qualifications (Score from SOQ Evaluation)</b>	10%	3.0	3.0	3.0
a	Does the contractor have adequate past experience with KAWC/AWC?	4%	3.0	3.0	3.0
b	Bidder understands intended scope of work and works to reduce change orders?	3%	4.0	4.0	4.0
c	Bidder successfully managed subcontractors with minor KAWC involvement?	3%	3.0	3.0	3.0
5	<b>Resources (High to Low)</b>	20%	4.0	4.0	4.0
a	Is the bidder's project organizational structure adequate?	5%	4.0	4.0	4.0
b	Is the Project Management Staff adequate?	5%	4.0	4.0	4.0
c	Are resources adequate to companies resources?	5%	4.0	4.0	4.0
d	Is the Construction Staff adequate?	5%	4.0	4.0	4.0

- Score Definitions  
5 Fair/Above Expectations  
4 Meets Expectations  
3 Meets Expectations  
2 Below Expectations  
1 Fair/Below Expectations  
0 Unacceptable

Item	TEAM 1 Bowen	TEAM 2 Layne	TEAM 3 W. Rogers	NOTES
1	1.0	2.0	3.0	
2	78.2	87.8	93.0	
3	4.0	4.0	4.0	
4	3.0	3.0	3.0	
5	4.0	4.0	4.0	

Item	TEAM 1 Bowen	TEAM 2 Layne	TEAM 3 W. Rogers	NOTES
1	1.0	2.0	3.0	
2	78.2	87.8	93.0	
3	4.0	4.0	4.0	
4	3.0	3.0	3.0	
5	4.0	4.0	4.0	





Scoring criteria & mechanisms are on the previous worksheets.  
 See scoring definitions below.

**Kentucky American Water**  
**Richmond Road Station Filter Building**  
**Bidders' Score Table**

TEAM 1	79.2	Bowen	TEAM 1	79.2	Bowen
TEAM 2	81.0	W. Rogers	TEAM 2	81.0	W. Rogers
TEAM 3	83.0	W. Rogers	TEAM 3	83.0	W. Rogers

TEAM 1	1.0	Bowen	TEAM 1	3.0	W. Rogers
TEAM 2			TEAM 2		Layne
TEAM 3			TEAM 3		



**KENTUCKY**  
**AMERICAN WATER**

**Richmond Road Station Filter Building  
Lexington, Kentucky**

**CONSTRUCTION MANAGER AT RISK  
REQUEST FOR PROPOSAL**

**May 2014**

**KENTUCKY AMERICAN WATER COMPANY  
Engineering  
2300 Richmond Road  
Lexington, Kentucky 40502**

**KENTUCY AMERICAN WATER**  
**RICHMOND ROAD STATION FILTER BUILDING**

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INVITATION TO BID  
FOR CONSTRUCTION OF

**KENTUCKY AMERICAN WATER COMPANY  
Lexington, Kentucky**

**RICHMOND ROAD STATION FILTER BUILDING**

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Sealed Bids for furnishing all plant, labor, equipment, materials and performing all Work to construct the **Richmond Road Station Filter Building**, will be received and opened at the office of **Kentucky American Water Company, Attn: Zach Dukes, 2300 Richmond Road, Lexington KY 40502** at 2:00 p.m., local time, **Thursday, June 26, 2014**.

One (1) set of Bidding Documents and one (1) electronic copy of Bidding Documents in pdf format on compact disk, including the Instructions to Bidders and Contract Documents, will be provided at no charge to the contractors who are invited to bid the project.

Subcontractors, manufacturers and material suppliers should obtain information and review the Bidding Documents by contacting potential Bidders. Documents will also be available for review at the office of Engineer – 2300 Richmond Road, Lexington, KY 40502.

Owner reserves its rights to waive any informality or deficiency in any Bid, to accept any Bid, to negotiate modifications of any Bid with any Bidder and accept any modified Bid, to reject any Bid, to reject all Bids, and to rebid the Project, all at the Owner's sole discretion.

## **INSTRUCTIONS TO BIDDERS**

### **ARTICLE 1 – DEFINED TERMS**

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions, with the following exceptions:
- A. “Bidder” means one who submits a Bid directly to Owner, as distinct from a subbidder, who submits a bid or quote to a Bidder.
  - B. “Successful Bidder” means the responsible Bidder submitting a responsive Bid, to whom Owner (on the basis of Owner’s evaluation as hereinafter provided) makes an award of the Contract.
  - C. “Bidding Documents” includes the Invitation to Bid, Instructions to Bidders, the Bid Form, and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).

### **ARTICLE 2 – COPIES OF BIDDING DOCUMENTS**

- 2.01 Complete sets of the Bidding Documents in the number and for the amount, if any, stated in the Invitation to Bid may be obtained from the party stated in the Invitation to Bid. No refunds will be made for the return of complete or partial copies of the Bidding Documents.
- 2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

### **ARTICLE 3 – QUALIFICATIONS OF BIDDERS**

- 3.01 Owner will accept Bids only from contractors that are prequalified by Owner, and whom Owner has invited to submit Bids. Each Bid must contain evidence of Bidder’s qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the Contract.
- 3.02 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder’s representations and certifications.

### **ARTICLE 4 – EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE**

- 4.01 *Subsurface and Physical Conditions*
- A. The Supplementary Conditions identify:

1. A Geotechnical Baseline Report on subsurface conditions at the Site;
  2. Other reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents.
  3. Those drawings of physical conditions in or relating to existing surface and subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.
- B. During the preliminary and final design phases, Engineer's Consultant will complete a Geotechnical Baseline Report. Contractor shall participate in preparation of the report in accordance with Supplementary Conditions SC-6.00.2. Once report is complete, Contractor will receive two copies for their use in accordance with the General Conditions. Copies of other reports and drawings referenced in Paragraph 4.01.A will be made available by Owner to any Bidder on request, at cost. Those other reports and drawings are not part of the Contract Documents. Bidder's reliance on Owner-furnished items is limited by the terms of Paragraph 4.02.B of the General Conditions.

#### 4.02 *Underground Facilities*

- A. Information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or by others. Bidders shall review the terms of Paragraph 4.04 of the General Conditions with respect to Underground Facilities.

#### 4.03 *Hazardous Environmental Condition*

- A. The Supplementary Conditions identify those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that Engineer has used in preparing the Contract Documents.
- B. Copies of reports and drawings referenced in Paragraph 4.03.A will be made available by Owner to any Bidder on request, at cost. Those reports and drawings are not part of the Contract Documents. Bidders shall review the terms of Paragraph 4.06 of the General Conditions with respect to Hazardous Environmental Conditions.

#### 4.04 **[Reserved.]**

- 4.05 On request, and after receipt from Bidder of evidence of satisfactory insurance coverage, Owner will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to excavation and the advance locating and protection of utilities, and to any other terms and conditions established by Owner.

- 4.06 Reference is made to the Supplementary Conditions for the identification of the general nature of other work that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) that relates to the Work contemplated by these

Bidding Documents. On request, Owner will provide to each Bidder for examination access to or copies of Contract Documents (other than portions thereof related to price) for such other work.

4.07 It is the responsibility of each Bidder before submitting a Bid to:

- A. examine and carefully study the Bidding Documents, including but not limited to the Drawings, Specifications, and Geotechnical Baseline Report, and the other related data identified in the Bidding Documents;
- B. visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work;
- D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in Paragraph 4.02 of the General Conditions, and (2) reports and drawings of Hazardous Environmental Conditions at the Site which have been identified in the Supplementary Conditions as provided in Paragraph 4.06 of the General Conditions;
- E. consider the information known to Bidder, information and observations obtained from visits to the Site, information commonly known to contractors doing business in the locality of the Site, the Bidding Documents, and the reports and drawings identified in the Bidding Documents and referred to in Paragraph 4.07.D above with respect to the effect of such information and observations on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs.
- F. agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;
- G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. be prepared to comply with the applicable requirements of Owner's safety or security programs, if any;
- I. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder; and
- J. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

- 4.08 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

#### **ARTICLE 5 – PRE-BID CONFERENCE**

- 5.01 A pre-proposal conference will be held at **2:00 PM** local time on **Thursday, June 5<sup>th</sup>, 2014** at **Kentucky American Water Company** at **2300 Richmond Road, Lexington, KY**. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference. Engineer will transmit to all prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

#### **ARTICLE 6 – SITE AND OTHER AREAS**

- 6.01 The Site is identified in the Bidding Documents. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor.

#### **ARTICLE 7 – INTERPRETATIONS AND ADDENDA**

- 7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing (including by e-mail). Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than ten days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 7.02 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by Owner or Engineer.

#### **ARTICLE 8 – BID SECURITY**

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of ten percent of Bidder's maximum Bid price and in the form of a Bid bond (on the form



attached) issued by a surety meeting the requirements of Article 5 of the General Conditions.

- 8.02 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of fourteen days after the Effective Date of the Agreement or the expiration of the period that Bids are subject to acceptance after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.
- 8.03 Bid security of other Bidders whom Owner believes do not have a reasonable chance of receiving the award will be returned within fourteen days after the Bid opening.

#### **ARTICLE 9 – CONTRACT TIMES**

- 9.01 The number of days within which, or the dates by which, the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

**Richmond Road Station Filter Building and CT Basin:** Notice to Proceed for submittals and pre-construction activates is expected to be issued no earlier than **April 2015**, Notice to Proceed for site construction is expected to be issued no earlier than **April 2015**, and Substantial Completion is **required** on or before **April 2016**.

#### **ARTICLE 10 – LIQUIDATED DAMAGES**

- 10.01 Provisions for liquidated damages, if any, are set forth in the Agreement.

#### **ARTICLE 11 – SUBSTITUTE AND “OR-EQUAL” ITEMS**

- 11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, or those substitute or “or-equal” materials and equipment approved by Engineer, accepted by Owner, and identified by Addendum (“Alternatives”). The materials and equipment described in the Bidding Documents establish a standard of required type, function and quality to be met by any proposed substitute or “or-equal” item. No item of material or equipment will be considered by Engineer as an Alternative unless Bidder submits to Engineer a written request for approval (including any supporting documentation) at least 15 days prior to the date for receipt of Bids. The burden of proof of the merit of the proposed Alternative is upon Bidder. Engineer's decision of approval or disapproval of a proposed Alternative will be final as to Bidder. If Engineer approves any proposed Alternative, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner. The Owner reserves the right to accept or reject proposed Alternatives. The Bid sum for each proposed Alternative shall include all money required to incorporate the Alternative into the Project. Later requests for additional compensation for Alternatives will not be considered.

## **ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS AND OTHERS**

12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to Owner in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of all proposed Subcontractors and Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor or Supplier if requested by Owner. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor or Supplier Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute, without an increase in the Bid.

If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors or Suppliers. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 6.06 of the General Conditions.

12.02 Owner encourages Contractors to seek diverse subcontractors and suppliers (including but not limited to Women Business Enterprises (WBE's), Minority Business Enterprises (MBE's), and Disabled Veteran Business Enterprises (DVBE's)), while at the same time ensuring that the best combination of quality, service and price is provided in accordance with the highest ethical and professional standards. The Owner recognizes the value of subcontractor and supplier diversity as a strategic business decision, and is committed to offer them an equal opportunity to compete for subcontracts to supply materials and services with all other suppliers and contractors in the competitive marketplace.

12.03 Contractor shall not be required to employ any Subcontractor, Supplier, individual or entity against whom Contractor has reasonable objection.

## **ARTICLE 13 – PREPARATION OF BID**

13.01 In lieu of a Bid Form, a Proposal shall be submitted by Bidders in accordance with this article. In general, whenever the term Bid Form is used in these contract documents, it shall have the same meaning as Proposal.

13.02 Intentionally left open.

13.03 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown.

- 13.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown.
- 13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.
- 13.06 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.
- 13.07 All names shall be printed in ink below the signatures.
- 13.08 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 13.09 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.
- 13.10 The following minimum information must be submitted with your bid for it to be accepted:
- A. Separate Lump Sum amounts:
    - 1. Pre-Construction Services during Design Phase (60% to Completion)
    - 2. Supervision and Superintendence of Construction
    - 3. Contractor's Fixed Fee
  - B. Evidence of Bidder's authority and qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the Contract. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.
  - C. A construction cost estimate of the Work, which shall be broken down by major work item, organized by Construction Specification Institute (CSI) division and major process components. This estimate will be used by the Owner to evaluate Bidder's understanding of the project, evaluate budget and rate impacts.
  - D. A list of construction work which Contractor desires to perform with its own forces either through negotiation or competitive bidding against qualified subcontractors.
  - E. For self performed work, the classifications of labor to be employed and associated hourly unit cost inclusive of wages, labor burden, fringe benefits, payroll taxes, insurance, etc. Labor rates shall not include any mark-up for home office overhead and profit.
  - F. Material and equipment rental rates to be used on self performed work.
  - G. Small tool allowance rate (% of labor) for self performed work.

- H. Provide description of the services and facilities included in the lump sum cost of Supervision and Superintendence of Construction. Provide a Construction Phase organizational chart identifying Contractor's Construction Supervision organization. Indicate those individuals who will be full time on the project and where they will be located (i.e., on-site, office). The organizational chart shall identify the project manager who will act as the Contractor's Representative on the Design team as identified in the Supplementary Conditions Article 6.22. Contractor shall submit the qualifications (experience, history, education, references, etc.) of the Contractor's project manager and site superintendent).
- I. A brief narrative description of the Contractor's understanding of the design documentation provided. Additionally, provide specifics of any constructability or value engineering suggestions which may be proposed by the Contractor. The Contractor is encouraged to submit alternative concepts, however, a bid based on the defined information is mandatory. Should alternative bids be submitted, preliminary sketches of the proposed facilities shall be included along with relative construction cost estimates comparing the alternative designs with that defined in the design memorandum.
- J. A preliminary schedule for construction of the project from date of award in Gantt chart form. The schedule shall identify the critical path and any long lead-time equipment and materials. This schedule shall show how Bidder intends to substantially complete construction work on or before **the dates stated below** with a Notice to Proceed for construction being issued no sooner than **the dates stated below**.

**Richmond Road Station Filter Building and CT Basin:** Notice to Proceed for submittals and pre-construction activities is expected to be issued no earlier than **April 2015**, Notice to Proceed for site construction is expected to be issued no earlier than **April 2015**, and Substantial Completion is **required** on or before **April 2016**.

- K. A critique of the proposed Contract Documents. Specifics of any exceptions which are taken to items requested in this document.
- L. Confirmation that you have read the Proposed Contract Documents included in the Attachments and are prepared to enter into this Agreement should your bid be accepted by the Owner.
- M. The cost of the Bonds identified in paragraph 5.01 of the General Conditions and Supplementary Conditions shall be included in the Bid. The Owner will determine whether Bonds will be required. If the Bonds are requested the cost will add to the Contractor's fee. An adjustment cost factor shall be submitted for any differences between the actual cost and the preliminary cost estimate. The cost of the Bond shall be included in the BID as a separate item.

## ARTICLE 14 – BASIS OF BID; COMPARISON OF BIDS

### 14.01 *Lump Sum*

- A. Bidders shall submit a Bid on a lump sum basis for the base Bid and include a separate price for each alternate described in the Bidding Documents as provided for in the Bid Form. The price for each alternate will be the amount added to or deleted

from the base Bid if Owner selects the alternate. In the comparison of Bids, alternates will be applied in the same order as listed in the Bid form.

#### 14.02 *Unit Price*

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid schedule.
- B. The total of all estimated prices will be the sum of the products of the estimated quantity of each item and the corresponding unit price. The final quantities and Contract Price will be determined in accordance with Paragraph 11.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

### **ARTICLE 15 – SUBMITTAL OF BID**

15.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form and the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the documents required by paragraph 7.01 of the Bid Form.

15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the Invitation to Bid and shall be enclosed in a plainly marked opaque, sealed envelope or package that shows the Richmond Road Station Filter Building, and the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED."

### **ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID**

16.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.

16.02 If within 24 hours after Bids are opened, any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned.

## **ARTICLE 17 – OPENING OF BIDS**

17.01 Bids will be opened **privately**.

## **ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE**

18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

## **ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT**

19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to not be responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder. Owner also reserves the right to waive any and all informalities and to negotiate contract terms with the Successful Bidder.

19.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

19.03 In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

19.04 In evaluating Bidders, Owner will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.

19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents.

19.06 If the Contract is to be awarded, Owner will award the Contract to the Bidder whose Bid is in the best interests of the Project.

19.07 Discrepancies in the multiplication of units of Work and Unit Prices will be resolved in favor of the Unit Prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

19.08 Owner also may consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.

## **ARTICLE 20 – CONTRACT SECURITY AND INSURANCE**

20.01 Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by such bonds.

## **ARTICLE 21 – SIGNING OF AGREEMENT**

21.01 When Owner gives a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement with the other Contract Documents which are identified in the Agreement as attached thereto. Within 15 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner. Within ten days thereafter, Owner shall deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

## **ARTICLE 22 – SALES AND USE TAXES**

22.01 Owner may be exempt from **Kentucky** state sales and use taxes on some materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Bid. Refer to Paragraph SC-6.10 of the Supplementary Conditions for additional information.

## **ARTICLE 23 – RETAINAGE**

23.01 Provisions concerning retainage are set forth in the Agreement.

## **ARTICLE 24 – CONTRACTS TO BE ASSIGNED**

24.01 N/A

## **ARTICLE 25 – PARTNERING**

25.01 Owner intends to participate in a partnering process with Contractor. The process is intended to help develop better and more effective communication and mutual understanding of common goals. The objectives of the process will be to achieve effective and efficient performance of the Work and completion of the Work within the Contract Price and Contract Times, all in accordance with the Contract Documents.

25.02 Participation in the partnering process will be voluntary. To initiate the process, within **25** days after the Notice to Proceed the key personnel of Owner, Engineer, Contractor, and Contractor's major Subcontractors will be invited to attend a half-day seminar and team building workshop to develop a partnering statement. The seminar and the workshop will be scheduled in conjunction with the preliminary design review meeting and conducted by a neutral facilitator at a time and location agreed to by Owner and Contractor in the general vicinity of the Site.

25.03 The facilitator will be selected by Owner, subject to approval by Contractor. Costs of the facilitator and facilities for the initial seminar and workshop will be paid by Owner. Thereafter, all facilitator-related and facilities costs will be shared equally by Owner and

Contractor with no change in the Contract Price. Each party will pay all costs associated with the participation of its own personnel.

- 25.04 It is intended that the initial seminar and workshop sessions be followed by periodic half-day evaluation sessions approximately every **3 months** as agreed to by Owner and Contractor. These sessions will be scheduled in conjunction with monthly job meetings if possible to minimize expense for attendees.
- 25.05 A primary objective of the partnering process is to maximize the potential for resolution of disputes in a timely and non-adversarial manner. The use of alternative dispute resolution (ADR) methods will be encouraged in order to promote and maintain amicable working relationships among the parties. In the event that ADR procedures are unsuccessful, the dispute resolution provisions set forth in the Contract Documents will be employed.

These provisions express the intent and spirit of the partnering process, and nothing stated herein or in the partnering statement shall change in any way the rights, responsibilities, and obligations of the parties as set forth in the Contract Documents. The partnering statement will not be a part of the Contract Documents and will not modify any defense, claim, obligation, or right that otherwise exists.



## AGREEMENT

THIS AGREEMENT is dated as of the \_\_\_\_ day of \_\_\_\_\_ in the year \_\_\_\_ by and between **Kentucky American Water Company**, (hereinafter called Owner) and **Name** (hereinafter called Contractor). Owner and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

### ARTICLE 1 - WORK

1.1 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

**KENTUCKY AMERICAN WATER COMPANY  
Richmond Road Station Filter Building**

### ARTICLE 2 - ENGINEER

2.1 The Engineer for the Project is **Hazen and Sawyer, 150 E. Campus View Blvd., Suite 133, Columbus, OH 43235** and who is to act as Owner's representative, assume all duties and responsibilities and have the rights and authority assigned to Engineer in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

### ARTICLE 3 - CONTRACT TIMES

3.1 The Work for the **Kentucky American Water Company, Richmond Road Station Filter Building** will be substantially completed and in service on or before **April 30, 2016**. Completion and ready for final payment for all work within this Agreement in accordance with Paragraph 14.07 of the General Conditions will be on or before **July 31, 2016**.

Owner and Contractor recognize that time is of the essence of this Agreement and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 3.1 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions.

3.2 Contractor and Owner recognize that time is of the essence of this Agreement and that Owner will suffer financial loss if the Work is not completed within the times specified in paragraph 3.1 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. They also recognize the delays, expenses and difficulties involved in providing in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner **One Thousand Dollars (\$1,000.00)** for each day that expires after the time specified in Paragraph 3.1 for substantial completion until the Work is substantially complete. After Substantially Complete if Contractor shall neglect, refuse, or fail to complete the remaining Work with the Contract Times or any proper extension thereof granted by Owner, Contractor shall pay Owner **Five Hundred Dollars (\$500.00)** for each day that expires after the times specified in Paragraph 3.1 for completion and readiness for final payment.

### ARTICLE 4 - CONTRACT PRICE

4.1 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents a sum equal to the Cost of the Work plus a Contractor's Fee for overhead and profit, both which shall be determined as provided below.

## ARTICLE 5 - COST OF WORK

5.1 Cost of the Work shall be determined as provided in paragraphs 11.01 of the General Conditions, as revised or amended by the Supplementary Conditions and shall include the following amount which shall be subject to increases or decreases for changes in the Work as provided in Article 7 hereof:

### Richmond Road Station Filter Building:

A Lump Sum of **Payment in Written Form Dollars (\$Payment in Numerical Form)** for Construction Supervision and Superintendence, as described in the Supplementary Conditions.

5.2 At final completion should the Cost of the Work, as audited and approved by the Owner exceed the Target Cost, the Contractor shall be entitled to a **50%** payment for the difference between the Final Cost of the Work and the Target Cost as provided.

5.3 At final completion should the Cost of the Work as audited and approved by the Owner be less than the Target Cost, an additional payment shall be made to the Contractor equal to **50%** of the difference between final Cost of the Work and Target Cost as an incentive to the Contractor to reduce the project cost to Owner.

5.4 It is understood that the Contract Price has been calculated on the basis of Conceptual Documents and that further development will occur as necessary to produce Final Contract Drawings and Specifications necessary to complete the design, to obtain regulatory approvals and to perform the Work. No adjustment will be made to the Contract Price unless future development of these Conceptual Documents during the Final Design Phases results in material changes in the scope, extent or character of the work to be performed or furnished or in the quality or function of the intended completed project not reasonably inferable or anticipatable from the Conceptual Documents by a Contractor experienced in the construction of water treatment facilities.

## ARTICLE 6 - CONTRACTOR'S FEE

6.1 The Contractor's Fee for those costs not included in the Cost of the Work shall be as follows:

### Richmond Road Filter Building:

A fixed fee of **Payment in Written Form Dollars (\$Payment in Numerical Form)** subject to increases or decreases for changes in the Work as provided in Article 7 hereof Conditions.

## ARTICLE 7 - CHANGES IN THE WORK

The amount of any increases or decreases in Contractor's Fee which results from a Change Order shall be set forth in the applicable Change Order subject to the following:

7.1 The amount of any increases or decreases in the Contractor's Fee which results from a change in the work shall be set forth in the applicable document amending the Contract Documents subject to the following:

A. Design Phase Changes: For changes in the Work ordered by Owner prior to completion of the Design Phase, the fixed fee will be adjusted by 5% of the estimated construction cost increase or decrease associated with the change. For changes involving cost increases, if during the Design Phase, Owner and Contractor are unable to agree to, or establish, the estimated construction cost increase associated with the change, this determination will be deferred to the Construction Phase at which time the actual Cost of the Work associated with the change is to be determined and used to make the 5% fixed fee adjustment.

B. Construction Phase Changes: After completion of the Final Design Phase, and approval of the final construction cost estimate, no adjustments to the fixed fee shall be made unless Owner orders additions or deletions to the Work which directly result in the Cost of the Work being greater than one hundred and ten percent (110%), or less than ninety percent (90%) of the final construction cost estimate. In such case the fixed fee shall be increased by 10% of the actual cost directly attributable to the change above 110% of the estimate or decreased by 5% of the cost directly attributable to the change below 90% of the approved estimate. Documents amending the Contract Documents as applicable will be issued to document Owner additions or deletions to work.

7.2 The amount of any increase or decrease in the Lump Sum Amount provided in Article 5 hereof in shall include only direct costs (i.e. no fee) and shall be determined in accordance with paragraph 11.3 of the General Conditions as may be revised or amended by the Supplementary Conditions.

## **ARTICLE 8 - PAYMENT PROCEDURES**

8.1 Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

Progress Payments; Retainage. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment as recommended by Engineer, on or about the 25th day of each month during construction as provided in paragraphs 8.1.1, 8.1.2 and 8.2 below. All such payments will be subject to the limitations of any fee and will be measured by the schedule of values established in paragraph 2.05 of the General Conditions, or in the event there is no schedule of values, as provided in the General Requirements.

8.1.1 For Cost of Work: Progress payments on account of the Cost of the Work will be made:

8.1.1.1 Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below, but, in each case, less the aggregate of payments previously made and less such amounts as Engineer shall determine, or Owner may withhold, in accordance with paragraph 14.02 of the General Conditions.

Unless otherwise agreed to in advance by Owner for specific subcontracts or material/equipment purchase orders, **95%** of the Cost of the Work completed and Cost of the Work applicable to materials and equipment not incorporated in the Work, but delivered, suitably stored and accompanied by documentation satisfactory to Owner as provided in paragraph 14.02 of the General Conditions (with the balance being retainage).

8.1.1.2 The Contractor shall submit a Progress Payment Application to the Owner on or about the 25<sup>th</sup> day of each month that includes the following:

- (1) The Contractor's estimate of the total expenditure that they will incur and the sums that they will be due them in the month succeeding the month in which the request is made, provided that in the first month the Contractor may submit their estimate for that month at its beginning; and
- (2) The total of the Contractor's actual expenditure and sums due him for the month preceding the month in which the request is made;
- (3) Any amount previously certified by the Owner in respect of the Contractor's estimated expenditure and sums due them for the preceding month.
- (4) The Contractor's Progress Payment Application shall be supported by all relevant documentary evidence and show the manner in which the total requested has been calculated. In addition, the Contractor will submit with all Progress Payment Applications, except Final Progress Payment, a conditional waiver and release duly executed by the Contractor and their subcontractors and suppliers on the form in the Supplementary Conditions.

8.1.1.3 Upon Substantial Completion and receipt of Release of Liens from suppliers and subcontractors whose Work is completed, in an amount sufficient to increase the total payments to Contractor such that retained funds will be approximately equal to the value of the remaining Work. Value to be agreed upon by the Owner, Engineer and Contractor, less such amounts as Engineer shall determine, or Owner may withhold, in accordance with paragraph 14.7 of the General Conditions.

8.1.2 For Contractor's Fee and Lump Sum Amount for Supervision and Superintendence, Progress payments will be made:

8.1.2.1 Payments will be in an amount equal to **100%** of the portion of such fee and lump sum earned to the date of the approved Application for Payment (less in each case payments previously made on account of such fee) based on the progress of the Work measured by the schedule of values established as provided in paragraph 2.05 of the General Conditions.

8.2 Final Payment. Upon final completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price and any retained funds, as recommended by Engineer as provided in said Paragraph 14.07. For the Contractor's Final Progress Payment Application, the Contractor will submit

an unconditional waiver and release duly executed by Contractor and their subcontractors and suppliers on the form in the Supplementary Conditions.

8.3 Interest. Not Used.

## **ARTICLE 9 - CONTRACTOR'S REPRESENTATIONS**

In order to induce Owner to enter into this Agreement Contractor makes the following representations:

9.1 Contractor has familiarized itself with the nature and extent of the Contract Documents, Contract Times, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

9.2 Contractor has studied carefully all reports of explorations and tests of subsurface conditions and drawings of physical conditions which are identified in the Supplementary Conditions as provided in Paragraph 4.02 of the General Conditions, and accepts the limitations set forth in Article B, Section 4.02 of the General Conditions.

9.3 Contractor has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests, reports and studies (in addition to or to supplement those referred to in Paragraph 9.2 above) which pertain to the subsurface or physical conditions at or contiguous to the site or otherwise which may affect the cost, progress, performance or furnishing of the Work as Contractor considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Paragraph 4.02 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by Contractor for such purposes.

9.4 Contractor has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said Underground Facilities are or will be required by Contractor in order to perform and furnish the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Paragraph 4.03 of the General Conditions.

9.5 Contractor has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

9.6 Contractor has given Engineer written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by Engineer is acceptable to Contractor.

## **ARTICLE 10 - ACCOUNTING RECORDS**

Contractor shall check all materials, equipment and labor entering into the Work and shall keep such full and detailed accounts as may be necessary for proper financial management under

this Agreement, and the accounting methods shall be satisfactory to Owner. Owner shall be accorded access to all Contractor's records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period three years after final payment by Owner.

## ARTICLE 11 - CONTRACT DOCUMENTS

The Contract Documents which comprise the entire agreement between Owner and Contractor concerning the Work consist of the following:

- 11.1 This Agreement (pages \_\_\_ to \_\_\_, inclusive).
- 11.2 Performance and Labor and Material Payment Bonds, identified as exhibits A and B and consisting of 4 pages.
- 11.3 Notice of Award. (Note: This document is not attached to this Agreement.)
- 11.4 General Conditions (Document Identification: Standard General Conditions of the Construction Contract – 2008 American Water System Edition, pages GC-0 to GC-61, inclusive).
- 11.5 Supplementary Conditions (pages SC-1 to SC-15 and Appendices A to C, inclusive).
- 11.6 Basis of Design Memo - Draft entitled **New Filter Building Design Richmond Road Station Water Treatment Plant**.
- 11.7 Drawings entitled **Richmond Road Station Water Treatment Plant Improvements** prepared by **Hazen and Sawyer** dated **May 2014**.
- 11.8 Intentionally left open
- 11.9 Addenda numbers \_\_\_ to \_\_\_, inclusive.
- 11.10 Contractor's Proposal (pages \_\_\_ to \_\_\_, inclusive) marked exhibit **CU**, including all certifications and documentation furnished with the Proposal as described in Article 13 of Instructions to Bidders.
- 11.11 Documentation submitted by Contractor prior to Notice of Award (pages \_\_\_ to \_\_\_, inclusive).
- 11.12 The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto:
  - 11.12.1 All Written Amendments and other documents amending, modifying, or supplementing the Contract Documents pursuant to Paragraph 3.04 of the General Conditions.
  - 11.12.2 Specifications as defined in the General Conditions.
  - 11.12.3 Drawings as defined in the General Conditions.

11.13 The documents listed in Paragraphs 11.2 et seq. above are attached to this Agreement (except as expressly noted otherwise above).

There are no Contract Documents other than those listed above in this Article 11. The Contract Documents may only be amended, modified or supplemented as provided in Paragraph 3.04 of the General Conditions.

## **ARTICLE 12 - MISCELLANEOUS**

12.1 Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meaning indicated in the General Conditions.

12.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and 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 the Contract Documents.

12.3 Owner and Contractor each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.

12.4 Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents 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. This Agreement is to be governed by the laws of the State of Missouri.

12.5 Contractor certifies that is has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 12.5

1. "Corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution.
2. "Fradulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
3. "Collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artifical, non-competitive levels.

4. "Coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

## **ARTICLE 13 - OTHER PROVISIONS**

### 13.1 Government Regulations

The following clauses, where applicable, are incorporated in this Agreement by reference as is fully set out; the Equal Opportunity Clause prescribed in 41 CFR 60-1.40, the Affirmative Action Clause prescribed in 41 CFR 60-250.4, regarding veterans and veterans of the Vietnam Era, and the Affirmative Action Clause for Handicapped Workers prescribed in 41 CFR 60-741.4.

Contractor accepts this Agreement and will supply any information relating to federal or state laws, rules or regulations relating to the above.

### 13.2 Background Check

Contractor shall conduct a background check on each of its employees prior to the employee performing any function or activity under this Agreement involving any direct customer contact, or on-site work at any of the Company's water treatment plants or pump stations. As used in the Agreement, "direct customer contact" shall include but not be limited to, any activity by the Contractor's employee at or near a customer's premises. The background check conducted by Contractor shall consist of a check of at least the following: Previous employers and dates of employment; Education; Driving record; Criminal history (state and federal); References; Credit history. Prior to commencing any work under this Agreement, Contractor shall provide proof to the Owner that the requirements of this Paragraph have been met. Contractor shall make available to the Company, upon request, the documentation and results of the background check with respect to any employee of Contractor performing any function under this Agreement involving any direct customer contact.



IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement in quadruplicate. Two counterparts have been delivered to Owner, and one counterpart each has been delivered to Contractor and Engineer. All portions of the Contract Documents have been signed or identified by Owner and Contractor or by Engineer on their behalf.

This Agreement will be effective on \_\_\_\_\_, \_\_\_\_\_.

Owner:

Contractor:

\_\_\_\_\_

\_\_\_\_\_

By \_\_\_\_\_

By \_\_\_\_\_

(Corporate Seal)

(Corporate Seal)

Attest \_\_\_\_\_

Attest \_\_\_\_\_

Address for giving notices

Address for giving notices

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

License No. \_\_\_\_\_

(If Contractor is a corporation, attach evidence of authority to sign.)

**LABOR AND MATERIAL PAYMENT BOND**

KNOW ALL MEN BY THESE PRESENTS: that \_\_\_\_\_,  
having an office at \_\_\_\_\_, as Principal,  
hereinafter called Contractor, and \_\_\_\_\_,  
having an office at \_\_\_\_\_, as Surety,  
hereinafter called Surety, are held and firmly bound unto **Kentucky American Water Company**, having an office at **2300 Richmond Road, Lexington, KY 40502**, as Obligee, hereinafter called Owner, for the use and benefit of claimants as herein below defined in the amount of **Payment in Written Form Dollars (\$Payment in Numerical Form)**, for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated \_\_\_\_\_, \_\_\_\_\_, entered into a Contract with the Owner for the construction of the project entitled **Richmond Road Filter Building**, in accordance with Drawings and Specifications prepared by **Hazen and Sawyer** which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly make payment of all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however to the following conditions:

1. A claimant is defined as one having a direct contract with the Contractor or with a Subcontractor of the Contractor for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.
2. The above named Contractor and Surety hereby jointly and severally agreed with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.
3. No suit or action shall be commenced hereunder by any claimant:
  - a) Unless claimant, other than one having a direct contract with the Contractor, shall have given written notice to any two of the following: the Contractor, the Owner or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is

made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Contractor, Owner or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.

b) After the expiration of one (1) year following the date on which Contractor ceased Work on said Contract or after the expiration of one (1) year following the Date of Substantial Completion of the Project, whichever is later, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, on any part thereof, is situated, and not elsewhere.

4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against such improvement, whether or not claim for the amount of such lien be presented under and against this bond.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

WITNESS:

\_\_\_\_\_  
CONTRACTOR (SEAL)

By \_\_\_\_\_

\_\_\_\_\_  
(Witness' Signature)

\_\_\_\_\_  
(Title)

WITNESS:

\_\_\_\_\_  
(Name of Surety) (SEAL)

By \_\_\_\_\_

(Attach Power of Attorney)

\_\_\_\_\_  
(Witness' Signature)

\_\_\_\_\_  
(Title)

**PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS: that \_\_\_\_\_,  
having an office at \_\_\_\_\_, as Principal,  
hereinafter called Contractor, and \_\_\_\_\_,  
having an office at \_\_\_\_\_, as Surety,  
hereinafter called Surety, are held and firmly bound unto the **Kentucky American Water Company**, having an office at **2300 Richmond Road, Lexington, KY 40502**, as Obligee, hereinafter called Owner, for the use and benefit of claimants as herein below defined in the amount of **Payment in Written Form Dollars (\$Payment in Numerical Form)**, for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated \_\_\_\_\_, \_\_\_\_\_, entered into a Contract with the Owner for the construction of the project entitled **Richmond Road Station Filter Building**, in accordance with Drawings and Specifications prepared by **Hazen and Sawyer** which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, the condition of this obligation is such that, if Contractor shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of Contract Times made by the Owner.

Whenever Contractor shall be and declared by Owner to be in default under the Contract, the Surety shall promptly remedy the default. If the Owner terminates the Contract for such default, the following precautions shall govern the liability of the Contractor and the Surety hereunder.

In the event of such termination, the Contractor and the Surety shall remain fully liable to the Owner for the Contractor's failure to timely complete the Contract, any additional costs incurred by the Owner in completing the Contract, and liquidated damages from the originally scheduled completion date to the date of the actual completion of the work by the Owner.

In the event of such termination, the Surety company may elect to take over and complete performance of the Contract by giving written notice to the Owner of such determination within seven (7) days of the Owner's mailing of notice of termination to the Surety and actually commencing completion with fourteen (14) days of the Owner's notice to the Surety. The Surety shall fully complete the work by the originally scheduled date of completion and the Contractor and the Surety shall remain liable to the Owner for all damages sustained by the Owner and for liquidated damages for delay.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due or before the expiration of two (2) years from the Date of Substantial Completion of the Project, whichever is later.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators or successors of the Owner.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

WITNESS:

\_\_\_\_\_  
CONTRACTOR (SEAL)

By \_\_\_\_\_

\_\_\_\_\_  
(Witness' Signature)

\_\_\_\_\_  
(Title)

WITNESS:

\_\_\_\_\_  
(Name of Surety)

(SEAL)

By \_\_\_\_\_  
(Attach Power of Attorney)

\_\_\_\_\_  
(Witness' Signature)

\_\_\_\_\_  
(Title)

**STANDARD GENERAL CONDITIONS  
OF THE CONSTRUCTION CONTRACT**

**2008 American Water System Edition**

*Issued by*

American Water System  
Voorhees, New Jersey

The Standard General Conditions of the Construction Contract, 2008 American Water System Edition ("General Conditions"), are based on the Standard General Conditions of the Construction Contract prepared by the Engineers Joint Contract Document Committee (EJCDC Doc. No. C-700, 2007 Edition). The General Conditions incorporate terms and conditions that are consistent with American Water System practices and policies. Only the General Conditions contained herein are a part of the Contract Documents for the project.

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**STANDARD GENERAL CONDITIONS OF THE  
CONSTRUCTION CONTRACT**

**2008 American Water System Edition**

**ARTICLE 1 – DEFINITIONS AND TERMINOLOGY**

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda* – Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
  2. *Agreement* – The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.
  3. *Application for Payment* – The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
  4. *Asbestos* – Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
  5. *Bid* – The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
  6. *Bidder* – The individual or entity who submits a Bid directly to Owner.
  7. *Bidding Documents* – The Bidding Requirements and the proposed Contract Documents (including all Addenda).
  8. *Bidding Requirements* – The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.
  9. *Change Order* – A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim* – A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
11. *Contract* – The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.
12. *Contract Documents* – Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price* – The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times* – The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
15. *Contractor* – The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work* – See Paragraph 11.01.A for definition.
17. *Drawings* – That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement* – The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *Engineer* – The individual or entity named as such in the Agreement.
20. *Field Order* – A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *General Requirements* – Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.
22. *Hazardous Environmental Condition* – The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

23. *Hazardous Waste* – The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations* – Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
25. *Liens* – Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
26. *Milestone* – A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
27. *Notice of Award* – The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed* – A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
29. *Owner* – The American Water System entity with which Contractor has entered into the Agreement and for which the Work is to be performed.
30. *PCBs* – Polychlorinated biphenyls.
31. *Petroleum* – Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *Progress Schedule* – A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
33. *Project* – The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual* – The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Radioactive Material* – Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative* – The authorized representative of Engineer who may be assigned to the Site or any part thereof.

37. *Samples* – Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
38. *Schedule of Submittals* – A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
39. *Schedule of Values* – A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
40. *Shop Drawings* – All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
41. *Site* – Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
42. *Specifications* – That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *Subcontractor* – An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
44. *Substantial Completion* – The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.
45. *Successful Bidder* – The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions* – That part of the Contract Documents which amends or supplements these General Conditions.
47. *Supplier* – A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.
48. *Underground Facilities* – All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity,

gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

49. *Unit Price Work* – Work to be paid for on the basis of unit prices.
50. *Work* – The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
51. *Work Change Directive* – A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

#### 1.02 Terminology

- A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.
- B. *Intent of Certain Terms or Adjectives*
  1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.
- C. *Day*
  1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
  - a. does not conform to the Contract Documents, or
  - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or
  - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide*

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.

- F. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## **ARTICLE 2 – PRELIMINARY MATTERS**

### *2.01 Delivery of Bonds and Evidence of Insurance*

- A. *Bonds:* When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.



2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will Owner have any obligations or duties to Contractor under the Agreement until Contract Times commence to run.

2.04 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:
  - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
  - 2. a preliminary Schedule of Submittals; and
  - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.
- B. At this conference Owner and Contractor shall each designate, in writing, specific individuals to act as their respective representatives with respect to the services and responsibilities of each party under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

### 2.07 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
  - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
  - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
  - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

## **ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE**

### 3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

### 3.02 *Reference Standards*

- A. Standards, Specifications, Codes, Laws, and Regulations
  - 1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their Subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, or Engineer, or any of their Related Entities, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

### 3.03 Reporting and Resolving Discrepancies

#### A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers or has actual knowledge of and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

#### B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
  - a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or
  - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

### 3.04 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
  - 1. A field order;
  - 2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or
  - 3. Engineer's written interpretation or clarification.
- C. Changes in Contract Time or Contract Price must be made by Change Order. Actions by Owner or Engineer under Paragraph 3.04.B do not result in any change to Contract Time or Contract Price.

### 3.05 *Reuse of Documents*

- A. Contractor and any Subcontractor or Supplier shall not:
  - 1. have or acquire any title to or Ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or
  - 2. reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.
- B. The prohibition of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

### 3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Condition, copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. 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 transferring party.

- C. When transferring documents in electronic media format, the transferring party 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 the data's creator.

#### **ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS**

##### *4.01 Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefore as provided in Paragraph 10.05.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

##### *4.02 Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
  - 1. A Geotechnical Baseline Report that indicates the assumed subsurface conditions (except Underground Facilities) at the Site;
  - 2. other reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and
  - 3. those drawings known to Owner of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.
- B. *Limited Reliance by Contractor Authorized:* The Geotechnical Baseline Report, which is a Contract Document, presents as a contractual baseline those subsurface conditions that Contractor may assume it will encounter; however, Owner does not warrant that actual conditions will not vary from the assumed conditions. Contractor may rely upon the express statements and depictions regarding assumed subsurface conditions at the

Site presented as a contractual baseline in the Geotechnical Baseline Report, which is a Contract Document. Except for such reliance, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities, with respect to:

1. the completeness of the Geotechnical Baseline Report, or content, quality, or completeness of any other such reports, tests, or drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
2. other data, interpretations, opinions, and information contained in any such reports or tests, or shown or indicated in any such drawings; or
3. any Contractor interpretation of or conclusion drawn from any such report, test, or drawing or any such other data, interpretations, opinions, or information.

#### 4.03 *Differing Subsurface or Physical Conditions*

##### A. *Notice*

1. The Contractor shall give written notice to Owner and Engineer of (a) subsurface or latent physical conditions at the Site which differ materially from those indicated in the Geotechnical Baseline Report or other Contract Documents or (b) unknown physical conditions at the Site of an unusual nature that differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the Contract Documents.
2. The Contractor's notice shall provide the Owner and Engineer the opportunity to investigate the conditions at the Site, and to obtain additional exploration or tests with respect to the pertinent condition. Owner shall provide to Contractor the results of any such additional tests or exploration.

B. *Engineer's Review*: After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

##### C. *Possible Price and Times Adjustments*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
  - a. such condition must meet at least one of the two categories described in Paragraph 4.03.A.1; and
  - b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
  - a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
  - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or
  - c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, Contractor may make a Claim therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.

#### 4.04 *Underground Facilities*

- A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the Owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
  1. Contractor may assume the general accuracy and completeness of any such information and data shown or indicated in the Contract Documents; and
  2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
    - a. reviewing and checking all such information and data,
    - b. locating for field construction purposes all Underground Facilities shown or indicated in the Contract Documents,
    - c. coordination of the Work with the Owners of such Underground Facilities, including Owner, during construction, and
    - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the Owner of such Underground Facility and give written notice to that Owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and advise Owner as to the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
2. If Owner concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

- A. Owner shall provide Engineering surveys to establish reference points and property monuments necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to a Hazardous Environmental Condition identified at the Site, if any, that Engineer has used in preparing the Contract Documents.
- B. *Limited Reliance by Contractor Authorized:* Contractor may rely upon the express statements and depictions regarding Hazardous Environmental Conditions contained in such reports and drawings, but such reports and drawings are not Contract Documents. Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities, with respect to:



1. the content, quality or completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
  2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
  3. any Contractor interpretation of or conclusion drawn from such express statements and depictions, such reports or drawings, or from any such other data, interpretations, opinions, or information.
- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by paragraph 4.06.E.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants, and Subcontractors of each and any of them from and against all claims, 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) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and Subcontractors of each and any of them from and against all claims, 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) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

#### 4.07 *Notice of Hazardous Materials*

- A. In accordance with the intent of the Federal Occupational Safety and Health Administration (OSHA) Standard Section 29 CFR 1910.12, Hazard Communication with effective date of May 25, 1986, as it may be amended from time to time, the Owner hereby notifies the Contractor that Work is to be performed on company property where the Contractor's employees may be exposed to hazardous materials existing on the premises.

Chemicals known to be used or stored by the Owner and required to be disclosed by said OSHA Standard Section 29 CFR 1910.12 are listed in the Supplementary Conditions.

- B. Owner, Contractor, and any Subcontractors will each provide or make available to the others: (a) any written hazard communication program required to be maintained with respect to the site and any material safety data sheet and other hazard communication information required to be provided in accordance with the applicable Laws and applicable Regulations; or (b) in the event that applicable Laws and Regulations do not require the provision or exchange of such hazard communications, Contractor and any Subcontractors shall, nevertheless, provide or make available to Owner and any other employers at the site a written hazard communication program, material safety data sheets and other hazard communication information of the type and consistent with the intent of said OSHA Standard Section 29 CFR 1910.12 and acceptable to Owner and Engineer. Contractor shall be responsible for coordinating any such required exchange

of documents or information between or among Owner and any other employers at the site, or any of them. Contractor shall include the provisions of this paragraph in any subcontract for any part of the Work at the site.

## **ARTICLE 5 – BONDS AND INSURANCE**

### *5.01 Performance, Payment, and Other Bonds*

- A. Contractor agrees to include in its subcontracts with major Subcontractors a requirement for such Subcontractors to furnish a Performance Bond and a Labor and Material Payment Bond, each in an amount equal to the Subcontract price and each naming the Owner and Contractor as co-obligees, as security for the faithful performance and payment of all such Subcontractors' obligations under their respective subcontract documents. These Bonds shall remain in effect at least until one year after the date when final payment becomes due, except as otherwise provided by Laws or Regulations. All bonds furnished in compliance with the above shall be executed by sureties having a rating of "A" by the most recent Best's Key Rating Guide and as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff, Bureau of Government Financial Operations, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act.
- B. Contractor is not required to furnish a Performance or Labor and Material Payment Bond at the time of award. If Owner requests at a later date that such bonds be furnished, Contractor will provide the bonds from a surety meeting the requirements of Paragraph 5.01A above. In this case Contractor's Fee will be increased in an amount equal to the premium paid for the bonds requested by Owner.

### *5.02 Licensed Sureties and Insurers*

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

### *5.03 Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of

insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

- C. Failure of Owner to demand such certificates or other evidence of full compliance with these insurance requirements or failure of Owner to identify a deficiency from evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that coverage and limits will necessarily be adequate to protect Contractor
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

#### 5.04 *Contractor's Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
  - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
  - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
  - 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
  - 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
    - a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
    - b. by any other person for any other reason;
  - 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
  - 6. claims for damages because of bodily injury or death of any person or property damage arising out of the Ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and Subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
6. include completed operations coverage:
  - a. Such insurance shall remain in effect for three years after final payment.
  - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

#### 5.05 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

#### 5.06 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the

replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and Subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
  2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit ;
  3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of Engineers and architects);
  4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
  5. allow for partial utilization of the Work by Owner;
  6. include testing and startup; and
  7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and Subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.
- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified

deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

- E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

#### 5.07 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as loss payees (and the officers, directors, partners, employees, agents, consultants and Subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect 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 loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and Subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as loss payees (and the officers, directors, partners, employees, agents, consultants and Subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

#### 5.08 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such

agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

#### 5.09 *Acceptance of Bonds and Insurance; Option to Replace*

- A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

#### 5.10 *Partial Utilization, Acknowledgment of Property Insurer*

- A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

### **ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES**

#### 6.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent, acceptable to Owner, who shall not be replaced without written authorization from Owner except under extraordinary circumstances.



#### 6.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

#### 6.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.
- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

#### 6.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.
  - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
  - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

#### 6.05 *Substitutes and "Or-Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, no like, equivalent, or "or-equal" item, and no substitution, is permitted.

#### 6.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.
- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked by Owner on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor
  2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and Subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.
- H. Owner or Engineer may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by a particular Subcontractor or Supplier.

#### 6.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor and Engineer, and the officers, directors, partners, employees, agents, consultants and Subcontractors of each and any of them from and against all claims, 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 arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and Subcontractors of each and any of them from and against all claims, 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) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

#### 6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility Owners for connections for providing permanent service to the Work.

#### 6.09 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that is contrary to Laws or Regulations, Contractor shall bear all claims, 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) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

#### 6.10 *Taxes*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

#### 6.11 *Use of Site and Other Areas*

- A. Limitation on Use of Site and Other Areas
  1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the Owner

or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such Owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
  3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and Subcontractors of each and any of them from and against all claims, 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) arising out of or relating to any claim or action, legal or equitable, brought by any such Owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

#### 6.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

#### 6.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;
  2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
  3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owners of adjacent property and of Underground Facilities and other utility Owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

#### 6.14 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

#### 6.15 *Hazard Communication Programs*

See Paragraph 4.07.B.

#### 6.16 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a

change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

#### 6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

##### 1. *Shop Drawings*

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:* Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

##### C. *Submittal Procedures*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:

a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

c. determined and verified the suitability of all materials offered with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

- d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. *Engineer's Review*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
2. Contractor shall furnish required submittals with sufficient information and accuracy in order to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing subsequent submittals of Shop



Drawings, samples or other items requiring approval and Contractor shall reimburse Owner for Engineer's charges for such time.

6.18 *Continuing the Work*

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
  - 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
  - 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
  - 1. observations by Engineer;
  - 2. recommendation by Engineer or payment by Owner of any progress or final payment;
  - 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
  - 4. use or occupancy of the Work or any part thereof by Owner;
  - 5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;
  - 6. any inspection, test, or approval by others; or
  - 7. any correction of defective Work by Owner.

6.20 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners,

employees, agents, consultants and Subcontractors of each and any of them from and against all claims, 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) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

- B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and Subcontractors arising out of:
  - 1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
  - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

#### 6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design

professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

## ARTICLE 7 – OTHER WORK AT THE SITE

### 7.01 *Related Work at Site*

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility Owners. If such other work is not noted in the Contract Documents, then:
  - 1. written notice thereof will be given to Contractor prior to starting any such other work; and
  - 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other Contractor who is a party to such a direct contract, each utility Owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility Owners and other Contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility Owners and other Contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
  - 1. the individual or entity who will have authority and responsibility for coordination of the activities among the various Contractors will be identified;
  - 2. the specific matters to be covered by such authority and responsibility will be itemized; and
  - 3. the extent of such authority and responsibilities will be provided.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

**ARTICLE 8 – OWNER’S RESPONSIBILITIES**

8.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

- A. In case of termination of the employment of Engineer, Owner shall appoint an Engineer whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

- A. Owner’s duties in respect of providing lands and easements and providing Engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner’s identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 *Insurance*

- A. Owner’s responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

- A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

- A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

8.12 *Compliance with Safety Program*

- A. While at the Site, Owner and its employees and representatives shall become familiar with Contractor's safety programs as initiated and maintained under Paragraph 6.13 and shall comply with the requirements of such programs while at the Site.

**ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION**

9.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period.
- B. Owner reserves the right to at any time, and in Owner's sole discretion; 1) designate an employee or Owner or an Owner-affiliated entity as Engineer, 2) directly undertake or perform some or all Engineer's authority, duties, or responsibilities, and 3) retain Owner-affiliated entities or independent Engineers, consultants, or managers to undertake some or all of Engineer's or Owner's authority, duties or responsibilities under the Contract Documents.
- C. The assignment of any authority, duties or responsibilities to Engineer or others under the Contract Documents, or any undertaking, exercise or performance thereof by Engineer, Owner, or others is intended to be for the sole and exclusive benefit of Owner

and not for the benefit of Contractor, Subcontractor, Supplier, or any other person or organization.

#### 9.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

#### 9.03 *Project Representative*

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

#### 9.04 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

**ARTICLE 10 – CHANGES IN THE WORK; CLAIMS**

10.01 *Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.



#### 10.02 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

#### 10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
  2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
  3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

#### 10.04 *Notification to Surety*

- A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

#### 10.05 *Claims*

- A. [Reserved]
- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event. A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied

by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal.

- C. *Other Party's Action:* The other party will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
1. deny the Claim in whole or in part, or
  2. approve the Claim.
- D. In the event that the other party does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. The other party's written action under Paragraph 10.05.C or denial pursuant to Paragraph 10.05.D will be final and binding upon the claimant, Owner and Contractor, unless claimant invokes the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

## **ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK**

### 11.01 *Cost of the Work*

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from Subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
  - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
  - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
  - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
  - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.
  - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
  - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in

connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded.* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, Engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

- D. *Documentation*: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

#### 11.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances*

1. Contractor agrees that:

- a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
- b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. *Contingency Allowance*

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

#### 11.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

- D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
  2. there is no corresponding adjustment with respect any other item of Work; and
  3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

## **ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES**

### *12.01 Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
  2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
  3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).
- C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:
1. a mutually acceptable fixed fee; or
  2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
    - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

- b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
- c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
- d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
- e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost; and
- f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

#### 12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

#### 12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility Owners or other Contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.
- B. If Owner, Engineer, or other Contractors or utility Owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility Owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.
- D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

## **ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK**

### *13.01 Notice of Defects*

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

### *13.02 Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

### *13.03 Tests and Inspections*

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
  - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
  - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and



3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.
- G. No observations, inspections, tests, or approvals by Engineer, Owner, or others shall relieve Contractor of its obligation to perform the Work in accordance with the Contract Documents.

#### 13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, 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) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

- D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

#### 13.05 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

#### 13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, 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) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

#### 13.07 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
1. repair such defective land or areas; or
  2. correct such defective Work; or
  3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
  4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, 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) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

#### 13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, 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) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

#### 13.09 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other Contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.
- C. All claims, 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) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

## ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

### 14.01 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

### 14.02 *Progress Payments*

#### A. *Applications for Payments*

1. At least 20 days before the date for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are

covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Each Application for Payment shall be accompanied by complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work, to the date of the Application for Payment.
3. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

*B. Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations on the Site of the executed Work as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
  - a. the Work has progressed to the point indicated;
  - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and
  - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
  - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

- b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's nor Owner's review of Contractor's Work for the purposes of recommending payments or determining to make payments, nor Engineer's recommendation of any payment, including final payment, nor Owner's decision to make any payment, including final payment, will impose responsibility on Engineer or Owner:
  - a. to supervise, direct, or control the Work, or
  - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
  - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
  - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
  - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
  - a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
  - b. the Contract Price has been reduced by Change Orders;
  - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
  - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

*C. Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

*D. Reduction in Payment*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:
  - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
  - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
  - c. there are other items entitling Owner to a set-off against the amount recommended; or
  - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

#### 14.03 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

#### 14.04 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any

provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

#### 14.05 *Partial Utilization*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.
  - 1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner and Engineer will follow the procedures of paragraph 14.04 A.-D. for that part of the Work.
  - 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
  - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.



4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

#### 14.06 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

#### 14.07 *Final Payment*

##### A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
  - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;
  - b. consent of the surety, if any, to final payment;
  - c. a list of all Claims against Owner that Contractor believes are unsettled; and
  - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. Contractor shall defend, indemnify, and hold Owner harmless against any Lien filed in connection with the Work by any Subcontractor, Supplier, or other lien claimant. At Owner's request, Contractor shall furnish a bond or other collateral satisfactory to Owner to protect and indemnify Owner against any Lien.

##### B. *Engineer's Review of Application and Acceptance*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and

Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

*C. Payment Becomes Due*

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

*14.08 Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

*14.09 Waiver of Claims*

- A. The making and acceptance of final payment will constitute:
  1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
  2. a waiver of all Claims by Contractor against Owner and a release of all liens other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

**ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION**

*15.01 Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract

Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

#### 15.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will justify termination for cause:
1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
  2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
  3. Contractor's repeated disregard of the authority of Engineer; or
  4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),
  2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and
  3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, 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) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.
- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to

terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

- E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

#### 15.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
  - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
  - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
  - 3. all claims, 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) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
  - 4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

#### 15.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined

to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

## **ARTICLE 16 – DISPUTE RESOLUTION**

### *16.01 Methods and Procedures*

- A. At any time after submitting notice of a claim under Paragraph 10.05.B and prior to the expiration of the 30-day time period set forth in Paragraph 10.05.E, Owner or Contractor may give to the other party written notice of intent to submit the Claim to a process of bilateral negotiations as set forth below.
- B. Within 30 days of delivery of such notice, Owner and Contractor shall meet and confer regarding the Claim. A good-faith effort to negotiate resolution shall be made by both parties.
- C. If the negotiations contemplated by Paragraph 16.01.B are unsuccessful, management representatives of Owner and Contractor at least one tier above the individuals who met under 16.01.B shall meet, confer, and negotiate within 30 days of the closure of the unsuccessful negotiations.
- D. If the Claim is not resolved by negotiation, the Claim shall be deemed denied and shall become final and binding 30 days after termination of the negotiations unless, within that time period, Claimant:
  - 1. elects in writing to invoke any further dispute resolution process provided for in the Supplementary Conditions, or
  - 2. agrees with the other party to submit the Claim to another dispute resolution process, or
  - 3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.
- E. All other disputes arising under the Contract shall be resolved through submittal of the dispute to a court of competent jurisdiction, unless another dispute resolution process is provided for in the Supplementary Conditions.

## **ARTICLE 17 – MISCELLANEOUS**

### *17.01 Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
  - 1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice, or by facsimile transmission.

#### 17.02 *Computation of Times*

- A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

#### 17.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

#### 17.04 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

#### 17.05 *Controlling Law*

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

#### 17.06 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement the **Standard General Conditions of the Construction Contract, 2008 American Water System Edition**, and other provisions of the Contract Documents as indicated below. All provisions that are not so amended or supplemented remain in full force and effect.

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Appendices:

Appendix A – Insurance Requirements and Sample Insurance Certificates (2 pages)

Appendix B - Release of Liens forms (Contractor, 2 pgs., Subcontractor, 1 pgs.)

Appendix C - Sales Tax Guidelines (2 pages)

Appendix D - Geotechnical Baseline Report

## SUPPLEMENTARY CONDITIONS

### SC-1.01 Definitions

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

Conceptual Documents – The drawings and specifications and/or other graphic or written materials, criteria and information concerning Owner's requirements for the Project, such as design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, including those items enumerated in the design memorandum which show or describe the character and scope of, or relate to, the Work to be performed or furnished and which have been prepared by or for Owner.

Construction – The performing or furnishing of labor, the furnishing and incorporating of materials and equipment into the Work and the furnishing of services and documents, all as required by the Contract Documents.

Target Cost – The estimated cost derived upon completion of 60% design, including incorporation of Owner's comments, the contractor shall develop and present a final detailed estimate of the cost of the construction activities. To the owner, the Supplemental conditions, SC-6.00 Final Design Phase and SC-11.01 Cost of Work, provides a detailed description of this requirement.

### SC-1.02 Terminology

Whenever the term "Water Company" is used in these Contract Documents it shall have the same meaning as Owner or Engineer, whichever is applicable.

### SC-2.02 Copies of Documents

Delete paragraph 2.02 in its entirety and insert the following:

- A. Owner shall furnish to Contractor up to **TWO (2) sets** of hard copy reproducible Contract Drawings and one unbound set of the Project Manual along with **ONE (1) set in electronic format (.PDF version)**. Additional copies will be furnished upon request at a cost of reproduction.

### SC-2.03 Commencement of Contract Times; Notice to Proceed

Add the following immediately after paragraph 2.03.A.

Owner will issue two (2) Notices to Proceed. The first will be the Final Design Phase Notice to Proceed, and the second will be the Construction Phase Notice to Proceed.

Final Design Phase: Work under the Final Design Phase of the Contract will commence on the day indicated in the Final Design Notice to Proceed. Refer to Article 6 – Contractor's Responsibilities, of the General Conditions, as amended by these



Supplementary Conditions for Contractor's Duties and Limitations during this phase of the Project.

Construction Phase: Work under the Construction Phase of the Contract will commence on the day indicated in the Construction Phase Notice to Proceed. Upon commencement of the Construction Phase, Contractor shall start to perform Contractor's obligations under the Contract Documents without the Final Design Phase limitations set forth in these Supplementary Conditions. The Construction Phase is anticipated to begin when the following conditions have been satisfied:

1. Design has been completed sufficiently to begin construction and the preliminary cost estimate has been approved by the Engineer. At the time for developing this contract documents, it is anticipated that the design will be completed by **February 2014**.
2. All construction permits have been issued. At the time for developing this contract documents, it is anticipated that all permits will be received by **July 2014**.

#### **SC-2.06 Preconstruction Conference**

Delete the title of subparagraph 2.06 of the General Conditions in its entirety and substitute in its place a new title headed "*Preconstruction Conference to establish Partnering Relationship; Designation of Authorized Representatives*"

Delete Paragraph 2.06.A in its entirety and insert the following in its place:

- A. Before any Work at the site is started, a conference attended by Owner, Contractor, Engineer, major subcontractor's and others as appropriate will be held with the assistance of a Facilitator in order to establish a Partnering relationship among the parties as to the Work and to discuss the schedules and procedures referred to in paragraph 2.05.A of the General Conditions. At such conference, the parties shall develop common Project objectives in the form of a partnering charter and shall develop working arrangements for periodic meetings among the parties, including subsequent partnering meetings, and for the rapid resolution of issues that may develop. Owner and Contractor shall mutually agree on the selection of the Facilitator. The cost of the Facilitator and the cost of the meeting facilities for all partnering sessions will be paid by the Owner. Each party will be responsible for the payroll, travel and living expenses of their employees and their subcontractors or consultants designated to attend the meeting. **Four** formal partnering sessions are anticipated, an initial **FULL** day workshop session followed by **1** separate follow-up meeting. All three sessions shall be scheduled in conjunction with design review meetings and/or project meetings to minimize travel expense.

#### **SC-4.02 Subsurface and Physical Conditions**

Add the following new paragraph(s) immediately after Paragraph 4.02.B:

C. The following Geotechnical Baseline Report is included as a Contract Document and indicates the subsurface conditions (except Underground Facilities and Hazardous Environmental Conditions) at the Site:

1. Geotechnical Report (to be included as an Addendum)

D. No other reports of explorations or tests of subsurface conditions at or contiguous to the Site were used in the preparation of the Drawings and Specifications.

#### **SC-4.06 Hazardous Environmental Conditions**

Delete Paragraphs 4.06.A and 4.06.B in their entirety and insert the following:

A. No reports or drawings related to Hazardous Environmental Conditions are known to Owner or Engineer.

B. Not Used.

#### **SC-4.07 Chemicals Used or Stored**

Add the following new paragraph immediately after Paragraph 4.07.B.

C. Chemicals known to be used or stored by the Owner at the Site and required to be disclosed under OSHA Standard Section 29 CFR 1910.12 are the following:

**Chlorine, Caustic Soda, PACI, Anhydrous Ammonia, Hydrofluosilicic Acid, Zinc Orthophosphate**

#### **SC-5.01 Performance, Payment and Other Bonds**

*[Note to User: If Performance and Payment Bonds are being used, add the following paragraph. Attach the Labor and Payment Material Bond and Performance Bond as Exhibit A and B, respectively to the Agreement]*

Delete Paragraph 5.01 in its entirety and insert the following:

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent

or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.

- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

#### **SC-5.04 Contractor's Insurance**

Add the following new paragraphs immediately after Paragraph 5.04.B:

- C. The limits of liability for the insurance required by Paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. At no expense to Owner, Contractor and subcontractors shall (1) obtain and keep in force during the term of this Agreement, and any renewals or extensions hereof; and (2) require its subcontractors to obtain and keep in force during the terms of their respective engagements or contracts, the minimum insurance limits and coverage set forth below. The insurance coverage limits stated below are minimum coverage requirements, not limitations of liability, and shall not be construed in any way as Owner's acceptance of the responsibility of Contractor.

##### **a. Commercial General Liability:**

- **\$(See Appendix A)** per occurrence Combined Single Limits.
- **\$(See Appendix A)** General Aggregate.
- **\$(See Appendix A)** Products and Completed Operations Aggregate.
- **\$(See Appendix A)** Completed Operation-Products Liability

CGL ISO 1996 or later occurrence form including premises and operations coverage, products and completed operations, coverage for independent contractors, personal injury coverage and blanket contractual liability, contractors protective liability if Contractor subcontracts all or any portion of the work to be performed hereunder. Completed operations shall be maintained for a period of three (3) years following final completion for any construction, renovation, repair and maintenance service.

##### **b. Workers' Compensation:**

- Coverage A: Applicable federal or state requirements: statutory minimum.
- Coverage B: Employer's Liability:
  - Each accident: **\$(See Appendix A).**
  - Each employee – disease: **\$(See Appendix A).**
  - Policy limit - disease: **\$(See Appendix A).**

- Coverage C: Voluntary workers compensation insurance coverage for all employees not subject to the applicable workers compensation act or acts.

The workers' compensation policy shall also include U.S. longshoreman and harbors workers' compensation act coverage if any work to be performed hereunder shall be done over or within one hundred (100) feet of any body of water, or otherwise at the sole discretion of Owner. Contractor shall provide maritime (Jones Act) coverage if a boat or vessel of any type is used.

c. **Automotive Liability (including owned, hired, borrowed and non-ownership liability)**

- Bodily injury and property damage **\$(See Appendix A)** each occurrence Combined Single Limits.

d. **Umbrella Liability**

- **\$(See Appendix A)** each occurrence and annual aggregate in excess of employer's liability, General liability and Automotive liability (no more restrictive than underlying insurance).

e. **State Highway:** See Appendix A

2. The minimum liability limits required may be satisfied through the combination of the primary general liability, employers' liability, and automotive liability limits with an umbrella liability policy (with coverage no more restrictive than the underlying insurance) providing excess limits at least equal to or greater than the combined primary limits.
3. All commercial general liability including completed operations-products liability coverage and automotive liability insurance shall designate Owner, its parent, affiliates and subsidiaries, its directors, officers and employees as an additional insured. All such insurance should be primary and non-contributory, and is required to respond and pay prior to any other insurance or self-insurance available to Owner. In addition to the liability limits available, such insurance will pay on behalf of or will indemnify Owner for defense costs. Any other coverage available to Owner applies on a contingent and excess basis. Such insurance shall include appropriate clauses pursuant to which the insurance companies shall wave its rights of subrogation against Owner.
4. Contractor and any of its subcontractors shall furnish, prior to the start of work, certificates or adequate proof of the foregoing insurance including, if specifically requested by Owner, copies of the endorsements and insurance policies naming Owner as an additional insured, as provided herein. Current certificates of insurance shall be provided prior to the commencement of work and shall be maintained until termination of this Agreement. Contractor shall notify Owner in writing, at least thirty (30) calendar days prior to cancellation, or of a material change in any policy.

5. The certificate holder is included as an additional insured with respect to liability arising out of the named insured's operations performed on behalf of such certificate holder. A waiver of any subrogation endorsement must accompany a certificate of insurance and must include workers' compensation policies.
  6. Carriers providing coverage will be rated by A.M. Best with at least an A-rating and a financial size category of at least Class VII. Such cancellation or material alteration shall not relieve Contractor of its continuing obligation to maintain insurance coverage in accordance with this contract. Carriers shall be licensed in the state(s) where work is performed.
  7. If Contractor shall fail to procure and maintain such insurance, Owner, upon written notice, may, but shall not be required to, procure and maintain same, but at the expense of Contractor. In the alternative, Owner may declare a default hereunder and, unless such default is timely cured, terminate the Agreement. Unless and until the default is cured, neither Contractor nor its servants, employees or agents will be allowed to enter upon the Owner's premises.
- D. The policies of insurance so required by Paragraph 5.4 shall include as additional insureds the following parties:
1. **Kentucky American Water Company**
  2. **American Water Works Service Company, Inc.**
  3. **Hazen and Sawyer**

#### **SC-5.06 Property Insurance – Builder's Risk Insurance**

The Contractor shall bear all risks of all loss or damage to the materials and Work until the Work is finally accepted by the Owner, except that the Contractor may claim reimbursement under the Owner's builder's risk insurance policy as herein provided and limited. Owner will carry "All Risk" Builders Risk Insurance subject to deductibles, terms and conditions as stated in the policy and below. It is the obligation and responsibility of the Contractor to make appropriate claim to the insurance company for all losses claimed under the policy. Should any loss not be covered under this policy, in whole in or parts, the Contractor shall bear the loss. Any questions regarding coverages, limitation, exclusion, etc. contained in the policy shall be addressed by bidders prior to submittal of bids, to **Director, Risk Management, American Water, 1025 Laurel Oak Road, Voorhees, NJ 08043.**

Such insurance shall cover the full value of the cost of replacement to the Owner, less applicable deductibles, of all completed portions of the work to be performed throughout the entire time of construction. The deductibles on each separate and unrelated loss are: (1) \$25,000 on loss; (2) \$250,000 on loss caused by flood; (3) 5% of total insurable value for loss caused by earthquake. Owner will furnish to the Contractor evidence of the insurance coverage provided.

Such insurance shall not cover (1) damage to or loss of material or equipment furnished by either party which are damaged or lost due to carelessness or negligence on the part of the Contractor, or (2) damage to or loss of machinery, tools, equipment, or other property furnished by the Contractor whether or not used by the Contractor in

carrying out the terms of the Contract unless such machinery, tools, equipment or other property are specifically intended for permanent incorporation into the Contract work and are included in an approved application for payment.

## SC-6 Contractor's Responsibilities

Add the following language immediately before paragraph 6.01 of the General Conditions:

### SC-6.00 *Final Design Phase*

Final Design Phase: After the Contract Times commence to run, Contractor shall:

1. Consult with Engineer to understand Engineer's requirements for the Project and review available data.
2. Advise Engineer as to the necessity of Owner's providing or obtaining from others additional reports, data or services of the types provided in paragraph 8.05 and assist Engineer in obtaining such reports, data, or services. This shall include, but not be limited to, furnishing assistance to Engineer and Engineer's Consultant in preparation of the Geotechnical Baseline Report.
3. Obtain such additional geotechnical and related information, which it deems necessary for performance of the Work.
4. Upon completion of the Final Design Phase (60% design completion), including reconciliation of Owner's comments, the Contractor shall present a detailed estimate of the Cost of the Work to the Engineer. The estimate shall be prepared and presented in general conformance with the Sixteen (16) Division Format of the Construction Specifications Institute (CSI). The estimate shall identify the following costs as applicable for each area of Work.
  - Direct Labor
  - Permanent Materials
  - Permanent Equipment
  - Subcontract Work
  - Allowances or Contingencies
  - Temporary Construction
  - Construction Equipment, Small Tools, Expenditures, etc.
  - Permits, Inspections & Testing
  - Utility Connections and Utility Usage
  - Miscellaneous

Upon review, comment and approval by Owner, this estimate will form the basis for the Target Cost for the project. With the exception of the purchase of long lead equipment or materials as recommended by Contractor and approved by Owner, Contractor shall not proceed with construction on the project until such time that the approved Target Cost is established and Owner has issued Construction Phase Notice to Proceed. At the completion of the Final Design Phase and upon issuance of purchase orders and subcontracts for all major materials, equipment and subcontracts the construction estimate shall be updated and submitted as the final construction cost estimate.

Throughout the Construction Phase the construction estimate shall be updated monthly to reflect the latest estimate or actual cost as applicable.

#### 6.00.1 Contractor's Representatives on Design Team

Contractor shall appoint the same project manager to represent the Contractor from the Final Design Phase of the Project and through the Construction Phase. This individual shall have the authority to act on behalf of the Contractor, shall attend monthly meetings scheduled by Engineer and shall be an experienced employee of the Contractor having recent and direct experience in the construction of water treatment and distribution facilities of the type and size of this project.

The Engineer, with Owner's approval, shall have the right to reject or demand replacement of Contractor's representative at any time, with or without cause, solely at Engineer's discretion for objective or subjective reasons which Engineer may, but is not required to, disclose to the Contractor and Contractor shall not be entitled to an adjustment of the Contract Price or Contract Times for such replacement.

#### 6.00.2 Contractor's Duties

Contractor shall perform the following duties:

- (a) Prepare and update the initial CPM Schedule as described in Division 1 -General Requirements, monitor the schedule and notify Engineer of any delays or schedule conflicts.
- (b) Make recommendations on construction feasibility, technology and economies. Propose construction alternatives to be studied by the Engineer and accurately predict the effects of those alternatives on the Project cost and schedule. Engineer must approve all proposed changes to the Contract Documents.
- (c) Carefully review, study and compare the Preliminary Contract Drawings and Specifications and report to the Engineer any errors, conflicts, ambiguities or discrepancies which Contractor may discover.
- (d) Continuously review the development of the Contract Drawings and Specifications and immediately notify Engineer of any impacts on the Contract Price and Contract Times and report to Engineer any errors, conflicts, ambiguities or discrepancies, which Contractor may discover.
- (e) Based on the CPM, recommend to the Engineer and Owner the purchase of long lead items and expedite their procurement to ensure their delivery by the required scheduled dates.
- (f) Attendance at design review meetings.

#### 6.00.3 Documentation of Contractor's Duties

Within 20 days of the Notice to Proceed for the Final Design Phase, Contractor shall submit to Engineer, an initial report containing Contractor's findings resulting from the performance of Contractor's duties discussed in Section 6.01.2. This report shall be supplemented, revised and amended monthly to reflect Contractor's continued findings

and recommendations as well as Engineer's approval/rejection of recommendations. A final version of the report shall be issued by Contractor at least 30 days prior to Owner's issuance of a Notice to Proceed for the Construction Phase.

#### **SC-6.01 Supervision and Superintendence**

*[Note to User: If the Project requires a project manager from the Contractor that should not be replaced except under extraordinary circumstances, the following may be used]:*

Add the following paragraph immediately at the end of Paragraph 6.01.B.

The Contractor shall assign a project manager, acceptable to the Owner, who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

#### **SC-6.03 Services, Materials and Equipment**

Add the following after paragraph 6.03C of the General Conditions:

- D. Contractor shall direct purchase the major materials and equipment for the project. Materials and equipment to be furnished by subcontractors shall be submitted by Contractor to Owner and Engineer for review/comment prior to completion of the Final Design Phase.

#### **SC-6.06 Concerning Subcontractors, Suppliers, and Others**

Add the following paragraphs after Paragraph 6.06H.

- I. Contractor shall include a provision in all Subcontracts, Procurement contracts and Purchase Orders stating that by acceptance of the Subcontract, Procurement Contract or Purchase Order the Subcontractor or Supplier provides advanced consent to the assignment of the Subcontract, Procurement Contract or Purchase Order from the Contractor to the Owner if desired by the Owner. Under such assignment Owner will assume all benefits, rights and responsibilities of the Contractor.
- J. Bids for the SCADA system will only be accepted from vendors pre-qualified by the Owner.

Owner and Engineer reserve the right to review proposed bidders for the trades listed below before Contractor solicits pricing for Subcontracts, Procurement contracts and Purchase Orders:

- 1. Electrical Subcontractor**
- 2. Concrete Supplier**
- 3. Mechanical Subcontractor**

- K. Owner encourages Contractors to seek diverse subcontractors and suppliers (including but not limited to Women Business Enterprises (WBE's), Minority Business Enterprises (MBE's), and Disabled Veteran Business Enterprises (DVBE's)), while at the same time ensuring that the best combination of quality, service and price is provided in accordance with the highest ethical and



professional standards. The Owner recognizes the value of subcontractor and supplier diversity as a strategic business decision, and is committed to offer them an equal opportunity to compete for subcontracts to supply materials and services with all other suppliers and contractors in the competitive marketplace.

#### **SC-6.08 Permits**

A listing of the permit(s) known at the time of preparation of the Bid Documents to be required for the Project and the identification of the party responsible for obtaining such permit(s) is set forth in the attached Schedule SC 6.08. The Owner and Engineer will assist the Contractor as required by the Permitting Agency in obtaining all permits required to be obtained by the Contractor. The Contractor will assist the Owner as required by the Permitting Agency in obtaining the permits required to be obtained by the Owner. Owner will obtain and pay for all necessary permits which by Laws or Regulations must be obtained by the Owner. The Contractor will obtain and pay for all other permits, licenses and certificates of inspection. The Contractor will pay for all inspection costs and fees.

The Contractor and/or his Subcontractor(s) shall obtain, complete, seal and sign all applications required to obtain construction permits required by state and local government agencies. A copy of the electrician and plumber's current state and/or local license shall be delivered to the Owner.

When required by the local governing body, the electrician and plumber will execute a mechanical bond in the form approved by the local government.

All bonds, application forms and copies of licenses shall be delivered to the Owner so these documents may be submitted with the Owner's application for a building permit. The Contractor shall assist the Owner in preparing the building permit. The Owner will pay for the building permit.

**SCHEDULE SC-6.08  
RICHMOND ROAD STATION FILTER BUILDING  
Permits and Approvals**

Description	Approving Agency	Date Submitted	Status	Responsible Party	
				Owner	Contractor*
Division of Water Construction Permit	Kentucky Division of Water	5/9/2014		X	
Site Plan Approval	LFUCG			X	
Building Permit	LFUCG			X	
Final Development Plan Approval	LFUCG			X	
Land Disturbance	LFUCG			X	
Demolition Permit	LFUCG			X	

\*(Contractor to obtain, Owner to pay for permit fees)

**SC-6.10 Sales Taxes**

Add the following language after Paragraph 6.10.A of the General Conditions:

- B. Contractor's responsibility under Paragraph 6.10 and this Paragraph SC-6.10 to pay all such taxes shall: (i) include the obligations to pay any interest or penalties that may be assessed as a result of Contractor's late payment or failure to pay such taxes, and (ii) survive final payment, completion and acceptance of the Work and termination or completion of the Agreement.
- C. Owner may be exempt from **KENTUCKY** sales and use taxes on certain services, machinery, equipment, material, and apparatus, tools or supplies in connection with the Work.
- D. Without altering Contractor's full responsibility to properly determine and pay such taxes, the Owner will provide the Contractor, for use at Contractor's risk, a copy of any Guidelines developed by the Owner with respect to sales and use tax exemptions that may be available in whole or in part in the state in which the Project is located. A copy of the Guidelines for the state in which the Project is located is included in **Appendix C** attached to the Supplementary Conditions. Such Guidelines are not Contract Documents. They may not necessarily reflect the current status of state tax exemptions or current status interpretations of these exemptions.
- E. Contractor shall indemnify and hold harmless and defend Owner from and against all claims, losses, expenses, damages and liability relating to: (i) Contractor's nonpayment of any sales, consumer, use and other similar taxes or interest or penalties required to be paid by Contractor, or (ii) Contractor's failure to utilize or implement any available sales and use tax exemption or Contractor's failure to obtain any necessary exemption certificate or other required exemption evidence.
- F. Contractor shall furnish evidence satisfactory to Owner that Contractor has paid all sales, consumer, use and other similar taxes required to be paid by Contractor. Contractor shall also furnish to Owner with Contractor's applications for final payment a schedule of all items incorporated in the Work that Contractor has

determined are entitled to sales and use taxes exemption and for which no sales and use taxes were paid by Contractor. Owner reserves the right to audit the Contractor's compliance with applicable sales and use taxes requirements prior to release of retainage and final payment. If Owner disagrees with any of Contractor's determinations or exemptions or otherwise has reason to believe that Contractor has not paid all applicable sales and use taxes, Owner shall be entitled to withhold the amount of sales and use taxes Owner believes Owner may be potentially liable for as a result of Contractor's nonpayment until: (i) Contractor presents evidence satisfactory to Owner that Contractor has paid the taxes in question or that the items in question are exempt and (ii) all statues of limitation for the applicable taxing authority to bring an action against Owner for payment of the taxes in question have expired, whichever first occurs.

- G. In addition to Owner's other rights and remedies under this Paragraph SC-6.10, Owner shall be entitled to set off against monies otherwise due Contractor hereunder the amount of any sales and use tax, or any other tax, which Owner is required to pay be reason of Contractor's failure to comply with Paragraph 6.10 of the General Conditions.

### **SC-9.01 Engineer's Status During Construction**

Add a new paragraph immediately after Paragraph 9.01C

- D. Owner hereby identifies the following, subject to a full reservation of Owner's rights under GC-9.01:

1. Engineer: **Hazen and Sawyer**
2. Owner-affiliated entities or independent engineers, consultants, or managers retained by Owner to undertake some of all of Engineer's or Owner's authority, duties, or responsibilities under the Contract Documents:

- **Engineer's Consultant: Hazen and Sawyer  
150 E. Campus View Blvd., Suite 133  
Columbus, OH 43235**

### **SC-9.03 Project Representative**

Add a new paragraph immediately after Paragraph 9.03.A

- B. The duties, responsibilities and limitations of authority of the Resident Project Representative shall be as follows:

1. General

The Resident Project Representative (RPR) is Engineer's agent at the site, will act as directed by and under the supervision of Engineer

2. Duties and Responsibilities of RPR

- a. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings.
- b. Liaison: Serve as Engineer's liaison with Contractor, working principally through Contractor's superintendent and assist in understanding the intent of the Contract Documents; and assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-site operations.
- c. Shop Drawings and Samples: Advise Engineer and Contractor of the commencement of any Work requiring a Shop Drawing or sample if the submittal has not been approved by Engineer.
- d. Review of Work, Rejection of Defective Work, Inspections and Tests:
  - (1) Conduct on-site observations of the Work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
  - (2) Report to Engineer whenever RPR believes that any Work is unsatisfactory, faulty or defective or does not conform to the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made.
  - (3) Verify that tests, equipment and systems startups and operating and maintenance training are conducted in the presence of appropriate personnel, and that Contractor maintains adequate records thereof.
- e. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
- f. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report with RPR's recommendations to Engineer. Transmit to Contractor decisions as issued by Engineer.
- g. Payment Requests: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the schedule of values, Work completed and materials and equipment delivered at the site but not incorporated in the Work.
- h. Completion:
  - (1) Before Engineer issues a Certificate of Substantial Completion, submit to Contractor a list of observed items requiring completion or correction.

- (2) Conduct final inspection in the company of Engineer, Owner and Contractor and prepare a final list of items to be completed or corrected.
- (3) Observe that all items on final list have been completed or corrected and make recommendations to Engineer concerning acceptance.

### 3. Limitations of Authority

Resident Project Representative:

- a. Shall not authorize any deviation from the Contract Documents or substitution of materials or equipment, unless authorized by Engineer.
- b. Shall not exceed limitations of Engineer's authority as set forth in the Agreement or the Contract Documents.
- c. Shall not undertake any of the responsibilities of Contractor, subcontractors or Contractor's superintendent.
- e. Shall not issue directions relative to, or assume control over, any aspect of the means, methods or techniques of construction unless such directions or control are specifically required by the Contract Documents.

#### **SC-11.01 Cost of the Work**

Add the following language immediately after paragraph 11.01 of the General Conditions:

The Cost of the Work shall include lump sum amounts for Supervision and Superintendence of Construction (including temporary facilities).

The lump sum amount for Supervision and Superintendence of Construction shall include the responsibilities described in General Conditions Article 6.00, 6.01.A and 6.01.B as amended by the supplemental conditions, and the duties described in General Requirements, Section 1000, Part 3.02 and Section 1500, Temporary Construction Facilities paragraphs 1.01 Water Supply; 1.02 Temporary Heat/Air Conditioning, 1.03 Electrical Supply - to include temporary electric for site office facilities and that needed to perform construction but not to include permanent power supply and use for testing and start-up of plant facilities and equipment; 1.04 Temporary Lighting-to include temporary lighting of site offices and exterior security lighting but not to include temporary lighting of construction areas; 1.07 Parking - to include parking for supervisory personnel at the site offices but not to include parking areas for construction personnel; 1.09 Sanitary Facilities and 1.10 Field Offices. This lump sum shall cover all project supervisory, administrative and engineering personnel costs including salary, payroll labor burden, vehicles, relocation, travel and living expenses. Also included is field office facility complex costs including trailers, office supplies, office equipment, telephone, postage, blueprinting, utilities and miscellaneous. General site facilities furnished by Contractor for use by all contractors and subcontractors shall also be included in this lump sum.

Contractor Self Performed Work: The Contractor is eligible to perform Work with its own forces either through a negotiated lump sum price or through successful bidding in competition with qualified subcontractors. No later than completion of the Final

Design Phase, the Contractor shall notify Owner and Engineer of specific Work they desire to perform with their own forces either through a negotiated price or as the result of competitive bidding. Contractor shall provide justification for Work desired to be performed through a negotiated price. If Owner and Engineer agree with the justification, Contractor shall provide a firm Lump Sum Bid with a detailed cost breakdown as backup.

If Owner accepts the bid, the agreed to price will constitute a lump sum cost to be included in the Cost of the Work. The Contractor is responsible for completion of the specified Work in accordance with the Contract Documents including warranty provisions for the price submitted. If Owner rejects the Contractor's bid to self perform specific Work, this Work shall be competitively bid to qualified Subcontractors including the Contractor if desired and approved by Owner.

Add the following language at the end of paragraph 11.01.A.2:

To the fullest extent practical, the Contractor shall purchase all permanent materials and equipment through documented competitive bidding. Materials and equipment not purchased through competitive bidding shall have prior approval from the Owner.

Add the following language at the end of paragraph 11.01.A.3:

To the fullest extent practical, the Contractor shall award all subcontracts through documented competitive bidding. Subcontracts not awarded through competitive bidding shall have prior approval from the Owner.

Add the following language at the end of paragraph 11.01.A.4:

The cost of special consultants shall only be included in the Cost of the Work if they have been authorized by the Owner prior to the furnishing of service.

Add the following language at the end of paragraph 11.01.A.5.c:

The Equipment rental rates to be paid for under a Cost of the Work basis are to be no higher than those prevailing in the locality of the project and shall not exceed 80% of the monthly rental rate determined through proper application of the Equipment Rental Rate Blue Book published by K-III Directory. Monthly operating costs shall be determined by multiplying the Blue Book estimated hourly operations cost by 120 hours. Prior to using construction equipment owned by Contractor or any subsidiary company, provide to Owner and Engineer a comparison of equipment rental costs between using Contractor's equipment versus equipment rented from others.

#### **SC-12.01 Change of Contract Price**

Add the following language immediately before paragraph 12.01 of the General Conditions:

Contractor's Fee and provisions for adjustment are provided in the Agreement. In Article 12.01 of the General Conditions, delete all references to the Contractor's fee or allowances for overhead and profit. Fee provisions of Article 12 of the General Conditions are applicable to subcontractors performing Work on a Cost of the Work basis per Paragraph 12.01.C.2.

### SC-14.07 Final Application for Payment

Add the following new paragraph immediately after Paragraph 14.07.A.2:

Contractor, Subcontractors and Suppliers shall execute and deliver to Owner their release of liens on forms supplied by Owner. Blank forms are included in **Appendix B** of these Supplementary Conditions.

### SC-16.01 Dispute Resolution

Add the following new paragraph immediately after Paragraph 16.01.E:

F. Covenant of Good Faith and Fair Dealing:

1. This contract imposes an obligation of good faith and fair dealing in its performance and enforcement. The Contractor, Engineer and Owner, with a positive commitment to honesty and integrity, agree to the following mutual duties:
  - a. Each will function within the laws and statues applicable to their duties and responsibilities.
  - b. Each will assist in the other's performance.
  - c. Each will avoid hindering the other's performance.
  - d. Each will proceed to fulfill its obligations diligently.
  - e. Each will cooperate in the common endeavor of the contract.

G. Voluntary Partnering:

1. The Owner intends to encourage the foundation of a cohesive partnership process with the Contractor and its principal subcontractors and suppliers. The partnership process will be structured to draw on the strengths of each organization to identify and achieve reciprocal goals. The objectives of the process will be to achieve effective and efficient performance of the Work within the Contract Price and Contract Times, all in accordance with the contract requirements.
2. This partnership will be bilateral in make-up and participation will be totally voluntary. To implement this partner initiative after the Contract Times start to run, the Contractor and Owner will initiate a partnering development seminar/team building conference in accordance with paragraph 2.06 of the General Conditions.
3. The establishment of a partnering charter on the project will not change the legal relationship of the parties to the Contract nor relieve either party from any of the terms of the contract.

## Limits of Liability Insurance

SC-5.04 Contractor's Liability Insurance is hereby supplemented to include the following:

The limits of liability for insurance required by paragraph GC-5.04 and paragraph SC-5.04 are shown on the attached ACORD sample Certificate of Insurance and as follows:

### Insurance Requirements.

**1. Commercial General Liability:**

- \$1,000,000 per occurrence Combined Single Limits
- \$1,000,000 General Aggregate
- \$1,000,000 Products and Completed Operations Aggregate
- \$1,000,000 Completed Operations-Product Liability

**2. Workers Compensation:**

- Coverage A: Applicable federal or state requirements: statutory minimum
- Coverage B: Employer's Liability:
  - Each Accident: \$1,000,000
  - Each Employee-disease: \$1,000,000
  - Policy Limit-disease: \$1,000,000

**3. Automotive Liability**

- Bodily injury and property damage \$1,000,000 each occurrence combined single limits

**4. Umbrella Liability**

- \$9,000,000 each occurrence and annual aggregate in excess of Employer's Liability, General Liability and Automotive Liability.



<b>Article I.</b>	<b>A CERTIFICATE OF INSURANCE</b>	<b>ISSUE DATE:</b>			
<b>PRODUCER</b>		THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.  <b>COMPANIES AFFORDING COVERAGE</b>			
<b>VENDOR'S INSURANCE BROKER AND ADDRESS</b>					
<b>INSURED</b>		COMPANY LETTER <b>A. ABC INSURANCE COMPANY</b>			
<b>VENDOR/Contractor/TRADE I.C, II.A.</b>		COMPANY LETTER <b>B. XXX INSURANCE COMPANY</b>			
<b>Address</b>		COMPANY LETTER <b>C. YYY INSURANCE COMPANY</b>			
		COMPANY LETTER <b>D.</b>			
		COMPANY LETTER <b>E</b>			
<b>COVERAGES</b>					
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.					
CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
A.	<b>GENERAL LIABILITY</b> <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR. <input type="checkbox"/> Owner'S & Contractor'S PROT. <input checked="" type="checkbox"/> PER PROJECT AGG. <input checked="" type="checkbox"/> CGL FORM #	CGL1234	1/1/2006	1/1/2007	GENERAL AGGREGATE PRODUCTS-COMP/OP AGG. \$ 1,000,000 PERSONAL & ADV. INJURY \$ 1,000,000 EACH OCCURRENCE \$ 1,000,000 FIRE DAMAGE (Any one Fire) \$ 1,000,000 MED. EXPENSE (Any one person) \$ 300,000 \$ 10,000
A.	<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input type="checkbox"/> COMP DED \$500 <input checked="" type="checkbox"/> NON-OWNED AUTOS	AL5678	1/1/2006	1/1/2007	COMBINED SINGLE LIMIT \$ 1,000,000  BODILY INJURY (Per Person) \$  BODILY INJURY (Per Accident) \$  PROPERTY DAMAGE \$
B.	<b>EXCESS LIABILITY</b> <input checked="" type="checkbox"/> UMBRELLA FORM <input type="checkbox"/> OTHER THAN UMBRELLA FORM	XS 9876	1/1/2006	1/1/2007	EACH OCCURRENCE AGGREGATE \$9,000,000  \$9,000,000
A	<b>WORKER'S COMPENSATION AND EMPLOYERS LIABILITY</b>	WC 5432	1/1/2006	1/1/2007	<input checked="" type="checkbox"/> STATUTORY LIMITS EACH ACCIDENT \$1,000,000 DISEASE-POLICY LIMIT \$1,000,000 DISEASE-EACH EMPLOYEE \$1,000,000
	OTHER				Personal Property: \$250,000 Deductible:
<b>DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS (Reference Project Location or Contract No.)</b> Certificate holder is included as Additional Insured, except for workers compensation, with respect to liability arising out of the named insured's operations as required by written contract. Any coverage afforded to the Additional Insured shall apply as primary and not excess to any other insurance or self insurance available to Additional Insured. Waiver of Subrogation shall apply to all insurance.					
<b>CERTIFICATE HOLDER</b>			<b>CANCELLATION</b>		
New Jersey American Water 1025 Laurel Oak Road Voorhess, NJ 08043			SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, AUTHORIZED REPRESENTATIVE		
ACORD 25-S (7/90)			ACORD CORPORATION 1990		

RELEASE OF LIENS

WHEREAS, we, the undersigned, have installed or furnished labor, materials and/or equipment for the installation of the Project entitled **Richmond Road Station Filter Building**, installed pursuant to a written agreement dated **Day and Month, Year**, between the **Kentucky American Water Company**, having an office at **2300 Richmond Road, Lexington, Kentucky 40502**, hereinafter called Owner and \_\_\_\_\_, having an office at \_\_\_\_\_, hereinafter called Contractor, which said facilities are owned by the Owner and described and located as follows:

**Kentucky American Water Company  
Richmond Road Station Filter Building**

WHEREAS, we, the undersigned, have agreed to release any and all claims and liens which we have, or might have, against the Owner, or said facilities by reason of the labor, materials and equipment furnished by us in connection with said installation;

NOW THESE PRESENTS WITNESS that we the undersigned, in consideration of the premises, and of the sum of One Dollar (\$1.00) in hand paid by the said Owner, at and before the sealing and delivery hereof, the receipt whereof we do hereby acknowledge, have remised, released and forever quitclaimed, and by these presents do remise, release and forever quitclaim, unto the said Owner, its successors and assigns, any and all manner of liens, claims and demands whatsoever which we now have, or might or could have, on or against the said facilities, or the owner thereof, for work done, or for equipment or materials furnished in connection with the installation thereof. It is the intent of this release that the Owner, its successors and assigns shall and may hold, have, use and enjoy the said facilities free and discharged from all liens and demands whatsoever which we now have, or might or could have against the same if these presents had not been made.

IN WITNESS WHEREOF, we have hereunto set our hand and seal the day written opposite our signature.

Company Name \_\_\_\_\_ (SEAL)  
By \_\_\_\_\_  
Title \_\_\_\_\_  
Dated \_\_\_\_\_, 20\_\_\_\_

Sworn to and subscribed before me, a Notary Public,  
this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public (SEAL)

I, \_\_\_\_\_, duly authorized representative of  
\_\_\_\_\_, designated as Contractor, do hereby state that  
the parties whose names are signed to the attached releases, pages 1 through \_\_\_\_\_, are all of the parties  
who have furnished labor, materials or equipment in connection with the construction of the facilities  
mentioned above; excepting only such materials as may have been furnished by the Owner.

Dated: \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
Representative's Signature

Sworn to and subscribed before me, a Notary Public,  
this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public (SEAL)

RELEASE OF LIENS

WHEREAS, we, the undersigned, have installed or furnished labor, materials and/or equipment for the installation of the Project entitled **Richmond Road Station Filter Building**, installed pursuant to a written agreement dated **Day and Month, Year**, between the **Kentucky American Water Company**, having an office at **2300 Richmond Road, Lexington, KY 40502**, hereinafter called Owner and \_\_\_\_\_, having an office at \_\_\_\_\_, hereinafter called Contractor, which said facilities are owned by the Owner and described and located as follows:

**Kentucky American Water Company  
Richmond Road Station Filter Building**

WHEREAS, we, the undersigned, have agreed to release any and all claims and liens which we have, or might have, against the Owner or said facilities by reason of the labor, materials and equipment furnished by us in connection with said installation;

NOW THESE PRESENTS WITNESS that we, the undersigned, in consideration of the premises, and of the sum of One Dollar (\$1.00) in hand paid by the said Owner, at and before the sealing and delivery hereof, the receipt whereof we, do hereby acknowledge, have remised, released and forever quitclaimed, and by these presents do remise, release and forever quitclaim, unto the said Owner, its successors and assigns, any and all manner of liens, claims and demand whatsoever which we now have, or might or could have, on or against the said facilities, or the owner thereof, for work done, or for equipment or materials furnished in connection with the installation thereof. It is the intent of this release that the Owner, its successors and assigns shall and may hold, have, use and enjoy the said facilities free and discharged from all liens and demands whatsoever which we now have, or might or could have against the same if these presents had not been made. And we do further certify and acknowledge, that we have received of and from the said Contractor, payment in full on account of labor done or materials or equipment furnished for or in connection with said facilities.

IN WITNESS WHEREOF, we have hereunto set our hand and seal the day written opposite our signature.

Company Name \_\_\_\_\_ (SEAL)

By \_\_\_\_\_

Title \_\_\_\_\_

Dated \_\_\_\_\_, 20 \_\_\_\_

Sworn to and subscribed before me, a Notary Public,  
this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.

\_\_\_\_\_  
(SEAL)

Notary Public

(Subcontractors and Suppliers)

## GUIDELINES FOR KENTUCKY CONTRACTORS

### USE OF THIS GUIDELINE:

This guideline may not be complete or current as of the date of the Contract or Contractor's performance of the Contract. State laws are subject to change. This guideline does not alter the Contractor's obligations under the Contract to properly determine and pay applicable taxes.

### GENERAL RULE:

Contractors' purchases of machinery, apparatus or equipment used or consumed directly and primarily in the production, generation, transmission or distribution of water for sale are not taxable.

### INTERPRETATION OF GENERAL RULE:

The machinery, apparatus or equipment must be "used or consumed directly and primarily" in the production, generation, or distribution of water to be exempt from tax. Machinery, apparatus or equipment is considered to be "used directly" in production only when it is used to initiate, sustain or terminate the transformation of raw materials into the finished product. In determining whether something is used directly, consideration is given to the physical proximity of the property in question to the production process, the proximity of time of the property's use to the time and use of other property used before and after it in the production process, and the active causal relationship between the use of the property in question and the production of the water. Property is considered to be "used primarily" when it is used more that 50% of the time directly in the exempt activity.

### SPECIFIC ITEMS:

Real Estate and Installations: Machinery, apparatus or equipment which is installed to become a part of real estate qualifies for the exemption if it is used or consumed directly and primarily in the production, generation or distribution of water.

Maintenance Items: Generally, maintenance charges are taxable. Tools or supplies used, but not installed, are always taxable whether or not they are used in connection with exempt machinery, equipment or apparatus.

Space Heating, Cooling, Ventilation, and Illumination: Property, including machinery and equipment, fuel or power used to ventilate buildings, lighting for general illumination, air conditioning and other space cooling, space heating and similar property, is subject to tax unless it can be proved that the use of such property bears an active causal relationship to the production, delivery or rendition of the utility service and its other uses are incidental.

Safety and Fire Prevention: Property used to prevent or fight fires, and equipment and supplies used for such programs as safety, accident prevention, or fire prevention, are subject to tax even though such equipment or property is required by law.

Non-Operational Activities: Property used in managerial, sales or other non-operational activities is not directly used in the production, delivery or rendition of the public utility service and, therefore, is taxable.

Repair Parts: Repair and replacement parts for exempt machinery and equipment are not taxable if they have a useful life of more than one year. Parts with a useful life of one year or less always are taxable.

*PROCEDURE FOR CLAIMING EXEMPTION:*

In order to claim the exemption, a contractor should provide the seller with an Exempt Use Certificate (ST-4).