



BOARD MEETING AGENDA – December 11, 2017

1. Call to Order

- NOTICE OF MEETING RECORDINGS

Meetings of Lehigh County Authority's Board of Directors that are held at LCA's Main Office at 1053 Spruce Road, Wescosville, PA, may be recorded for viewing online at lehighcountauthority.org. Recordings of LCA meetings are for public convenience and internal use only and are not considered as minutes for the meeting being recorded, nor are they part of public record. Recordings may be retained or destroyed at LCA's discretion.

- *Public Participation Sign-In Request*

2. Review of Agenda / Executive Sessions

3. Approval of Minutes

- *November 13, 2017 Board meeting minutes*

4. Public Comments

5. Action / Discussion Items:

FINANCE AND ADMINISTRATION

- *Connection Fees & Customer Facilities Fees (Resolution No. 12-2017-1) – December 11, 2017 (tan)*
- *2018 Board meeting schedule (yellow)*

WATER

WASTEWATER

- *Construction Phase Change Order – Allentown Division – Wastewater Treatment Plant: Digester Cover Replacements (blue)*
- *2018 SCARP Program Management (green)*

6. Monthly Project Updates / Information Items (1st Board meeting per month) – **December report attached**

7. Monthly Financial Review (2nd Board meeting per month)

8. Monthly System Operations Overview (2nd Board meeting per month)

9. Staff Comments

10. Solicitor's Comments

11. Public Comments / Other Comments

12. Executive Sessions

13. Adjournment

UPCOMING BOARD MEETINGS

Meetings begin at Noon at LCA's Main Office, unless noted otherwise below.

January 8, 2018

January 22, 2018

February 12, 2018

PUBLIC PARTICIPATION POLICY

In accordance with Authority policy, members of the public shall record their name, address, and discussion item on the sign-in sheet at the start of each meeting; this information shall also be stated when addressing the meeting. During the Public Comment portions of the meeting, members of the public will be allowed 5 minutes to make comments/ask questions regarding non-agenda items, but time may be

extended at the discretion of the Chair; comments/questions regarding agenda items may be addressed after the presentation of the agenda item. Members of the public may not request that specific items or language be included in the meeting minutes.

REGULAR MEETING MINUTES

November 13, 2017

The Regular Meeting of the Lehigh County Authority was called to order at 12:02 p.m. on Monday, November 13, 2017, Chairman Brian Nagle presiding. Other Members present at the commencement of the meeting were: Linda Rosenfeld, Jeff Morgan, Richard Bohner, Norma Cusick, Scott Bieber, and Ted Lyons. Authority Staff present were Liesel Gross, Brad Landon, Ed Klein, Pat Mandes, Chuck Volk, Chris Moughan, John Parsons, Susan Sampson, Andrew Moore, Amy Kunkel and Lisa Miller.

REVIEW OF AGENDA

Chairman Nagle announced that today's Board meeting is being videotaped and streaming live and recordings will be posted to the Authority's website.

Liesel Gross noted there are no Agenda changes but there will be an Executive Session at the end of the regular agenda to discuss potential litigation. Scott Bieber announced he will need to leave the meeting at 1:45 p.m. Jeff Morgan announced that he will need to leave the meeting at 2:00 p.m.

APPROVAL OF MINUTES

October 23, 2017 Regular Meeting Minutes

Richard Bohner suggested a few corrections for grammar, spelling, and the addition of a vote score.

Kevin Baker arrived at 12:05 p.m.

On a motion by Richard Bohner, seconded by Norma Cusick, the Board approved the Minutes of the October 23, 2017 meeting as corrected (7-0). Ted Lyons abstained.

PUBLIC COMMENTS

None.

ACTION AND DISCUSSION ITEMS

2018 Water & Wastewater Rate Schedules

Liesel Gross provided the 2018 water & sewer schedules of rates and charges along with the handout of the summary of results from the Suburban Water Rate Study prepared by Dave Busch of Keystone Alliance Consulting. She explained that the rate study results are incorporated into the proposed 2018 schedule of rates and charges. She noted that the Suburban Water Rate Study projected rates for 2018 through 2022, but additional "what if" scenarios will be evaluated to complete the study for the 2019 through 2022 rates. Scenarios to be evaluated will include varying levels of pay-as-you-go funding for capital improvements, along with incorporation of preventive maintenance strategies into the operating expenses for years 2019 through 2022. She also highlighted that the study included incorporating the two remaining small water systems, Upper Milford Central Division and Madison Park North Division, into the common rate structure, which is being proposed to be completed in 2018.

In addition to the Suburban Water Rate Study results, the packet of proposed rates incorporates the rates discussed during the budget process for the Allentown Division water and sewer rates, and the Western Lehigh sewer signatory rates.

Ms. Gross asked for approval of the 2018 rate schedules as presented and noted the Staff will come back with a resolution for the tapping fees, meter fees and other customer facility fees at a later date.

Chairman Nagle pointed out the significant decrease in Administrative Order (AO) Fees under the City of Allentown wastewater rates and asked for an explanation. Ms. Gross explained that the AO fee is the charge that is applied to the customer bills in Allentown and is collected by the Authority and then turned back to the City to pay their debt service for bonds they have issued on AO projects. The reason that it is decreasing in 2018 is because the 2017 rate included some pay-as-you-go capital improvements into the fee and in 2017 the City issued their first set of bonds, so the 2018 rate is decreased to reflect only the debt service portion and no additional pay-as-you-go capital expenses.

On a motion by Norma Cusick, seconded by Kevin Baker, the Board approved the 2018 Water & Sewer Rate schedules (8-0).

Suburban Division – Spring Creek Pump Station

Chuck Volk gave an overview of the Spring Creek Pump Station project that consists of the installation of a comminutor in the wet well to replace existing bar screens, new weir gates automated by ultrasonic level detectors, and upgrades to the SCADA system. Mr. Volk is asking for approval of the Capital Project Authorization for the Construction Phase in the amount of \$412,333.00 which consists of award of the Construction General contract to Blooming Glen Contractors, WW in the amount of \$156,093.00, and award of the Construction Electrical contract to A. N. Lynch Co., Inc. in the amount of \$180,000.00, and the Professional Services Authorization for the Construction Phase Engineering to JMT, Inc. in the amount of \$11,240.00.

Jeff Morgan asked about the Authority's SCADA system and its ability to interconnect operations of multiple facilities. Mr. Volk explained that all stations are SCADA enabled and monitored. Liesel Gross added that the SCADA upgrades will help the Authority to move toward having an automated wet weather control logic in place for all facilities that deal with wet weather issues. Chris Moughan explained the Authority is upgrading about three stations per year that are currently not on the SCADA system, with approximately a dozen or so stations remaining to be upgraded.

Linda Rosenfeld questioned the difference between *miscellaneous* and *contingency* on the authorization sheet. Mr. Volk explained that *contingencies* are used for unforeseen costs that may arise during construction. *Contingencies* require a change order and are budgeted at 10% of the bid. *Miscellaneous* is for additional services that are not part of the contract. The Board suggested using only one contingency item in future authorizations, and removing the miscellaneous cost item, to which Mr. Volk agreed.

On a motion by Norma Cusick, seconded by Jeff Morgan, the Board approved the Capital Project Authorization for the Construction Phase in the amount of \$412,333.00 which consists of award of the Construction General contract to Blooming Glen Contractors, WW in the amount of \$156,093.00, and award of the Construction Electrical contract to A. N. Lynch Co., Inc. in the amount of \$180,000.00, and the Professional Services Authorization for the Construction Phase Engineering to JMT, Inc. in the amount of \$11,240.00 (8-0).

Wastewater Rules & Regulations

Brad Landon explained the changes to the *Rules & Regulations for Sewerage Service*. The purpose of the proposed change is to establish administrative guidelines in regard to wastewater allocations in the satellite wastewater systems similar to those used in the Western Lehigh Interceptor-connected systems. This update will ensure consistent application of wastewater allocation procedures across all service areas.

On a motion by Linda Rosenfeld, seconded by Ted Lyons, the Board approved the update to the *Rules & Regulations for Sewerage Service* (8-0).

USEPA Administrative Order – Update

Liesel Gross updated the Board regarding the actions planned through the end of 2017 to comply with the Administrative Order to eliminate sanitary sewer overflows, including submission of a capital improvements plan for the Western Lehigh Interceptor and related facilities. She reviewed the efforts over the past two years to develop agreements with the municipal signatories related to sharing costs for capital improvements based on their peak-flow contributions, noting that these efforts have not been successful and no Board action will be needed to approve any new agreements. On behalf of the Authority at the Western Lehigh Sewerage Partners, an implementation plan is being developed for submission to EPA by the December 31, 2017 deadline and will be reviewed with the Board at the December 11, 2017 meeting. The plan will focus on signatory work for removal of leakage from the sewer system and the Authority's work to upgrade the Park Pump Station and other related interceptor projects.

Ms. Gross noted that the design work for the City of Allentown wastewater treatment plant improvements, including blending, is moving forward, and the Authority has lead efforts to complete legislative and regulatory outreach on this issue as discussed at a prior Board meeting. The City plans to submit a permit application to the Pa. Department of Environmental Protection at 30% design completion to seek formal feedback from regulators on the blending option. The Board expressed concerns about receiving feedback on a plan being submitted based on 30% design, to which Ms. Gross explained that this is standard practice and may result in receiving useful feedback from the regulatory agency earlier.

Norma Cusick questioned the work that has been ongoing in other townships and boroughs regarding removal of inflow and infiltration. Ms. Gross explained that the Authority has not been receiving regular reports from the other municipalities outside of the Western Lehigh Sewerage Partners on the work they are completing; however, since all municipalities must submit a plan to EPA by the end of the year, it is expected all information will be shared at that time.

Industrial Pretreatment Program Overview

Pat Mandes introduced Andrew Moore, Manager of Industrial Waste for the Authority. Mr. Moore was present to give an overview of an EPA mandated Industrial Pretreatment Program (IPP) and provide specifics of the program at Kline's Island by presenting a PowerPoint presentation.

The Board questioned what would happen to the regulations on the Pretreatment plant if the EPA is dissolved. Pat Mandes explained that even if EPA no longer existed, the regulations would remain and would be enforced by the Authority based on City ordinances that are in place because it is important to the system to control these kinds of industrial wastes.

Norma Cusick asked about the term of "categorical" waste and asked if that term would apply to hospital waste. Mr. Moore explained that hospitals are not classified by EPA as "categorical" dischargers, but are still enrolled in the IPP program and are required to have permits because of the volume of their discharges.

MONTHLY PROJECT UPDATES/INFORMATION ITEMS

Liesel Gross noted that since there are no action or discussion items for the November 27, 2017 meeting, the Board may want to consider cancelling the meeting. The Board agreed to cancel the November 27, 2017 meeting. Ms. Gross noted that the monthly Financial report and System Operations report for October 2017 will be provided and posted to the website to stay on track with reporting. Ms. Gross pointed out that the monthly project update has been changed to include sewage planning modules reviewed under the Developments portion of the report under Finance & Administration – Information Items.

STAFF COMMENTS

None.

SOLICITOR'S COMMENTS

None.

PUBLIC COMMENTS / OTHER COMMENTS

None.

Chairman Nagle called a break at 1:17 p.m. The meeting reconvened at 1:23 p.m.

EXECUTIVE SESSION

An Executive Session was held at 1:23 p.m. to discuss potential litigation. The Executive Session ended at 2:28 p.m.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 2:28 p.m.

Richard H. Bohner
Secretary

RESOLUTION No. 12-2017-1

(Duly adopted 11 December 2017)

A RESOLUTION ESTABLISHING THE VARIOUS COMPONENTS OF THE LEHIGH COUNTY AUTHORITY CAPITAL RECOVERY FEES FOR THE WATER SYSTEM CONNECTION FEE FOR THE CITY DIVISION AND THE CUSTOMER FACILITIES FEES FOR THE CITY WATER SYSTEM AND SUBURBAN DIVISION WATER AND WASTEWATER SYSTEMS.

WHEREAS, Lehigh County Authority ("Authority") is a Pennsylvania municipal authority incorporated by the County of Lehigh in accordance with the Municipality Authorities Act to provide, among other services, wastewater and water services; and

WHEREAS, the Authority owns and/or operates water and wastewater systems throughout the Lehigh Valley of Pennsylvania, which systems are divided between its City of Allentown and Suburban Divisions; and

WHEREAS, the Authority charges certain rates and fees for use of and connection to its systems; and

WHEREAS, the Authority desires to establish its fees in accordance with §5607 of the Municipality Authorities Act, as amended by legislative action in December 2003, setting forth the appropriate fee components; and

WHEREAS, the Authority has calculated the allowable basis for such fees for certain of its wastewater and water systems in accordance with the attached calculations and its Summary of the Capital Recovery Fees for the Water System Connection Fee for the City Division, the Customer Facilities Fees for the City Division water system and the Customer Facilities Fees for the Suburban Division water and wastewater systems (as Exhibit A), the current version of which, as well as any future changes thereto, is made a part hereof as if included herein; and

NOW THEREFORE, the Lehigh County Authority, pursuant to powers invested in it by the Pennsylvania Municipality Authorities Act, as amended, hereby resolves that:

1. The capital recovery fees for wastewater and water service in various of the Authority's wastewater and water systems as indicated and shown on *2018 Tapping Fee Resolution - Exhibit A, LCA Customer Facilities Fees and Connection Fees, Allentown and Suburban Divisions - Water and Wastewater*, attached hereto and made a part hereof, are adopted effective 1 January 2016.

2. The Authority's Schedules of Rates and Charges shall be amended to reflect the fees hereby adopted, which fees shall be effective as of 1 January 2018.

On motion of _____, seconded by _____, this Resolution was adopted the 11th day of December 2017.

**2018 TAPPING FEE RESOLUTION - EXHIBIT A
LCA CUSTOMER FACILITIES FEES AND CONNECTION FEES
ALLENTOWN AND SUBURBAN DIVISIONS - WATER AND WASTEWATER**

Suburban Division - Water System - Customer Facilities Fees

Meter Component - With DC Backflow

<u>Meter Size</u>	<u>2018 Supply Cost</u>	<u>2018 Labor Cost</u>	<u>2018 Rate</u>
5/8"	\$283	\$92	\$375
5/8" Pit	\$338	\$92	\$430
3/4"	\$301	\$92	\$393
3/4" Pit	\$348	\$92	\$440

Meter Component - With No Backflow

<u>Meter Size</u>	<u>2018 Supply Cost</u>	<u>2018 Labor Cost</u>	<u>2018 Rate</u>
5/8"	\$252	\$92	\$344
5/8" Pit	\$307	\$92	\$399
3/4"	\$270	\$92	\$362
3/4" Pit	\$317	\$92	\$409
1"	\$344	\$92	\$436
1" Pit	\$381	\$92	\$473
1 1/2" Displacement	\$631	\$50	\$681
1 1/2" Turbine	\$864	\$50	\$914
1 1/2" Compound	\$1,196	\$50	\$1,246
2" Displacement	\$830	\$50	\$880
2" Turbine	\$1,037	\$50	\$1,087
2" Compound	\$1,410	\$50	\$1,460

Suburban Division - Wastewater System - Customer Facilities Fees

Meter Purchase Only (Plumber Install)

<u>Meter Size</u>	<u>2018 Supply Cost</u>	<u>2018 Inspection Fee</u>	<u>2018 Rate</u>
5/8"	\$252	\$50	\$302
5/8" Pit	\$307	\$50	\$357
3/4"	\$270	\$50	\$320
3/4" Pit	\$317	\$50	\$367
1"	\$344	\$50	\$394
1" Pit	\$381	\$50	\$431
1 1/2" Displacement	\$631	\$50	\$681
1 1/2" Turbine	\$864	\$50	\$914
1 1/2" Compound	\$1,196	\$50	\$1,246
2" Displacement	\$830	\$50	\$880
2" Turbine	\$1,037	\$50	\$1,087
2" Compound	\$1,410	\$50	\$1,460

Allentown Division - Water System - Customer Facilities Fees

<u>Meter Size</u>	<u>2018 Meter Price</u>	<u>Components</u>	<u>2018 Labor Cost</u>	<u>2018 Rate</u>
5/8"	\$81	\$103	\$88	\$272
3/4"	\$139	\$103	\$88	\$329
1"	\$128	\$105	\$88	\$321
1 1/2"	\$275	\$154	\$88	\$517
2"	\$358	\$189	\$88	\$636
3" Compound	\$1,423	\$145	\$50	\$1,618
3" Turbine	\$985	\$145	\$50	\$1,180
4" Compound	\$2,472	\$165	\$50	\$2,687
4" Turbine	\$1,918	\$165	\$50	\$2,133
6" Compound	\$4,270	\$198	\$50	\$4,518
6" Turbine	\$3,452	\$198	\$50	\$3,700
8" Compound	\$6,898	\$273	\$50	\$7,221
8" Turbine	\$5,858	\$273	\$50	\$6,181

<u>Other Components</u>	<u>2018 Price</u>
5/8" Meter Horn	\$41.00
3/4" Meter Horn	\$59.00
Curb Box - Metal	\$67.84

Allentown Division - Water System - Water Connection Fees

Water Taps 3/4 inch - 2 inch

	<u>Corporation</u>	<u>Tail Piece</u>	<u>Saddle Clamp</u>	<u>Employee Wages</u>	<u>Equipment</u>	<u>2018 Rate</u>
Size 3/4 "	\$22	\$17	\$0	\$234	\$65	\$338
Size 1 "	\$33	\$25	\$0	\$234	\$65	\$357
Size 1 1/2"	\$102	\$68	\$30	\$234	\$65	\$499
Size 2 "	\$171	\$109	\$30	\$234	\$65	\$609

Water Sleeve and Valve Connectors

	<u>Valve</u>	<u>Casing</u>	<u>Tapping Fitting</u>	<u>Employee Wages</u>	<u>Equipment</u>	<u>2018 Rate</u>
Size 4"x 4"	\$410	\$120	\$357	\$689	\$221	\$1,797
Size 6"x 4"	\$410	\$120	\$363	\$689	\$221	\$1,803
Size 6" x 6"	\$521	\$120	\$413	\$689	\$221	\$1,964
Size 8"x 4"	\$410	\$120	\$376	\$689	\$221	\$1,816
Size 8"x 6"	\$521	\$120	\$418	\$689	\$221	\$1,969
Size 8"x 8"	\$829	\$120	\$545	\$689	\$221	\$2,404
Size 12"x 4"	\$410	\$120	\$483	\$689	\$221	\$1,923
Size 12"x 6"	\$521	\$120	\$531	\$689	\$221	\$2,082
Size 12"x 8"	\$829	\$120	\$642	\$689	\$221	\$2,501
Size 12"x 12"	\$1,636	\$120	\$1,204	\$689	\$221	\$3,870



**LEHIGH COUNTY AUTHORITY
2018 MEETING SCHEDULE**

*Meetings are typically held on Mondays beginning at 12:00 p.m.,
in the LCA Office, Main Conference Room*

Board Meetings

January 8, 22

February 12, 26

March 12, 26

April 9, 23

May 14, 21 (tentative)

June 11, 25

July 9, 23

August 13, 27

September 10, 24

October 8, 22

November 12, 26

December 10

BRIAN NAGLE
Chair



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: December 11, 2017

To: LCA Authority Board of Directors
From: Phil DePoe, P.E.
Subject: Construction Phase Change Order –
Allentown Division WWTP: Digester Cover Replacements

MOTIONS /APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – Capital Project Authorization <u>Amendment No. 2:</u> <i>Quad – Construction phase change order</i>	\$87,895

PROJECT BACKGROUND:

Failing process equipment was affecting the ability to effectively utilize the biogas produced by anaerobic digesters located at the City of Allentown’s Kline’s Island Wastewater Treatment Plant. The proposed scope of this multiyear project was the phased replacement of two anaerobic digester covers (Secondary Digester in 2016 and Primary No. 1 Digester in 2017). The old digester covers were of carbon steel construction and after 40 years of use they reached the end of their expected service life. Other miscellaneous electrical improvements were completed with the project as well. This project was identified as Schedule 7 in the Lease Agreement.

CHANGE ORDER SUMMARY:

This construction phase change order requested by the general contractor (Quad) is to capture the additional dry tons removed from the digester cleaning portion of the project. In 2015, our design engineer estimated the dry tons to be removed at 100 for the Secondary and 90 for the Primary No. 1. These estimated numbers were based on field test performed by a cleaning contractor before the project began. During actual cleaning, 125.3 dry tons were removed from the Secondary Digester in Spring of 2016 and 156.2 dry tons were removed from the Primary No 1. Digester in Spring of 2017. The contract price to clean the Secondary Digester was \$96,500 (actual was \$120,924.15) and the contract price to clean the Primary No. 1 Digester was \$86,250 (actual was \$149,720.41). It is important to note that the quantities on the bid form were an estimate and that actual quantities removed in the field reflect the needed payment. At this point, the project is complete and this change order will close out the payments to the contractor.

FINANCIAL:

The Project was identified as a Schedule 7 in the Lease Agreement and was funded by the LCA Allentown Division. This project was approved by the City as Major Capital and the CCRC will take effect in 2019.

PROJECT STATUS:

Construction is 100% complete and final paperwork is being finalized.

THIS APPROVAL:

Capital Project Authorization Amendment No. 2.

FUTURE AUTHORIZATIONS:

None.

CAPITAL PROJECT AUTHORIZATION AMENDMENT No. 2

PROJECT NO.:	AD-S-16-1	BUDGET FUND:	Allentown Div\Wastewater\Capital
PROJECT TITLE:	Allentown Division WWTP: Digester Cover Replacements Construction Phase	PROJECT TYPE:	<input type="checkbox"/> Construction <input type="checkbox"/> Engineering Design <input type="checkbox"/> Equipment Purchase <input checked="" type="checkbox"/> Amendment No. 2
THIS AUTHORIZATION: TO DATE (W/ ABOVE)	\$87,895 \$3,232,745		

CONTRACT AMENDMENT NO. 1 – CONSTRUCTION PHASE CHANGE ORDER

DESCRIPTION OF CHANGE ORDER:

This construction phase change order requested by the general contractor (Quad) is to capture the additional dry tons removed from the digester cleaning portion of the project. In 2015, our design engineer estimated the dry tons to be removed at 100 for the Secondary and 90 for the Primary No. 1. These estimated numbers were based on field testing performed by a cleaning contractor before the project began. During actual cleaning, 125.3 dry tons were removed from the Secondary Digester in Spring of 2016 and 156.2 dry tons were removed from the Primary No 1. Digester in Spring of 2017. The project is complete and the change order will close out the payments to the contractor.

Previous Authorizations	
Design Phase	\$162,694
Construction Phase	\$2,982,156

REQUESTED THIS AUTHORIZATION	
Construction Phase Contract Amendment No. 1	
General Contractor: Quad	\$87,895

Future Authorization	
Change Orders	\$0

Total Estimated Project	\$3,232,745
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REVIEW AND APPROVALS:

Project Manager	Date	Chief Executive Officer	Date
Chief Capital Works Officer	Date	Chairman	Date

Arcadis U.S., Inc.
1128 Walnut St., 4th Floor
Philadelphia
Pennsylvania 19107
Tel 215.931.4372
www.arcadis-us.com

Ms. Pat Mandes
Compliance Director
Lehigh County Authority
P.O. Box 3348
Allentown, PA 18106

Subject:

Sewer Capacity Assurance and Rehabilitation Program
Scope and Budget for SCARP Program Management through 2018

Dear Ms. Mandes:

Date:
11/21/2017

Arcadis is pleased to offer this scope and budget proposal for program management services related to the Sewer Capacity Assurance and Rehabilitation Program (SCARP).

Contact:
Anthony J. Dill

PROPOSED SCOPE OF SERVICES

Phone:
215.931.4372

ARCADIS will provide coordination and on-call services to LCA and the Western Lehigh SCARP Partnership (Partnership) to facilitate regulatory approval and WLSP implementation of the SCARP in 2018. These program management services will be for tasks not defined in other project specific authorizations. These services include:

Email:
Anthony.Dill@arcadis.com

- Meetings with PADEP and USEPA
- Preparation of responses to regulators regarding the SCARP Implementation Outline
- Preparation of regulatory reports to PADEP and EPA
- Meetings with Partnership Engineering team and Partnership Municipal Leaders
- Meetings with City of Allentown and other Signatories
- Status meetings with LCA for the overall program
- Technical evaluations and data reviews
- Small modeling, flow assessment, or other conveyance related work
- Other on-call services as requested by LCA

Our ref:
66000247.0066

This proposal and its contents shall not be duplicated, used or disclosed — in whole or in part — for any purpose other than to evaluate the proposal. This proposal is not intended to be binding or form the terms of a contract. The scope and price of this proposal will be superseded by the contract. If this proposal is accepted and a contract is awarded to Arcadis as a result of — or in connection with — the submission of this proposal, Arcadis and/or the client shall have the right to make appropriate revisions of its terms, including scope and price, for purposes of the contract. Further, client shall have the right to duplicate, use or disclose the data contained in this proposal only to the extent provided in the resulting contract.

DELIVERABLES AND SCHEDULE

Deliverables and schedule for delivery will be determined on an assignment by assignment basis.

BUDGET

As this is undefined work, we recommend allocating \$70,000 to cover the work anticipated through the end of 2018. We propose to complete these services on a time and materials basis in accordance with the Agreement between LCA and Malcolm Pirnie, Inc. and the current Summary of Standard Charges for Lehigh County Authority. We will track the costs associated with this work and report them to LCA monthly throughout the program. We will not exceed the authorized budget without written professional services authorization from LCA.

Please contact me with your authorization to proceed if this scope and budget are acceptable to you. If you have any questions please do not hesitate to call me at 215-931-4372 or 610-761-3253 (mobile).

Sincerely,

ARCADIS U.S., Inc.

A handwritten signature in blue ink that reads "Tony Dill". The signature is fluid and cursive.

Tony Dill, PE, BCEE
Program Manager – Buried Infrastructure Team

Cc: Jim Shelton, Arcadis



Lehigh County Authority

1053 Spruce Street * P.O. Box 3348 * Allentown, PA 18106-0348
(610)398-2503 * FAX (610)398-8413

PROFESSIONAL SERVICES AUTHORIZATION

AMENDMENT NUMBER 29

Professional:

Arcadis
Jim Shelton
1128 Walnut St.
Philadelphia, PA 19107

Date: 11/29/17

Requested By: Pat Mandes

Approvals

Department Head: _____

Chief Executive Officer: _____

Description of Services (Work Scope, Steps, Check Points, etc.):

This is an amendment to the current Arcadis authorization for the WLI Infiltration and Inflow Project: The work covered by this amendment includes Program Management for 2018.

Program Management includes work that is not defined by other approved tasks. The work will include on-call services, EPA semi-annual report, annual DEP report, attending meetings with DEP and EPA, attend meetings with Partners, attend meetings with the City, prepare cost estimates for AO Capital Improvements Plan (CIP), I & I Committee participation, technical evaluations as needed and other coordination or services as needed. The total "Not to Exceed" cost is \$70,000 for the period ending December 2018.

The scope of work is described in more detail in the proposal dated November 21, 2017.

Cost Estimate (not to be exceeded without further authorization): This amendment is not to exceed \$70,000 for Program Management.

Time Table and Completion Deadline:

Current through December 2018.

(For Authority Use Only)

Authorization Completion:

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

Capital Project S-08-05, Signatory I & I Investigation/Remediation Program

FINANCE & ADMINISTRATION

ACTION ITEMS

1. Connection Fees & Customer Facilities Fees (Resolution No. 12-2017-1) – December 11, 2017

Resolution No. 12-2017-1 is presented for Board consideration to update certain tapping fees related to customer facilities and connection fees. The 2018 fees reflect actual costs for LCA purchase and installation of required metering equipment and other installation details for each connection size for water and sewer service.

2. 2018 Meeting Schedule – December 11, 2017

The 2018 Board meeting schedule is included for approval.

DISCUSSION ITEMS

INFORMATION ITEMS

1. Recently Purchased Investments – Certificates of Deposit (CDs)

CERTIFICATES OF DEPOSIT

15-Nov-17

Fund	Bank	Location	Gross Amount	Date of Purchase	Date Due	Net Rate %
LLRI CR	PSDLAF Flex Pool		400,000.00	11/14/17	1/17/18	1.0
Cons Wtr (2)	PSDLAF Flex Pool		155,000.00	11/14/17	1/17/18	1.0
Cons LL2 (314)	PSDLAF Flex Pool		245,000.00	11/14/17	1/17/18	1.0
WW Capac	PSDLAF Flex Pool		600,000.00	11/14/17	1/17/18	1.0
Wtr R&R	PSDLAF Flex Pool		1,000,000.00	11/14/17	1/17/18	1.0

Cons Wtr (2) Consolidated Water (2)
 LLRI CR Little Lehigh Relief Interceptor Capital Reserves
 Cons LL2 (314) Consolidated Little Lehigh Relief Interceptor 2
 WW Capac Wastewater Capacity
 2010 Wtr Cons A 2010 Water Construction, Series A Bond
 Wtr R&R Renewal and Replacement

2. Developments

Water system construction is occurring in the following developments:

- Fields at Indian Creek, Phase 2, 35 private, age-restricted/senior residential units (sfd), UMiIT, water & sewer
- Spring View (Bortz Tract), 14 commercial units, UMT
- Trexler Business Center, 1 Commercial Lot with 6 commercial buildings, LMT
- Trexler Fields, Phase 1B/8/9, 100 residential lots (sfa), UMT

Water system plans are being reviewed for the following developments:

Diocesan Pastoral Center, 2 commercial lots, 3 additional lots and residual lot for existing cemetery, LMT

Farr Tract, 17 residential lots (sfd), LMT

Grant Street Townes, 18 residential lots (sfa), WashT.

Green Acres Mobile Home Court, master meter 590 existing units (sfd), UMT

Hickory Park Estates, 3 residential lots (sfd), UMT

Hillview Farms, 31 residential lots (sfd), LMT/SWT

Indian Creek Industrial Park, 6 commercial lots, UMiIT, water and sewer

Kohler Tract, 125 residential lots (sfa), UMiIT, water and sewer

Lehigh Hills, Lot 5, Phase 1, 273 apartments & clubhouse, UMT

Madison Village at Penn's View, 66 manufactured homes, 1 lot, LynnT, water and sewer

Mary Ann's Plaza, 1 lot with 12 commercial units, NWT

Millbrook Farms, Section VI, 45 residential lots (sfd), LMT

Morgan Hills, 40 residential lots (sfd), WeisT, water and sewer

Parkland School District, new elementary school, 1 lot, UMT

Schoeneck Road, Lot 1, 1 lot warehouse, LMT

Shepherd's Corner, 1 commercial lot, LMT

Spring Creek Properties Settlement Subdivision, Lot 1, 1 commercial lot, LMT

Stone Hill Meadows, Phase 2, 85 residential units (sfd), LMT

Weilers Road Twins, 82 residential lots (sfa), UMT

Woodmere Estates, 60 residential units (sfd), UMT

Sewage Planning Modules Reviewed in Prior Month:

LMT Community Center Expansion, LMT, 500 gpd

3865 Fish Hatchery Road, LMT, 223 gpd

WATER**ACTION ITEMS**

DISCUSSION ITEMS

INFORMATION ITEMS

1. Allentown Division - Water Filtration Plant / Water Distribution: Flood Pump Replacement

Upgrades to the existing stormwater pump/control for the WFP and D&C parking lot were needed due to equipment age. The existing flood pump (centrifugal) was replaced with a new submersible flood pump. Miscellaneous electrical upgrades also occurred. In addition, a new raw water magmeter and two new chemical feed tanks were installed at the Water Filtration Plant. Board Approval was granted at the January 23rd Board Meeting. Construction began in April of 2017 and was completed in late September. This capital project is funded by the LCA Allentown Division. **(No Change)**

2. Allentown Division – Hamilton Street Cedar Creek Bridge Water Main Relocation Project

As part of the Pennsylvania Rapid Bridge Replacement Program, the replacement of the Cedar Creek Bridge on Hamilton Street has required the relocation of approximately 500 linear feet of water main. The Design phase was approved at the December 2016 Board meeting. As of June 2, 2017 Gannett Fleming our Engineer has submitted their design of the relocation to the state and is awaiting their approval. It is anticipated that this work will be reimbursed 100% by the state and that the construction related activities will be incorporated within the state's work. **(No Change)**

3. Allentown Division – Pre-Lease Valve Replacements

The project scope includes the replacement of approximately 50 inoperable valves in multiple locations throughout the City that existed prior to the lease settlement. The bid was authorized for award at the June 26, 2017 board meeting. As of late November 2017, our contractor has completed 100% of their contract with LCA and is in the process of project closeout. The project is classified as uncompleted work and will be funded by the City of Allentown **(No Change)**.

4. Allentown Division – Schantz Spring Main Replacement

The project is the replacement of approximately 2,000 linear feet of 1903 vintage 30-inch diameter water main in Martin Luther King, Jr. Boulevard from the Water Filtration Plant heading towards Schribers Bridge. This project also includes addressing other leaks that were identified during the "SmartBall" leak detection work completed by the City of Allentown (COA). Bids were received on July 13, 2017. The Board approved the construction contract at the July 24, 2017 Board meeting, Notice to Proceed was issued August 29, 2017. As of late November 2017, our contractor has completed nearly 50% of their contract of both the main line replacement on MLK Blvd and of the leak site areas. This Project is identified as Schedule-7 Work and will be funded by LCA Allentown Division.

5. Allentown Division – Schantz Spring Exposed Main Replacement

This project will replace approximately 110 linear feet of the 30-inch diameter water main that supplies water from Schantz Spring to the Water Filtration Plant on the county's property at Cedarbrook where the line crosses a swale from I-78. The project will demolish the concrete culvert that carries the pipe over the swale and install a new pipe under the swale. The project will be funded by the LCA Allentown Division. The Public Water Supply Permit was issued by DEP in August 2017. The construction contract has been signed and a preconstruction meeting held. The contractor plans to start setting up E&S controls on November 27th. Construction will

be coordinated with the on-going main replacement project in Martin Luther King, Jr. Boulevard at the Water Filtration Plant.

6. **Suburban Division – CLD Auxiliary Pump Station Project**

The project will feature the installation of a new booster pumping station and water main extension to pump water from the Lower Pressure System to the Upper Pressure System. The project will also involve installation of a SCADA system. The Public Water Supply (PWS) permit application package was submitted to DEP. Design and permitting of the pump station will be completed in early 2018, and the station will be constructed in 2018.

7. **Suburban Division - Water Main Replacement Program Cycle 3**

The project consists of the replacement of approximately 1 mile of aged and/or failing Cast Iron water main. The design phase of this project was approved at the January 2015 Board meeting. Bids were received on July 13, 2017. The Board approved the construction contract at the July 24, 2017 Board meeting, Notice to Proceed was issued August 29, 2017. As of late November 2017, our contractor has completed 100% of their contract with LCA and is in the process of project closeout.

8. **Suburban Division - Water Main Replacement Program Cycles 1 & 2**

The project consists of the replacement of 2.85 miles of aged and/or failing Cast Iron water main. The Construction phase was approved at the 4/11/16 Board meeting. As of late July 2017 the contractor, Anrich Inc., has completed all punch list item deficiencies. LCA is under discussions with Anrich, Inc. to close out the project **(No Change)**.

9. **Suburban Division – Upper Milford-CLD Interconnection Project (Kohler Tract)**

The project will feature the installation of a new booster pumping station and water main extension to pump water from the Central Lehigh Division (CLD) to the 125-lot Kohler Tract subdivision in Upper Milford Township. Design of the pump station is under way and the Public Water Supply (PWS) permit application package was submitted to DEP. We made offers to two property owners where easements are needed.

10. **Suburban Division – Pine Lakes Pumping Station Improvements**

This project was originally bid in July 2016 and bids were subsequently rejected due to the lack of competitiveness and significant exceedance of the engineer's estimate. The project was modified and rebid in May 2017 resulting in greater bidder interest and lower prices. The purpose of this project is to upgrade the original hydro-pneumatic well station (built in mid-1970s) to continue the level of service, replace aged and problematic equipment, reduce the probability and consequence of risk, and prolong the useful life of the station. The station is to be upgraded to a double pumping variable speed system with full SCADA telemetry. A pre-construction meeting was held in August and work began in fall 2017 **(No Change)**.

11. **Suburban Division – Asset Management Facility Upgrades**

Project includes the construction of improvements that were identified and prioritized in the Building Condition and Assessment Study prepared by D'Huy Engineering in accordance with LCA's asset management goal. The project scope includes structural, HVAC, and electrical/code improvements to be performed on facilities that were assigned a high risk score (high consequence and probability of failure). Nine (9) water facilities and two (2) wastewater facilities are part of the project scope. The project bids were opened on May 30, and authorization to award was given at the June 26, 2017 Board meeting. Construction is anticipated to be completed by the end of 2017 **(No Change)**.

12. **Suburban Division – Crestwood Alternate Water Supply**

The project consists of abandonment of existing wells and storage tank currently serving higher elevation customers and a connection of the pumping station to the main North Whitehall Division System. The project will also involve installation of a SCADA system. The project bids were opened on July 7 and authorization to award was given at the July 24, 2017 Board meeting. A pre-construction meeting was held in September. Construction started in October 2017 and will be completed in early 2018. **(No Change)**.

13. Suburban Division – Well Abandonments

The project consists of the abandonment of six wells that are no longer used due to water quality issues: WL4, WL7, NL7, NL8, NL9, and NL10. Authorization to award a professional services agreement to ARRO Consulting Engineers was given at the July 24, 2017 Board meeting. Construction began in September 2017 and is expected to be substantially complete by mid-December.

14. Suburban Division – 2017 Water Meter Replacement Project

The project consists of the replacement of approximately 2000 residential meters and 430 commercial meters as well as replacing “non-read” meters with new transceiver units. Residential meters which are 20 years and older and commercial meters 15 years and older will be replaced. All meters will be upgraded to the most current radio read capability. The project was approved at the September 25, 2017 Board meeting. The Notice to Proceed was issued in November.

15. Suburban Division – Buss Acres Pump Station Replacement

The project consists of the consolidation and replacement of two well stations with a single new pump station and a new water storage tank to replace two antiquated hydropneumatic pump stations. The new station will be a variable frequency drive controlled double pumping system with full SCADA control. The design will accommodate the future addition of radon removal equipment to be implemented upon DEP’s mandate of a regulatory limit. Design phase was authorized at the 8/28/17 board meeting, and the project is anticipated to be ready for bidding in Spring 2018. **(No Change)**

WASTEWATER

ACTION ITEMS

1. **Construction Phase Change Order – Allentown Division – Wastewater Treatment Plant: Digester Cover Replacements – December 11, 2017**

This construction phase change order requested by the general contractor (Quad) is to capture the additional dry tons removed from the digester cleaning portion of the project. Our design engineer estimated the dry tons to be removed at 100 for the Secondary and 90 for the Primary No. 1. These estimated numbers were based on a field test performed by a cleaning contractor before the project began. During actual cleaning, 125 dry tons were removed from the Secondary and 156 dry tons were removed from the Primary No 1. Digester. The project is complete and the change order will close out the payments to the contractor. Approval of the change order will be requested at the 12/11/17 Board meeting.

2. **2018 SCARP Program Management – December 11, 2017**

A Professional Services Authorization is being presented to the Board for consideration for Arcadis for work related to the I & I SCARP Program. The work includes Program Management for 2018. Attached is a Professional Services Authorization and Arcadis Scope of Work.

DISCUSSION ITEMS

1. **Western Lehigh Sewerage Partners SCARP Implementation Plan**

The Implementation Plan detailing the Partner and LCA capital improvements through 2025 to address the wet weather issues will be presented to the Board.

INFORMATION ITEMS

1. **Allentown Division – Manhole Collars with Water Tight Frame and Covers: Cycle 4**

This project will permanently secure the frame and cover of approximately 10 aged brick manholes identified by current LCA staff. This work will eliminate inflow from entering these manholes and eliminate the potential for sanitary sewer overflows (SSOs) from these manholes. A kick-off meeting has occurred with the City. Board approval for construction was granted at the June 26, 2017 Meeting. Construction began at the end of July 2017 and was completed in early August 2017. The project is identified as Administrative Order and will be funded by the City. This is the final cycle of the project. **(No Change)**

2. **Allentown Division – Wastewater Treatment Plant: Digester Cover Replacements**

This project involves the cover replacement of both the Primary Digester No. 1 and the Secondary Digester (the cover for Primary Digester No. 2 was previously replaced in 2010). A Major Capital Improvement (MCI) Conceptual Design has been approved by the City. Board approval of the construction phase was received at the 2/8/16 Board Meeting. The new Secondary Digester cover was installed in late October 2016 and its construction was completed in late February of 2017. The new Primary No. 1 Digester Cover is also installed and is now operational. This Project is identified in the Lease as a Schedule 7 (required) project and was funded by the LCA Allentown Division. **(No Change)**

3. **Allentown Division – Wastewater Treatment Plant: WWTP Security Upgrades**

This project involves the installation of security related equipment upgrades at the Kline's Island Wastewater Treatment Plant (WWTP). Enhanced security will further reduce the risk of breaches that may impair the operation of the facility. Board Approval of the CoStars Agreement with Tyco (to purchase the security cameras, doors, etc. upfront) was granted at the January 23,

2017 Board Meeting. Approval of the electrical contractor to install the security equipment was granted at the May 22, 2017 Board Meeting. Construction of the project began in late July of 2017 and will be completed in mid-December. This Project is identified as an Uncompleted Work (UW) in the Lease Agreement and will be funded by the City of Allentown.

4. **Allentown Division – Wastewater Treatment Plant: Electrical Substation Replacements**

This project involves the replacement of the existing 12.4 kV Switchgear and existing Substation No. 1 and No. 2. The equipment was installed in 1977 and has reached the end of its useful life. The City has reviewed this and has approved this project as a Major Capital Project. Approval of the design engineer was granted at the May 8, 2017 Board Meeting. Approval of the construction contract is tentatively scheduled to be requested at a March 2018 Board Meeting. Construction of the project is expected to begin in May of 2018 and be completed by mid-2019. This Major Capital Project will be funded by the LCA Allentown Division.

5. **Allentown Division – Wastewater Treatment Plant: Miscellaneous Improvements**

In December 2016, the drive unit on Final Clarifier #5 at Kline's Island WWTP experienced a complete failure. The drive was the original unit that was installed during construction of the clarifier in 1968. An emergency declaration was declared to reduce the installation time by several weeks. A request for a retroactive emergency declaration was requested and approved at the January 9, 2017 Board meeting. The drive was installed in April 2017 and is now fully operational. The remaining mechanisms of Final Clarifier #5, and the drive unit and similar mechanisms of Final Clarifier #6 have also reached the end of their useful life and will be replaced in late 2017. Construction approval was granted at the August 28, 2017 Board meeting. Construction should be completed by 1Q 2018. This capital project will be funded by the LCA Allentown Division. **(No Change)**

6. **Allentown Division – Kline's Island WWTP Phase 1 AO Design Improvements**

This project includes the design of the AO improvements at the wastewater treatment plant. This conceptual design concept was approved by the City and the relevant final deliverables were received by LCA. The City then directed LCA to proceed with the final design of improvements related to the blending alternative. Board approval for the Professional Services Authorization with Kleinfelder East, Inc. was granted at the September 11, 2017 Board Meeting. The project is identified as Administrative Order Work and will be funded by the City. Construction is expected to begin in early 2019 and is expected to be complete in early 2021, subject to regulatory review and approval.

7. **Suburban Division – Test & Seal Project, Western Lehigh Interceptor Service Area**

Project consists of sanitary sewer cleaning, inspections via CCTV, cured-in-place point repairs, pressure testing and chemical grout sealing of joints, and post construction inspection for sanitary sewer lines located in western and central Lehigh County previously identified as areas subject to leakage. This project is part of the SCARP program. Construction began in August 2016 and is expected to finish by the end of Summer 2017; additional scope work is being completed by the end of 2017. **(No Change)**

8. **Suburban Division – Lynn Township WWTP Improvements, Phases 1 & 2**

This project will upgrade the wastewater treatment plant (WWTP) headworks to install a mechanical fine screen, in order to protect the influent pumps and mitigate rag buildup. The project is funded by the Lynn Township Suburban Division. The contractor has installed the meter vault. The mechanical screen was also installed and a successful startup performed. The chemical feed line must still be installed along with some minor plumbing and electrical work.

9. **Suburban Division – SCARP**

In August of this year, the City sent a letter to EPA indicating their capital improvements plan would consist of blending. EPA recently responded to the City's letter and strongly suggested that source removal work and collection/conveyance system capacity issues be addressed as the implementation plan and that the work at the WWTP is not warranted due to improvements in the system performance. The City has indicated that their Attorney will prepare a response to EPA asking for clarification.

The MOC for LCA and the LCA Signatories went through a final review by the Solicitors. One of the LCA Signatories has decided it will not be signing the MOC as it has already committed to the source removal projects and cannot commit to a future peak flow cost allocation because of the unknown risk.

The Partner Implementation Plan will be shared with the Board in December in either draft or final form.

10. Suburban Division – Park Pump Station Upgrade Design

The Park Pump Station is to be upgraded to address station capacity and age/condition issues, and prolong the service life of this critical facility. The existing pumps are to be replaced with dry pit submersible units, existing motors are to be replaced with high efficiency units, and the old rheostat type motor drives are to be replaced with variable speed drives. The MCC is also to be replaced along with miscellaneous mechanical improvements. The DEP Part 2 Water Quality Management Permit application was submitted to DEP in June 2017, and approved on 9/27/17. Design is substantially complete and bid phase is anticipated to begin late 2017. **(No Change)**

11. Suburban Division – Tank Painting Project – Heidelberg Heights Wastewater Treatment Plant

This project is part of LCA's Asset Management Program and involves the draining, cleaning, surface preparation, and painting of the interior and exterior Sequencing Batch Reactor tanks at the Heidelberg Heights wastewater treatment plant. The exposed tanks are 16 years old and require recoating to prevent degradation from the corrosive effects of wastewater and wastewater gases, and the environment. Bids were opened in May and the project was authorized for award at the June 12, 2017 board meeting. Construction was completed in November 2017.

12. Suburban Division – Spring Creek Pump Station

This project involves the following upgrades to the existing pumping station: Install a comminutor to reduce buildup of debris on the bar screens, replace the manually operated weir gates with new motorized weir gates, and upgrades to the SCADA system. Design of the project is complete. Notices of Award were sent to the contractors in November. Construction is anticipated to begin in early 2018.

13. Allentown Division – Kline's Island WWTP Master Plan

This project involves development of a Master Plan that is required as part of the lease with the City of Allentown. The Master Plan is similar in scope to what was done previously for the Allentown Water System in 2017. The city requirements dictate that the Master Plans must be updated every 5 years for the duration of the lease. A Request for Proposal is scheduled to be released to four (4) previously qualified firms in mid-December, 2017. Award of the contract is planned for Q1 2018 and will run through the majority of 2018.