

**Minutes Of
Engineering And Maintenance Committee Meeting
Of The Water Works Board
Of The City Of Birmingham
March 20, 2019**

An Engineering and Maintenance Committee Meeting of The Water Works Board of the City of Birmingham was held Wednesday, March 20, 2019, at 11:30 a.m., at the Birmingham Water Works Board, 3600 First Avenue North, to discuss engineering and maintenance issues.

The following Committee members were present: Brett A. King, Brenda J. Dickerson, Sherry W. Lewis and Ronald A. Mims. Other Board Members present who do not serve on the Committee were: Tommy Joe Alexander, William “Butch” Burbage, Jr., George Munchus and Deborah Clark.

The meeting was also attended by: Michael Johnson, Interim General Manager; T. M. “Sonny” Jones, Assistant General Manager of Engineering and Maintenance; Grace Amison, Executive Assistant to the Board of Directors; Tammy Wilson, Executive Assistant to T. M. “Sonny” Jones; Terrell Jones, Security Superintendent; Ben Sorrell, Chief Engineer; George Anderson, Information Technology Manager; Doug Stockham, System Development Manager; John Dansby, Distribution Manager; Geoff Goodwin, Water Revenue Manager; Jeff Cochran, Principal Engineer; John Reymann, Electrical and Mechanical Manager; Casey Rogers, Electrical and Mechanical Superintendent; Michael Parker, Customer Support Service Manager; Johnny Mayfield, Industrial and Commercial Accounts Manager; Josh Smith, Superintendent Industrial and Commercial Accounts; Roger Hicks, Water Resources Manager; Greg Henslee, Water Resources Superintendent; Mark Parnell, Parnell Thompson, LLC; Kelvin Howard, Kelvin Howard, LLC; Theo Johnson, Volkert; Brian Ruggs and Patrick Flannelly, ARCADIS; Tommy Palladino, Agency 54; Chandra Abesingha, CE Associates; Maurice Blackwell, Craig Cardell, Scott Jones and Jimmy Harris, Badger Meter; Abe Rigsby, Sean Works and Kevin Smith, Neptune; Rob McClendon, Xylem; Kyle Mosely, Darryl Fleming and Tyler Moore, CPS; Wesley Parkmond, AECOM; Anita Pilles, EW Moon; Kim Bivins, BCIA; Melissa Auston, Attorney General Office.

Chair of the Committee, Brett A. King called the meeting to order at 11:32 a.m. and called on George Anderson to open the meeting with prayer.

Following, as set forth in agenda item 1, Badger Meter, Neptune and Sensus presented information on Automated Meter Reading at the request of Director Mims. Maurice Blackwell, with Badger Meter provided a handout (a copy is on file with the Committee meeting book) and presented a slide show. Badger Meter’s corporate offices are in Milwaukee, Wisconsin and was founded in 1905. The company specializes in meter and valve applications. The AMR/AMI market share for Badger is about 24% of that business. The objective is to get readings done efficiently and effectively. Badger utilizes the Orion Cellular solution through AT & T to provide data in fifteen-minute intervals.

Director Munchus asked if the partnership with AT & T was a financial one. Mr. Blackwell responded it is more of an alliance and there is no exchange of fees. Mr. Blackwell passed an Endpoint around for the Committee to examine. The Endpoint calls in four times per day. Mr. Blackwell discussed the pros for using cellular based solutions for Birmingham Water Works (BWW). Columbia, South Carolina uses this technology successfully and they are about half the size of Birmingham, according to Mr. Blackwell. Once the information is collected, it is stored in a cloud-based application which you can utilize for billing and it can be used for inventory management. The software takes Customer Service to a whole new level in that it is customizable. There is a consumer portal and a smartphone application. Mr. Blackwell stated there is a 20-year Endpoint and Network warranty included. Director Alexander asked what the cost is per unit. A Badger sales representative responded approximately \$200.00 per account. Director Alexander stated that would be around \$40 million for BWW for 200,000 meters. Discussion occurred regarding financing options available through Badger. It was confirmed that the BWW has some Badger meters already in its system and that other meters are compatible with Badger's technology.

Next, Darryl Fleming, with Consolidated Pipe and Supply, as a distributor of Neptune, introduced himself. Mr. Fleming stated they have offices locally here in Birmingham. The Neptune headquarters are in Tallassee, Alabama and they are in their 12th decade in business. Sean Works, Senior Product Manager with Neptune provided a handout (a copy is on file with the Committee meeting book) and presented a slide show. Mr. Works stated their solution is what they call Network-as-a-Service (NaaS), which monitors service 24 hours per day 7 days per week and 365 days per year. Mr. Works used an iceberg analogy to contrast a purpose-built network vs. NaaS, like Neptune provides. The initial costs are clear and there are no recurring network costs for the length of the contract with NaaS. Mr. Works talked about the R900i product, which uses LoRa technology and the features of the product were highlighted. Abe Rigsby, Senior Regional System Specialist talked about Neptune 360, the cloud-based data management platform. You can access your utility's information anytime, anywhere through an Internet web browser and it is designed exclusively for the business of water. Integration with other applications and third-party applications is a part of the cloud platform solution. Customer Service driven capabilities were discussed. The software can set parameters put in place by BWW. Neptune also features a 360 Mobile Application to save time and money using devices already owned by your utility. Director Alexander asked about a ballpark cost figure. A Neptune representative responded about \$240.00 - \$250.00 an Endpoint for 10 years of service.

Following, Assistant General Manager, Sonny Jones made it clear that these services do not replace the meter. A sensor fits on top of the meter and sends information back to the server, Mr. Jones stated. Tyler Moore, representing Sensus, provided a handout (a copy is on file with the Committee meeting book) and presented a slide show. Sensus has 80 million products deployed globally. Mr. Moore explained that Sensus is a Xylem brand. Sensus does business with Southern Company locally. Sensus offers FlexNet Solution Architecture, which is their AMI technology. FlexNet is like a cell phone. It is made up of three components. Metrology, sensors and controls, a base station and network management software. A diagram of a proposed propagation map for BWW was shown

to the Committee using two antennas. What makes FlexNet different is the noise level. Most AMI/AMR networks are in unlicensed networks. Sensus uses primary licensed networks, which means there is more power, long range, 2-way access, channelization of frequencies and predictability which equals long term risk mitigation. Mr. Moore discussed SmartPoint differentiators and software/service differentiators. FlexNet can also address non-revenue water solutions and leak detection solutions by monitoring pressure. Mr. Moore stated they offer a 20-year warranty on their product. Years 16 through 20 are prorated. In summary, FlexNet is long lasting, reliable and predictable. Water utilities choose Sensus based on our ability to mitigate risk associated with large scale investments in battery technology, according to Mr. Moore. The ability to use the wireless network to go beyond metering is important for future return on investment. Sensus has an in-house Professional Services Team and it understands SAP. Director Alexander asked about the cost. Mr. Moore responded about \$200.00 per Smart Point. The variable cost on the installation side could run about \$300.00. Ongoing costs are \$5.00 to \$10.00 per meter per year. Director Dickerson asked about the propagation study. Mr. Moore responded there is no additional cost for that. Director Mims asked AGM Sonny Jones and ARCADIS to evaluate the information presented today and bring it back to Committee. Director Lewis asked for a history as well because the Board investigated this in the past working with Alabama Power and there were some roadblocks.

Next, Director Dickerson asked the Committee's approval to move items 2,3,4 and 5, to take bids. Item 2 is for the replacement of approximately 7,580' of 2" galvanized steel pipe / 2" unlined cast iron pipe and 800' of 6" unlined cast iron pipe with approximately 8,600' of 6" DICL pipe and related appurtenances; and 136 water services along Avenue "R"; Avenue "J"; Avenue "K"; Avenue "L"; Avenue "M"; 12th Place; 13th Street; 14th Street; 15th Street and 17th Street located in the Ensley Community of the City of Birmingham, Alabama at an estimated out-of-pocket cost to the Board of \$2,064,000.00. Item 3 is for the replacement of approximately 3,810' of 2" galvanized steel pipe with approximately 600' of 4" DICL pipe; 2,650' of 6" DICL pipe and related appurtenances; and 99 water services along (Site A) Parkridge Avenue located in the City of Fairfield, Alabama and along (Site D) Grasselli Boulevard SW and Hillman Avenue SW both located in the City of Birmingham, Alabama at an estimated out-of-pocket cost to the Board of \$747,500.00. Item 4 is for the replacement of approximately 2,720' of 2" galvanized steel pipe / 2" unlined cast iron pipe with approximately 140' of 4" DICL pipe; 830' of 6" DICL pipe; 1,890' of 8" DICL pipe and related appurtenances; and 42 water services along Dawson Avenue SW; Dowell Avenue SW; and 28th Street SW located in the City of Birmingham, Alabama at an estimated out-of-pocket cost to the Board of \$657,800.00. Item 5 is for the replacement of approximately 2,280' of 2" cast iron cement lined (CICL) pipe with approximately 210' of 4" DICL pipe; 3,000' of 6" DICL pipe and related appurtenances; and 42 water services along Mims Avenue SW; 17th Way SW; Cleburn Avenue SW; and Boise Avenue SW located in the City of Birmingham, Alabama at an estimated out-of-pocket cost to the Board of \$738,300.00. On a motion duly made and seconded, the Committee unanimously agreed to move all four items to the Board. Director Munchus reminded Staff to get with BCIA.

Following, was a request for the Committee to recommend to the Board to award a bid to Landscape Unlimited, LLC, the lowest responsible and responsive bidder, for landscaping restoration throughout the distribution area at an annual estimated out-of-pocket cost to the Board of \$1,497,800.00, as set forth in agenda item 6; and to authorize the Interim General Manager and/or the Assistant General Manager to execute a contract per bid specifications and condition. The HUB subcontractor participation is 30%. Some discussion occurred requiring the bidder to have a General Contractor's license. Director Munchus asked if BCIA was involved. Kim Bivins, of BCIA stated they were involved in the pre-bid meeting. On a motion duly made and seconded, the Committee unanimously agreed to move the item to the Board.

Next, was a request for the Committee to recommend to the Board to award a bid to Consolidated Pipe, the lowest responsible and responsive bidder, for estimated quantities of Curb Stops (Annual), at an estimated out-of-pocket cost to the Board of \$51,409.60, as set forth in agenda item 7; and to authorize the Interim General Manager and/or the Assistant General Manager to execute a contract per bid specifications and conditions. The HUB participation is 0%. On a motion duly made and seconded, the Committee unanimously agreed to move the item to the Board.

Following, was a request for the Committee to recommend to the Board to award a bid to Consolidated Pipe, the lowest responsible and responsive bidder, for estimated quantities of Unions (Annual), at an estimated out-of-pocket cost to the Board of \$68,067.68, as set forth in agenda item 8; and to authorize the Interim General Manager and/or the Assistant General Manager to execute a contract per bid specifications and conditions. The HUB participation is 0%. On a motion duly made and seconded, the Committee unanimously agreed to move the item to the Board. Director Munchus asked Director Clark if she wanted to discuss item 6, the Landscape bid. Director Clark asked to talk with legal outside of the Boardroom. Director Clark exited the meeting and the meeting continued with the Committee.

Next, was a request for the Committee to recommend to the Board to award a bid to Black Diamond Paving, LLC, the lowest responsible and responsive bidder, for estimated quantities of Standard Patch Paving/Longitudinal Transverse Replacement, at an annual estimated out-of-pocket cost to the Board of \$954,625.00, as set forth in agenda item 9; and to authorize the Interim General Manager and/or the Assistant General Manager to execute a contract per bid specifications and conditions. The HUB participation is 100%. Kim Bivins with BCIA was not able to certify that this is a woman-owned business. After some discussion, a motion was duly made and seconded and the Committee unanimously agreed to table the item. Director Clark returned to the meeting.

Following, was a request for the Committee to recommend to the Board approval of expenditures with Layne/Vertiline c/o Dowdy & Associates, a sole source provider, to repair a Cahaba Pump Station river pump at a total out-of-pocket cost to the Board of \$182,350.00, as set forth in agenda item 10. AGM Sonny Jones stated this is 30% of the cost to buy a new pump. This expenditure is exempt from bidding under Alabama

Competitive Bid Law because it is a sole source provider. On a motion duly made and seconded, the Committee unanimously agreed to move the item to the Board.

Next, was a request for the Committee to recommend to the Board approval to exercise its bid option to extend a contract to CJ Pressure Cleaning, Inc., the lowest responsible and responsive bidder, per bid awarded May 2018, for pressure-washing per bid specifications, at an annual estimated out-of-pocket cost to the board of \$500,000.00, as set forth in agenda item 11. The HUB participation is 100%. Kim Bivins stated this company is certified by BCIA and ALDOT. On a motion duly made and seconded, the Committee unanimously agreed to move the item to the Board.

Following, Attorney Parnell certified an Executive Session to discuss pending litigation concerning the lawsuit regarding bids. Attorney Parnell stated it should take no longer than 15 to 30 minutes and he did not anticipate any action being taken. On a motion duly made and seconded, the Committee went into Executive Session to discuss pending litigation.

Next, a motion was made and seconded to come out of Executive Session, and the Committee Meeting resumed.

Following, ARCADIS presented information on improving Lake Purdy Dam. A handout (a copy is on file with the Committee meeting book) was distributed among the Committee members. Mr. Brian Ruggs gave a summary stating this is a Capital Project and that BWW is committed to strengthening its water sources, protecting its ability to supply water to its customers and reducing risks. Lake Purdy by the Numbers gives a Timeline of Lake Purdy Dam from 1900 to 2020. Mr. Ruggs stated FEMA classifies Lake Purdy Dam as a high hazard dam because there is a potential for loss of life if the dam is breached. The 2011 BWW safety inspection identified several safety risks to the dam's structure. The probable maximum flood (PMF) figures were discussed. ARCADIS' proposed solution would mitigate seepage, improve stability, protect against overtopping and minimizing seepage. The anticipated cost for design is \$865,000.00 and the design and construction would be around \$35 million. This is a three-year project Mr. Ruggs stated.

As there was no further business to be brought before the Committee, the meeting was adjourned at 1:34 p.m.

_____/s/_____
Michael Johnson
General Manager

_____/s/_____
Brenda J. Dickerson, Ph.D.
Second-Vice Chairwoman/Second Vice President

_____/s/_____
Brett A. King, Esq.
Director

_____/s/_____
Sherry W. Lewis
Director

_____/s/_____
Ronald A. Mims
Secretary-Treasurer