

LEHIGH COUNTY AUTHORITY
WORKSHOP AGENDA
Monday, June 15, 2015 – 12:00 PM

INITIAL ITEMS *(Collectively 5 Minutes)*

1. **Identify items for June Board Meeting**

- *Review Board Discussion items, June 2015 – August 2015*

ACTION/DISCUSSION ITEMS

1. **Suburban Division –WLI / LLRI Meter Station No. 5 Rehabilitation Project**

Meter Station No. 5, located near Keck's Bridge in Lower Macungie Township, meters flow from the Western Lehigh Interceptor (WLI). The Allentown-Emmaus Interceptor joins the WLI just downstream of the metering location, and the combined flow is conveyed to the Allentown Division for treatment. The existing flow meters are outdated, inaccurate, and in need of replacement. The proposed Meter Station No. 5 Rehabilitation Project includes the following improvements: internal cleaning and CCTV inspection of all gravity sewer lines in the vicinity of the station, internal cured-in-place lining of the two inverted siphon lines, interior repair of meter pit structures to eliminate seepage/infiltration, replacement of flow meters, installation of valves to isolate the flowmeters for future maintenance, and installation of a valved cleanout at each inverted siphon to facilitate future maintenance/line cleaning. Bids were received on June 11, 2015. Construction Phase approval of the Project is requested. Documentation to be mailed under separate cover.

2. **Allentown Division – Transmission Main Leak Detection Survey**

The Project includes the use of a non-invasive leak detection methodology to find any leaks that may exist in approximately 33,000 linear-feet of large transmission mains ranging from 16 thru 36 inches in diameter. Both steel and cast iron materials will be surveyed. We will be requesting Professional Services approval for this project at the June workshop meeting. The project will be funded by the LCA Allentown Division. Reference attached documentation **(green)**

3. **Concession Agreement and Trust Indenture Amendments**

We recommend substantial approval of the attached **(yellow)** Concession Agreement and Trust Indenture Amendments which together correct errors and omissions regarding descriptions of real property conveyed by the City to the Authority related to the Allentown Sewer Utility System and the Water Plant and Distribution System.

INFORMATION ITEMS

1. ***None.***

OTHER ITEMS

1. ***None.***

**BOARD ACTION/DISCUSSION ITEMS
JUNE 2015 – AUGUST 2015**

PRIORITY*	PROJECT/ISSUE	TYPE OF ACTION	TIMING**
<i>AS NEEDED</i>			
H	Acquisition/Growth Strategy Activities	Status Report	As needed
L	Jordan Creek Wastewater Plant	Status Report	As needed
M	Strawberry Acres – AARC - Sewer System	Status Report	As needed
H	Strategic Plan Update	Status Report	As needed
H	Wastewater Capacity Program Update	Status Report	As needed
<i>WITHIN 45 DAYS</i>			
H	Allentown Division – MH Lining (Cycle 2), Construction Phase	Approval	July (W)
H	Allentown Division – MH Frame/Cover Project (Cycle 2) Construction Phase	Approval	July (W)
M	Telog Site Conversion to SCADA, Professional Services	Approval	July (W)
H	Suburban Division – 3 Pumping Stations, SCADA Professional Services	Approval	July (W)
M	Electronic Bill Presentment & Payment Processing (EBPP) contract services	Discussion / Approval	July (B)
<i>WITHIN 75 DAYS</i>			
H	Suburban Division- Lynn Township Wastewater Treatment Plant Upgrades, Phase 1 Construction Phase	Approval	August (W/B)



Lehigh County Authority

1053 Spruce Street * P.O. Box 3348 * Allentown, PA 18106-0348
(610)398-2503 * FAX (610)398-8413 * Email: service@lehighcountyauthority.org

MEMORANDUM

Date: June 15.2015

To: Authority Board

From: Charles Volk, P.E. Asset Management Engineer

Subject: Suburban Division – Western Lehigh –
Meter Station No. 5 Rehabilitation- Rejection of Construction
Contract Bid

MOTIONS /APPROVALS REQUESTED:

No.	Item
1	Rejection of the Construction Contract Bid Received from Eastern Environmental Contractors, Inc. in the amount of \$604,900; and authorize a re-bid of the work.

PROJECT OVERVIEW:

Meter Station No. 5, located near Keck’s Bridge in Lower Macungie Township, meters flow from the Western Lehigh Interceptor (WLI). The Allentown-Emmaus Interceptor joins the WLI just downstream of the metering location, and the combined flow is conveyed to the Allentown Division for treatment. The existing flow meters are outdated, inaccurate, and in need of replacement. The proposed Meter Station No. 5 Rehabilitation Project includes the following improvements: internal cleaning and CCTV inspection of all gravity sewer lines in the vicinity of the station, internal cured-in-place lining of the two inverted siphon lines, interior repair of meter pit structures to eliminate seepage/infiltration, replacement of flow meters, installation valves to isolate the flowmeters for future maintenance, and installation of a valved cleanout at each inverted siphon to facilitate future maintenance/line cleaning.

FINANCIAL:

The Project will be funded by the LCA Suburban Division – Western Lehigh.

PROJECT STATUS & BID RESULTS

Bid Phase was administered in-house via Penn Bid. Four (4) prospective bidders attended the mandatory pre-bid conference. One bid was received from Eastern Environmental Contractors, Inc. for amount of \$604,900. The bid amount exceeds the preliminary cost opinion and appears to be excessive.

A possible factor in the receipt of a single (high) bid was the combination of mechanical work (replacement of the meter and valve installation) with sanitary sewer pipeline rehabilitation work (clean, CCTV, and internal lining of interceptor lines in the vicinity of the station). A mechanical contractor would be required to subcontract the pipeline work. Also, the economics of limited contractor interest in the project may have contributed to the high pricing.

The recommendation of this memorandum is to re-bid the project with the scope reduced to include only the mechanical work, and perform the pipeline inspection and rehabilitation at a later date under a separate contract. It is suspected that more competitive bids will be received with this approach.

THIS APPROVAL: Re-bid.

CONSTRUCTION CONTRACTS

The project was advertised for bid on May 20, 2015. A mandatory pre-bid meeting was held on May 29, 2015 at LCA's main office where representatives from four (4) contractors attended the meeting. Only one (1) bid was received on June 11, 2015, via Penn Bid. The bidding results are as shown in Table 1 below:

Table 1 – Bid Results	
General Construction	
Bidder	Amount
<i>EASTERN ENVIRONMENTAL</i>	<i>\$604,900</i>

SCHEDULE

Re-bidding to be initiated in June with projected bid opening in late July. Board approval of the re-bid of Construction Phase is anticipated to be requested at the August 10, 2015 Workshop meeting

MEMORANDUM

Date: June 15, 2015

To: Authority Board
From: Jason Gruber, Frank Leist
Subject: Allentown Division-Transmission Main Leak Detection

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Professional Services Authorization – Transmission Main Leak Detection	\$135,148.00

PROJECT OVERVIEW:

The Transmission Main Leak Detection Project will include the use of a non-invasive leak detection methodology to find any leaks that may exist in approximately 32,865 linear feet of large transmission mains ranging in diameter from 16” to 36” inches. Only steel and cast iron mains will be considered during this project. A majority of these mains over 65 years old.

Effective non-invasive leak detection on large mains of these sizes is a specialized service which requires sophisticated equipment and a high level of user expertise. To facilitate the transmission main leak detection survey for this year, the project includes the installation of (21) permanent roadway monitoring points by hydro-excavation. This methodology will minimize road damage and restoration costs. The permanent monitoring points, or potholes as they are sometimes referred to, can be re-used for future leak detection and condition assessment surveys.

The survey will use a non-invasive, acoustic cross-correlation method in which magnetic surface-mounted sensors are attached to the pipe at valves, fittings, and other access / monitoring points. Sensors may be spaced up to 1000 feet apart, or where hydrophones are connected to the water column at air valves, spacing may be up to 2500 feet.

The City of Allentown Lease Operating Standards requires 110 miles out of the total of 320 miles of existing water mains to be leak-surveyed annually. Excepting for the large transmission mains of 16” diameter and larger, this work is executed by the Allentown Division Distribution & Collection Department. The leak detection survey footage from this project will count towards the 110 mile annual leak survey requirement.

FINANCIAL:

This Project will be funded by the LCA Allentown Division.

PROJECT STATUS:

The project will move forward as soon as board approval is received.

THIS APPROVAL

Lehigh County Authority (LCA) intends to retain a firm that will provide leak detection services for all steel and cast iron water transmission mains that are 16”-36” diameter. The following table summarizes the services to be performed:

Professional Services
1. Provide field verification of all pipe locations
2. Install (21) permanent roadway monitoring points
3. Provide all traffic control and safety precautions
4. Issue field reports to immediately document all confirmed leaks
5. Provide summation report detailing methods used and final results

CONSULTANT SELECTION PROCESS:

Five (5) firms were contacted in order that they would provide proposals. The results of the solicitations are listed below:

Consultant	Cost
Echologics, LLC	\$135,148.00
Utility Services Company	Provided an unacceptable alternate technology
New York Leak Detection	Declined to propose
Fluid Conservation Technologies	Declined to propose
American Leak Detection	Subcontracts all large diameter leak detection projects to Echologics so no proposal was submitted

We recommend award of the project to Echologics a division of the Mueller Company. Echologics is a leader in the development of acoustic technologies that can non-invasively detect underground leaks and have provided their services around the world, to name a few; The Las Vegas Valley Water District; United Water- New Jersey; Bristol-United Kingdom; The California Rural Water Association and The City of New Orleans

FUTURE AUTHORIZATIONS-

There are currently no additional authorizations that are foreseen as part of the initial leak detection project.



Lehigh County Authority

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PROFESSIONAL SERVICES AUTHORIZATION

Professional: ECHOLOGICS, LLC
1200 Abernathy Road
NE Suite 1200
Atlanta, GA 30328

Date: June 15, 2015
Requested By: John Parsons

Approvals
Department Head: _____
Chief Executive Officer: _____

Allentown Division - Transmission Main Leak Detection

Echologics, LLC will perform a non-invasive leak detection survey on 32,865 feet (approximately 6.2 miles) of 16" to 36" diameter steel and cast iron water transmission mains in the Allentown Division.

Professional Services
1. Provide field verifications of all pipe locations
2. Install (21) permanent roadway monitoring points
3. Provide all traffic control and safety precautions
4. Issue field reports to immediately document all confirmed leaks
5. Provide summation report detailing methods used and final results

Professional Services:

Cost Estimate (not to be exceeded without further authorization): \$135,148.00

Time Table and Completion Deadline: As required to meet various critical deadlines as set forth in the proposal.



(For Authority Use Only)

Authorization Completion:

Approval: _____ **Actual Cost:** _____ **Date:** _____

**PROFESSIONAL SERVICES AUTHORIZATION
INDEMNIFICATION**

Allentown Division - Transmission Main Leak Detection

(To be signed by Professional and returned to the Authority)

I am or represent the Professional indicated above, and as such I am authorized to:

- Accept the terms of the professional services authorization dated June 15, 2015 attached; and

- Agree to indemnify and hold harmless the Authority, its employees, agents, officials, successors and assigns (hereinafter all jointly referred to as "Authority"), from any and all loss and liability for claims, demands, suits or causes of action at law or in equity for damages and injuries (including death of every kind and nature) to persons (including employees of the Professional) and property arising out of error, omission or negligent act of Professional, or any person under contract to it, in rendering professional services under this authorization. The indemnification shall include, but not be limited to, payment of all attorney fees and all incidental litigation expenses of the Authority, whether or not the Authority is held liable. Professional shall not, however, be liable for any portion of a judgment nor associated litigation expenses, including attorney's fees, ultimately determined to be the result of the negligence of the Authority.

Name (signature):

Name (printed)

Title: _____

FIRST SUPPLEMENTAL TRUST INDENTURE

LEHIGH COUNTY AUTHORITY

to

MANUFACTURERS AND TRADERS TRUST COMPANY,

as Trustee

Dated as of June ____, 2015

FIRST SUPPLEMENTAL TRUST INDENTURE

THIS FIRST SUPPLEMENTAL TRUST INDENTURE dated as of June ____, 2015 (this “First Supplemental Indenture”), between LEHIGH COUNTY AUTHORITY (the “Authority”), a body corporate and politic duly organized and validly existing under the laws of the Commonwealth of Pennsylvania (the “Commonwealth”), and MANUFACTURERS AND TRADERS TRUST COMPANY (together with its successors hereunder, the “Trustee”), a corporation with trust powers organized and existing under the laws of the state of New York acting through its corporate trust office in Harrisburg, Dauphin County, Pennsylvania, and supplements and amends that certain Trust Indenture dated as of August 1, 2013 (the “Original Indenture”), between the Authority and the Trustee.

WITNESSETH:

WHEREAS, the Authority is a body corporate and politic organized by the Board of County Commissioners of the County of Lehigh, Pennsylvania under the provisions of the Pennsylvania Municipality Authorities Act, 53 Pa. C.S. §5601 *et seq.*, as amended (the “Act”); and

WHEREAS, the City of Allentown, Pennsylvania (the “City”) owns the Allentown Sewer Utility System and the Allentown Water Plant and Distribution System; and

WHEREAS, pursuant to the terms and conditions of the Allentown Water and Sewer Utility System Concession and Lease Agreement dated as of May 1, 2013, as supplemented by a Letter Agreement dated July 25, 2013 (collectively, the “Original Concession Agreement”), by and between the City and the Authority, the City leased to the Authority, and the Authority leased from the City, the Sewer Utility System, the real property for which is described on Schedule 1A attached to the Original Concession Agreement, and the Water Plant and Distribution System, the real property for which is described on Schedule 1B attached to the Original Concession Agreement, upon the terms and conditions set forth therein; and

WHEREAS, the Authority, in connection with the Original Concession Agreement, authorized the undertaking of the 2013 Project, and has issued its 2013 Bonds under and pursuant to the Original Indenture from the Authority to the Trustee; and

WHEREAS, the City and the Authority desire to further supplement and amend the Original Concession Agreement to correct certain errors and omissions contained on Schedules 1A and 1B of the Original Concession Agreement with respect to the legal descriptions of the real property included in the Sewer Utility System and the Water Plant and Distribution System, and in connection therewith will enter into a First Amendment to Allentown Water and Sewer Utility System Concession and Lease Agreement dated as of _____, 2015 (the “First Amendment,” and together with the Original Concession Agreement, the “Concession Agreement”); and

WHEREAS, in connection with the execution of the First Amendment, the City and the Authority shall execute and deliver an amendment to the Memorandum of Lease, which shall be recorded with the Lehigh County Recorder of Deeds (the “Lease Amendment”); and

WHEREAS, sections 13.01(c) of the Original Indenture provide that the Authority and the Trustee may from time to time subject to the conditions and restrictions therein enter into Supplemental Indentures to, *inter alia*, subject, describe or re-describe any property subjected or to be subjected to the lien of the Original Indenture; and

WHEREAS, the Authority and the Trustee desire to execute this First Supplemental Indenture to incorporate such changes made by the First Amendment and to provide that future amendments to the Concession Agreement, where permitted therein and by this Indenture, may be incorporated by reference without the need for additional action by the Authority and the Trustee; and

WHEREAS, the Authority has by appropriate action taken at its meeting on _____, 2015 authorized and directed the execution and delivery of the First Amendment, the Lease Amendment and this First Supplemental Indenture; and

NOW, THEREFORE, intending to be legally bound, the Authority and the Trustee do hereby agree as follows:

ARTICLE I GENERAL PROVISIONS

Section 1.01 Definitions. All defined terms used but not defined herein shall have the meanings set forth in the Original Indenture. The terms defined in this First Supplemental Indenture, in the preambles hereto and in this Article I (including such terms defined in the Original Indenture as are modified or supplemented in the preambles hereto or in this Article I), shall for all purposes of the Indenture, have the meanings herein specified, unless the context clearly otherwise requires:

“Concession Agreement” shall mean the Allentown Water and Sewer Utility System Concession and Lease Agreement dated as of May 1, 2013, as the same shall be supplemented and amended from time to time, in accordance with the provisions therein and in this Indenture.

ARTICLE II AMENDMENTS

Section 2.01 Amendment to Original Indenture. In accordance with Section 13.01 of the Original Indenture, the Original Indenture is modified, as follows: Section 10.09 of the Original Indenture is amended by adding new subsection (jj), as follows:

“(jj) Notice of the adoption of an amendment or supplement to the Concession Agreement, along with a copy of such amendment or supplement.”

ARTICLE III MISCELLANEOUS

Section 3.01 Ratification and Confirmation of Original Indenture. All terms, conditions and covenants of the Original Indenture, except to the extent that the same are modified or amended or supplemented hereby, are ratified and confirmed and are declared to be and shall be and shall remain in full force and effect and shall apply in all respects to this First Supplemental Indenture, all as shall be applicable and appropriate, with like effect, as applicable and appropriate, as if the same were repeated substantively, in full herein; provided, however, that the Original Indenture always shall be construed so as to give proper effect and meaning to the intent and purposes hereof.

Section 3.02 Confirmation of Assignment, Transfer and Pledge. The Authority specifically confirms the assignment, transfer and pledge with the Trustee under the Indenture of all right, title and interest of the Authority in and to the Trust Estate.

Section 3.03 Integral Part. This First Supplemental Indenture, being a supplement to the Original Indenture, shall be construed as an integral part thereof.

Section 3.04 Use of Article and Section Numbers. Use of Article and Section numbers herein is for convenience only and such Article and Section numbers do not bear any relationship to Article and Section numbers of the Original Indenture which may be numbered similarly.

Section 3.05 Counterparts. This First Supplemental Indenture may be executed and delivered in multiple counterparts, each of which shall be regarded for all purposes as an original; and such counterparts shall constitute but one and the same instrument.

IN WITNESS WHEREOF, LEHIGH COUNTY AUTHORITY has caused this First Supplemental Indenture to be executed by its General Manager and its Solicitor and Manufacturers and Traders Trust Company has caused this First Supplemental Indenture to be executed by an Authorized Officer, all as of the day and year first written above.

LEHIGH COUNTY AUTHORITY

Attest:

Solicitor

By: _____
Chief Executive Officer

MANUFACTURERS AND TRADERS
TRUST COMPANY, as Trustee

By: _____
Authorized Signatory

640537724374-1 (Parcel A)	641608803433-1 (Parcel H)
547681151896-1 (Parcels B1 and B3)	641713031099-1 (Parcel I)
547681766181-1 (Parcel B2)	640793720039-1 (Parcel J)
549687306085-1 (Parcel C-1)	640753265912-1 (Parcel K)
549698420599-1 (Parcel C-1)	640750739532-1 (Parcel L)
549687025935-1 (Parcel C2)	640750170804-1 (Parcel L)
640680701041-1 (Parcels D1 and D2)	640751057379-1 (Parcel L)
548766493444-1 (Parcels E1 and E2)	640751452311-1 (Parcel L)
640514849503-1 (Parcels F1 and F2)	640660609774-1 (Parcel M)
640514929328-1 (Parcels F1 and F2)	640696235818-1 (Parcel N)
640505801489-1 (Parcel G)	549687306085-1 (Parcel O)

**AMENDMENT TO MEMORANDUM OF ALLENTOWN WATER AND SEWER
UTILITY SYSTEM CONCESSION AND LEASE AGREEMENT**

THIS AMENDMENT TO MEMORANDUM OF ALLENTOWN WATER AND SEWER UTILITY SYSTEM CONCESSION AND LEASE AGREEMENT (this “Amended Memorandum”) is dated as of the _____ day of _____, 2015, and effective as of the _____ day of _____, 2015, by and between the CITY OF ALLENTOWN, a municipality and city of the third class of the Commonwealth of Pennsylvania duly organized and existing under the Constitution and laws of said Commonwealth and the City of Allentown Home Rule Charter (the “Landlord”), and LEHIGH COUNTY AUTHORITY, a municipal authority duly organized and existing under the Constitution and laws of said Commonwealth (“Tenant”).

WITNESSETH:

WHEREAS, Landlord and Tenant have entered into the Allentown Water and Sewer Utility System Concession and Lease Agreement dated as of May 1, 2013 (the “Original Agreement”), a memorandum of which was recorded with the Lehigh County Recorder of Deeds on August 8, 2013 as Instrument Number 2013030449 (the “Memo of Lease”), pursuant to which Landlord leased the Property to Tenant (the “Lease”); and

WHEREAS, Landlord and Tenant have entered into a certain First Amendment to Allentown Water and Sewer Utility System Concession and Lease Agreement dated as of even date herewith (the “Amendment”). The Original Agreement as amended by the Amendment shall be referred to as the “Agreement”; and

WHEREAS, the purpose of the Amendment is to reflect a change in the legal description of the Property being leased by Tenant from Landlord under the Lease; and

WHEREAS. the parties intend by this Amended Memorandum to amend the Memo of Lease to reflect the change in the legal description of the Property.

NOW, THEREFORE, Landlord and Tenant, intending to be legally bound, hereby agree as follows:

1. The name of Landlord is the City of Allentown.
2. The name of Tenant is Lehigh County Authority.
3. The addresses of the parties to the Agreement are:
 - (a) Landlord: City of Allentown
435 Hamilton Street, Room 227
Allentown, PA 18101
Attention: Director of Finance
 - (b) Tenant: Lehigh County Authority
1053 Spruce Street, P.O. Box 3348
Allentown, PA 18106
Attention: Chief Executive Officer
4. The Original Agreement is dated as of May 1, 2013. The Amendment is dated as of _____, 2015.
5. The description of the demised premises as set forth in the Lease is as set forth on **Exhibit A** attached hereto and made a part hereof (the "Property").
6. The date of commencement of the term of the Lease is August 7, 2013 (the "Commencement Date").
7. The initial term of the Lease expires on the 50th anniversary of the Commencement Date (or such later date as required pursuant to the terms of the Agreement to effect a Delay Event Remedy (as defined in the Agreement) or to provide AA-Compensation (as defined in the Agreement) through an extension of the term of the Lease), unless sooner terminated in accordance with the provisions of the Agreement or in the event that the Tenant's existence is not extended as provided in Section 3.6 of the Lease.
8. The Agreement provides for rights of extension of the Lease: (i) if a Delay Event (as defined in the Agreement) occurs as described in Section 15.1(d) of the Agreement, then Tenant shall have the right to extend the initial term of the Lease for a period that would be sufficient so to compensate Tenant and to restore Tenant to the same economic position as Tenant would have been in had such Delay Event not occurred, all in accordance with the terms and conditions of Section 15.1(d) of the Agreement.
9. The Tenant does not have a right of purchase of or refusal on the Property or any part thereof.

10. Information regarding the Lease may be obtained from either of the undersigned parties hereto at their respective addresses noted in Section 3 above.

11. All terms and conditions of the Agreement are hereby incorporated herein by reference as if fully set forth herein. This Amended Memorandum has been entered into for the sole purpose of placing the Agreement, as amended by the Amendment, of record and shall not be deemed to amend, modify, supplement, or change any of the terms and conditions of the Agreement or the Amendment in any respect whatsoever. To the extent of any conflict between this Amended Memorandum and the Agreement (as amended by the Amendment), the terms of the Agreement (as amended by the Amendment) shall govern and control. This Amended Memorandum may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute and be construed as one and the same instrument.

12. The Memo of Lease is hereby amended and restated in its entirety.

SIGNATURES BEGIN ON NEXT PAGE

IN WITNESS WHEREOF, Landlord and Tenant have executed this Amended Memorandum as of the day and year first above written.

LANDLORD:

CITY OF ALLENTOWN

By: _____

Name: _____

Title: _____

COMMONWEALTH OF PENNSYLVANIA)

) SS:

COUNTY OF LEHIGH)

On this ___ day of _____, 2015, before me, the undersigned officer, personally appeared _____, who acknowledged himself/herself to be the _____ of the **CITY OF ALLENTOWN**, a municipality and city of the third class of the Commonwealth of Pennsylvania duly organized and existing under the Constitution and laws of said Commonwealth and the City of Allentown Home Rule Charter, and that he/she, as such officer, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the City of Allentown by himself/herself as such officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Notary Public

My commission expires:

IN WITNESS WHEREOF, Landlord and Tenant have executed this Amended Memorandum as of the day and year first above written.

TENANT:

LEHIGH COUNTY AUTHORITY

By: _____

Name: _____

Title: _____

STATE OF _____)

) SS:

COUNTY OF _____)

On this _____ day of _____, 2015, before me, the undersigned officer, personally appeared _____, who acknowledged himself/herself to be the _____ of Lehigh County Authority, a municipal authority duly organized and existing under the Constitution and laws of the Commonwealth of Pennsylvania, and that he/she, as such officer, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the company by himself/herself as such officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Notary Public

My commission expires:

EXHIBIT "A" TO AMENDED MEMORANDUM
LEGAL DESCRIPTION OF THE PROPERTY

RESOLUTION No. 5-2015-1

SUPPLEMENTAL RESOLUTION TO RESOLUTION No. 4-2015-1

(Duly adopted 18 May 2015)

A RESOLUTION OF THE BOARD OF LEHIGH COUNTY AUTHORITY, AMENDING ITS 13 APRIL 2015 RESOLUTION, BY AMENDING CERTAIN DESIGNATIONS AS IT RELATES TO THE ISSUANCE OF THE AUTHORITY'S WATER REVENUE BOND, SERIES OF 2015 (THE "BOND"); AUTHORIZING OTHER NECESSARY ACTION; AND PROVIDING WHEN THIS SUPPLEMENTAL RESOLUTION SHALL BECOME EFFECTIVE.

WITNESSETH:

WHEREAS, the Lehigh County Authority (the "Authority") is a body corporate and politic organized by the Board of the County Commissioners of Lehigh County, Pennsylvania (hereinafter called the "County") under the Municipality Authorities Act (the Act of June 19, 2001, as amended and supplemented), of the Commonwealth of Pennsylvania (hereinafter called the "Act"), as evidenced by its Certificate of Incorporation dated September 21, 1966; and

WHEREAS, pursuant to such incorporation, as amended, the Authority owns and operates, among other things, a suburban water system (the "Water System") in the Lehigh Valley; and

WHEREAS, the Authority previously issued \$14,700,000 aggregate principal amount of its Adjustable/Fixed Rate Water Revenue Bonds, 1984 Series (the "1984 Bonds") pursuant to a Trust Indenture (the "Original Indenture"), dated as of November 1, 1984, between the Authority and First Valley Bank now by successor The Bank of New York Mellon (the "Trustee") in regards to the Authority's Water System revenues ("Water Revenues"); and

WHEREAS, the Authority, under the Original Indenture, pledged the Authority's Water Revenues as security for the Authority's 1984 Bonds and future additional bonds issued under the Original Indenture and supplements thereto, on a party lien basis; and

WHEREAS, the Original Indenture and supplements thereto related solely to the Authority's suburban operations; and

WHEREAS, the Water Revenues pledged under the Original Indenture and supplements thereto do not relate to the Authority's City of Allentown operations but solely and exclusively to its suburban operations; and

WHEREAS, the Authority and the Trustee, or its predecessor in interest, previously entered into a series of the First through the Eighth Supplemental Indentures in connection with the Authority's issuance of additional bonds under the Original Indenture; and

WHEREAS, on April 13, 2015 the Authority adopted a resolution (Resolution Number 4-2015-1 or "Resolution") wherein it accepted a proposal from ESSA Bank & Trust, a Pennsylvania banking institution for the purchase of the Authority's Water Revenue Bond, Series of 2015 ("Bond"); and

WHEREAS, the Bond was issued to undertake the refunding of the Authority's 2010AA Water Revenue Bonds (the "Refunding Project") on a current basis; and

WHEREAS, the Resolution, with reference to the Bond, authorized the issuance of a "Ninth Supplemental Indenture"; and

WHEREAS, it was discovered after the Authority's meeting on April 13, 2015 that previously the Authority had issued a Ninth Supplemental Indenture dated April 1, 2013 which was not related to any specific financing, but related to amending the definition of "water system" under the Original Indenture and its supplements and to specifically indicate that the definition of "water systems" does not include or in any way relate to the Authority's City of Allentown operations; and

WHEREAS, in order to maintain accurate records with regards to the sequencing of supplemental indentures and to comply with its prior action to issue the Bond to ESSA Bank & Trust, a Pennsylvania banking institution, the Authority is scheduled to settle on the Bond by issuing the next supplemental indenture in sequence which is its Tenth Supplemental Indenture dated May 20, 2015; and

WHEREAS, in order to conform its action of record and, in a manner consistent with a certain general certificate dated May 20, 2015 to be issued at the time of settlement ("General Certificate"), the Authority hereby authorizes the issuance of this Supplemental Resolution.

NOW, THEREFORE BE IT RESOLVED by the Board of the Lehigh County Authority as follows:

Section 1. Previously Defined Terms.

Except as the context may otherwise clearly require, terms defined by parenthetical reference shall have the meaning set forth in the Resolution; and the terms defined in the Resolution to the extent applicable shall have the meaning set forth therein as if restated in full herein unless amended with this Supplemental Resolution.

Section 2. Supplemental Resolution.

Unless expressly or by necessary implication, modified or amended, all provisions of the Resolution shall be deemed reinstated in full herein and shall have full force and effect for the benefit and security of the registered owners of the Bond, if any. This Supplemental Resolution is executed and shall be construed as a supplement to the Resolution and shall form a part thereof. All conditions and terms set forth in ESSA Bank & Trust, a Pennsylvania banking institution proposal relative to the Bond are unaltered and shall remain in full force and effect.

Section 3. Amendments.

(a) The Board shall and does hereby authorize and direct that the Resolution shall be amended in a manner consistent with the General Certificate, to correctly identify the supplemental indenture which relates to the Bond as the Tenth Supplemental Indenture.

(b) The Chief Executive Officer, Chief Financial Officer, Solicitor, Chief Administrative Officer or such other designated representative is authorized and directed as appropriate: (i) to provide a copy of this Supplemental Resolution to ESSA Bank & Trust, a Pennsylvania banking institution; and (ii) to take any other required necessary and/or appropriate action.

Section 4. This Supplemental Resolution shall become effective upon its execution.

Section 5. Severability. In the event any provision, section, sentence, clause or part of this Supplemental Resolution shall be held to be invalid, such invalidity shall not affect or impair any remaining provision, section, sentence, clause or part of this Supplemental Resolution, it being the intent of the Authority that such remainder shall be and shall remain in full force and effect.

Section 6. Ratification. All actions undertaken by Authority officials with reference to the closing scheduled for May 20, 2015 are hereby ratified.

On motion of Ms. Cusick, seconded by Mr. Bohner, this resolution was adopted the 18th day of May, 2015.

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I, Bradford E. Landon, Solicitor of Lehigh County Authority, do hereby certify that the foregoing is a true, correct and complete copy of a resolution which was duly adopted by the Authority at a public meeting of the Authority held on the 18th day of May, 2015, after notice thereof had been duly given as required by law, at which meeting a quorum was present and voting and which Resolution No. 5-2015-1 is now in full force and effect on the date of this certification.

Bradford E. Landon, Solicitor