1. PURPOSE

The Paulding County Water System (herein referred to as the County) intends to select a professional engineering design firm to provide surveying, geotechnical services, design, permitting, bidding and construction phase services for a series of distribution system improvements associated with the Richland Creek Water Supply Program that will help convey water from the new WTP to the existing distribution system. These improvements include:

1. Approximately 65,000 LF of 36-inch Finished Water Pipeline from the new Water Treatment Plant to a new Booster Pump Station
2. A new 18 mgd package Booster Pump Station
3. Approximately 1,500 LF of 36-inch Finished Water Pipeline from the new pump station to an existing 24-inch pipeline located on Highway 278

Attached Figure 1 in Exhibit A shows an overall location of the pipeline and pump station improvements. Figure 2 in Exhibit A shows the anticipated location of the Booster Pump Station on County owned property in proximity to Highway 278.

2. RICHLAND CREEK WATER SUPPLY PROGRAM DESCRIPTION

Paulding County’s Richland Creek Water Supply Program is being planned to fulfill the long-term water supply needs of the County through the year 2060. Paulding County currently owns and operates the public water system infrastructure within the County, and the new Richland Creek Water Supply Program will allow the County to supply its own long term supply needs of up to 35 mgd. The new Richland Creek Reservoir will be a pumped storage reservoir located in northern Paulding County on the upper reaches of Richland Creek. Its primary water source will be water pumped from the Etowah River. Water will be treated at a new 18 mgd WTP and pumped via the new 36-inch pipeline down to the City of Dallas where a booster pump station will convey it into the existing distribution system. Brown and Caldwell is serving at the overall Program Manager for the Richland Creek Water Supply program assisting the County in the implementation of the improvements.

3. SCOPE OF SERVICES

The scope of services includes field investigations, surveying, geotechnical investigations, preliminary design and detailed design, permitting, easement support, bidding and construction services for the project. Detailed work tasks are as outlined in this section. Suggested modifications to the scope shall be detailed in the Engineer’s proposal. The Engineer shall provide all necessary services required for a complete design package suitable
for permitting, bidding and construction of the project. Exhibit A provides a Conceptual
design of the pipeline and pump station improvements.

A portion of the pipeline will be funded through State Direct Investment (SDI) funding. The
State has specific requirements for this pipeline that shall be included in the scope of work of
the pipeline designer,

1. The State will be providing $15 million of SDI funding for the pipeline. This
section of pipeline will be designated at the “State Pipeline”. The linear dimension
of the State Pipeline shall be established by the designer with input of the Program
Manager and County. The desire is to make the State Pipeline as contiguous as
possible and within the state owned right of way of SR 61.

2. Within 90 days of completion of preliminary design, the designer shall make
recommendation for the identification of the “State Pipeline”.

**Task 1 – Project Administration, Management, and Quality**

Throughout all tasks, the Engineer shall provide project administration and management activities
such as staffing, subconsultant coordination, budget management, schedule management, and
coordination with County/Program Manager and maintain the quality of the work products defined
within this scope as consistent with applicable standards and County / Program Manager’s
expectations.

Project administration and management includes general internal project management based on the
tasks in this Scope of Work throughout the life of the project. Engineer shall provide the
following:

- *Prepare for and attend project kick off meeting.*
- Prepare a Project Management Plan with team member contacts, stakeholder contacts,
schedule, fee/budget and sample invoice.
- Prepare a Risk Register identifying potential risks for the project and mitigating strategies.
- Prepare and submit monthly status reports including an updated project schedule, current
status of the project tasks and project financials.
- Schedule and attend monthly progress meetings during design and construction with the
County / Program Manager to review the current status of the Project.
- Provide meeting summaries for all Progress Meetings, design review meetings, permitting
meetings, State Agency meetings or other meetings. For each deliverable review, provide
review comment spreadsheet for all stakeholder review comments including Engineer
response and action on each review comment.
- Perform quality assurance and quality control (QA/QC) reviews for the Project.
- Coordinate and manage subcontractor(s) as applicable.

**Preliminary Investigations and Route Confirmation**

- Engineer will prepare project route maps from GIS data and other publically available
information for use in project planning.
• Engineer will perform a preliminary investigation to confirm the route and which side of the road is proposed for the new waterline.

• The project designer and surveyor will coordinate with County / Program Manager and perform a site visit to walk the project route and observe the condition of the route and identify factors that may affect the design and location of the proposed pipeline, such as existing utilities, major road crossings, railroad crossing, streams, buffers, wetlands, terrain, rock, permitting considerations or other observable features affecting the design and constructability of the project.

• Provide a preliminary siting confirmation and layout for the booster pump station facility.

• Engineer will provide a brief Technical Memorandum (TM) summarizing the results of the field reconnaissance and other preliminary considerations and a concept route recommendation for review and approval by County / Program Manager. Engineer will attend a review meeting with County / Program Manager to review the TM.

• Engineer will coordinate with the Power Company for service to the new BPS.

Task 2. Field Surveys and Investigations

A detailed field survey shall be conducted along the alignment proposed and approved by the County / Program Manager under Task 1. The total pipeline length (combined) is estimated to be 66,500 feet. Field surveys will be conducted primarily on one side of the road, expanding at intersections, crossings, tie ins and other areas where additional detail is needed and will include the following at a minimum:

Topographic and Planimetric Survey. Engineer shall provide planimetric and topographic survey work and create a topographic base file for use in the project design, permitting, and contract document preparation. Surveying will generally encompass:

• Develop survey notification letters and mail to parcels owners along the project route.

• Field survey a corridor along the pipeline route, generally from centerline of the roadway to the back of the right of way; widening at intersections and significant crossings

• Coordination for the location of underground utilities and indicate the type and location of both underground and above ground utilities based on available information

• Location of property corners adjacent to or within the survey corridor

• Location of all drainage and sanitary sewer information (ditch bottoms, storm drain top elevations, invert elevations, sizes, and connections), including elevations of storm or sanitary pipes extending to the opposite side of the road

• Topographic survey of the corridor with two foot contour intervals

• Establishment of right-of-way and property lines sufficient for the preparation of easement plats for land acquisition along the survey corridor

• Location of roadway features including, edge of pavement, curb and gutter and roadway centerline

• Labeling of road names and property owners on drawing

• Location of permanent structures within the survey corridor
• Location of large diameter trees (> 24-inches) and type (e.g. pine, oak, etc.)
• Location of significant obstacles along route to include fences, trailers, sheds, power poles, light poles, signs, etc.
• Location of driveways
• Location of creek centerlines, waterline elevation and the bottom/top of banks
• Location of existing connection points, coordinating with County / Program Manager’s personnel
• Setting of construction benchmarks for listing on plans (northing, easting, elevation, description) at intervals of 2000’ along route
• Location of wetland and stream buffer delineation flagging

The survey will be provided in Georgia State plane coordinates.

**Environmental Survey and Delineation (Wetland and Stream Buffers)** – Engineer shall locate and delineate “Waters of the United States”, including streams, wetlands, and most ponds and lakes, subject to Section 404 of the Clean Water Act, administered by the United States Army Corps of Engineers (USACE), and Section 401 of the Clean Water Act. These features will be delineated in the field prior to field surveying activities. State waters and wetland vegetation shall be located and delineated in the field to determine if a Georgia State stream buffers variance is required.

a. Conduct a geotechnical investigation at the pump station site and along the water pipeline route. Geotechnical scope shall be included in the proposal and generally consist of the following minimum requirements:
   • Three soil borings and geotechnical report for the booster pump station site, suitable for design of the pump station foundation, slab, etc.
   • Borings and geotechnical report for rock, ground water and other constructability concerns along the pipeline route, minimum one every 500 feet.
   • Boring and geotechnical report suitable for the design and permitting of the railroad crossing.

**Geotechnical Investigations** – Engineer shall conduct a geotechnical investigation at the pump station site and along the water pipeline route. Geotechnical scope shall be included in the proposal and generally consist of the following minimum requirements:

• Three soil borings and geotechnical report for the booster pump station site, suitable for design of the pump station foundation, slab, etc.
• Borings and geotechnical report for rock, ground water and other constructability concerns along the pipeline route, minimum one every 500 feet
• Boring and geotechnical report suitable for the design and permitting of the railroad crossing.
**Task 3. Easement Drawings and Encroachment Permitting**

Engineer will provide up a total of 20 easement drawings, on 8.5” x 14” sheets, for County / Program Manager’s use in obtaining easements along the proposed pipeline route. Engineer will coordinate with County / Program Manager’s land acquisition staff on project-related questions during the easement procurement process. Costs for easement plats shall be provided on a per plat basis.

Engineer shall prepare encroachment permit documentation necessary for the County to obtain necessary GDOT encroachment permits.

**Task 4. Design Document Preparation**

The detailed design phase will consist of the preparation of drawings and specifications for permitting and construction of the proposed water main and Pump Station in accordance with County standards and State of Georgia requirements.

The design will be conducted in the following phases. Engineer will provide two (2) sets of full size drawings and pdf’s for review and coordinate and conduct workshop meetings at the 30%, 60% and 90% design milestones to review the design documents and County / Program Manager comments.

The 30% Preliminary Engineering design will consist at a minimum of the following:

- Base drawings utilizing field survey data
- Plans indicating the proposed horizontal alignment
- Locations of tie ins and connections
- Preliminary Pump Station Layout
- Preliminary opinion of probable construction cost
- Recommended location of “State Pipeline” delineation based on $15 Million SDI funding
- Standard Construction Details
- Permitting and easement requirements based on field delineation and survey results

The 60% design shall address comments received at the 30% phase and consist at a minimum of the following:

- Drawings including pipeline profile sheets
- Valving and connection piping details
- Pump Station Site Plan
- Pump Station Piping Layout
- Electrical Plan
- Sizing / locational analysis for air release and surge relief valves. Analysis shall incorporate surge protection devices (surge relief valve and surge tank) provided under the WTP contract.
• Erosion and sedimentation control plan and details
• Technical specifications
• Bid Form
• Updated opinion of probable construction cost

The 90% design shall address comments received at the 60% phase and consist of a full set of plans, details, specifications and bid documents. It is anticipated 90% drawings will be sufficient for project permitting.

The 100% design shall include the resolution of all review comments and incorporation of regulatory agency comments. The design documents shall be sufficient for bidding the project for construction.

The State Pipeline designated portion of the Pipeline that will be funded by the $15,000,000 State Direct Investment (SDI) funding from GEFA shall be delineated on all drawings. The design documents shall be established so that the schedule of values will track this portion of piping independently and allow for easy tracking of percent completion of that section of pipeline.

Preliminary technical requirements for the project are included in the conceptual design document attached in Exhibit A to this RFP.

The pump station will be located within the Dallas Corridor Overlay and Newtown Overlay. Officially they are cited as Code of Ordinances of City of Dallas, Georgia, Chapter 44, Article III, Divisions 4 & 5 (available at Municode.com). The architectural design of the building exterior should meet these requirements (meeting only minimum requirements due to the isolated location of this facility). Design standards for these overlay districts are included in Exhibit B to this RFP.

Task 5. Permitting

In preparation for bidding and construction of the project, Engineer will prepare and coordinate submittals, address comments and obtain the following anticipated permits or concurrences:

• Railroad crossing permit
• Georgia EPD Stream Buffer Variance for any non perpendicular stream crossing
• Corps of Engineers Nationwide Permit for impacts to jurisdictional waters
• Georgia EPD Technical Review
• GDOT Encroachment Permit
• Land disturbance permit from Paulding County including any necessary modifications to the construction documents. Paulding County has delegated authority to review erosion and sedimentation control plans.
• NPDES GAR 100002 for construction stormwater discharges - project information will be provided in the design drawings for construction contractor’s use in completing and submitting the project Notice of Intent (NOI).
Task 6. –Bid Phase Assistance

When approved by County / Program Manager, Engineer will assist in the bidding process for the project. Engineer will prepare a complete set of contract documents, including:

- Project technical specifications
- Project bid drawings including incorporation of all applicable permit review comments
- Project Bid Form
- Project Front End Documents (provided by County / Program Manager)

Engineer will combine the County / Program Manager provided “Front End Documents” with Technical Specifications and Bid Form for a bid ready package.

It is anticipated that the pipelines and pump station will be bid as one construction project.

Funding for the project will be associated with the Georgia Environmental Financing Authority. Procurement activities will take place in accordance with the GEFA SRF requirements (Outlined in GEFA “Exhibit C – State Revolving Fund Bid Procedures” attached to this RFP).

Upon advertisement of the construction project by County / Program Manager, Engineer will provide bid period services consisting of the following specific activities:

- Maintain plan holders list
- Issue bid documents (plans and specification packages)
- Attend a Pre-Bid Conference and assist County / Program Manager in conducting the conference
- If necessary, prepare addenda to interpret, clarify, and amend the Contract Documents
- Answer technical questions from contractors during the bidding period
- Upon Contractor Selection, prepare 6 sets of Conformed Documents

County / Program Manager will review and tabulate the bids, and select the contractor.

Task 7 –Stakeholder Involvement and Public Outreach

Engineer should provide budget to support to County / Program Manager for stakeholder involvement and public outreach, limited to attending up to two public meetings and providing one GIS based project overview exhibit and detailed technical drawings. County / Program Manager will develop mailing lists and maintain community contacts for stakeholders.

Task 8 – Construction Phase Services

Engineer will provide limited construction observation and administrative services during the construction period of the project. County / Program Manager will prepare a Notice of Award to the selected contractor, and prepare and issue a Notice to Proceed. The Engineer will provide additional administrative services during construction that will include the following items:

- Attend and assist in conducting a pre-construction conference
- Review submittals and shop drawings; produce submittal log
- Review Requests For Information; produce RFI log
- Review Change Order Requests, produce change management log
• Attend monthly progress meetings; produce agenda and minutes
• Provide contract close out assistance (punch list support, etc.)
• Budget 150 hours for site inspection in addition to monthly meetings. Anticipate 25 (6 hour site visits).
• Prepare record drawings based on the contractor’s red-line mark-up drawings, contractor’s survey information, and the County / Program Manager records. Record drawings will be submitted by Engineer to County / Program Manager in AutoCAD, PDF, TIF, and GIS formats.

**Data or Assistance to be Provided by County / Program Manager**

• County / Program Manager will provide services of an independent testing laboratory to perform tests and approvals of samples, materials and equipment as specified.
• County / Program Manager will provide construction observation in parallel to other ongoing construction projects.

4. PROJECT SCHEDULE

The overall program intends to issue the design Notice to Proceed by March 1, 2016 and the pipeline design completed by the end of 2016. Permitting and Procurement for a Contractor(s) will take place in the first quarter of 2017 with construction Notice to Proceed issued at the end of March 2017. Construction would be anticipated to take a maximum of 2 years with the pump station and pipeline able to come online no later than the first Quarter of 2019.

Engineer shall include a project schedule with their proposal along with an assessment of the feasibility of meeting this proposed timeframe.

5. SUBMITTAL DEADLINE AND DELIVERY

A. Eight copies and one electronic copy on CD of the Proposal must be received by the Paulding County Paulding County Finance Department no later than 4:00 P.M. on Friday, January 29, 2016. One Copy of the cost proposal shall be provided.

B. The Project name and Firm’s name and address must be shown on the outside of the sealed envelopes, addressed to and delivered to:

        Paulding County Finance Department
        240 Constitution Boulevard, 2nd Floor
        Dallas, GA 30132

        The envelopes must be clearly labeled as RFP#16007-3802 Design Services for the Distribution System Improvements Finished Water Pipeline and Booster Pump Station.

C. No submittals will be accepted after the deadline. Submittals received after the designated time will not be considered. Submittals must be paper copies, appropriately bound. Emailed or faxed copies will not be accepted.
6. PROPOSAL CONTENTS

Proposals should be bound with the name of the firm and name of the Project visible on the outside cover. Each submittal will be limited to 20 double-sided sheets addressing all aspects of the Request for Proposal.

Costs identified in Item E below shall be submitted in a separate envelope with the label of “Cost Proposal”.

To standardize responses and simplify the comparison and evaluation of responses, all submittals must be organized in the manner set forth below. The document should have a Cover Letter, Table of Contents with the following major sections, including tabs marking section locations. Sheets should be printed double-sided (20 pages, exclusive of Table of Contents, Resumes and tabs):

A. General Information

1. A cover letter signed by an officer of the firm.

2. Provide a primary contact point for all correspondence related to the proposal including name, title, phone number, and email address.

3. A statement confirming that the firm meets the appropriate state licensing requirements to practice in the State of Georgia; provide business license number; also provide a copy of current insurance coverage.

4. A statement agreeing to all terms contained in the County’s Request for Proposals document including permission for the County and its representatives to contact references, clients, contractors or others to seek information about the firm’s past performance, as well as permission for those persons contacted by the County and its representatives to provide requested information.

5. A statement that the firm currently has in-house resources to perform all work required for each of the Project parts except in those specialized areas that are clearly listed in the submittal (Project Team section) as areas of work that will be subcontracted. Provide an organization chart showing the key personnel.

6. A statement by the firm certifying that, in accordance with O.C.G.A. 36-91-21 and to the best of its knowledge, there are no circumstances that would cause a conflict of interest on the part of the firm or its proposed sub-consultants or sub-contractors in performing services for Paulding County, and that no company or person other than bona fide employees working solely for the Consultant has been employed or retained to solicit or secure the proposed contract.

7. Describe respondent’s firm by providing its full legal name, date of establishment, type of entity, short history, current ownership structure, and any recent or materially significant proposed change in ownership.
8. Identify any litigation, arbitration, or mediation claims that involved similar projects. Identify any contract or subcontract held by the firm or officers of the firm, which have been terminated. Include only those actions involving projects completed during the past 10 years. Include claims that were initiated by or against the project Owner and the Engineer under contract with the project Owner. Briefly state the nature of the claim and the outcome.

B. Firm’s Experience and Performance on Similar Projects (15 points)

Submit the following information on past projects to illustrate the specialized expertise, demonstrated experience, applicable qualifications, and available resources of the firm with emphasis on key team members proposed for this project. The responding firm shall provide a summary of up to five (5) similar pipeline projects of similar size and nature within the last 10 years and the following information:

1. For each listed project, provide the following:
   a. Project name, location, description, and status of the project.
   b. Project’s original contracted engineering cost and final engineering cost. Explain any difference.
   c. Project’s construction cost.
   d. Contact information (reference name, title, e-mail address and phone number) for Owner for each project.

2. Key project team members serving on each of the above-listed projects with emphasis on the participation of team members proposed for this Project. Specialized expertise and/or resources applied during project, with concise explanations of their value and relevance to this Project.

3. Describe any issues relevant in evaluating the ability of the responding firm to handle the proposed Project.

4. List of all Paulding County projects that the firm worked on either for design or construction over the last 10 years, either completed or ongoing.

C. Project Team Qualifications (15 points)

Submit proposed Project team information to include the following:

1. Organizational chart showing key personnel who will be assigned to the Project; include the name and role/responsibility of each key team member. Include only those staff members who will commit a substantial percentage of their time to the work. List the approximate number of technical staff that is expected to serve in support roles on the Project. Show reporting structure of the Project team including any sub-consultants. Include a listing of work elements that will be performed by sub-consultants and state the names of proposed sub-consultants.

2. For each key person identified, list their length of time with the firm and at least two comparable projects in which they have played a primary role. If a project selected for a
key person is the same as one selected for the firm in Section B, provide just the project name and the role of the key person. For other projects provide the following:
   a. Description of project
   b. Role of the person.
   c. Project’s original contracted engineering cost and engineering cost.
   e. Project owner.
   f. Reference information (two current names with telephone numbers and e-mail per project).

D. Understanding the project and approach to performing the required services (20 points)

1. Provide a discussion on your project understanding and approach, with emphasis on modifications, deviations or improvements to the proposed scope of services.
2. Discuss the major issues and / or risks your team has identified on this project and how you intend to address and mitigate those issues.
3. Describe your firm’s project management approach and team organization during the project. Describe systems used for planning, scheduling, project execution and quality control.
4. Provide a schedule by phase and task for completing the work.
5. Identify any assumptions and services anticipated to be provided by the County / Program Manager.
6. Provide any additional information that you feel would assist the County in making this project award decision.
7. Include with their proposal a list of assumptions used to develop final scope and fee for this Project.

E. Price and other cost considerations. (50 points) – Provide in a Separate Envelope

Provide pricing broken down by project phases and sub tasks where appropriate. Include hours and rates for staff assigned to the project. All reimbursables, expenses, overhead, administration shall be included in the hourly rates provided.

F. Optional Interview (25 points)

An interview may be held among short-listed firms at the discretion of the County. Information will be provided at a later date.

7. QUESTIONS AND CLARIFICATIONS

Any questions concerning this Request for Proposals should be directed to the person listed below. No interpretation or clarification of the meaning of the instructions or scope of services will be made orally except for general information that does not require a clarification. Every request for such interpretation should be in writing, submitted by email or fax, and addressed to the individual shown below. To be given consideration, questions must be received at least seven
All clarifications and any supplemental instructions will be posted on the Paulding County Purchasing website at the following address: http://www.paulding.gov.

Please check the website periodically for updates to the Request for Proposals.

Address questions to:
Kelly Comstock, P.E.
RCR Program Manager
Brown and Caldwell
990 Hammond Drive Suite 400
Atlanta, GA 30328
Email: Kcomstock@brwncald.com
Phone: (770) 673-3669
Fax: (770) 369-9495

8. EVALUATION AND SELECTION

Submittals from each Firm will be evaluated on the basis of the information submitted, along with an analysis of other available information. The County may conduct investigations or interviews, as it deems necessary, to assist in the evaluation of the qualifications submitted. A selection committee will review the proposals and rank the Firms and will award points to each category listed in Section 6 in accordance to completeness/responsiveness of each category. The initial evaluation is based on a total maximum score of 100 points. Maximum points for each category are included in Section 6.

After the initial evaluation, the County may proceed to a contract with the selected Firm, or a “short list” of the top two or three Firms or teams will be developed. These “short-listed” Firms will be interviewed and a final selection will be made.

It is anticipated a contract for engineering services will be entered into with the Firm that, in the opinion of the County, offers the most favorable combination of qualifications, approach, and pricing. The County reserves the right to not award the project depending upon qualifications and final proposals.

9. CONTRACT

The successful respondent will be expected to enter into an Agreement with Paulding County. The contract will be based upon the EJCDC® E-500, Agreement Between Owner and Engineer for Professional Services.

11. OWNERSHIP OF SUBMITTAL DOCUMENTS

Upon receipt of the submittal by the County, the submittal and all included documentation shall become the property of the County, without compensation to the respondent, for disposition or usage by the County at its discretion. The County assumes no responsibility or obligation to respondent Firms and will make no payment for any costs associated with the preparation or submission of submittals. All work, including but not limited to planning, programming, cost estimates and summaries, plans, specifications, concepts, ideas, and other materials prepared by
or for the respondent Firm for the County under this Request for Qualifications and any subsequent proposal shall become the property of the County. However, such provisions do not include the publication, distribution, or sale of such submittals to third parties not employed by or under contract to the County.

Notwithstanding the foregoing, Paulding County agrees any use of such submittals without the Consultant’s verification or adaptation for the specific purpose intended shall be at the sole risk of Paulding County. The respondent Firm may establish claim to copyright any data first produced in the preparation of the submittal. When such claim to a copyright is made, the respondent Firm shall affix the applicable copyright notice to the data when the data are delivered to the County. The Consultant agrees to grant to Paulding County and others acting on its behalf, at no cost, a nonexclusive, irrevocable license to use such data solely for the municipal purposes of the Paulding County Water System. Notwithstanding the foregoing, no claim of copyright or confidentiality shall modify Paulding County’s statutory obligation to provide copies of documents submitted to it in response to an “Open Records Act” request.

12. RESERVATION OF RIGHTS

Paulding County reserves the right to waive any informality or to reject any or all submittals, to evaluate submittals, and to select the Firm or Firms that are, in the County’s opinion, in the best interest of the County.

END OF DOCUMENT
EXHIBIT A
CONCEPTUAL DESIGN REPORT
Prepared for:  Paulding County
Project Title:  Richland Creek Reservoir and Water Supply Program
Project No.:  147201
Subject:  36 Inch Transmission Line and Highway 278 BPS Conceptual Design
Date:   December 14, 2015
To:   Laurie Ashmore, Director of Paulding County Water System
From:   Kelly Comstock, PE, BCEE
Introduction

This Technical Memorandum documents the conceptual design for planned 36 inch pipeline and booster pump station necessary to support the initial implementation of the Richland Creek Reservoir and Water Supply Program (RCR). The RCR program will include the construction of a new 305, acre 3.4 billion gallon water supply reservoir that will pull water from the Etowah River during non-low flow conditions. It will also include a water treatment plant with an initial capacity of 18 mgd. Once the RCR comes online and produces water it is the County’s intention to reduce dependency on the Cobb County Marietta Water Authority and become totally self sufficient, except for few remote areas of the system, in producing water within the first decade of operation.

Due to the location of the RCR in the northern portion of the County, transmission improvements are necessary to convey treated water from the RCR down to the central part of the County where it can be distributed to all service areas. The County maintains three pressure zones: the main pressure zone (HGL = 1255 ft), the Union Pressure Zone (HGL = 1445 ft) and the Yorkville Pressure Zone Zones (HGL = 1522 ft).

This memorandum details this conceptual design of the various improvements necessary to be implemented as part of the Richland Creek Water Supply Program to support distribution of water throughout Paulding County. The required improvements were recommended based on County’s water system model that was updated by Tetra Tech and County utilizing Bentley WaterGems software. The improvements include a 36-inch finished water line from the RCR site down to a new proposed booster pump station located at highway 278. In addition to these improvements, a new storage tank will be provided at Macland Road in order to provide storage in the distribution system. Figure 1 shows the location of the planned improvements.

36-Inch Finished Water Pipeline

In order to convey water from the RCR to the planned Highway 278 Booster Pump Station a new 36-inch transmission line will be installed. This new 36-inch transmission main shall be capable of delivering over 30-mgd flow to meet the overall system. The pipeline will generally run along Highway 61 down into the City of Dallas after which it will turn on Johnston Avenue and the then tie into the suction header of the new pump station located off of Bethel Road. There is one anticipated rail crossing and one bridge crossing that will be required along the route. Table 1 provides anticipated design criteria for the new 36-inch pipeline. These criteria can be further refined during detailed design.

<table>
<thead>
<tr>
<th>Table 1. 36” Finished Water Line Design Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting Location</td>
</tr>
<tr>
<td>RCR WTP Property Line</td>
</tr>
<tr>
<td>Lat – 34.074708°, Lon -84.832610°</td>
</tr>
<tr>
<td>Ending Location</td>
</tr>
<tr>
<td>Highway 278 Booster Pump Station</td>
</tr>
<tr>
<td>Lat 33.918433°, Lon-84.844879°</td>
</tr>
<tr>
<td>Pipeline Material</td>
</tr>
<tr>
<td>Ductile Iron Pipe w/ Cement Mortar Lining</td>
</tr>
<tr>
<td>Normal Operating Pressure (Maximum) at Lowest Point (elevation 850-ft)</td>
</tr>
<tr>
<td>Maximum Pressure Due to Pump Shutoff at Lowest Point (elevation 850-ft)</td>
</tr>
<tr>
<td>Pressure Class</td>
</tr>
<tr>
<td>Diameter</td>
</tr>
</tbody>
</table>
Highway 278 Booster Pump Station

The Booster Pump station will take water supplied from the new 36-inch pipeline and boost the pressure to send flows to the southern portion of the main pressure zone and booster pump stations associated with the other pressure zones. The discharge of the pump station will travel through a new 36-inch pipeline that runs approximately 1,500 ft and ties into the existing 24-inch pipeline running along Highway 278. Figure 4 shows the anticipated location of the new Booster Pump Station. Table 2 includes the preliminary design criteria for the Highway 278 Booster Pump Station. The anticipated suction pressure range is 60 to 80 psig when this booster pump station is in service and around 120 psig when this booster pump station is not in service. The pump discharge pressure is expected to vary between 135 and 175 psig while delivering a flow range of 16 to 22 mgd. The operation of this pump station will be based on McLand tank level and preliminary strategy will be turning pumps at this station when tank level drops to 22.5-ft and turning pumps off when tank level is at 28-ft. The design criteria for this pump station are presented in Table 2.

<table>
<thead>
<tr>
<th>Table 2. Highway 278 Booster Pump Station Design Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Pumps</td>
</tr>
<tr>
<td>Pump Capacity</td>
</tr>
<tr>
<td>Design Point</td>
</tr>
<tr>
<td>Pump Type</td>
</tr>
<tr>
<td>Motor</td>
</tr>
<tr>
<td>Candidate Pump Model (See Figure 2)</td>
</tr>
</tbody>
</table>

It is expected that two pumps will be in service most of the time with third pump for standby purposes. The operation of this pump station with simulated conditions (utilizing WaterGems model for 17 mgd MDD and 25 mgd MDD flow scenarios) is shown in Figure 3.

The pump station will be configured such that there will be a bypass line with a check valve between suction and discharge of this pump station. When the pumps are not in operation flows pumped from the water plan and can bypass this pump station flow into southern portion of the system. Maximum bypass flow under current design condition is expected to be just below 8 mgd under normal operation.

The current plan is to utilize a fully integrated package pump station for this application. An example of this system is shown in Figure 5. It should be emphasized that suction piping as shown in Figure 5 may not meet the requirements of Hydraulic Institute for piping. The design will modify the layout shown in Figure 5 to meet the requirements of the Hydraulic Institute while maintaining the intent of utilizing a fully integrated packaged pumping station for this application. It is also anticipated that, for this application the pump station may need to be built in three sections and assembled on site. The pump station will be located within the Dallas Corridor Overlay and Newtown Overlay. Officially they are cited as Code of Ordinances of City of Dallas, Georgia, Chapter 44, Article III, Divisions 4 & 5, both of which are available at Municode.com. The architectural design of the building exterior should meet these requirements (meeting only minimum requirements due to the isolated location of this facility).
Figure 1

Proposed Transmission System Improvements for the Richland Creek Water Supply Program
Figure 2. Candidate Pump Curve
Figure 3 – Simulated Operation of Proposed Pumps – Two Pump Operation.
Figure 4: Preliminary Layout of BPS and Piping
Figure 5. Example of Fully Integrated Package Pump Station.
EXHIBIT B
City of Dallas Overlay Requirements

- Town New Overlay District Sec. 44-199. - Building design standards.

(a) Architectural design requirements.

(1) Structures within the New Town Overlay District shall have a "turn of the century" design aesthetic. Building designs should be reminiscent of structures built between 1880 and 1920, with a strong sense of proportion, a pedestrian scale, and facades typically comprised of masonry (including brick), wood and glass.

(2) Building designs should emphasize vertical proportions where the height of individual buildings, windows, and other building elements should exceed their width.

(3) Structures longer than 100 feet in length shall create variations in the facade through varying the cornice height, facade depth, materials, textures, colors, and/or window and door patterns to provide visual interest and avoid imposing or monotonous facades.

(4) Exterior metal walls shall be prohibited on all buildings erected, constructed, altered, repaired or used in this New Town Overlay Zone, which abut, are adjacent to or are visible from any of the roadway corridors that define the district's boundaries.

(5) Building facades may be constructed from masonry (including brick), glass, and/or wood as defined below, or other materials or products which provide the same desired stability and quality. (Please note: Building facades to be regulated by this district include all building sides which are visible from any public street or sidewalk within the district.) Products other than the following listed products must be approved by the city:

a. Masonry construction. Masonry construction shall include all masonry construction that is composed of solid, faced, or veneered-wall construction (excluding masonry boards, concrete masonry units (CMU) and/or cinder blocks, unless otherwise approved by the city) with standard brick size.
   1. Stone material used for masonry construction may consist of granite, sandstone, slate, limestone, marble, or other hard or durable all-weather stone. Ashlar, cut stone, and dimensioned stone construction techniques are acceptable.
   2. Brick material used for masonry construction shall be composed of hard fired (kiln-fired) all weather standard size brick or other all weather facing brick.

b. Glass walls. Glass walls shall include glass curtain walls construction. Glass curtain wall shall be defined as an exterior wall which carries no floor or roof loads, and which may consist of a combination of glass and other surfacing materials supported in a metal framework.

c. Wood construction. Wood construction shall include wood siding, board and baton, and other traditional wood construction. Fiberboard (Hardiplank and/or similar products) may be allowed with approval of the city. Other synthetic siding material including vinyl siding and metal siding are prohibited as a facade material within the overlay district.
The materials and finishes of exposed roofs shall compliment those used for the exterior walls. Exposed roofs shall be defined as that portion of a roof visible from ground level of any public roadway or public area (sidewalk and/or parking area) or residentially zoned or used area.

Roof-mounted equipment (mechanical and all other) shall be screened from view. The appearance, materials, and color of roof screens shall be coordinated with the building to maintain a unified appearance.

All building mechanical and electrical equipment located adjacent to the building and visible from any public roadway, public area (including sidewalks and/or parking areas), or a residentially zoned or used area shall be screened from view. Such screens and enclosures shall be treated as an integral element of the building's appearance and shall thus consist of materials and colors that are compatible with the building facade and/or dense landscaping.

The exposed walls and roofs of buildings shall be maintained in a clean, orderly, and attractive condition; free of cracks, dents, punctures, breakage, and other forms of visible marring. Materials that become excessively faded, chalked or otherwise deteriorated shall be refinished, repainted or replaced.

Refuse and waste removal areas, loading berths, service yards, storage yards, and exterior work areas shall be screened from view from public ways.

Screening of service yards, ground mounted mechanical and electrical equipment, refuse/waste areas and other places that tend to be unsightly shall be accomplished by use of walls, fencing, planting, or combinations of these. Walls or fencing may be comprised of brick, stone, wrought iron or wood. No barbed wire, razor wire, chain link fence or similar elements shall be visible from any public area (roadway, sidewalk or parking area). Screening shall be equally effective in winter and summer.

Relationship of buildings to site.

Buildings shall be placed in close proximity to public roadways, shall relate to roadways and pedestrian sidewalk areas, and shall promote easy access from sidewalks into buildings.

Setbacks and building edges shall be varied from building to building (up to ten feet in variation) to enhance visual interest and to prevent consistent building edges longer than 100 linear feet.

Parking areas shall be located to the side and behind buildings. Parking and driveways may not be located between buildings and public roadways. Under special exception from the city, a maximum of two rows of parking may be allowed between buildings and federal or state designated highways. If parking and/or a driveway of any type is allowed under special exception, a landscape berm no less than 12 feet in width and four feet in height must be provided between public roadways and the parking and/or driveway positioned between the roadway and building.

Pedestrian paths along public roadways may not be interrupted for more than 30 continuous linear feet by driveways. Pedestrian sidewalks/paths over driveways must be differentiated from driveway pavement through the use of another material or the same material with a different color and texture.
Shared driveways serving multiple properties and inter-parcel access are strongly encouraged to minimize the number of driveways through pedestrian areas/sidewalks and the number of access points for each individual development and along major roadways.

(6) Deceleration lanes, except for those required by the department of transportation on federal or state controlled roadways, are not allowed within the New Town Overlay District.

(7) All new developments shall preserve a minimum of 15 percent of the development parcel as open space (natural or publicly accessible open space). The term "open space," as it relates to this requirement, does not include impervious surfaces with the sole exceptions of pedestrian sidewalks and multiuse trails.

(8) Plans for new developments and exterior alterations to any existing structures must include a detailed site plan that shows all sidewalks areas, parking areas, building footprints and entries, pedestrian paths from sidewalks and parking areas to building entries, clear transitions of the streetscape (sidewalks, landscaping and lighting) with adjacent parcels along all public roadways, and calculation of required open space.

(9) Parking areas shall be treated with decorative elements, building wall extensions, plantings, berms, or other innovative means so as to attractively landscape and/or screen parking areas from the view of public ways.

(10) Within the permissible limits of the applicable zoning district, the height and scale of each building shall be compatible with its site and existing (or anticipated) adjoining buildings.

(11) Newly installed utility services, and service revisions necessitated by exterior alterations shall be underground.

(12) Within the downtown subdistrict the following additional provisions/restrictions shall apply:
   a. All new structures in the downtown subdistrict shall be placed at the back of and adjacent to the pedestrian sidewalk.
   b. The maximum block size in the downtown subdistrict is 200 feet. Blocks longer than 200 feet should be sub-divided to create alleyways, driveways, or new roadways at appropriate intervals.
   c. All parking in the downtown subdistrict must be on-street parking or located to the side or behind buildings. No parking, other than on-street parallel parking, or driveways shall be permitted between the public roadway, pedestrian sidewalk, and facing building edges in the downtown subdistrict.
   d. Parking areas to the side of any building in the downtown subdistrict must include a minimum five-foot planting area between the public sidewalk and the parking area. The planting area may include shade trees, shrubs, seasonal flowers, and/or benches, but shall not include impervious pavement or surfaces.
   e. Curb cuts in the downtown subdistrict shall be a maximum of 24 feet in width. Shared driveways among multiple parcels and/or developments are encouraged to minimize the number of disruptions in the pedestrian environment/sidewalks.
   f. Entrances to buildings within the downtown subdistrict must be clearly visible, face the public street, be directly accessible from the adjacent public sidewalk along the roadway, and must be unlocked during normal business hours.
(g) There is no minimum open space requirement for buildings in the downtown subdistrict.

(c) **Minimum building height.**

(1) All structures within the overlay district shall have a minimum building height of 24 feet measured to the top of the parapet wall on a flat roof or the lowest eave of a sloped roof and shall have the appearance of a two-story or taller structure.

(2) Downtown subdistrict structures must have a minimum of two occupied levels above grade.

(d) **Uses in the downtown subdistrict.**

(1) Structures including a vertical mix of uses with ground floor commercial uses (office, retail, restaurant, etc.) and office and/or residential units above are encouraged and hereby allowed within the downtown subdistrict in addition to any other uses allowed by the underlying zoning.

(2) For vertical mixed-use buildings, parking requirements shall be based on the parking required by the underlying zoning for the use on the ground floor plus one space per bedroom for residential units and three spaces for every 1,000 square feet of office space on upper floors.

(Comp. Ords. 2005, § 5-1816(D))

- **Dallas Corridor Overlay District Sec. 44-215. - Building design standards.**

(a) **Architectural design requirements/non-residential.**

(1) Exterior metal walls shall be prohibited on all buildings erected, constructed, altered, repaired or used in the overlay district, which abut are adjacent to, or are visible to State Routes 6, 6 Business or 61.

(2) Building facades may be constructed from masonry or glass, as defined below, or other materials or products which provide the same desired stability and quality. Products other than those listed below must be approved by the city.

a. **Masonry construction**: Which shall include all masonry construction that is composed of solid, faced, or veneered-wall construction with standard brick size (excluding masonry boards and cinder blocks, unless otherwise approved by the city).

i. Stone material used for masonry construction may consist of granite, sandstone, slate, limestone, marble, or other hard or durable all weather stone. Ashlar, cut stone, and dimensioned stone construction techniques are acceptable.

ii. Brick material used for masonry construction shall be composed of hard fired (Kiln-fired) all weather standard brick or other all weather facing brick.

b.
Glass walls: Which shall include glass curtain walls or glass block construction. Glass curtain wall shall be defined as an exterior wall which carries no floor or roof loads, and which may consist of a combination of metal, glass and other surfacing materials supported in a metal framework.

c. 

Wood construction.

(3) The materials and finishes of exposed roofs shall complement those used for the exterior walls. Exposed roofs shall be defined as that portion of a roof visible from ground level of the corridor or any adjacent public thoroughfare or residentially zoned or used area.

(4) Roof mounted equipment on exposed roofs shall be screened from view. The appearance of roof screens shall be coordinated with the building to maintain an unified appearance.

(5) All building mechanical and electrical equipment located adjacent to the building and visible from a public thoroughfare or a residentially zoned or used area shall be screened from view. Such screens and enclosures shall be treated as an integral element of the building's appearance.

(6) The exposed walls and roofs of buildings shall be maintained in a clean, orderly, and attractive condition; free of cracks, dents, punctures, breakage, and other forms of visible marring. Materials that become excessively faded, chalked or otherwise deteriorated shall be refinished, repainted or replaced.

(7) Refuse and waste removal areas, loading berths, service yards, storage yards, and exterior work areas shall be screened from view from public ways.

(b) Relationships of buildings to site.

(1) The site shall be planned to accomplish a desirable transition with the streetscape and provide for adequate planting, safe pedestrian movement and parking area.

(2) Site planning in which setbacks and yards are in excess of zoning restrictions is encouraged to provide an interesting relationship between buildings.

(3) Parking areas shall be treated with decorative elements, building wall extensions, plantings, berms or other innovative means so as to attractively landscape and/or screen parking areas from view public ways.

(4) Without redistricting the permissible limits of the applicable zoning district, the height and scale of each building shall be compatible with its site and existing (or anticipated) adjoining buildings.

(5) Newly installed utility services, and service revisions necessitated by exterior alterations, shall be underground.

c) Minimum building height. All uses within the corridor overlay districts shall have minimum building heights of 14 feet with a minimum of 12 feet to the lowest eaves for a building with a gable, hip or gambrel roof.

(Ord. No. OA-2012-04, 3-19-2012)
EXHIBIT C
STATE REVOLVING LOAN FUND
BID PROCEDURES

Recipient:

Loan Number:

1.) Competitive procurement by public bidding is required for construction, construction services, materials and equipment.

2.) The governmental entity contracting the work (the Owner) must advertise for bids by conspicuously posting the notice in its office and by advertising in the local newspaper that is its legal organ or on its Internet website or on an Internet site designated for its legal advertisements.

3.) Advertisements must appear at least twice. The first advertisement must appear at least four weeks prior to the bid opening date. The second must follow at least two weeks after the first advertisement. Website advertisements must remain posted for at least four weeks. Plans and specifications must be available for inspection by the public on the first day of the advertisement. The advertisement must include details to inform the public of the extent and character of work to be performed, any pre-qualification requirements, any pre-bid conferences, and any federal requirements.

4.) The Owner must require at least a 5% bid bond or certified check or cash deposit equal to 5% of the contract amount.

5.) Sealed bids, with a public bid opening, are required.

6.) The Owner must award to the low, responsive, responsible bidder or bidders with reservation of right to reject all bids.

7.) The Owner may modify bidding documents only by written addenda with notification to all potential bidders not less than 72 hours prior to the bid opening, excluding Saturdays, Sundays, and legal holidays.

8.) The Owner must require 100% payment and performance bonds.

9.) Change orders may not be issued to evade the purposes of required bidding procedures. Change orders may be issued for changes or additions consistent with the scope of the original construction contract documents.
10.) Prior to disbursement of funds, provide EPD with copies of the following:
   a) Proof of advertising
   b) Certified detailed bid tabulation
   c) Engineer’s award recommendation
   d) Governing body’s award resolution
   e) Executed contract documents, including plans and specifications
   f) Construction and payment schedules
   g) Notice to proceed
   h) Contractor’s written oath in accordance with O.C.G.A. 36-91-21 (e). (This is an oath required by law to be provided to the Owner by the Contractor. In short, this must state that the Contractor has not acted alone or otherwise to prevent or attempt to prevent competition in bidding by any means and must be signed by appropriate parties as defined by law.)
   i) Summary of plans for on-site quality control to be provided by the Owner or Engineer - name and brief qualifications of construction inspector(s) and approximate hours per week of inspection to be provided.

11.) If other funding sources are involved which have stricter bidding requirements or if applicable laws or ordinances require stricter requirements, these stricter requirements shall govern.

12.) If the loan recipient wishes to fund work that may not fully meet the bidding requirements of this loan contract, then, prior to bidding this work, it shall submit a written request to the Georgia Environmental Facilities Authority (GEFA) that specific requirements be waived. Based on specific circumstances of the request, GEFA will require submission of additional information necessary to document that State laws and local ordinances are not violated and that the intent of the loan contract bid procedures (public, open, competitive procurement) is satisfied through alternate means.

13.) The Owner is required to notify the Construction Management Unit of the Environmental Protection Division at least two weeks prior to pre-construction conferences for work funded under this loan contract and to schedule these conferences so that a representative of this Unit may participate.
14.) It is the policy of the State Revolving Loan Fund (SRF) to promote a fair share of subagreements to small and minority and women’s businesses on contracts performed under the SRF. If the successful bidder plans to subcontract a portion of the project, then the bidder must submit to EPD, with copy to the Owner within 10 days after bid opening, evidence of the positive steps taken to utilize small, minority and women’s businesses. Such efforts shall include:

a) Include qualified small, minority and women’s businesses on solicitation lists;

b) Assuring that small, minority and women’s businesses are solicited whenever they are potential sources;

c) Dividing total requirements, when economically feasible, into small tasks or quantities to permit maximum participation by small, minority and women’s businesses.

d) Establish delivery schedules, where the requirements of the work permit, which will encourage participation by small, minority and women’s businesses.

e) Use the services and assistance of the U.S. Small Business Administration and the Office of Minority Business Enterprise of the U.S. Department of Commerce.

f) Requiring each party to a subagreement to take the affirmative steps outlined in paragraphs a) through e) of this section.