

CRAWFORD & BAXTER, P.S.C.

ATTORNEYS AT LAW  
523 Highland Avenue  
P.O. Box 353  
Carrollton, Kentucky 41008

RECEIVED

FEB 25 2013

PUBLIC SERVICE  
COMMISSION

James M. Crawford  
Ruth H. Baxter

Phone: (502) 732-6688  
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Email: CBJ523@AOL.COM

February 22, 2013

Mr. Jeff Derouen, Executive Director  
Public Service Commission  
211 Sower Boulevard  
P.O. Box 615  
Frankfort, Kentucky 40602-0615

RE: West Carroll Water District  
Case No. 2013-00041

Dear Mr. Derouen:

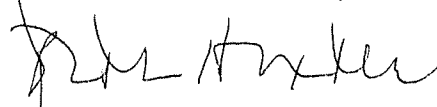
Enclosed you will find for filing the following documents with regard to the above styled case to supplement its Application for Certificate of Convenience and Necessity originally mailed to your office on January 22, 2013:

1. Ten (10) Supplemental Filings; and,
2. Ten (10) copies of the Exhibits.

Thank you for your courtesy in this matter.

Sincerely,

CRAWFORD & BAXTER, P.S.C.



Ruth H. Baxter

RHB/dmp

Enclosures

cc: Ms. Vickie Edwards, Chairperson, WCWD

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FEB 25 2013

PUBLIC SERVICE  
COMMISSION

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION FOR CERTIFICATE OF )  
CONVENIENCE AND NECESSITY - ) CASE NO. 2013-00041  
CONSTRUCTION FOR THE )  
WEST CARROLL WATER DISTRICT )

**SUPPLEMENTAL FILING**

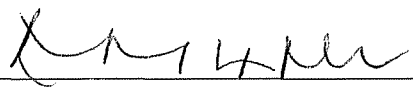
\*\*\*\*\*

Pursuant to KRS 278.020, and the Order of the Kentucky Public Service Commission (“PSC”) entered on November 16, 2012, comes now West Carroll Water District and in support of its request to the PSC to issue a Certificate of Convenience and Necessity for the construction of water infrastructure improvements to its existing systems filed with the PSC on or about January 22, 2013, supplements its original filing to include the following:


Exhibit 18 - Letter dated February 13, 2013, from Department for Environmental Protection Division of Water, approving construction permit and authorizing Carrollton Utilities Company to advertise for bids.

CRAWFORD & BAXTER, P.S.C.  
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Attorneys for West Carroll Water District

By:   
Ruth H. Baxter

WEST CARROLL WATER DISTRICT  
Post Office Box 54  
Carrollton, Kentucky 41008  
(502) 732-1216 (Direct Line)  
(502) 732-7055 (Main Line)  
(502) 732-7058 (Fax)

BY:   
Vickie Edwards, Chairperson

**VERIFICATION**

I, Vickie Edwards, Chairperson of the West Carroll Water District, state that the statements contained in this Supplemental Filing are true to the best of my information and belief.

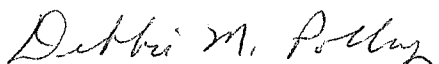
  
Vickie Edwards, Chairperson

STATE OF KENTUCKY)

COUNTY OF CARROLL)

Subscribed and sworn to before me by Vickie Edwards, Chairperson of the West Carroll Water District, on this the 22<sup>nd</sup> day of February, 2013.

My commission expires: 10-13-2013

  
Notary Public, Kentucky State at Large

STEVEN L. BESHEAR  
GOVERNOR



LEONARD K. PETERS

**ENERGY AND ENVIRONMENT CABINET**  
DEPARTMENT FOR ENVIRONMENTAL PROTECTION  
DIVISION OF WATER  
200 FAIR OAKS LANE, 4TH FLOOR  
FRANKFORT, KENTUCKY 40601  
[www.kentucky.gov](http://www.kentucky.gov)

February 13, 2012

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FEB 25 2013

PUBLIC SERVICE  
COMMISSION

Mr. Terry Roach  
Carrollton Utilities  
P. O. Box 269  
Carrollton, KY 41008

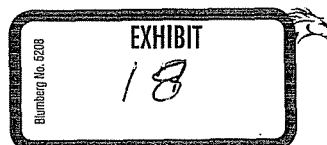
RE: Countywide Underserved Project Contract No.  
1, 2 & 3 SRF  
Project AI#: 696DW No: KY0210067-12-001  
Activity ID: APE20120001  
Carrollton Utilities Water Treatment System  
Improvements  
DW SRF BID Authorization & Technical  
Approval  
Carroll County, Kentucky

Dear Mr. Roach:

We have reviewed the plans and specifications for the above referenced project. This is to advise that plans and specifications for the modification to existing water treatment plant with the addition of an ion exchange softening process to supplement the existing lime softening process that is currently rated for 1.5 mgd, improvements include a low lift pump capable of pumping 1,040 gpm at between 27 to 40 feet TDH, three ion exchange units rated at 0.5 mgd each for total capacity of 1.5 mgd, a new brine system, and a new sewer line to take backwash water to the sanitary sewer system and construction of two booster pump stations (King Ridge & Gilgal Roads, 40 and 60 GPM with 480 and 300 feet TDH respectively) for the above referenced project .

Based on the hydraulic analysis/data submitted, **Nora Lane served by this extension is considered to be underserved.** This designation indicates that without improvements to the existing infrastructure, future extensions may not be able to provide the required minimum pressure of 30 psi on the discharge side of customers' meters. **Without improvements to the infrastructure at Nora Lane, future extensions may be denied.** The underserved designation may be used to help prioritize areas under the Governor's 2020 plan for funding future infrastructure improvements

This project APPROVED with respect to sanitary features of design, as of this date with the requirements contained in the attached construction permit.



1. You are hereby authorized to advertise for bids to construct this project. In addition to other notices, you shall advertise the bid for seven (7) to twenty-one (21) days prior to the Bid Opening date in the newspaper with the largest circulation in your area. Please provide the bid opening date to the Division of Water, SRF Section. Buddy Griffin may be reached at (502) 564-3410, extension 4971 or e-mail at [Buddy.Griffin@ky.gov](mailto:Buddy.Griffin@ky.gov).
2. You are cautioned not to advertise unless you have a proper wage decision. The Federal Davis-Bacon wage rates are applicable for this project. Please contact all other funding sources for their requirements.
3. A set of AS-BID plans and specifications (with any APPROVAL conditions addressed) and a copy of the Advertisement shall be submitted to the Division of Water when the project is advertised. These items will be reviewed as part of the Authority to Award process.
4. The attached Project Review and Cost Summary form is to be completed and signed after bids have been received and then submitted along with the supporting documents indicated on the form. Your signature on this form will certify that all the information to be retained by the recipient has been secured and is available for review by the Division at the pre-construction conference. The complete bid package should be submitted to the Division of Water within fourteen (14) days after the bid opening.
5. Upon approval of the bid documents, the Division of Water will authorize you to award the construction contract, and arrange for a pre-construction conference. Division of Water staff **must** be present at this pre-construction conference.
6. You are cautioned that the advertisement and award of this contract will be subject to the laws and regulations that govern the DWSRF process and the conditions of your KIA loan agreement.
7. Please be advised that the construction contract is subject to the Equal Employment Opportunity requirements contained in Executive Order 11246. Equal Employment opportunity affirmative action by the prime contractor and all subcontractors is mandated throughout the duration of the contract. Documentation of efforts to comply with Executive Order 11246, Equal Employment Opportunity in accordance with the EPA Special Notice to Bidders is required.
8. Documentation of compliance with the DBE Fair Share Policy in accordance with 40 CFR 31.36(e) is required and must be submitted to the Division of Water within fourteen (14) days of the bid opening.

Countywide Underserved Project Contract No. 1, 2 & 3 SRF  
Project AI#: 696 DW No: KY0210067-12-001  
Activity ID: APE20120001  
Carrollton Utilities Water Treatment System Improvements  
DW SRF BID Authorization & Technical Approval  
Carroll County, Kentucky  
February 13, 2013  
Page 3 of 3

9. If sanitary features of the approved plans are to be changed during construction, the engineer shall submit the revision to the Division of Water for approval prior to implementation of the modification. Written approval from the Division of Water must be granted prior to on-site work dedicated to the adjustment.
10. When this project is completed, the owner shall submit a written certification to the Division of Water that the above referenced water facilities have been constructed and tested in accordance with the approved plans. Such certification shall be signed by a licensed professional engineer.
11. When this project is completed, the engineer shall submit as-built drawings to the Division of Water.

If you have any questions concerning this project, please contact Mr. Abbas Pourghasemi at 502-564-3410 Ext. 4833.

Sincerely,



Mark Rasche, P.E.  
Supervisor, Engineering Section  
Water Infrastructure Branch  
Division of Water

MER: AGP

Enclosures

C: Strand Associates, Inc  
Carroll County Health Department  
Public Service Commission  
Division of Plumbing  
KIA

## Treatment-Modification

Carrollton Utilities  
Facility Requirements

Activity ID No.: APE20120004

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**GACT0000000009 (Contract No 1,2 & 3 Countywide underserved project) 13 miles of line replacement and water main extension (39,000 LF of 3, 4, 6 and 8-inch PVC, DI and HDPE pipes):**

### Limitation Requirements:

Condition No.	Parameter	Condition
L-1	Depth	A continuous and uniform bedding shall be provided in the trench for all buried pipe. Backfill material shall be tamped in layers around the pipe and to a sufficient height above the pipe to adequately support and protect the pipe. Stones found in the trench shall be removed for a Depth $\geq$ 6 in below the bottom of the pipe. [Recommended Standards for Water Works 8.5.2] This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.
L-2	Depth	All water lines shall be covered to a Depth $\geq$ 30 in to prevent freezing. [Recommended Standards for Water Works 8.5.3, 401 KAR 8:100 Section 1(7)] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-3	Diameter	All water lines shall have Diameter $\geq$ 3 in. [Recommended Standards for Water Works 8.1.4] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-4	Diameter	Water lines with Diameter $<$ 6 in shall not have fire hydrants. [Recommended Standards for Water Works 8.1.5] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-5	Diameter	All new and existing water lines serving fire hydrants or where fire protection is provided shall have Diameter $\geq$ 6 in. [Recommended Standards for Water Works 8.1.2] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-6	Distance	Water lines shall have a sufficient quantity of valves so that inconvenience and sanitary hazards will be minimized during repairs. A valve spacing Distance $\leq$ 1.0 mi should be utilized. [Recommended Standards for Water Works 8.2] This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.
L-7	Distance	Hydrant drains shall not be connected to sanitary sewers or storm drains and shall be located a Distance $>$ 10 ft from sanitary sewers and storm drains. [Recommended Standards for Water Works 8.3.4] This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.

## Treatment-Modification

Carrollton Utilities  
Facility Requirements

Activity ID No.: APE20120004

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### Limitation Requirements:

Condition No.	Parameter	Condition
L-8	Distance	<p>Except when not practical, water lines shall be laid a horizontal Distance <math>\geq 10</math> ft from any existing or proposed sewer. The distance shall be measured edge to edge.</p> <p>In cases where it is not practical to maintain a 10 foot separation, water lines may be installed closer to a sewer provided that the water lines shall be laid in a separate trench or on an undisturbed shelf located on one side of the sewer at such an elevation that the bottom of the water line is at least 18 inches above the top of the sewer. [Recommended Standards for Water Works 8.6.2] This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.</p>
L-9	Distance	<p>When water lines and sewers cross,</p> <ol style="list-style-type: none"><li>1) water lines shall be laid such that either<ol style="list-style-type: none"><li>a) the the top of the water line is a vertical Distance <math>\geq 18</math> in below the bottom of the sewer line or</li><li>b) the bottom of the water line is a vertical Distance <math>\geq 18</math> in above the top of the sewer line.</li></ol></li><li>2) 1 full length of the water pipe shall be located so that both joints of the water pipe will be as far from the sewer as possible, and</li><li>3) special structural support for the water and sewer pipes may be required. [Recommended Standards for Water Works 8.6.3]</li></ol> <p>This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.</p>
L-10	Distance	<p>The open end of an air relief pipe from automatic valves shall be extended a Distance <math>\geq 1.0</math> ft above grade and provided with a screened, downward-facing elbow. The pipe from a manually operated valve shall be extended to the top of the pit. Use of manual air relief valves is recommended wherever possible. [Recommended Standards for Water Works 8.4.2] This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.</p>
L-11	Pressure	<p>Pipes shall not be installed unless all points of the distribution system remain designed for ground level Pressure <math>\geq 20</math> psi under all conditions of flow. [Recommended Standards for Water Works 8.1.1] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.</p>
L-12	Pressure	<p>Pressure <math>\geq 30</math> psi must be available on the discharge side of all meters. [401 KAR 8:100 Section 4(2)] This requirement is applicable during the following months: All Year. Statistical basis: Instantaneous determination.</p>



## Treatment-Modification

Carrollton Utilities  
Facility Requirements

Activity ID No.: APE20120004

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### Limitation Requirements:

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Condition No.	Parameter	Condition
L-13	Residual Disinfection	<p>New or relocated water lines shall be thoroughly disinfected (in accordance with AWWA Standard C651) upon completion of construction and before being placed into service. To disinfect the new or relocated lines use chlorine or chlorine compounds in such amounts as to produce an initial disinfectant concentration of at least 50 ppm and a Residual Disinfection <math>\geq</math> 25 ppm at the end of 24 hours. Follow the line disinfection with thorough flushing and place the lines into service if, and only if, Coliform monitoring applicable to the line does not show the presence of Coliform.</p> <p>If Coliform is detected, repeat flushing of the line and Coliform monitoring. If Coliform is still detected, repeat disinfection and flushing as if the line has never been disinfected. Continue the described process until monitoring does not show the presence of Coliform. [401 KAR 8:150 Section 4(1), Recommended Standards for Water Works 8.5.6] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.</p>
L-14	Velocity	<p>Each blow-off, fire hydrant, or flush hydrant shall be sized so that Velocity <math>\geq</math> 2.5 ft/sec can be achieved in the water main served by the blow-off or hydrant during flushing. [Recommended Standards for Water Works 8.1.6.b, 401 KAR 8:100 Section 1(7)] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.</p>

### Monitoring Requirements:

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Condition No.	Parameter	Condition
M-1	leaks	<p>The presence or absence of leaks monitored by physical testing as needed shall be determined in all types of installed pipe. Pressure testing and leakage testing shall be in accordance with the latest edition of AWWA Standard C600. [Recommended Standards for Water Works 8.5.5] This requirement is applicable during the following months: All Year. Statistical basis: Instantaneous determination.</p>

## Treatment-Modification

Carrollton Utilities  
Facility Requirements

Activity ID No.: APE20120004

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GACT0000000009 (continued):

### Narrative Requirements:

#### Additional Limitations:

Condition No.	Condition
T-1	<p>Additional Limitations: Water line installation shall be in accordance with AWWA standards or manufacturer recommendations. [Recommended Standards for Water Works 8.5.1]</p>
T-2	<p>Additional Limitations: Pipes, fittings, valves and fire hydrants shall conform to the latest standards issued by the AWWA or NSF (if such standards exist). PVC and PE piping used must be certified to ANSI/NSF Standard 61. [Recommended Standards for Water Works 8.0.1]</p>
T-3	<p>Additional Limitations: At high points in water lines, where air can accumulate, provisions shall be made to remove the air by means of hydrants or air relief valves. Automatic air relief valves shall not be used in situations where manhole or chamber flooding may occur. [Recommended Standards for Water Works 8.4.1]</p>
T-4	<p>Additional Limitations: All tees, bends, plugs and hydrants shall be provided with reaction blocking, tie rods or joints designed to prevent movement. [Recommended Standards for Water Works 8.5.4]</p>
T-5	<p>Additional Limitations: For each fire or flush hydrant, auxiliary valves shall be installed in the hydrant lead pipe. [Recommended Standards for Water Works 8.3.3]</p>
T-6	<p>Additional Limitations: No flushing device, blow-off, or air relief valve shall be directly connected to any sewer. Chambers, pits or manholes containing valves, blow-offs, meters, or other such appurtenances shall not be directly connected to any storm drain or sanitary sewer. Such chambers, pits or manholes shall be drained to absorptions pits underground or to the surface of the ground where they are not subject to flooding by surface water. [Recommended Standards for Water Works 8.1.6, Recommended Standards for Water Works 8.4.3]</p>
T-7	<p>Additional Limitations: If water lines are installed or replaced in areas of organic contamination or in areas within 200 ft of underground or petroleum storage tanks, ductile iron or other nonpermeable materials shall be used in all portions of the water line installation or replacement. [401 KAR 8:100 Section 1(5)(d)6, Recommended Standards for Water Works 8.0.2]</p>
T-8	<p>Additional Limitations: No water pipe shall pass through or come in contact with any part of a sewer manhole. [Recommended Standards for Water Works 8.6.6]</p>

## Treatment-Modification

Carrollton Utilities  
Facility Requirements

Activity ID No.: APE20120004

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### Narrative Requirements:

#### Additional Limitations:

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Condition

No. Condition

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T-9 Additional Limitations:  
If a fire sprinkler system is to be installed, a double check detector assembly approved for backflow prevention shall be utilized. The double check detector assembly of the system shall be accessible for testing. [401 KAR 8:100 Section 1(7)]

T-10 Additional Limitations:  
If water lines cross a stream or wetland, the provisions in the attached Water Quality Certification shall apply. If you have any questions please contact the Water Quality Certification Supervisor of the Water Quality Branch at (502) 564-2225. [401 KAR 8:100 Section 1(7)]

#### Subfluvial Pipe Crossings:

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Condition

No. Condition

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T-11 Subfluvial Pipe Crossings:  
For subfluvial pipe crossings, a floodplain construction permit will not be required pursuant to KRS 151.250 if the following requirements of 401 KAR 4:050 Section 2 are met.

- 1) No material may be placed in the stream or in the flood plain of the stream to form construction pads, coffer dams, access roads, etc. during construction of pipe crossings.
- 2) Crossing trenches shall be backfilled as closely as possible to the original contour.
- 3) All excess material resulting from construction displacement in a crossing trench shall be disposed of outside the flood plain.
- 4) For erodible channels, there shall be at least 30 inches of backfill on top of all pipe or conduit points in the crossing.
- 5) For nonerodible channels, pipes or conduits in the crossing shall be encased on all sides by at least 6 inches of concrete with all pipe or conduit points in the crossing at least 6 inches below the original contour of the channel. [401 KAR 8:100 Section 1(7)]

## Treatment-Modification

Carrollton Utilities  
Facility Requirements

Activity ID No.: APE20120004

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### Narrative Requirements:

#### Subfluvial Pipe Crossings:

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Condition

No. Condition

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T-12

Subfluvial Pipe Crossings:

For subfluvial pipe crossings greater than 15 feet in width,

- 1) the pipe shall be of special construction, having flexible, restrained, or welded watertight joints, and
- 2) valves shall be provided at both ends of water crossings so that the section can be isolated for testing or repair.

Valves shall

- a) be easily accessible,
- b) not be subject to flooding, and
- c) if closest to the supply source, be in a manhole with permanent taps made on each side of the valve to allow insertion of a small meter to determine leakage and for sampling purposes. [Recommended Standards for Water Works 8.7.2]

**Treatment-Modification**

Carrollton Utilities  
Facility Requirements

Activity ID No.: APE20120004

**GTRT0000000002 (Ion Exchange water softning system) Ion Exchange water softning system, brine storage and water softner backwash to the WWTP:**

**Limitation Requirements:**

Condition No.	Parameter	Condition
L-1	Approved Operational Capacity	An Approved Operational Capacity $\leq$ _ gallons/min is applicable. This is equivalent to an Approved Operational Capacity of no more than _____ MGD. The Approved Operational Capacity is the maximum rate, ignoring backwash requirements, at which adequately treated water can be produced by the treatment facility under ideal conditons during the specified month(s) and, for this treatment facility, is limited by _____. Operation in exceedance of the Approved Operational Capacity will result in water of unknown or undesirable sanitary quality and, as such, is outside of any approval granted to the facility by the Division of Water. [401 KAR 8:100 Section 1] This requirement is applicable during the following months: All Year. Statistical basis: 24-hour average.
L-2	Approved Filtration Rate	An Approved Filtration Rate $\leq$ 5 gpm/ft <sup>2</sup> is applicable. Operation in exceedance of the Approved Filtration Rate will result in water of unknown or undesirable sanitary quality and, as such, is outside of any approval granted to the facility by the Division of Water. [401 KAR 8:100 Section 4(2)] This requirement is applicable during the following months: All Year. Statistical basis: 24-hour average.
L-3	Approved Surface Area	An Approved Surface Area = _ ft <sup>2</sup> is applicable and represents the total filter area at the treatment facility. [401 KAR 8:100 Section 4(2)] This requirement is applicable during the following months: All Year. Statistical basis: Constant.

**Monitoring Requirements:**

Condition No.	Parameter	Condition
M-1	Treated Water	For the public water system, the produced quantity of Treated Water monitored by flow meter daily shall be determined. [401 KAR 8:020 Section 2(7)(a)] This requirement is applicable during the following months: All Year. Statistical basis: Daily Total.

**Treatment-Modification**

Carrollton Utilities  
Facility Requirements

Activity ID No.: APE20120004

**GTRT0000000002 (continued):**

**Submittal/Action Requirements:**

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Condition  
No.

Condition

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- S-1      Following each month of water service to the public, the public water system shall submit Monthly Operating Report (MOR): Due monthly, by the 10th of the month to the Cabinet at the Division of Water, Frankfort Office Park, 14 Reilly Road, Frankfort, Kentucky 40601. The completed reports shall include, for the month of service,
- a) certified operator(s) of the system and
  - b) the total volume of water produced daily.
- Completed reports shall include the dated original signature of the owner or authorized agent. [401 KAR 8:020 Section 2(7)(a)]

## Treatment-Modification

Carrollton Utilities  
Facility Requirements

Activity ID No.: APE20120004

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GTSP0000000002 (Kings Ridge & Gilgal Rd Pump Station ) Two new pump stations, 60 and 40 GPM with 300 and 480-ft TDH:

### Limitation Requirements:

Condition No.	Parameter	Condition
L-1	Pressure	Pump stations shall be located or controlled so that intake Pressure $\geq 20$ psi is maintained during normal pump operation. [Recommended Standards for Water Works 6.4.b] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-2	Pressure	Pump stations shall be located or controlled so that an automatic cutoff or a low pressure controller maintains a Pressure $\geq 10$ psi in the suction line under all operating conditions. [Recommended Standards for Water Works 6.4.c] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-3	Residual Disinfection	New pumps shall be thoroughly disinfected (in accordance with AWWA Standard C651) upon completion of construction and before being placed into service. To disinfect new pumps use chlorine or chlorine compounds in such amounts as to produce an initial disinfectant concentration of at least 50 ppm and a Residual Disinfection $\geq 25$ ppm at the end of 24 hours. Follow the disinfection with thorough flushing and place each pump into service if, and only if, Coliform monitoring applicable to the pump does not show the presence of Coliform. If Coliform is detected, repeat flushing of the pump and Coliform monitoring. If Coliform is still detected, repeat disinfection and flushing as if the pump has never been disinfected. Continue the described process until monitoring does not show the presence of Coliform. [401 KAR 8:100 Section 1(7)] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-4	Slope	Pumping facilities shall be located and designed to maintain the sanitary quality of pumped water. As part of this, all pump station floors shall have Slope $\geq 3$ in per 10 ft to a suitable drain. [Recommended Standards for Water Works 6.2.e, Recommended Standards for Water Works 6.0, Recommended Standards for Water Works 6.1] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-5	Air Change Rate	Ventilation shall conform to existing local and/or state codes. At a minimum forced ventilation shall produce an Air Change Rate $\geq 6$ air change(s)/hr. [401 KAR 8:100 Section 1(7), Recommended Standards for Water Works 6.2.5] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.

## Treatment-Modification

Carrollton Utilities  
Facility Requirements

Activity ID No.: APE20120004

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GTSP0000000002 (continued):

### Limitation Requirements:

Condition No.	Parameter	Condition
L-6	Height	Pumping stations shall not be subject to flooding. To this end, 1) grading around stations shall lead surface drainage away and 2) stations shall be elevated or protected to a Height $\geq$ 3 ft above the highest of the following: a) the 100-year flood elevation, or b) the highest recorded flood elevation. [Recommended Standards for Water Works 6.1.1, Recommended Standards for Water Works 6.0] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-7	Height	When a pump station has pits or compartments which must be entered, stairways or ladders shall be provided between all floors. Stairs shall have risers with a Height $\leq$ 9 in, handrails on both sides, and treads with non-slip material wide enough for safety. [Recommended Standards for Water Works 6.2.3] This requirement is applicable during the following months: All Year. Statistical basis: Maximum.

### Narrative Requirements:

#### Additional Limitations:

Condition No.	Condition
T-1	Additional Limitations: Pumping stations shall be so located that the proposed site will meet the requirements for hydraulics of the system. [Recommended Standards for Water Works 6.1]
T-2	Additional Limitations: Pumping stations shall be readily accessible at all times for servicing and repairs. [Recommended Standards for Water Works 6.1.1.b, Recommended Standards for Water Works 6.4.3]
T-3	Additional Limitations: Pumping stations shall be designed to prevent vandalism and protect against entrance of animals or unauthorized persons. [Recommended Standards for Water Works 6.1.1.d]
T-4	Additional Limitations: Pumping stations shall be of durable construction with outward-opening doors. [Recommended Standards for Water Works 6.2.b]



## Treatment-Modification

Carrollton Utilities  
Facility Requirements

Activity ID No.: APE20120004

Page 11 of 20

### GTSP000000002 (continued):

#### Narrative Requirements:

##### Additional Limitations:

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Condition	
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No.	Condition
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- |      |  |
|------|--|
| T-5  | Additional Limitations:<br>Pumping stations shall be fire and weather resistant. [Recommended Standards for Water Works 6.2.b]   |
| T-6  | Additional Limitations:<br>Pumping stations shall have suitable pump gland discharges so that drainage from the glands is not onto the floor. [Recommended Standards for Water Works 6.2.f]  |
| T-7  | Additional Limitations:<br>If underground structures are present at pumping stations, they shall be waterproofed. [Recommended Standards for Water Works 6.2.d]  |
| T-8  | Additional Limitations:<br>Pumping stations shall have adequate space for the installation of additional pumps. [Recommended Standards for Water Works 6.2.a]  |
| T-9  | Additional Limitations:<br>Pumping stations shall have adequate space for the safe servicing of all equipment. [Recommended Standards for Water Works 6.2.a]   |
| T-10 | Additional Limitations:<br>Pump stations shall have crane-ways, hoist beams, eyebolts, or other adequate facilities for servicing or removal of pumps, motors or other heavy equipment.<br>[Recommended Standards for Water Works 6.2.2.a] |
| T-11 | Additional Limitations:<br>Pump stations shall have openings as needed for removal of heavy or bulky equipment. [Recommended Standards for Water Works 6.2.2.b]  |
| T-12 | Additional Limitations:<br>Pump stations shall have a convenient tool board, or other facilities as needed, for proper maintenance of equipment. [Recommended Standards for Water Works 6.2.2.c]   |
| T-13 | Additional Limitations:<br>In areas where excess moisture could cause safety hazards or damage to equipment, dehumidification shall be provided. [401 KAR 8:100 Section 1(7),<br>Recommended Standards for Water Works 6.2.6]              |
| T-14 | Additional Limitations:<br>Electrical controls shall be located above grade. [Recommended Standards for Water Works 6.6.5]   |

## Treatment-Modification

Carrollton Utilities  
Facility Requirements

Activity ID No.: APE20120004

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### GTSP000000002 (continued):

#### Narrative Requirements:

##### Additional Limitations:

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Condition No.	Condition
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| T-15 | Additional Limitations:<br>All electrical equipment and work shall conform with the applicable state and local electrical codes and the National Electrical Code. [Recommended Standards for Water Works 6.5, Recommended Standards for Water Works 6.2.7]   |
| T-16 | Additional Limitations:<br>Pump stations shall be adequately lighted throughout. [Recommended Standards for Water Works 6.2.7]   |
| T-17 | Additional Limitations:<br>All automatic pump stations shall be provided with automatic signaling apparatus which will report when the station is out of service. All remote controlled stations shall be electrically operated and controlled and shall have signaling apparatus of proven performance. [Recommended Standards for Water Works 6.5] |
| T-18 | Additional Limitations:<br>Automatic or remote control pump stations shall be located or shall have control devices setup so that the range between start and cutoff pressure prevents excessive pump cycling. [Recommended Standards for Water Works 6.4.d]   |
| T-19 | Additional Limitations:<br>Equipment shall be provided or other arrangements made to prevent surge pressures from activating controls which switch on pumps or activate other equipment outside the normal design cycle of operation. [Recommended Standards for Water Works 6.6.5]  |
| T-20 | Additional Limitations:<br>Provisions shall be made to prevent energizing the motor in the event of a backspin cycle. [Recommended Standards for Water Works 6.6.5]  |
| T-21 | Additional Limitations:<br>Pump stations shall be provided with enough heat to prevent freezing of equipment or treatment processes. [Recommended Standards for Water Works 6.2.4]   |
| T-22 | Additional Limitations:<br>Pump stations shall have at least 2 pumps. Pumps shall be sized so that if any single pump is out service, the remaining pump or pumps shall be capable of providing the peak demand on the station. [Recommended Standards for Water Works 6.3, Recommended Standards for Water Works 6.4.1]                             |
| T-23 | Additional Limitations:<br>Provisions shall be made for pump alternation. [Recommended Standards for Water Works 6.6.5]  |

## Treatment-Modification

Carrollton Utilities  
Facility Requirements

Activity ID No.: APE20120004

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### GTSP000000002 (continued):

#### Narrative Requirements:

##### Additional Limitations:

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Condition No.	Condition
T-24	<p>Additional Limitations: Pumps shall</p> <ul style="list-style-type: none"><li>a) have ample capacity to supply the peak demand against the required distribution system pressure without dangerous overloading,</li><li>b) be driven by prime movers able to meet the maximum horsepower condition of the pumps,</li><li>c) be provided readily available spare parts and tools, and</li><li>d) be served by control equipment that is properly protected against temperatures to be encountered. [Recommended Standards for Water Works 6.3]</li></ul>
T-25	<p>Additional Limitations: Pumps, their prime movers and accessories shall be controlled in such a manner that they will operate at rated capacity without dangerous overload. [Recommended Standards for Water Works 6.6.5]</p>
T-26	<p>Additional Limitations: Pump stations shall be located or controlled so that a bypass is available. [Recommended Standards for Water Works 6.4.e]</p>
T-27	<p>Additional Limitations: Pump stations shall contain indicating and totalizing metering of the total water pumped. Each pump shall have</p> <ul style="list-style-type: none"><li>a) a standard pressure gauge on its discharge line and</li><li>b) a compound gauge on its suction line.</li></ul> <p>Each pump should have a means for measuring the instantaneous volume per time discharge. [401 KAR 8:100 Section 1(7), Recommended Standards for Water Works 6.4.2, Recommended Standards for Water Works 6.6.3]</p>
T-28	<p>Additional Limitations: Pumps shall be adequately valved to permit satisfactory operation, maintenance and repair of the equipment. Each pump shall have a positive-acting check valve on the discharge side between the pump and the shut-off valve. [Recommended Standards for Water Works 6.6.1]</p>

## Treatment-Modification

Carrollton Utilities  
Facility Requirements

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### GTSP000000002 (continued):

#### Narrative Requirements:

##### Additional Limitations:

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Condition

No. Condition

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- T-29 Additional Limitations:  
Piping for pumps shall, in general,
- 1) be designed so that the friction losses will be minimized,
  - 2) not be subject to contamination,
  - 3) have watertight joints,
  - 4) be protected against surge or water hammer,
  - 5) be provided with restraints where necessary, and
  - 6) a) be such that each pump has an individual suction line or  
b) be manifolded such that the lines insure similar hydraulic and operating conditions. [Recommended Standards for Water Works 6.6.2]
- T-30 Additional Limitations:  
To ensure continuous service when the primary power is interrupted, power supplied to pump stations shall be
- a) from at least 2 independent sources or
  - b) from a primary source with a standby or auxiliary source provided.
- If standby power is provided by onsite generators or engines, the fuel storage and fuel line must be designed to protect the water supply from contamination.  
[Recommended Standards for Water Works 6.6.6]

## Treatment-Modification

Carrollton Utilities  
Facility Requirements

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**PORT0000000008 (Contract No 1,2 & 3 Countywide underserved project) 13 miles of line replacement and water main extension (39,000 LF of 3, 4, 6 and 8-inch PVC, DI and HDPE pipes):**

### Monitoring Requirements:

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Condition No.	Parameter	Condition
M-1	Coliform	The presence or absence of total Coliform monitored by sampling and analysis as needed shall be determined for the new or relocated water line(s). Take samples at connection points to existing lines, at 1 mile intervals, and at dead ends without omitting any branch of the new or relocated water line. Sample bottles shall be clearly identified as "special" construction tests. [401 KAR 8:100 Section 1(7), 401 KAR 8:150 Section 4, Recommended Standards for Water Works 8.5.6] This requirement is applicable during the following months: All Year. Statistical basis: Instantaneous determination.

### Submittal/Action Requirements:

#### Coliform:

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Condition No.	Condition
S-1	Coliform: For new construction projects, the distribution system, using the most expedient method, shall submit Coliform test results to the Cabinet: Due immediately following disinfection and flushing. [401 KAR 8:150 Section 4(2)]

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Condition No.	Condition
S-2	For proposed changes to the approved plan, submit information: Due prior to any modification to the Cabinet for approval. Changes to the approved plan shall not be implemented without the prior written approval of the Cabinet. [401 KAR 8:100 Section 1(8)]
S-3	The person who presented the plans shall submit the professional engineer's certification: Due when construction is complete to the Division of Water. The certification shall be signed by a registered professional engineer and state that the water project has been constructed and tested in accordance with the approved plans, specifications, and requirements. [401 KAR 8:100 Section 1(8)]

**Treatment-Modification**

Carrollton Utilities  
Facility Requirements

Activity ID No.: APE20120004

**PORT0000000008 (continued):**

**Narrative Requirements:**

**Additional Limitations:**

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Condition

No. Condition

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T-1 Additional Limitations:  
Chlorinated water resulting from disinfection of project components shall be disposed in a manner which will not violate 401 KAR 5:031. [401 KAR 8:020 Section 2(20)]

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Condition

No. Condition

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- T-2 This project has been permitted under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the applicant from the responsibility of obtaining any other approvals, permits or licenses required by this Cabinet and other state, federal and local agencies. Further, this permit does not address the authority of the permittee to provide service to the area to be served. [401 KAR 8:100 Section 1(7)]
- T-3 Unless construction of this project is begun within two years from the issuance date of this permit, the permit shall expire. If this permit expires, the original plans and specifications may be resubmitted for a new comprehensive review. If you have any questions concerning this project, please contact the Drinking Water Branch at 502/564-3410. [401 KAR 8:100 Section 1(9)]
- T-4 Final approval of facility. Upon completion of construction, the person who presented the plans shall certify in writing that the project has been completed in accordance with the "approved" plans and specifications. The public water supply shall operate the facility consistent with the approved plans and specifications. Any proposed change to the approved plan shall be submitted to the cabinet for approval. The public water supply shall not implement any change to the approved plan without the prior written approval of the cabinet. [401 KAR 8:100]
- T-5 During construction, a set of approved plans and specification shall be available at the job site at all times. All work shall be performed in accordance with the approved plans and specifications. [401 KAR 8:100 Section 1(7)(a)]

**Treatment-Modification**

Carrollton Utilities  
Facility Requirements

Activity ID No.: APE20120004

**PORT000000009 (Kings Ridge Road Pump Station) 40 GPM with 480-ft TDH:**

**Monitoring Requirements:**

Condition No.	Parameter	Condition
M-1	Coliform	The presence or absence of total Coliform monitored by sampling and analysis as needed shall be determined for the new or relocated water line(s). Take samples at connection points to existing lines, at 1 mile intervals, and at dead ends without omitting any branch of the new or relocated water line. Sample bottles shall be clearly identified as "special" construction tests. [401 KAR 8:100 Section 1(7), 401 KAR 8:150 Section 4, Recommended Standards for Water Works 8.5.6] This requirement is applicable during the following months: All Year. Statistical basis: Instantaneous determination.
M-2	Coliform	The presence or absence of total Coliform monitored by sampling and analysis as needed shall be determined for the new pump(s). If the pump(s) are independent of (not directly connected to) the new or relocated lines, take at least 1 sample at the discharge side pitcock. Otherwise, no additional sampling beyond the sampling required for new or relocated lines shall be required. Sample bottles shall be clearly identified as "special" construction tests. [401 KAR 8:100 Section 1(7)] This requirement is applicable during the following months: All Year. Statistical basis: Instantaneous determination.

**Submittal/Action Requirements:**

**Coliform:**

Condition No.	Condition
S-1	Coliform For new construction projects, the distribution system, using the most expedient method, shall submit Coliform test results to the Cabinet: Due immediately following disinfection and flushing. [401 KAR 8:150 Section 4(2)]
S-2	For proposed changes to the approved plan, submit information: Due prior to any modification to the Cabinet for approval. Changes to the approved plan shall not be implemented without the prior written approval of the Cabinet. [401 KAR 8:100 Section 1(8)]

**Treatment-Modification**

Carrollton Utilities  
Facility Requirements

Activity ID No.: APE20120004

PORT000000009 (continued):

**Submittal/Action Requirements:**

Condition No.	Condition
S-3	The person who presented the plans shall submit the professional engineer's certification: Due when construction is complete to the Division of Water. The certification shall be signed by a registered professional engineer and state that the water project has been constructed and tested in accordance with the approved plans, specifications, and requirements. [401 KAR 8:100 Section 1(8)]

**Narrative Requirements:**

**Additional Limitations:**

Condition No.	Condition
T-1	Additional Limitations: Chlorinated water resulting from disinfection of project components shall be disposed in a manner which will not violate 401 KAR 5:031. [401 KAR 8:020 Section 2(20)]

Condition No.	Condition
T-2	This project has been permitted under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the applicant from the responsibility of obtaining any other approvals, permits or licenses required by this Cabinet and other state, federal and local agencies. Further, this permit does not address the authority of the permittee to provide service to the area to be served. [401 KAR 8:100 Section 1(7)]
T-3	Unless construction of this project is begun within 1 year from the issuance date of this permit, the permit shall expire. If requested prior to the permit expiration, an official extension from the Division of Water may be granted. If this permit expires, the original plans and specifications may be resubmitted for a new comprehensive review. If you have any questions concerning this project, please contact the Drinking Water Branch at 502/564-3410. [401 KAR 8:100 Section 1(9)]
T-4	Final approval of facility. Upon completion of construction, the person who presented the plans shall certify in writing that the project has been completed in accordance with the "approved" plans and specifications. The public water supply shall operate the facility consistent with the approved plans and specifications. Any proposed change to the approved plan shall be submitted to the cabinet for approval. The public water supply shall not implement any change to the approved plan without the prior written approval of the cabinet. [401 KAR 8:100 Section 401 KAR 8:100(1)(8)]



**Treatment-Modification**  
Carrollton Utilities  
Facility Requirements

Activity ID No.: APE20120004

**PORT0000000009 (continued):**

**Narrative Requirements:**

Condition No.	Condition
T-5	During construction, a set of approved plans and specification shall be available at the job site at all times. All work shall be performed in accordance with the approved plans and specifications. [401 KAR 8:100 Section 1(7)(a)]

**Treatment-Modification**

Carrollton Utilities  
Facility Requirements

Activity ID No.: APE20120004

**PORT0000000010 (Gilgal Rd Pump Station) 60 GPM with 300-ft TDH:**

**Monitoring Requirements:**

Condition No.	Parameter	Condition
M-1	Coliform	The presence or absence of total Coliform monitored by sampling and analysis as needed shall be determined for the new or relocated water line(s). Take samples at connection points to existing lines, at 1 mile intervals, and at dead ends without omitting any branch of the new or relocated water line. Sample bottles shall be clearly identified as "special" construction tests. [401 KAR 8:100 Section 1(7), 401 KAR 8:150 Section 4, Recommended Standards for Water Works 8.5.6] This requirement is applicable during the following months: All Year. Statistical basis: Instantaneous determination.