



LCA Main Office:
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Agendas & Minutes Posted:
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LEHIGH COUNTY AUTHORITY

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BOARD MEETING AGENDA – November 10, 2025 – 12:00 p.m.

In-Person or Virtual Meeting Attendance Options Available: Meetings of the LCA Board of Directors will be held at LCA's Main Office as well as online using the Zoom Meetings application, which includes a telephone option. Public participation is welcomed both in-person or virtually. Instructions for joining the meeting online or by phone are posted on the LCA website in the morning on the day of the meeting, prior to the start of each meeting. You may also issue comment to LCA via email to LCABoard@lehighcountyauthority.org in advance of any meeting or view the meeting at a later time by visiting the LCA website. Please visit <https://www.lehighcountyauthority.org/about/lca-board-meeting-videos/> for specific instructions to join the meeting if you are attending virtually. If attending in-person at LCA's Main Office, please follow all safety and sanitation protocols posted.

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 the public record. Recordings may be retained or destroyed at LCA's discretion.

- *Public Participation Sign-In Request*

2. Review of Agenda / Executive Sessions

- Additions to Agenda (vote required if action will be taken)

3. Approval of Minutes

- *October 27, 2025 Board Meeting minutes*

4. Committee Reports

- *August 25, 2025 Governance Committee minutes*

5. Public Comments

6. Action / Discussion Items:

FINANCE AND ADMINISTRATION

- *2026 Water & Wastewater Rate Schedules (Approval) (yellow) (digital Board packet, pages 9-27)*
- *Pennvest Financing Resolutions: Lead Service Line Replacement Cycle 2 Projects (Approval) (green) (digital Board packet, pages 28-34)*
- *2026 Board Meeting Schedule (Approval) (goldenrod) (digital Board packet, page 35)*

WATER

- *Allentown Division – Lead Service Line Replacement Cycle 2 Project (Approval) (pink) (digital Board packet, pages 36-46)*

WASTEWATER

- *Sanitary Sewer Collection System: City of Allentown Manhole Rehabilitation (Approval) (blue) (digital Board packet, pages 47-55)*

- *Suburban Division – Heidelberg Heights Sewer System: I&I Source Reduction Program (Approval) (**tan**) (digital Board packet, pages 56-62)*
 - *Allentown Division – Sanitary Sewer Collection System: I&I Source Reduction Program (LCA Year 2) – Rejection of Contract 2 Bids (Approval) (**purple**) (digital Board packet, pages 63-64)*
 - *Allentown Division – Sanitary Sewer Collection System: I&I Source Reduction Program (LCA Year 2) – Contract 3 (Approval) (**salmon**) (digital Board packet, pages 65-74)*
 - *Allentown Division – Kline’s Island WWTP: Substation No. 1 and Switchgear Replacement (Approval) (**gray**) (digital Board packet, pages 75-81)*
7. Monthly Project Updates / Information Items (1st Board meeting per month) (digital Board packet, pages 82-91) - **November 2025 report attached**
 8. Monthly Financial Review (2nd Board meeting per month)
 9. Monthly System Operations Overview (2nd Board meeting per month)
 10. Staff Comments
 11. Solicitor’s Comments
 12. Public Comments / Other Comments
 13. Board Member Comments
 14. Executive Sessions
 15. Adjournment

UPCOMING BOARD MEETINGS		
November 24, 2025	December 8, 2025	January 12, 2026

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

October 27, 2025

The Regular Meeting of the Lehigh County Authority Board of Directors was called to order at 12:00 p.m. on Monday, October 27, 2025, Vice Chairman Jeff Morgan presiding. The meeting was hybrid via in-person and video and audio advanced communication technology ("ACT"), using the Zoom internet application, including telephone option. Each Board member and other attendees of the meeting were able to hear each other attendee and be heard by each other attendee. The public could also participate in the meeting in-person or via ACT, using the Zoom internet application, including telephone option. A Roll Call of Board members present was taken. Amir Famili, Jeff Morgan, Ted Lyons, Linda Rosenfeld, Sean Ziller, and Peter Dent were present for Roll Call and remained for the duration of the meeting. Kevin Baker entered the meeting at 12:10 and was present for the duration of the meeting.

Attorney Kevin Reid, the Authority's Solicitor, was present along with Authority Staff, Liesel Gross, Ed Klein, Andrew Moore, Chris Moughan, AJ Capuzzi, Chuck Volk, Phil DePoe, Susan Sampson, Taylor Stakes and Lisa Miller.

Vice Chairman Morgan announced that the Board received their electronic and hard copies of the Board packet in advance. A copy of the packet is also available online.

REVIEW OF AGENDA

Liesel Gross stated there are no changes to the published agenda and no Executive Session is planned.

APPROVAL OF MINUTES

October 13, 2025 Meeting Minutes

On a motion by Linda Rosenfeld, seconded by Peter Dent, the Board approved the minutes from the October 13, 2025 meeting as presented (6-0).

PUBLIC COMMENTS

None.

Resolution 10-2025-1: Authorizing the Authority's Application for Grant Funding, Equipment Purchase

Liesel Gross provided clarification on the project description, noting that the grant would be used for equipment and installation of water system valves in the City of Allentown. The Local Share Assessment grant is offered annually and requires a Board resolution in order to apply. The maximum of the grant is \$1 million. Chris Moughan provided additional details on the project that would address small water system valves in Allentown that are found to be inoperable, which causes challenges for emergency response procedures during a water main break.

On a motion by Peter Dent, seconded by Linda Rosenfeld, the Board approved Resolution 10-2025-1 (6-0).

2026-2030 Capital Plan

Liesel Gross provided a presentation summarizing the 2026-2030 Capital Plan noting that the plan is conceptual, and next year's costs are incorporated into the 2026 Budget. Chuck Volk reviewed the changes made to the project details since the prior presentations of the draft plan. He noted that a

project was added to the Suburban Water plan for Small Systems Water Supply Improvements for \$100,000. Also in the Suburban Water plan, the Buss Acres Water Treatment Upgrade project has been reduced from \$600,000 to \$250,000 due to timing considerations related to a potential Pennvest grant application. In the Suburban Wastewater plan, the 2026 budget for the Pretreatment Plant Critical Upgrades project has been reduced from \$2.5 million to \$2.0 million to reflect the timing of work to be completed in the current year. The Pretreatment Plant Upgrades and Replacement project budget for 2026 has been increased from \$200,000 to \$400,000 to reflect the electrical upgrades design phase. In the Allentown Division plan, the Manhole Rehabilitation Project description was changed to reflect current plans and details as reviewed with the City of Allentown. Phil DePoe provided details of the project.

Ms. Gross provided a total Plan summary, noting \$335 million in project costs is slightly lower than the prior Capital Plan mainly due to completion of some projects and the phasing of the Pretreatment Plant upgrades. She reviewed the main drivers for plan costs including wet-weather projects, major wastewater facility upgrades, and regulatory-driven projects such as the lead service line replacement program. There was some discussion regarding the regulatory projects.

Ed Klein provided an overview of the funding sources for the 2026-2030 Capital Plan projects.

Chuck Volk reviewed the comments that were received from the City of Allentown and the Lehigh Valley Planning Commission.

There was additional Board discussion regarding funding for the lead service line replacement program. Sean Ziller thanked the staff for putting together a thoughtful capital plan.

On a motion by Sean Ziller, seconded by Linda Rosenfeld, the Board approved the 2026-2030 Capital Plan (7-0).

2026 Budget

Liesel Gross noted that today's presentation is a summary of 2026 Budget information previously provided to the Board, and the Board will be asked to approve the Budget. Ms. Gross provided an executive summary and reviewed the highlights of the 2026 Budget, summarizing the impact of the strategic initiatives and staff changes. There are no changes to the proposed budget from prior presentations.

Ed Klein reviewed the 2026 Budget summary, noting the Authority's metrics related to debt service coverage ratio and cash reserves, and he reviewed planned borrowing for 2026 capital expenses.

Ms. Gross reviewed the proposed customer rate increases for 2026 and a rate comparison among other communities in the Lehigh Valley.

On a motion by Ted Lyons, seconded by Peter Dent, the Board approved the 2026 Budget (7-0).

Emergency Declaration – Water Main Replacement – 13th Street, Allentown

Chris Moughan provided an overview of the water main break that occurred on October 15th on 13th Street, between Liberty and Gordon Streets, in Allentown. After assessing the situation, Joao Bradley was contacted to mobilize their emergency repair team. Approximately 15 feet of damaged 12-inch cast iron pipe was removed and replaced with 12-inch ductile iron pipe using two repair clamps received from Eastern Suburban via Core and Main. Water service was restored around 6:30 p.m. and the roadway was reopened shortly thereafter. Based on the findings of the damaged pipe, it was recommended that full replacement of the 12-inch water main in that block be replaced. The

pipe was originally installed in 1912. Further discussion determined that the adjacent 30-inch main of similar age and condition should also be replaced, but this pipe could be downsized to 12-inch ductile iron pipe. Joao Bradley provided a cost estimate of \$397,875.00 for the work. Due to the time sensitive nature of the repair, the emergency was declared administratively on October 15, 2025.

Staff is asking for Board approval of the declaration retroactive to October 15, 2025 to cover expenses already incurred in response to this emergency and waive standard purchasing guidelines as a result of acting as expeditiously as possible to address the emergency.

Sean Ziller asked if any buildings were impacted by the water flowing from the water main break and, if so, does the Authority share the cost of remediation. Chris Moughan said that most of the water went into the storm drain, and he is unaware of any property damage. There was some discussion about the insurance claims process in these cases and protections provided to municipal entities for exposure to property damage claims.

There was additional discussion regarding the prioritization of pipe replacements based on age and condition.

On a motion by Sean Ziller, seconded by Linda Rosenfeld, the Board approved the Emergency Declaration retroactive to October 15, 2025, for the water main replacement and repair work on 13th Street in Allentown for a cost estimate of \$397,875.00 (7-0).

Suburban Division – Upper Western Lehigh Pump Station & Force Main Change Order

Chuck Volk provided a background of the project. Amy Kunkel explained that during construction of the pump station wet well, and after an extended period of wet weather, a sinkhole developed on the construction site near the two parallel interceptors that convey sewage to and from the Pretreatment Plant. Earth Engineering Inc. (EEI) was retained by Blooming Glen Contractors to evaluate and quantify the sinkhole and recommended that grouting be installed to minimize further sinkhole development and damage to the interceptor lines. The cost to install the grouting is a conservative estimate based on the recommendation from the geotechnical engineer. The exact amount of drilling and grouting material required to reach bedrock is not known at this time, and actual costs will be updated upon completion of the work.

On a motion by Linda Rosenfeld, seconded by Peter Dent, the Board approved Amendment No. 1 for the Construction Change Order for Contract 1 – General / Process Mechanical to Blooming Glen Contractors Inc. in the amount of \$149,981.52 (7-0).

MONTHLY FINANCIAL REVIEW

Ed Klein provided a presentation of the September 2025 Financial statements. He stated that cash flow for the full year is forecasted to be better than the budget for all three funds; however, net income is favorable to budget for Suburban Water and Wastewater, but the City Division is unfavorable due to deferment of the \$15 million lead service line replacement project in 2025.

MONTHLY SYSTEM OPERATIONS OVERVIEW

Andrew Moore reviewed the September 2025 report, reviewing the two recordable injury accidents that occurred last month. Both accidents required medical attention. Amir Famili commented that the lack of JSAs (Job Safety Analysis) appears to be a common theme in the safety incidents reported this year. He asked that the Board be updated on current procedures and process of updating JSAs. Mr. Moore said that this can be provided at a future meeting.

Mr. Moore reviewed water production and wastewater treatment statistics for the prior month. He explained a Notice of Violation (NOV) was received for the PFAS exceedance in the Emmaus Consecutive Division. An NOV will be issued quarterly until the Borough of Emmaus project to resolve the PFAS issue is completed. He then reviewed the system performance for sanitary sewer overflows and permit exceedances.

STAFF COMMENTS

Liesel Gross introduced Taylor Stakes, the new Director of Communications and Strategic Partnerships. Mr. Stakes provided a brief background of his work experience.

SOLICITOR'S COMMENTS

None.

PUBLIC COMMENTS / OTHER COMMENTS

None.

BOARD MEMBER COMMENTS

None.

EXECUTIVE SESSION

None.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 1:25 p.m.

Linda A. Rosenfeld
Secretary

Lehigh County Authority Board of Directors

Governance Committee

Meeting Minutes

Meeting Date & Time: Monday, August 25, 2025 at 10:45 a.m.

Meeting Location: Lehigh County Authority, 1053 Spruce Road, Allentown, PA 18106

Agenda:

1. Call to Order

Committee Chair Peter Dent called the meeting to order at 10:45 a.m.

2. Roll Call

Committee members present:

Committee Chair – Peter Dent

LCA Board Chair – Amir Famili

Linda Rosenfeld

Ted Lyons

Committee members absent: None

LCA Staff: Liesel Gross, CEO (non-voting)

3. Approval of Minutes

On a motion by Peter Dent, seconded by Amir Famili, the Committee approved the minutes of the August 11, 2025 Governance Committee meeting (4-0).

4. Governance Committee Charter

The Committee reviewed a final draft of the Governance Committee Charter and made minor suggested changes. A final version of the charter will be included on the agenda at the next Board of Directors meeting for review and approval.

5. Executive Committee Charter

Upon discussion of the Committee, a recommendation for the formation of an Executive Committee will not be brought forward to the Board of Directors for approval at this time.

6. LCA Board Member Expectations

The Committee discussed the use of a signed document for Board members to codify their commitment to meeting certain expectations for their participation on

the Board. A draft Expectations document was reviewed, with suggested changes discussed. A final version of the Board Expectations document will be included on the agenda at the next Board of Directors meeting for review and approval.

There was some discussion about when the Board members would be asked to sign the document, and opportunities to share the document in advance of a new Board member being appointed by the County of Lehigh. The Committee's recommendation will be to have existing Board members sign the document now, and new Board members sign it following their appointment to the Board.

Ted Lyons asked about the current process for appointments to the Authority Board of Directors, which Liesel Gross reviewed. The Committee discussed the need to have greater input or participation in the recruiting process to ensure the Board makeup is suitable for the efficient and effective operation of the Authority.

7. Committee Meeting Schedule

The next Committee meeting will be held at 10:45 a.m. on October 13, 2025. A Committee meeting schedule will be developed for 2026 for review at the next meeting. The schedule will be based on meeting in the morning of the first regular Board meeting of each calendar quarter.

8. New Business

Based on review of the Governance Committee Charter, Peter Dent recommended that the next meeting of the Committee be focused on review of Board Officers' roles and responsibilities, along with discussion of the formation of a Finance Committee.

Ted Lyons agreed that the Treasurer's role requires some additional discussion, and the Authority would benefit from having a Board member with strong financial background given the size of the Authority's capital budget. The investment strategies employed by the CFO should be discussed and reviewed by the Board.

There was some additional discussion about the makeup of the Board. An alternative was discussed of finding a financial person to serve on the Finance Committee, as the Board Chair may appoint Committee members who are not currently serving on the Authority Board.

9. Public Comment

None.

10. Adjourn

Mr. Dent adjourned the meeting at 11:35 a.m.

MEMORANDUM

TO: LCA Board of Directors
FROM: Liesel Gross, CEO
DATE: November 3, 2025
RE: 2026 Water & Sewer Rates

Attached: Sample Residential Bill Calculations for LCA Service Areas
Lehigh Valley Water & Sewer Rate Comparison
Proposed 2026 Water & Sewer Rate Schedules

Important Reminders

1. Lehigh County Authority is a non-profit, municipal authority. All revenues collected through our water and sewer rates are used for the sole benefit of the system to pay for current expenses or to fund future capital improvements.
2. Our Board of Directors are unpaid volunteers, and LCA has no shareholders to pay.
3. While LCA operates as a single organization, the water and sewer revenues collected from our customers in Suburban communities may not be used to pay for expenses associated with the Allentown Division lease agreement, or vice versa. This is specified in all LCA bond documents that prohibit the mixing of revenues.
4. Our nation's water and wastewater systems face staggering public investment needs over the next several decades. The U.S. Environmental Protection Agency estimates more than \$1.2 Trillion will be needed for drinking water and wastewater infrastructure improvements over the next 20 years. These investments are needed not only to replace aging systems that are 50 to 100 years old or older, but also to implement new public health initiatives such as the requirement to remove all lead pipes from water systems. In LCA's service area, local needs to address these challenges will place continued stress on the annual budget and rates to all customers for the foreseeable future.
5. These critical system improvements and associated rate increases are necessary for the protection of public health and the environment, and to support a vibrant economy. LCA takes this responsibility very seriously. The decision to raise rates is weighed carefully against the long-term needs of the system so that LCA can fulfill its mission.

Rate Setting & Review Process

Lehigh County Authority's 2026 water and sewer rates are presented in the attached schedules for the Board of Director's consideration for adoption on November 10, 2025. They have been posted on the LCA website in advance of their proposed adoption and shared with key customers directly in accordance with any existing service agreements. Should any customer or member of the general public

have questions or comments about these rates prior to their effective date of January 1, 2026, LCA staff will bring them back to the Board for consideration and to record them publicly for the record.

To assist the Board and the public with reviewing the proposed rates, a summary of the proposed rate changes is shown on the table below, and all changes are highlighted / shaded grey within the rate schedule documents attached. A calculation of the impact to a typical residential customer is also attached to this memo along with a comparison of how LCA's rates compare to other water/sewer utilities in the Lehigh Valley region and other major urban areas located in Pennsylvania.

It is important to note that these rates were discussed, reviewed, and preliminarily approved as part of the 2026 Budget process that began in July and was concluded in October. This submission represents formal adoption of the rates that were generated based on 2026 Budget calculations of revenue requirements as well as contractual requirements for rate-setting.

Water Rates

Rate	Page #	Description / Discussion
Suburban Water Fixed & Volume Charges	1	Proposed changes in the volume rates align with recommendations made by LCA's rate consultant in 2022 using a "cost of service" model designed to distribute actual system costs to customers in accordance with their water usage.
Public Fire Protection	2	Fire hydrant and system charges for public fire service provided by the Authority were also evaluated as part of the 2022 water rate study.
Allentown Water Rates	6	The 2026 rates reflect increases based on the terms of the Concession Lease Agreement with the City of Allentown, as amended in the summer of 2020. Such increases include an overall 7.1% increase, comprised of increases to general fixed and volume charges and updated calculations of the Capital Cost Recovery Charge and other fees per the methodology included in the Lease.

Wastewater Rates

Rate	Page #	Description / Discussion
Suburban Common Rate Sewer Systems	1	Sewer rates in LCA's small sewer systems have not been increased since 2013 and have not kept pace with operations and maintenance costs. The 2026 rate increases on average by about 4% and will be continued annually to address revenue requirements for these small systems.
Suburban Exceptional Strength Charge	4	As calculated in the Western Lehigh Interceptor User Charge Report that was submitted to municipal signatories in October 2025. Rates are calculated by formula in compliance with municipal agreements.
Western Lehigh Interceptor & Little Lehigh Relief Interceptor User Charges	6	As calculated in the Western Lehigh Interceptor User Charge Report that was submitted to municipal signatories in October 2025. Rates are calculated by formula in compliance with municipal agreements.

Rate	Page #	Description / Discussion
Allentown Sewer Rates	7	The 2026 rates reflect increases based on the terms of the Concession Lease Agreement with the City of Allentown, as amended in the summer of 2020. Such increases include an overall 7.1% increase, comprised of increases to general fixed and volume charges and updated calculations of the Capital Cost Recovery Charge and other fees per the methodology included in the Lease.
Allentown Exceptional Strength Charge	8	As calculated by formula and applied to the City’s municipal signatories and in-City customers with high-strength waste discharges.
Allentown Industrial Pretreatment Charges	8	Fees that may apply to individual customers depending on permit parameters, based on actual costs.

2026 Tapping Fees / Customer Facilities Fees

Any updates to these fees that may be required will be brought to the Board at a later date with required documentation and Resolution.

**LEHIGH COUNTY AUTHORITY
SCHEDULE OF WATER RATES AND CHARGES**

**CENTRAL LEHIGH, NORTH WHITEHALL, WASHINGTON TOWNSHIP,
HEIDELBERG HEIGHTS, ARCADIA, PINE LAKES, MILL CREEK, BEVERLY HILLS,
CLEARVIEW FARM ESTATES, UPPER MILFORD CENTRAL, EMMAUS CONSECUTIVE,
AND MADISON PARK NORTH DIVISIONS**

I. Schedule of Water Rates

A. Metered Water Use

**Central Lehigh, North Whitehall, Washington Township, Heidelberg Heights,
Arcadia, Pine Lakes, Mill Creek, Beverly Hills, Emmaus Consecutive,
Madison Park North, Upper Milford Central & Clearview Farm Estates
Divisions**

(adopted 11/10/2025; effective 1/1/2026)

Current Fixed Charges		2026
Meter Size	Fixed Charge	Fixed Charge
<i>Quarterly</i>		
5/8" & 3/4" *	\$34.50	\$36.50
1"	61.25	65.00
<i>Monthly</i>		
1-1/2"	46.25	49.00
2"	64.00	67.75
3"	115.75	122.75
4"	169.50	179.75
6"	317.50	336.50
8"	493.25	522.75
10"	694.25	736.00

*Typical residential.

Current Volume Charges			2026
Quarterly Usage (gal.)	Monthly Usage (gal.)	Rate per 1,000 Gal.	Rate per 1,000 Gal.
First 120,000	First 0 - 40,000	\$4.02	\$4.14
Next 2,880,000	Next 960,000	\$3.63	\$3.74
Next 24,000,000	Next 8,000,000	\$3.18	\$3.28
Next 147,000,000	Next 49,000,000	\$2.92	\$3.01
Over 174,000,000	Over 58,000,000	\$2.72	\$2.80

Welshtown Road (Washington Township Division)

(adopted 9/19/95; effective 10/1/95)

Volume		Rate per 1,000 Gal.
First 8,000 gal./qtr.		*Minimum Charge/Quarter
All over 8,000 gal./qtr.		\$ 5.50
Meter Size		*Minimum Charge/Quarter
5/8" & 3/4"		\$ 60.00
1"		72.00
1-1/4"		84.00
1-1/2"		108.00
2"		133.00
3"		169.00
4"		266.00
6"		459.00

LEHIGH COUNTY AUTHORITY
SCHEDULE OF WATER RATES AND CHARGES (cont'd)

B. Public Fire Protection

(adopted 11/10/2025; effective 1/1/2026)

Each Public Fire Hydrant (O&M Charge)	\$11.26/month
Each Inch-Squared Foot (System Charge)	\$0.00188/year

2026 Rates:

\$11.71/month

\$0.00196/year

C. Private Fire Protection

(adopted 7/12/10; effective 7/12/10)

Fire Line Size	Charge per Month
Single Family Residential	\$ 5.00
2"	13.61
2-1/2"	21.26
3"	30.62
4"	54.43
6"	122.47
8"	217.72
10"	340.18
12"	489.87

Arcadia West Division – Direct Fire Protection Service

(adopted 5/12/03; effective 5/12/03)

	Charge per Sq. Ft. of Building Space
Monthly	\$.00321
Quarterly	.00963

II. Meter Test Fee

(adopted 12/15/14; effective 1/1/15)

Meter Size	Fee
5/8", 3/4", 1"	\$50.00
Larger than 1"	Actual Cost if >\$50

III. Meter Inspection Fee

(adopted 12/15/14; effective 1/1/15)

\$50.00**IV. Service Order / Site Visit Fees**

(adopted 12/15/14; effective 1/1/15)

Business Hours – 7:00 a.m. and 4:45 p.m., Monday through Friday (except holidays)	\$50.00
After Hours	\$150.00
Service Termination & Restoration Charge	\$100.00

V. Site Revisitation Charge

(adopted 12/15/14; effective 1/1/15)

\$100.00

**LEHIGH COUNTY AUTHORITY
SCHEDULE OF WATER RATES AND CHARGES (cont'd)**

VI. Lien Administration Fee

(adopted 12/13/04; effective 01/1/05)

\$56.50 + Current Lehigh County Clerk of Court's Filing Fee**VII. Hydrant Security Device Fee****Central Lehigh Division**

(adopted 11/28/16; effective 1/1/17)

\$140.00**VIII. Fire Flow Test Charge**

(adopted 11/11/2024; effective 1/1/2025)

\$300.00**IX. Use of Easement Preparation Fee**

(adopted 12/07/11; effective 01/01/12)

\$90.00**X. Backflow Prevention Non-compliance Charge**

(adopted 12/07/11; effective 01/01/12)

\$50.00

LEHIGH COUNTY AUTHORITY
SCHEDULE OF WATER RATES AND CHARGES (cont'd)

IX. Tapping, Connection and Customer Facilities Fees

(adopted 7/28/2025; effective 8/1/2025)

Central Lehigh, North Whitehall, Washington Township, Heidelberg Heights, Pine Lakes, Mill Creek, Beverly Hills, Madison Park North, Upper Milford Central & Clearview Farm Estates Divisions

Size of Service Line	Tapping Fee		Connection Fee	Customer Facilities Fee
	Distribution	Capacity		
MFR*	\$ 173.93	\$ 529.32	Actual Cost See fee schedule	
3/4"	260.89	793.98		
1"	434.82	1,323.30		
1-1/2"	869.63	2,646.59		
2"	1,391.41	4,234.55		
3"	2,608.89	7,939.78		
4"	4,348.16	13,232.97		
6"	8,696.32	26,465.94		
8"	13,914.10	42,345.51		
10"	20,001.52	60,871.67		
12"	37,394.15	113,803.56		

Emmaus Consecutive Division

Inquire with Lehigh County Authority. Tapping fee subject to intermunicipal agreement for water capacity provided by Borough of Emmaus.

Arcadia Division

Size of Service Line	Tapping Fee		Connection Fee	Customer Facilities Fee
	Distribution	Capacity		
MFR*	\$ 194.86	\$ 1,822.92	Actual Cost See fee schedule	
3/4"	292.29	2,734.37		
1"	487.16	4,557.29		
1-1/2"	974.32	9,114.58		
2"	1,558.90	14,583.32		
3"	2,922.95	27,343.73		
4"	4,871.58	45,572.88		
6"	9,743.16	91,145.76		
8"	15,589.05	145,833.22		
10"	22,409.26	209,635.25		
12"	41,895.57	391,926.77		

Special Purpose Fee		
Fire Service System	\$ 0.18	Per Square Foot of Building Space

Notes:

MFR - Applicable to each dwelling unit in a mobile home park or multi-family dwelling with individual service and individually metered.

Connection Fee is based on actual cost of connecting to the Authority water line, extending the service line to the property line, and inspecting the Customer Service Line.

LEHIGH COUNTY AUTHORITY
SCHEDULE OF WATER RATES AND CHARGES (cont'd)

Customer Facilities Fee

(adopted 12/9/2024; effective 1/1/2025)

This fee includes the supply and installation of a water meter and a backflow protection device for residential facilities (meter component). The fee can also include, at the customer's option and based on actual cost, installation of a service line from the property line to the customer's facility by the Authority.

All service lines must have an approved backflow protection device installed. The Authority will furnish a DC (dual check) device for residential facilities.

Meter Size	Meter Fee - With DC Backflow	Meter Fee - With No Backflow
5/8"	\$530	\$472
5/8" Pit	\$531	\$473
3/4"	\$549	\$491
3/4" Pit	\$550	\$492
1"		\$619
1" Pit		\$562
1 1/2" Displacement *		\$874
1 1/2" Turbine *		\$1,338
1 1/2" Compound *		\$1,831
2" Displacement *		\$1,133
2" Turbine *		\$1,553
2" Compound *		\$2,087

* LCA will install all meters 1" or smaller. Larger meters may be purchased from LCA at the prices listed above, which includes a \$50 inspection fee. If LCA installation of a larger meter is requested, the customer will pay actual costs, on a time and materials basis.

Notes:

Backflow protection devices for commercial/industrial facilities or other facilities with a 1" or larger meter shall be approved by the Authority, and supplied, installed and tested by the applicant. Meters larger than 2" shall be approved by the Authority, supplied and installed by the applicant, and inspected by the Authority at the applicant's expense.

X. Non-Sufficient Funds (NSF) Fee

All Divisions

(adopted 9/24/01, effective 1/1/02)

\$25.00

XI. Service Initiation Fee

All Divisions

(adopted 9/24/01, effective 1/1/02)

\$15.00

LEHIGH COUNTY AUTHORITY
SCHEDULE OF WATER RATES AND CHARGES (cont'd)

CITY OF ALLENTOWN

Adopted 11/10/2025; Effective 1/1/2026

NOTE: Unless expressed specifically in this Schedule of Rates and Charges, customers of the City of Allentown water system are subject to any and all additional charges, fees, penalties and policies stated in Lehigh County Authority's Rules & Regulations for Water Service and its Schedule of Water Rates and Charges duly adopted for its non-City systems.

A. Metered Water Use

Meter Size	2025 Monthly Charge	2026 Monthly Charge	2025 Quarterly Charge	2026 Quarterly Charge
5/8"	n/a	n/a	\$85.57	\$90.28
3/4"	n/a	n/a	\$94.93	\$100.15
1"	n/a	n/a	\$114.11	\$120.38
1 1/2"	\$53.77	\$56.73	n/a	n/a
2"	\$72.63	\$76.62	n/a	n/a
3"	\$122.79	\$129.54	n/a	n/a
4"	\$179.51	\$189.38	n/a	n/a
6"	\$336.58	\$355.09	n/a	n/a
8"	\$525.28	\$554.17	n/a	n/a

Volume	2025 Rate per 1,000 Gallons*	2026 Rate per 1,000 Gallons*
All Volume	\$5.11851	\$5.35708

* Volume charge includes cost recovery for any Change of Law and cost passed through from the Delaware River Basin Commission as allowed under the Lease Agreement with the City of Allentown.

B. Capital Cost Recovery Charge

\$0.40753 per 1000 gallons

2026 Rate: \$0.42054

C. Private Fire Protection

Each Hydrant	\$506.33 per year (may be billed monthly or quarterly)
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2026 Rate:
\$534.17

D. Tapping Fees

Part 1 – Pre-Concession Rate for Pre-Concession Capital Cost Recovery

\$8.30 per gallon

2026 Rate: \$8.75

Part 2 – Post-Concession Rate for LCA Capital Cost Recovery

Capacity Part	\$0.00851 per gallon
Distribution Part	\$0.02551 per gallon

LEHIGH COUNTY AUTHORITY
SCHEDULE OF WATER RATES AND CHARGES (cont'd)

E. Customer Facilities Fees

Adopted 12/9/2024; Effective 1/1/2025

Fees includes the supply and installation of a water meter and associated components.

Meter Size	With LCA Installation*	Without LCA Installation*
5/8"	\$394	
3/4"	\$463	
1"	\$448	
1 1/2"	\$784	
2"	\$988	
3" Compound		\$2,279
3" Turbine		\$1,629
4" Compound		\$3,833
4" Turbine		\$3,012
6" Compound		\$6,694
6" Turbine		\$5,445
6" Fireline		\$12,306
8" Compound		\$10,709
8" Turbine		\$9,143
8" Fireline		\$19,425
* LCA will install all meters 2" or smaller. Larger meters may be purchased from LCA at the prices listed above, which includes a \$50 inspection fee. If LCA installation of a larger meter is requested, the customer will pay actual costs, on a time and materials basis.		

Other Components	Price
5/8" Meter Horn	\$65.51
3/4" Meter Horn	\$76.69
Curb Box	\$107.33

LEHIGH COUNTY AUTHORITY
SCHEDULE OF WATER RATES AND CHARGES (cont'd)

F. Connection Fee

Adopted 12/9/2024; Effective 1/1/2025

Actual cost of connecting to the Authority water line, completed by Authority personnel. Additional fees may apply for service line inspection, plan review, construction permits and/or capital recovery charges. Please contact the Authority's Capital Works department for more information.

Tap Size	Connection Fee
3/4"	\$439
1"	\$468
1 1/2"	\$702
2"	\$879
4" x 4"	\$3,097
6" x 4"	\$3,291
6" x 6"	\$3,554
8" x 4"	\$3,568
8" x 6"	\$3,831
8" x 8"	\$4,541
12" x 4"	\$5,024
12" x 6"	\$5,288
12" x 8"	\$6,060
12" x 12"	\$8,152

**LEHIGH COUNTY AUTHORITY
SCHEDULE OF WASTEWATER RATES AND CHARGES**

**UPPER MILFORD TOWNSHIP, WEISENBERG TOWNSHIP,
HEIDELBERG HEIGHTS, WYNNEWOOD, SAND SPRING, WASHINGTON
TOWNSHIP, LOWHILL TOWNSHIP, LYNN TOWNSHIP, WESTERN LEHIGH
INTERCEPTOR & LITTLE LEHIGH RELIEF INTERCEPTOR SYSTEMS**

I. Schedule of Wastewater Rates

For Subsection A of this schedule, the following shall apply:

- All single-family residential properties shall be billed based on the first-quarter usage based on water meter readings. Multi-family residential properties shall be billed based on actual usage in each bill cycle based on water meter readings.
- If no first-quarter usage data is available, or the property is unmetered, residential properties shall be billed based on an assumed usage of 180 gallons per day per EDU.
- All commercial properties shall be billed based on actual usage based on water meter readings.
- Where a per-EDU fixed charge is applied to commercial properties, the assumed value of an Equivalent Dwelling Unit is 235 gallons per day.

For Subsections B - D of this schedule, the following shall apply:

- All properties shall be billed based on actual usage in each bill cycle based on water meter readings. Unmetered properties shall be billed based on an assumed usage of 180 gallons per day per EDU.
- Where a per-EDU fixed charge is applied to commercial properties, the assumed value of an Equivalent Dwelling Unit is 235 gallons per day.

A. Common Rate Sewer Collection Systems

Direct customers in Upper Milford, Weisenberg, Lowhill, and Upper Macungie Townships with no local wastewater treatment system (collection systems only).
(adopted 11/10/2025; effective 1/1/2026)

Flow Charge	<u>\$/1,000 gals</u>
All Flow	4.53

Fixed Charge per Quarter	<u>\$ per Equivalent Dwelling Unit (EDU)</u>	<u>2026 Fixed Charge per EDU</u>
- Multi-Family Residential	10.50	\$12.00
- All Other Accounts	21.00	\$24.00

B. Common Rate Sewer Collection & Treatment Systems

Wynnewood Terrace, Heidelberg Heights, Sand Spring and Lynn Township systems with wastewater treatment plant service.
(adopted 11/10/2025; effective 1/1/2026)

Flow Charge	<u>\$/1,000 gals</u>
All Flow	9.53

Fixed Charge per Quarter	<u>\$ per Equivalent Dwelling Unit (EDU)</u>	<u>2026 Fixed Charge per EDU</u>
- Multi-Family Residential	10.50	\$15.00
- All Other Accounts	21.00	\$30.00

**LEHIGH COUNTY AUTHORITY
SCHEDULE OF WASTEWATER RATES AND CHARGES**

D. Washington Township System

(adopted by resolution of Washington Township Board of Supervisors 12/2/08; effective 1/1/09 – Administered by Lehigh County Authority per agreement, as operator, approved 4/13/09; effective 1/1/09. Current rate adopted by LCA 12/10/12; effective 01/01/13). All other Authority administrative fees shall apply to these customers, including those set forth in the Metering Fees and Other Charges categories of this schedule.

Fixed Charge	\$/qtr
All customers	\$124.00

Flow Charge	\$/1,000 gals
All flow	\$5.00

LEHIGH COUNTY AUTHORITY SCHEDULE OF WASTEWATER RATES AND CHARGES

II. Metering Fees

A. Meter Purchase/Installation Fee

(adopted 12/9/2024; effective 1/1/2025)

Meter Size	Purchase & Inspection *
5/8"	\$399
5/8" Pit	\$400
3/4"	\$418
3/4" Pit	\$419
1"	\$546
1" Pit	\$489
1-1/2" Displacement	\$874
1-1/2" Turbine	\$1,338
1-1/2" Compound	\$1,831
2" Displacement	\$1,133
2" Turbine	\$1,553
2" Compound	\$2,087

* Prices include ECR meter with touchpad, radio read unit and installation wire, plus \$50 inspection fee. Plumber shall install all components and call for meter inspection by LCA personnel.

B. Meter Inspection Fee

\$50.00

(adopted 12/15/14; effective 1/1/15)

C. Meter Test Fee

(adopted 12/15/14; effective 1/1/15)

Meter Size	Fee
5/8", 3/4", 1"	\$50.00
Larger than 1"	Actual Cost if >\$50

III. Other Charges

A. Service Order / Site Visit Fee

(adopted 12/15/14; effective 1/1/15)

Business Hours – 7:00 a.m. and 4:45 p.m.,
Monday through Friday (except holidays) **\$50.00**

After Hours **\$150.00**

B. Site Revisitation Charge

\$100.00

(adopted 12/15/14; effective 1/1/15)

**LEHIGH COUNTY AUTHORITY
SCHEDULE OF WASTEWATER RATES AND CHARGES**

- C. Lien Administration Fee**
(adopted 12/13/04; effective 01/01/05)

\$56.50 + Current Lehigh County Clerk of Court's Filing Fee

- D. Non-Sufficient Funds (NSF) Fee** **\$25.00**
(adopted 9/24/01, effective 1/01/02)

- E. Service Initiation Fee** **\$15.00**
(adopted 9/24/01, effective 1/01/02)

- F. Sampling and Testing Charges** **\$182.00/day**
(adopted 11/11/19; effective 1/1/20)
(Commercial & Industrial)

Fats-Oils-Greases Analysis **\$68.50/sample**
(adopted 11/11/2024; effective 1/1/2025)

- G. Exceptional Strength Charges**
(adopted 11/10/2025; effective 1/1/2026)

(Commercial & Industrial)	2025 Rates \$ / pound	2026 Rates \$ / pound
BOD	0.34	0.40
TSS	0.28	0.39
TKN	0.42	0.43

- H. Use of Easement Preparation Fee** **\$90.00**
(adopted 12/07/11; effective 01/01/12)

**LEHIGH COUNTY AUTHORITY
SCHEDULE OF WASTEWATER RATES AND CHARGES**

IV. Capital Recovery Charges

(adopted 7/28/2025; effective 8/1/2025)

System	Tapping Fee \$/gallon/day	Tapping Fee \$/EDU	Connection Fee	Customer Facilities Fee
Upper Milford System			Actual Cost Trended*	Actual Cost Trended*
Route 29 Service Area				
Contributed Area (includes Western Lehigh fees plus UMiT Capacity & Planning Parts)	\$ 24.11	\$ 5,538.20		
LCA-Installed Area (includes Contributed Area fees plus UMiT Collection Part)	37.45	8,779.45		
Lower Macungie Twp. Customer	3.29	768.84		
Other Service Areas				
Contributed Area (includes Western Lehigh fees plus UMiT Capacity Part-Other)	16.80	3,760.08		
Non-Contributed Area (includes Contributed Area fees plus UMiT Collection Part)	30.13	7,001.34		
Western Weisenberg Twp System				
LCA Planning Fee	3.38	887.47	Historical Cost plus Financing	
LCA Land Fee	6.15	1,613.77	Actual Cost Trended	
Wastewater Treatment Plant	51.00	13,388.70	Actual Cost Trended	
Wynnewood System				
Capacity	96.04	22,473.09	Actual Cost	Actual Cost
Collection	23.65	5,533.53		
Heidelberg Heights System				
Capacity	45.40	10,622.77	Actual Cost	Actual Cost
Collection	4.57	1,069.72		
Sand Spring System				
Capacity	178.85	41,851.21	Actual Cost	Actual Cost
Collection	4.50	1,052.55		

*If constructed by Authority; if constructed by property owner, a \$90 inspection fee applies.

The capital recovery fees set forth in this schedule do not apply to the Washington Township sewer system since the Washington Township Board of Supervisors establishes such fees and administers capital recovery fees directly.

**LEHIGH COUNTY AUTHORITY
SCHEDULE OF WASTEWATER RATES AND CHARGES**

WESTERN LEHIGH INTERCEPTOR SYSTEM

I. Schedule of Wastewater Rates

(adopted 11/10/2025; effective 1/1/2026)

LCA Signatories	<u>2025 Rate (\$)</u>	<u>2026 Rates</u>
Flow (per 1,000 gallons)	1.55	\$1.48
BOD (per pound)	0.34	\$0.40
TSS (per pound)	0.28	\$0.39
TKN (per pound)	0.42	\$0.53
Allocation (per 1,000 gallons per day)	0.31	\$0.36
Emmaus		
Flow (per 1,000 gallons)	0.46	\$0.58

II. Tapping Fee

(adopted 7/28/2025; effective 8/1/2025)

<u>System</u>	<u>Tapping Fee \$/gal/day</u>	<u>Tapping Fee \$/EDU</u>	<u>Costing Method</u>
Treatment Allocation	7.84	1,747.39	Historical Trended Cost
Western Lehigh Interceptor	6.05	1,349.21	

LITTLE LEHIGH RELIEF INTERCEPTOR SYSTEM

I. Schedule of Wastewater Rates

(adopted 11/10/2025; effective 1/1/2026)

	<u>2025 Rates (\$)</u>	<u>2026 Rates</u>
LCA Signatories – Phase 1	0.33	\$0.16
Flow (per 1,000 gallons)		
Other Users – Lower Macungie Phase 2 & Brookside Road, Salisbury, and So. Whitehall Townships		
Flow (per 1,000 gallons)	0.31	\$0.19
LCA Signatories – Phase 2 Flow (per 1,000 gallons)	0.018	\$0.025

II. Tapping Fee

(adopted 7/28/2025; effective 8/1/2025)

<u>System</u>	<u>Tapping Fee \$/gal/day</u>	<u>Tapping Fee \$/EDU</u>	<u>Costing Method</u>
Little Lehigh Relief Interceptor	2.17	484.04	Historical Trended Cost

LEHIGH COUNTY AUTHORITY SCHEDULE OF WASTEWATER RATES AND CHARGES

CITY OF ALLENTOWN

Adopted 11/10/2025; Effective 1/1/2026

NOTE: Unless expressed specifically in this Schedule of Rates and Charges, customers of the City of Allentown wastewater system are subject to any and all additional charges, fees, penalties and policies stated in Lehigh County Authority's Rules & Regulations for Sewerage Service and its Schedule of Wastewater Rates and Charges duly adopted for its non-City systems.

A. Sewer Usage Charges

Meter Size	2025 Monthly Charge	2026 Monthly Charge	2025 Quarterly Charge	2026 Quarterly Charge
5/8"	n/a	n/a	\$29.75	\$31.38
3/4"	n/a	n/a	\$32.97	\$34.78
1"	n/a	n/a	\$39.42	\$41.59
1 1/2"	\$18.52	\$19.54	n/a	n/a
2"	\$24.97	\$26.34	n/a	n/a
3"	\$42.29	\$44.62	n/a	n/a
4"	\$61.64	\$65.03	n/a	n/a
6"	\$115.52	\$121.87	n/a	n/a
8"	\$211.92	\$223.58	n/a	n/a

Flow Charge	2025 Rate per 1,000 Gallons*	2026 Rate per 1,000 Gallons*
All flow based on metered water usage**	\$3.65502	\$3.85688

* Flow charge includes cost recovery for any Change of Law and cost passed through from the Delaware River Basin Commission as allowed under the Lease Agreement with the City of Allentown.

** Unmetered residential accounts will be charged for flow based on an average usage of 180 gallons per day.

B. Capital Cost Recovery Charge

\$0.29680 per 1000 gallons

2026 Rate:
\$0.65344

C. Administrative Order Fee

\$0.20363 per 1000 gallons

2026 Rate:
\$0.20934

Administrative Order Fee is collected to reimburse the City of Allentown for expenses associated with complying with the USEPA Administrative Order to correct / eliminate sanitary sewer system overflows.

D. Tapping Fees

Part 1 – Pre-Concession Rate for Pre-Concession Capital Cost Recovery

\$6.32 per gallon

2026 Rate: \$6.67

Part 2 – Post-Concession Rate for LCA Capital Cost Recovery

Capacity Part \$0.01538 per gallon

Collection Part \$0.00052 per gallon

**LEHIGH COUNTY AUTHORITY
SCHEDULE OF WASTEWATER RATES AND CHARGES**

E. Exceptional Strength Charges

(Commercial & Industrial)	2025 Rate \$ / pound	2026 Rate \$ / pound
BOD	0.330	0.334
TSS	0.293	0.312
TKN	0.430	0.466

F. Industrial Pretreatment Program Fees

Program Charge / Testing Fees	2025 Rate	2026 Rate
Issue Initial Two (2) Year Permit	\$1,200.00	\$1,200.00
Renewal Fee	\$575.00	\$575.00
Review of Monitoring Reports Required by Federal Regulations	\$275.00	\$275.00
Single Occurrence Review	\$350.00	\$350.00
Site Visitations and Inspection	\$130.00	\$130.00
Monitoring Reports Preparation	\$135.00	\$135.00
Placement of Chemical Samplers	\$105.00	\$105.00
Sample Collection and Preparation	\$52.50	\$52.50
Biochemical Oxygen Demand	\$28.50	\$28.50
Cyanide, Total	\$31.00	\$35.50
Oil & Grease	\$68.50	\$68.50
pH	\$13.00	\$13.00
Phenols	\$37.50	\$38.50
Solids, Total Dissolved	\$22.00	\$26.00
Solids, Total Suspended	\$18.00	\$18.00
Solids, Total	\$15.50	\$15.50
Sulfides	\$50.00	\$50.00
Total Kjeldahl Nitrogen (TKN)	\$30.00	\$30.00
Total Petroleum Hydrocarbons	\$75.00	\$75.00
Total Phosphorous as P	\$15.00	\$15.50
Cadmium	\$15.50	\$15.50
Chromium	\$15.50	\$15.50
Copper	\$15.50	\$15.50
Lead	\$15.50	\$15.50
Molybdenum	\$15.50	\$15.50
Nickel	\$15.50	\$15.50
Silver	\$15.50	\$15.50
Selenium	\$15.50	\$15.50
Zinc	\$15.50	\$15.50
Mercury	\$26.00	\$26.00
Cobalt	\$15.50	\$15.50
Lithium	\$15.50	\$15.50
SVOA 625	\$237.00	\$237.00
VOA 1666	\$449.00	\$449.00
VOA 624	\$125.00	\$128.50
Diesel Range Organics	\$78.00	\$78.00
PFAS	\$357.00	\$450.00

RESOLUTION No. 11-2025-1

Borrower Resolution (ME#80257)

(Duly adopted 10 November 2025)

AUTHORIZING THE SECURING OF A LOAN FROM THE PENNSYLVANIA INFRASTRUCTURE INVESTMENT AUTHORITY (“PENNVEST”) IN THE MAXIMUM PRINCIPAL AMOUNT OF \$5,660,930 (THE “LOAN”) AND THE ACCEPTANCE OF A PRINCIPAL FORGIVENESS LOAN FROM PENNVEST IN THE MAXIMUM PRINCIPAL AMOUNT OF \$6,337,070 (THE “PFL”) FOR THE PURPOSE OF PROVIDING FUNDS TO FINANCE THE REPLACEMENT OF LEAD SERVICE LINES OF THE ALLENTOWN WATER PLANT AND DISTRIBUTION SYSTEM, AND TO PAY COSTS AND EXPENSES OF SECURING SUCH FUNDING; AUTHORIZING THE EXECUTION AND DELIVERY OF A DEBT OBLIGATION OF THE AUTHORITY IN CONNECTION WITH THE LOAN; AUTHORIZING THE EXECUTION OF THE FUNDING DOCUMENTS, AND PROVIDING FOR THE AUTHENTICATION AND DELIVERY THEREOF; AUTHORIZING THE DISPOSITION OF THE FUNDING PROCEEDS RECEIVED OR TO BE RECEIVED FROM PENNVEST; AUTHORIZING AND DIRECTING THE PROPER OFFICERS OF THE AUTHORITY TO DO ALL THINGS NECESSARY TO CARRY OUT THIS RESOLUTION; AND RESCINDING ALL INCONSISTENT RESOLUTIONS.

WHEREAS, the Lehigh County Authority (the “Authority”) is a body corporate and politic organized by the Board of County Commissioners of the County of Lehigh, Pennsylvania (the “County”) 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 amended, including by that Allentown Water and Sewer Utility System Amended and Restated Concession and Lease Agreement dated as of September 1, 2020, and effective as of September 17, 2020 (the “Concession Agreement”), by and between the City and the Authority, the City leased the Concessioned System (as defined in the Concession Agreement) to the Authority, as concessionaire, and granted to the Authority the right to operate the Concessioned System in order to provide utility services and collect revenues

therefrom and in connection therewith, all in accordance with the provisions of the Existing Concession Agreement (as defined in the Concession Agreement); and

WHEREAS, the Authority, in connection with the lease and operation of the Concessioned System pursuant to the Concession Agreement, has from time to time issued bonds under and pursuant to a Trust Indenture dated as of August 1, 2013, as supplemented by a First Supplemental Trust Indenture dated as of August 1, 2015, a Second Supplemental Trust Indenture dated as of October 1, 2018, a 2020-1 Supplemental Trust Indenture dated as of September 1, 2020, and a 2020-2 Supplemental Trust Indenture dated as of September 1, 2020, and as amended and restated by that Amended and Restated Trust Indenture between the Authority and Manufacturers and Traders Trust Company (the “Trustee”), dated as of September 1, 2020, and effective as of September 17, 2020, as further amended and supplemented by a 2023-1 Supplemental Trust Indenture, dated as of February 1, 2023, a 2024-1 Supplemental Trust Indenture, dated as of March 1, 2024, and a 2025-1 Supplemental Trust Indenture, dated as of October 1, 2025 (collectively, the “Indenture”); and

WHEREAS, the Indenture provides that the Authority, under certain conditions, may incur Agency Loan Fund Subordinated Indebtedness outside of the Indenture, from time to time for any lawful purpose of the Authority; and

WHEREAS, in accordance with the Act and pursuant to the requirements of the Indenture, the Authority desires to incur Agency Loan Fund Subordinated Indebtedness outside of the Indenture to undertake a project (the “Project”) consisting of (i) the replacement of lead service lines of the Allentown Water Plant and Distribution System and (ii) the payment of the cost of issuing the Debt Obligation (hereinafter defined); and

WHEREAS, in order to finance the Project and any other costs and expenses and incurred by the Authority in connection with the PENNVEST Funding (hereinafter defined), the Authority intends to secure from the Pennsylvania Infrastructure Investment Authority (“PENNVEST”) a loan in the maximum principal amount of \$5,660,930 (the “Loan”) and a principal forgiveness loan in the maximum principal amount of \$6,337,070 (the “PFL,” and together with the Loan, the “PENNVEST Funding”), such Loan to be evidenced by a Debt Obligation, in the maximum principal amount of \$5,660,930, pertaining to the Loan, by the Authority in favor of PENNVEST (the “Debt Obligation”); and

WHEREAS, the Debt Obligation shall be issued outside of the Indenture and shall be secured by a lien on the Concession Revenues, as defined in the Indenture (known herein as the “Project Collateral”) that is by its terms expressly subordinated to the lien of the Indenture and the Concession Revenues; and

WHEREAS, pursuant to the foregoing, the Debt Obligation constitutes “Agency Loan Fund Subordinated Indebtedness” of the Authority, in accordance with Section 3.07 of the Indenture, which is both outside of and subordinate to the lien of the Indenture; and

WHEREAS, in addition to the Project Collateral, the Debt Obligation shall be secured by and any other agreements granting and creating security interests, all as more particularly set forth in the funding agreement between the Authority and PENNVEST (the “Funding Agreement”), and the funding offer from PENNVEST, dated as of October 16, 2024 as amended, supplemented and extended to date, and as may be further amended, supplemented and extended from time to time (the “Funding Offer,” and together with the Debt Obligation, the Funding Agreement, and all other security agreements, other agreements, documents, certificates and instruments described in or contemplated by the Funding Agreement are collectively referred to as the “Funding Documents”); and

WHEREAS, in connection with the PENNVEST Funding, the Authority desires and intends to take all necessary and proper actions to execute and deliver all documents required by PENNVEST to be executed and delivered to obtain and/or accept the PENNVEST Funding and to assure its proper repayment of the Loan, as well as any documents or certificates required under the Indenture relating to Subordinated Indebtedness; and

NOW, THEREFORE, the Board of the Lehigh County Authority hereby resolves as follows:

SECTION 1. For the purpose of providing funds to finance the cost of the Project and to pay costs and expenses in connection with the PENNVEST Funding, the Authority hereby authorizes the execution of all Funding Documents and the taking of all actions necessary and required by PENNVEST to obtain the Loan and accept the PFL, including the issuance of the Debt Obligation in connection with the Loan, all pursuant to the provisions of the Act and the Funding Documents.

SECTION 2. The Debt Obligation shall be secured by the Funding Documents from the Authority to PENNVEST, and to the extent and in the manner therein set forth, the Project Collateral, and other agreements granting and creating certain security interests in favor of PENNVEST.

Neither the Debt Obligation nor the Funding Documents shall in any manner pledge the full faith and credit or taxing power of the Commonwealth of Pennsylvania, the County or any political subdivision thereof, nor shall it be deemed to be an obligation of the Commonwealth of Pennsylvania, the County or any political subdivision thereof, nor shall the Commonwealth of Pennsylvania, the County or any political subdivision thereof be liable for the payment of the principal of, or interest on, such obligation, but it shall be secured upon and payable as provided for in the Indenture and from such other moneys as may be made available for the purpose of repaying the Debt Obligation.

SECTION 3. The Chair or Vice Chair of the Board of the Authority, or the Chief Executive Officer or Chief Financial Officer of the Authority (collectively and individually, the “Authority Officials”) are hereby authorized and directed to execute and deliver the Funding Documents in such form on behalf of the Authority, with the advice of counsel to the Authority and Bond Counsel, subject to such changes and

modifications, if any, as may be approved by such Authority Officials, the execution of the Funding Documents to be conclusive evidence of such approval, and, if required, the Secretary is hereby authorized to cause the corporate seal of the Authority to be affixed thereto and to attest the same. Such Authority Officials are further authorized to acknowledge the same on behalf of the Authority and to deliver said Funding Documents to PENNVEST.

SECTION 4. The Debt Obligation shall be repaid in the amounts and on certain dates, all as set forth in the Funding Documents as submitted to this meeting, subject to such changes and modifications, if any, that may be accepted by the Authority based on the advice of Counsel to the Authority and Bond Counsel, the execution of the Debt Obligation by the Authority Officials to be conclusive evidence of such approval of any changes and/or modifications.

SECTION 5. Upon receipt, the proceeds from the PENNVEST Funding authorized to be obtained and/or accepted in this Resolution, shall be applied by the Authority under the terms and conditions set forth in the Funding Documents.

SECTION 6. The Authority hereby ratifies and confirms the appointment of Eckert Seamans Cherin & Mellot, LLC, Harrisburg, Pennsylvania, as bond counsel for the Authority in connection with the PENNVEST Funding. Such firm shall work in cooperation with the Authority's solicitor.

SECTION 7. The proper officers of the Authority are hereby authorized, empowered and directed on behalf of the Authority to execute any and all papers and documents to do and cause to be done any and all acts and things necessary or proper for the execution or carrying out of this Resolution and the Funding Documents.

SECTION 8. All resolutions or parts of resolutions inconsistent herewith shall be, and the same are, hereby rescinded, cancelled and annulled.

NOW THEREFORE, BE IT RESOLVED that the Lehigh County Authority Board hereby approves Resolution No. 11-2025-1.

On motion of _____, seconded by _____,
_____, this resolution was adopted the 10th day of November, 2025.

Tally of Votes: Yeas _____ Nays _____

○ ○

I, Linda A. Rosenfeld, Secretary of the Lehigh County Authority Board of Directors, 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 10 November 2025, after notice thereof had been duly given as required by law, at which meeting a quorum was present and voting and which resolution No. 11-2025-1 is now in full force and effect on the date of this certification.

Linda A. Rosenfeld
Secretary
Lehigh County Authority Board of Directors

Attest:

Lisa J. Miller
Executive Administrative Support Specialist

RESOLUTION No. 11-2025-2
Reimbursement Resolution (ME#80257)
(Duly adopted 10 November 2025)

DECLARATION OF OFFICIAL INTENT TO REIMBURSE ITS GENERAL FUNDS USED TO REPLACE THE LEAD SERVICE LINES OF THE ALLENTOWN WATER PLANT AND DISTRIBUTION SYSTEM WITH FUNDS RECEIVED FROM THE PENNSYLVANIA INFRASTRUCTURE INVESTMENT AUTHORITY.

WHEREAS, Lehigh County Authority, Lehigh County, Pennsylvania (the “Authority”), has determined that it is necessary to undertake a capital project, (the “Project”) consisting of replacement of lead service lines in the Allentown Water Plant and Distribution System;

WHEREAS, in order to finance the costs of the Project, the Authority has entered into or intends to enter into a Funding Agreement with the Pennsylvania Infrastructure Investment Authority (“PENNVEST”) in the maximum principal amount of \$11,998,000, consisting of a loan in the maximum principal amount of \$5,660,930 and a principal forgiveness loan in the maximum principal amount of \$6,337,070, (together the “PENNVEST Funding Agreement”);

WHEREAS, the Authority intends to pay certain costs and expenses of the Project, on an interim basis, using funds from its General Fund until the proceeds of the PENNVEST Funding Agreement are received.

NOW, THEREFORE, the Authority hereby declares as follows:

Pursuant to federal requirements set forth at 26 C.F.R. § 1.150-2, the Authority officially intends to reimburse its General Fund for Project costs incurred by the Authority with the proceeds of the PENNVEST Funding Agreement up to the maximum principal amount of \$11,998,000.

NOW THEREFORE, BE IT RESOLVED that the Lehigh County Authority Board hereby approves Resolution No. 11-2025-2.

On motion of _____, seconded by _____, this resolution was adopted the 10th day of November 2025.

Tally of Votes: Yeas _____ Nays _____

○ ○

I, Linda A. Rosenfeld, Secretary of the Lehigh County Authority Board of Directors, 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 10 November 2025, after notice thereof had been duly given as required by law, at which meeting a quorum was present and voting and which resolution No. 11-2025-2 is now in full force and effect on the date of this certification.

Linda A. Rosenfeld
Secretary
Lehigh County Authority Board of Directors

Attest:

Lisa J. Miller
Executive Administrative Support Specialist



LEHIGH COUNTY AUTHORITY BOARD 2026 MEETING SCHEDULE

Meetings of the Lehigh County Authority ("LCA") Board are held on the 2nd & 4th Mondays of each month, except as noted below. All LCA Board meetings begin at Noon, 12:00 p.m. LCA Board meetings will be held at LCA's Main Office located at 1053 Spruce Road, Wescosville PA, 18106, as well as online using the Zoom Meetings internet application, or other video and audio advanced communication technology (ACT). LCA Board meetings are open to the public. Public participation at the meeting is welcomed. Instructions for joining the meeting online or by phone are posted on the LCA website the morning on the day of the meeting, prior to the start of each meeting. Please visit <https://www.lehighcountyauthority.org/about/lca-board-meeting-videos/> for specific instructions to join the meeting. The Board's meeting agenda and other meeting materials are also posted on LCA's website. You may also issue comment to LCA via email to LCABoard@Lehighcountyauthority.org in advance of any meeting or view a recording of the meeting at a later time by visiting the LCA website. Comments received prior to a meeting will be read at the Board's meeting and become part of the public record.

Board Meetings

January 12, 26
February 9, 23
March 9, 23
April 13, 27
May 11, 18
June 8, 22
July 13, 27
August 10, 24
September 14, 28
October 12, 26
November 9, 23
December 14

MEMORANDUM

Date: October 31, 2025

To: Lehigh County Authority Board of Directors
From: Anton Siekmann, Project Manager
Subject: Allentown Division – Lead Service Line Replacement Program Cycle 2 – Construction Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – Construction Phase – Lead Service Line Replacement Cycle 2	\$10,435,935
2	Professional Services Authorization – CDM Smith ⁽¹⁾	\$945,000
3	Professional Services Authorization – GFT (formerly Gannet Fleming) ⁽¹⁾	\$60,000
4	Award Construction Contract A – Joao & Bradley Construction Co. ⁽¹⁾	\$4,546,280
5	Award Construction Contract B – Hydrovac Excavation ⁽¹⁾	\$4,384,655

(1) Included in the Capital Project Authorization

PROJECT BACKGROUND

In 2021, the US Environmental Protection Agency (US EPA) issued the final regulatory framework for the Lead and Copper Rule Revisions (LCRR). In late 2023, US EPA published the proposed Lead and Copper Rule Improvements (LCRI), which would require replacement of all lead water service lines within 10 years of the final rule. Following the pilot program of Cycle 1, LCA is planning to perform the Cycle 2 LSLR project with the goal of replacing 1,000 private-side service lines.

PROJECT SCOPE

This project's scope is for 1,000 private-side lead and/or galvanized service line replacements across Allentown. It includes inventory work via in-home inspections and obtaining entry agreements from property owners.

FINANCIAL

This project represents Change of Law and will be funded by Allentown Division via grants and loans through the Pennvest program.

PROJECT STATUS

In February 2024 CDM Smith was authorized for design, bid, project management, public communication and construction management services. They were selected based on experience with prior lead service line replacement program design and construction management. In August 2024 CDM was given an authorization for additional design and bid services, and a second

amendment was authorized in October 2025 for construction management and ordinance development. Gannet Flemming (recently renamed as GFT) was authorized in February 2024 to provide Pennvest Funding application services. The project was advertised for bid on 9/12/2025 as two contracts for 500 replacement each. A pre-bid meeting was held on 9/24/2025. Bids were opened for contract A on 10/16/2025 and contract B on 10/20/2025. Six bids were submitted for contract A and four bids were submitted for contract B. Summaries of these bids are provided below.

THIS APPROVAL – CONSTRUCTION PHASE

The contract time for this work is 540 days from Notice to Proceed, and final completion is to be reached 180 days after substantial completion. Assuming approval at the Board meeting held 11/10/2025, construction is anticipated to conclude in January 2028.

BIDDING SUMMARY

This project consists of two General Construction contracts, one for Contract A and one for Contract B. The bid results are summarized below:

Bidder (Contract A)	Bid
Joao & Bradley Construction Co., Inc.	\$4,546,280.00
Hydrovac Excavation	\$4,931,025.00
Inliner Solutions, LLC	\$6,547,872.50
Brubacher Excavating, Inc.	\$8,779,344.00
Michael F. Ronca and Sons Inc.	\$8,871,000.00
DOLI Construction Corporation	\$11,512,805.00

Bidder (Contract B)	Bid
Hydrovac Excavation	\$4,384,655.00
Joao & Bradley Construction Co., Inc.	\$5,655,655.00
Inliner Solutions, LLC	\$6,253,747.50
Michael F. Ronca and Sons Inc.	\$8,781,000.00

Bids for Contract A were reviewed by LCA and our consultant, CDM Smith, and have been found to be in order. Joao & Bradley Construction was found to be the lowest responsive bidder for Contract A. Joao & Bradley has performed several projects with LCA in the past and has performed satisfactorily. Therefore, it is recommended Contract A be awarded to Joao & Bradley at \$4,546,280.

Bids for Contract B were reviewed by LCA and our consultant, CDM Smith, and have been found to be in order. Hydrovac Excavation was found to be the lowest responsive bidder for Contract B. Hydrovac Excavation has performed several large-scale linear projects successfully in the past, and their references indicated they performed satisfactorily. Therefore, it is recommended Contract B be awarded to Hydrovac Excavation at \$4,384,655.

PROFESSIONAL SERVICES

CDM Smith will provide Resident Project Representative Inspection services for the construction phase of this project. Their work will include

Professional Services ⁽¹⁾
1. RPR Inspection Services

(1) See CDM's proposal dated October 31, 2025, for additional information

GFT will provide Pennvest funding services for the construction phase of this project. Their work will include:

Professional Services ⁽¹⁾
1. Pennvest Settlement
2. Pennvest Construction Administration

(1) See GFT's proposal dated October 30, 2025, for additional information

PROJECT SCHEDULE

Assuming Construction Phase Authorization following the November 10, 2025 Board meeting, Pennvest closing is scheduled for January 15, 2026. Upon closing, Notice to Proceed will be issued to contractors and work is expected to begin February 2026.

FUTURE AUTHORIZATIONS:

TBD



1053 SPRUCE RD * P.O. BOX 3348 * ALLENTOWN, PA 18106-0348
610-398-2503 * email: service@lehighcountyauthority.org
www.lehighcountyauthority.org

REQUEST FOR BOARD AUTHORIZATION

Board of Directors Meeting Date: 10/31/2025
Staff Member Requesting Authorization: Anton Siekmann
Department: Capital Works
Short Description / Title of Project / Purchase: Lead Service Line Replacement Program – Cycle 2– Construction Phase
Project Number (if applicable): AD-W-26 / 50632

Capital Expense: (check all that apply)

- ☒ Capital Project >\$250,000
☒ Construction / Other Contract(s)
☒ Professional Services Authorization
☐ Initial Authorization
☐ Amended Authorization
☐ Professional Services Authorization >\$100,000
☐ Equipment Purchase >\$250,000
☐ Upsizing / Extension >\$250,000
☐ Aggregate Change Order >10% of contract and >\$100,000
☐ Stand-Alone Change Order >\$50,000

Operations Expense:

- ☐ Construction / Other Contract >\$250,000
☐ Professional Services Authorization >\$100,000
☐ Equipment / Other Individual Item >\$250,000
☐ Emergency Authorization >\$50,000
☐ Aggregate Change Order >10% of contract and >\$100,000
☐ Stand-Alone Change Order >\$50,000

LCA Enterprise Fund: ☒ Allentown Division ☐ Suburban Water ☐ Suburban Wastewater ☐ Internal Service / Admin

Current Project Phase: ☐ N/A (skip to Description) ☐ Planning ☐ Conceptual Design ☒ Design / Bid ☒ Construction

Prior Authorization(s):

Date	Phase	Description	Amount Authorized
2/16/2024	Design	CDM Smith – Design, Project Management, Public Communications, Bidding and Construction Services	\$933,607
2/16/2024	Design	Gannet Flemming – Funding Application Services	\$38,600
7/26/2024	Design	CDM Smith – Design, Bid, Construction Phase Amendment 1	\$215,055
10/20/2025	Design	CDM Smith – Construction Management, Ordinance Development	\$71,800
Total Prior Authorizations:			\$1,259,062

Current Authorization Requested:

Description	Amount Requested
CDM Smith – Construction Inspection Services	\$945,000
GFT – Pennvest settlement and Construction Phase Pennvest funding administration	\$60,000
Joao & Bradley Construction – Construction Contract A	\$4,546,280
Hydrovac Excavation – Construction Contract B	\$4,384,655
Contingency	\$400,000
Staff Time	\$100,000
Total Amount Requested (this authorization):	\$10,435,935

Future Authorizations:

Phase	Note / Description	Estimated Cost
	TBD	\$
Estimated Total Project Cost:		\$11,694,997

Short Description: (please attach supporting documentation, cost justification, trade-in values, proposals, memos, etc.)

This project consists of 1000 Lead or Galvanized Private-side service line replacements across the city of Allentown. The construction work was bid as two contracts of 500 replacements each, with canvassing and inventory building included in the construction effort. This Authorization Request is to award those contracts, inspect the work, and complete the process of funding application and submission during construction. See attached memo and proposals for more detail.

Purchasing Procedure: ☒ Formal Bid ☒ Request for Proposal ☐ Cooperative Purchasing Group / Co-Staff ☐ N/A - Emergency

Motion: Linda Rosenfeld

Second:

Approved?

Certified by:

Lisa J. Miller



Two Penn Center Plaza
1500 JFK Boulevard, Suite 1208
Philadelphia, Pennsylvania 19102
tel: 215 636-0600

October 30, 2025

Mr. Anton Siekmann
Project Manager
Lehigh County Authority
1341 North Ave
Plainfield, NJ 07062

Subject: Cycle 2 Lead Service Line Replacement
Owner's Resident Project Representative (RPR) Oversight Services

Dear Mr. Siekmann:

CDM Smith Inc. (CDM Smith) is providing this proposal in response to your Request for Proposals (RFP) dated October 17, 2025, to provide Lehigh County Authority (LCA) with full-time RPR oversight services for the Cycle 2 Lead Service Line Replacement (LSLR) Program. This proposal outlines our understanding of the project, the scope of work to be completed and the compensation for our services. Most importantly, it identifies the reasons CDM Smith is the most qualified and best suited firm to support LCA with these services.

Project Understanding

LCA is conducting an ambitious lead service line replacement program. Following the Cycle 1 pilot program that targeted replacement of 150 lead service lines, LCA is now preparing to begin the construction phase of its larger Cycle 2 LSLR program, targeting the identification and replacement of 1,000 private-side lead and/or galvanized service lines. Notice to proceed is scheduled to begin in early 2026 with completion of construction expected around June 2027.

LCA expects the selected RPRs to be onsite full-time during active construction. A total of four RPRs are requested, two for each of the two construction contractors selected to complete the Cycle 2 LSLR program. The RPRs will observe, monitor, and document the work completed by the respective work crews while also providing onsite coordination between the construction contractors, LCA, and CDM Smith's design team. They will monitor the contractors' field activities throughout the duration of construction and respond to project correspondence in a timely manner.

Scope of Services

For planning and budgeting purposes, LCA has assumed that each of the four RPRs will be onsite for 2,000 hours each, for a total of 8,000 hours. Of the 8,000 hours planned, LCA has directed that 6,000 be assumed to be regular time (non-overhead) and 2,000 hours be assumed as overtime (1.5X).



Specific duties and responsibilities of the RPRs include the following:

- Monitor the construction work for conformance with the contract documents.
- Maintain coordination between project stakeholders, including CDM Smith, Property Owner, LCA, and the contractors.
- Maintain daily installation records and detailed inspection reports for each home where work occurs.
- Maintain field files of correspondence, shop drawings, daily journals, test records, etc.
- Review material deliveries for conformance with approved contractor submittals.
- Witness, coordinate, and document all required field testing activities.
- Provide input into proposed change orders and pay applications.
- Respond to customer complaints concerning construction activities in coordination with LCA as necessary.
- Prepare “punch lists” and conduct contract closeout inspections.
- Monitor and keep CDM Smith and LCA informed of construction progress, potential or pending change orders, schedule status, and any areas of concern on a continuing basis.
- Maintain accurate records to document costs associated with time and material change orders.
- Monitor use of site, storage, daily cleanup, and final restoration activities of the contractor to determine conformance with the requirements of the contract documents.
- All documentation, daily logs, and inspection reports will be posted and managed via Procore software, Survery123, etc.
- Attend all monthly progress meetings.
- Take daily GPS of all publicly owned infrastructure, newly installed and existing.



Mr. Anton Siekmann
October 30, 2025
Page 3

Compensation

CDM Smith proposes to complete this work under the terms and conditions of its current Master Services Agreement (MSA) with LCA that expires 12/1/2027. The table below reflects our proposed costs for the scope of services defined above. Our regular billing rate for all RPRs will be \$105 per hour, consistent with the Construction Representative category in our current MSA. This equates to a billing rate of \$157.50 per hour for overtime (1.5X). CDM Smith understands that travel expenses (i.e. meals, lodging, personal vehicle mileage, etc.) will not be billable under this contract. Although the work is expected to be completed before our current MSA and rate schedule expires on December 1, 2027, CDM Smith reserves the right to adjust our RPR billing rate for any work on this project that occurs after December 1, 2027 under an amended MSA and rate schedule.

Task	Hours	Unit Rate (\$/hour)	Extended Cost
Regular Time	6,000	\$105.00	\$630,000
Overtime	2,000	\$157.50	\$315,000
PROJECT TOTALS	8,000		\$945,000

Why Hire CDM Smith?

CDM Smith has been LCA's trusted partner with the planning and engineering design of its Cycle 2 LSLR Program. We are already under contract to provide ongoing support with the construction management and engineering services during construction for the Cycle 2 LSLR, and extending our support to include the RPR services provides the following benefits:

- **Experienced RPRs:** CDM Smith is the national leader in lead service line replacement programs, many of which we have staffed with RPRs. In Pennsylvania and New Jersey alone, we have more than 60 field staff supporting American Water's LSLR programs with services including door-to-door canvassing, oversight of test pitting, and service line replacement RPR services. As our work with American Water proceeds and is finished, we fully expect that some, if not all, of our RPRs for LCA will be staffed from this pool of skilled and experienced workers.
- **Single Point of Responsibility/Accountability:** CDM Smith is already under contract with LCA for the construction management and engineering services during construction for the Cycle 2 LSLR program. Adding the RPR services to our scope will eliminate the need for LCA to manage third party RPR services and will facilitate the coordination and communications between the construction contractors, LCA and CDM Smith's design team. There will be no confusion about responsibilities, as CDM Smith will be accountable for all aspects of the construction management and RPR oversight.





Mr. Anton Siekmann

October 30, 2025

Page 4

- **Cost Savings for Project Management:** In our costs above, CDM Smith has intentionally excluded any project management costs for the RPR services. The project management and administrative costs associated with the RPR services can be covered by our existing Cycle 2 LSLR contract, which will run concurrently with the RPR services. This represents an estimated savings to LCA of roughly \$40,000 to \$45,000.

We look forward to continuing our work with LCA on the Cycle 2 LSLR Program. If there are any questions about our proposal, please do not hesitate to contact me by either phone (215) 239-6522 or email hammelljo@cdmsmith.com.

Sincerely,

CDM Smith Inc.

A handwritten signature in blue ink that reads "John O. Hammell".

John O. Hammell, PE, PMP
Principal

cc: B. Lubenow, CDM Smith
S. Loughery, CDM Smith





October 30, 2025

Anton Siekmann
Project Manager
Lehigh County Authority
(via Email)

RE: Lehigh County Authority (LCA)
Allentown Division – Cycle 2 Lead Service Line Replacement
PENNVEST Funding Services (Loan Closing through Project Closeout)

Dear Anton,

GFT is pleased to submit this proposal to provide engineering services for PENNVEST funding for loan closing and construction administration. The previous scope of services, as outlined in the February 14, 2024 proposal, included application and DBE efforts. The scope of work included with this proposal, described below, includes the continuation of PENNVEST Administration services through closeout.

A. PENNVEST Settlement (Loan Closing)

1. Coordinate completion of PENNVEST settlement documents and requirements.
2. Coordinate with the apparent low bidder to complete all required compliance forms.
3. Assist LCA with completion of online tasks and approvals.
4. Monitor and assist with completion of items required by Bond Counsel, Solicitor, and design engineer.
5. Prepare and maintain PENNVEST settlement checklist, including status of each item required and identification of responsible parties.
6. Coordinate with design engineer for construction contract documents, bonds, insurances, and project costs.
7. Obtain and/or complete the following items required for PENNVEST settlement: copies of system documents, agreements, insurances, and contracts; preparing system descriptions, organizational information, draft list of liens, list of real property, project management plan, project budget, draft solicitor letter agreement; and draft resolution (Resolution to Borrow, Reimbursement Resolution, and Rate Resolution, if required), professional services agreements, and opinion documents for LCA and Solicitor or Bond Counsel review and execution.
8. Prepare and submit to PADEP Davis Bacon Wage Rate Forms.
9. Coordinate with PADEP DBE Approvals.
10. Address questions and comments from PENNVEST, as needed, and participate in PENNVEST conference calls during Settlement preparation (estimated at four (4) conference calls).

B. PENNVEST Administration

1. Prepare and submit change orders and documentation for approval by PADEP (estimated at six (6) change orders); coordinate pre-approval for change orders over \$25,000 as required by PENNVEST (estimated at two (2) pre-approval change orders).

2. Prepare and submit all final change orders and documentation for approval by PADEP.
3. Complete the one (1) annual DBE Firm Utilization Report, if required.
4. Provide guidance to resident observer and construction administration staff related to compliance with PENNVEST requirements including Davis Bacon Wage administration, DBE, American Iron and Steel, and Build America Buy America procurement requirements.
5. Coordinate project closeout including final reimbursement, confirm audit requirements are complete, confirm completion of property information entry into PV Portal, obtain documentation of final PADEP inspection, confirm all change orders were submitted and approved. Provide all information needed to close out the project with PADEP and PENNVEST until final loan holdback is released and loan amortization begins.

Assumptions

- A. PENNVEST Settlement (Loan Closing)
 - a. Contract documents including agreements, bonds, insurances, schedule of values, bid forms, and related items will be obtained and provided by design engineer.
 - b. Engineering, permitting, and construction cost estimates and supporting documentation will be provided by design engineer.
 - c. Design engineer will be responsible for Engineering Omnibus Certification at settlement.
 - d. No special Davis Bacon Wage Rates will be required to be requested through Labor and Industry.
 - e. No rate adequacy analysis is included.
- B. PENNVEST Construction Administration
 - a. LCA will be responsible for compiling and assembling project cost documentation, preparing online estimates, preparing online PENNVEST reimbursement request forms, and submitting information to PENNVEST related to PENNVEST Payment Requests.
 - b. Design engineer and construction inspector will be responsible for confirming compliance by contractor and others and maintaining compliance documentation for federal funding requirements during construction including, but not limited to, Davis Bacon Wages, American Iron and Steel Act compliance, Build America Buy America compliance, and Disadvantaged Business Enterprise compliance.
 - c. Assumes two (2) change orders requiring prior approval (greater than \$25,000).
 - d. Assumes six (6) total change orders.
 - e. Assumes one (1) annual DBE report and one (1) final report.
 - f. No in-person meetings or site visits included.

The estimated cost to complete the above scope of services is \$60,600. Services will be completed in accordance with the Terms and Conditions of the April 19, 2023 Master Services Agreement for Professional Services between LCA and Gannett Fleming, extended on January 30, 2025. Effort will be billed on a cost-plus basis and will not exceed the estimated cost without prior authorization from LCA.



Please contact me if you have any questions regarding this Proposal or would like any additional information. If this Proposal is acceptable to LCA, please sign and date below and return a copy to me (email copy is fine).

Sincerely,

Michael T. Brown, P.E.*

Vice President

* Licensed in PA and NY

E: mtbrown@gftinc.com

C: 717.649.3662

gftinc.com

Accepted by Lehigh County Authority

Signature

Printed Name

Date

MEMORANDUM

Date: November 10, 2025

To: LCA Board of Directors
Liesel Gross, CEO

From: Phil DePoe, Senior Planning Engineer

Subject: Allentown Division – Manhole Rehabilitation Year 2 (Trout Creek)

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization: Allentown Division – Manhole Rehabilitation Year 2 (Trout Creek)	\$160,000
1A*	Professional Services Authorization: Arcadis – Design Services	\$130,000

**Included in the Capital Project Authorization*

1. Allentown Division – Manhole Rehabilitation Year 2 (Trout Creek)

AUTHORIZATION OVERVIEW:

The City's sanitary sewer system contains approximately 7,200 public manholes. Upon conclusion of the 2021 metering program and the 2022 rain derived inflow and infiltration (I&I) analysis, there have been three manhole inspections authorized since late 2022. As of late October 2025, a total of 4,400 manholes have been authorized and 3,500 have been successfully inspected. In parallel, a manhole rehab pilot project was authorized in September 2024 with construction concluding in Q3 of 2025. A rehab effectiveness analysis for this pilot project is nearing completion and those results will inform future rehab projects. Given the fact that the Trout Creek sewershed contains the "worst" I&I statistics, it will be addressed first in a programmatic fashion. The specific manhole rehab plan for 2026 will include rehab of approximately 450 manholes in the Trout Creek under two separate methods: one for regular O&M related work and one for trenchless rehab work via a contractor.

Attached is the proposal dated 10/9/2025. All 450 of the manholes included in this project will be in the Industrial, Tioga, and Juniata basins to facilitate post-rehabilitation effectiveness monitoring that is slated for late 2026 or early 2027. The rehabilitation will be divided into two separate construction bid packages: reset & replace and trenchless measures (150 manholes); and O&M corrective measures (300 manholes). The 150-manhole design package will be traditionally bid, while the 300-manhole package is intended to be performed "in-house" without contractor involvement. The balance of the approximately 1,000 manholes that require corrective measures or rehabilitation in Trout Creek will be performed in subsequent years.

The 2026 manhole rehab project will be referred to as "MH Rehabilitation Year 2" and coincides with the I&I Source Reduction Plan Year 2 project.. The 2027 and 2028 MH rehab projects will also focus in Trout Creek before pivoting to the East Side sewershed. One major program driver is to rehabilitate the public manholes in three of the six basins within the Trout Creek sewershed by the end of 2026 so temporary meters can be installed in late 2026 or early 2027. The results of the 2027 temporary metering program will be compared to the 2021 data and will provide rehab effectiveness benchmarks. Note that the program details are still in final development and are subject to change when new information becomes available. This programmatic manhole rehab approach, plus the ongoing main and auxiliary pump station upgrades (i.e. 100 MGD) at the

Kline’s Island Wastewater Treatment Plant are in alignment with the region's overall Act 537 Plan goals of reducing sanitary sewer overflows and Outfall 003 activation frequency.

FINANCIAL:

This Program will be funded by the LCA Allentown Division.

CURRENT STATUS:

Pending Board approval for this design phase.

See below for manhole inspection summary table to date:

Table 1. November 2025 Manhole Inspection Summary

	Number Authorized*	Number Inspected	Area
Authorization #1 (12/12/22)	900	509	Various Sewersheds
Authorization #2 (8/14/24)	1,860	1,666	Trout Creek Interceptor Sewershed
Authorization #3 (10/14/24)	1,640	1,326	Eastside Sewershed; high priority “paving”
TOTAL	4,400	3,501	

*NUMBER OF AUTHORIZED MANHOLES PER PROPOSAL WERE ESTIMATES; FINAL INSPECTION AMOUNTS TO BE LISTED ABOVE

THIS APPROVAL – MANHOLE REHABILITATION YEAR 2 (TROUT CREEK)

LCA intends to retain the services of an engineering consulting firm to provide these additional manhole rehabilitation design services. These services include, but are not limited to, the following:

Professional Services
• Design
• Contract Documents
• Bid and Bid Evaluation Support
• Project Management and Meetings

CONSULTANT SELECTION PROCESS:

In addition to serving as LCA’s engineering consultant for annual ongoing sewer program support services, Arcadis has worked with the City since the 2009 EPA Administrative Order (AO). They are also a critical Act 537 Partner and are developing crucial elements related to the Plan’s development. Recent work performed since the commencement of the mandated Act 537 planning include:

- Sewer Billing Meter (SBM) investigations
- City MH Inspection Program
- 2021 Flow Characterization Study/KISS Model Development
- 2022 Rain Derived Inflow and Infiltration (RDII) analysis/Nighttime Weiring investigations/Capacity Problem Definition/Preliminary Screening of Alternatives (PSOA)
- 2023 Interceptor Inspections/Final Alternatives Analysis (FAA)
- 2024 Selection of Solution (SOS)/MH Rehabilitation Year 1 (Pilot)

SCHEDULE:

Upon Board authorization, this design will be “bid ready” by early December 2025 with procurement services to follow in early 2026. Construction is slated to start in late February 2026 and finish in the Fall.

FUTURE AUTHORIZATIONS:

A separate proposal for construction engineering will be provided once the construction project scope and schedule have been fully defined.

A request for Manhole Rehabilitation Year 3 design services is anticipated in the third quarter of 2026.

REQUEST FOR BOARD AUTHORIZATION

Board of Directors Meeting Date: November 10, 2025
Staff Member Requesting Authorization: Phil DePoe
Department: Engineering & Asset Management
Short Description / Title of Project / Purchase: City of Allentown Manhole Rehabilitation Year 2 (Trout Creek)
Project Number (if applicable): 50615

Capital Expense: (check all that apply)

- ☒ Capital Project >\$250,000
☐ Construction / Other Contract(s)
☒ Professional Services Authorization
☐ Initial Authorization
☐ Amended Authorization
☐ Professional Services Authorization >\$100,000
☐ Equipment Purchase >\$250,000
☐ Upsizing / Extension >\$250,000
☐ Aggregate Change Order >10% of contract and >\$100,000
☐ Stand-Alone Change Order >\$50,000

Operations Expense:

- ☐ Construction / Other Contract >\$250,000
☐ Professional Services Authorization >\$100,000
☐ Equipment / Other Individual Item >\$250,000
☐ Emergency Authorization >\$50,000
☐ Aggregate Change Order >10% of contract and >\$100,000
☐ Stand-Alone Change Order >\$50,000

LCA Enterprise Fund: ☒ Allentown Division ☐ Suburban Water ☐ Suburban Wastewater ☐ Internal Service / Admin

Current Project Phase: ☐ N/A (skip to Description) ☐ Planning ☐ Conceptual Design ☒ Design / Bid ☐ Construction

Prior Authorization(s):

Date	Phase	Description	Amount Authorized
10/20/23	Design Engineering	Cycle 1 Manhole Rehabilitation Pilot	\$37,000
9/23/24	Construction Engineering	Cycle 1 Manhole Rehabilitation Pilot	\$271,000
9/23/24	General Construction Contract	Cycle 1 Manhole Rehabilitation Pilot	\$1,230,025
Total Prior Authorizations:			\$1,538,025

Current Authorization Requested:

Description	Amount Requested
Staff	\$10,000
Design Engineering (Trout Creek)	\$130,000
Contingency	\$20,000
Total Amount Requested (this authorization):	\$160,000

Future Authorizations:

Phase	Note / Description	Estimated Cost
Construction Engineering	Cycle 2 Manhole Rehabilitation (Trout Creek)	\$100,000
General Construction Contract	Cycle 2 Manhole Rehabilitation (Trout Creek)	\$600,000
Design Engineering	Cycle 3 Manhole Rehabilitation (Trout Creek)	\$130,000
Estimated Total Project Cost:		\$2,528,025

Short Description: (please attach supporting documentation, cost justification, trade-in values, proposals, memos, etc.)

Attached is the proposal dated 10/9/25. As a follow up to the Cycle 1 Manhole Rehabilitation Pilot project that concluded in Q3 2025, Cycle 2 will focus solely in the City's Trout Creek sewershed and will entail the rehabilitation of approximately 450 manholes. All 450 of these manholes will be in the Industrial, Tioga, and Juniata basins to facilitate post-rehabilitation effectiveness monitoring (slated for late 2026 or early 2027). The rehabilitation will be divided into two separate construction bid packages: (1) reset & replace and trenchless measures (~150 manholes) and (2) O&M corrective measures (~300 manholes). The ~150-manhole design package will be traditionally bid, while the ~300-manhole package is intended to be performed "in-house" without contractor involvement. The balance of the approximately 1,000 manholes that require corrective measures or rehabilitation in Trout Creek will be performed in subsequent years.

Purchasing Procedure: ☐ Formal Bid ☒ Request for Proposal ☐ Cooperative Purchasing Group / CoStars ☐ N/A - Emergency

Motion: _____ **Second:** _____ **Approved?** _____ **Certified by:** _____

Mr. Philip DePoe
Capital Works Program Manager
Lehigh County Authority
1053 Spruce Road
Allentown, PA 18106-0348

Arcadis U.S., Inc.
1600 Market Street
Suite 1810
Philadelphia
Pennsylvania 19103
Tel 215 625 0850
www.arcadis.com

Subject:

City of Allentown Manhole Rehabilitation Year 2 - Trout Creek
Design and Bid Phase Services Proposal

Date:

October 9, 2025

Dear Mr. DePoe:

Arcadis U.S., Inc. (Arcadis) is pleased to submit this proposal to provide design and procurement services to LCA for the City of Allentown Manhole Rehabilitation Year 2 - Trout Creek work. This scope and budget cover from project initiation through evaluation of received bids for each of the two Construction Bid Packages anticipated to cost approximately \$900,000 total. The Trout Creek Manhole Rehab Design will be broken into two separate construction bid packages:

1. Reset & Replace and Trenchless Measures – 12-month contract
2. O&M Corrective Measures – 12-month contract

A separate proposal for construction engineering will be provided once the construction project scope and schedule have been fully defined.

Contact:

Jim Shelton

Phone:

302.723.1450

Email:

James.Shelton@arcadis.com

OBJECTIVES

Experience and flow data indicate the City's inventory of manholes suffers significant inflow during large storms from sheet flow over the manhole cover and that manholes in stream beds and floodplains in the Trout Creek Interceptor are often under inches or feet of water, or the exposed cones are surrounded by water. This work is being done to significantly reduce inflow while also addressing infiltration and structural related conditions. As part of the City Manhole Inspection work, Arcadis has conducted over 1,500 manhole inspections in the Trout Creek Basins and determined appropriate basis of rehabilitation for these manholes, including gathering required field measurements to support design, bidding, and construction of manhole

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.

https://Lehighcountyauthority-My.Sharepoint.Com/Personal/Depoe_Pm_Lehighcountyauthority_Org/Documents/YEARS/2025/537/MH Rehabilitation/Rehab Year 2/For The Board/City Trout Creek Manhole Rehab Design.Pro.Docx

rehabilitation. Approximately 450 of these will be included in these two construction bid packages, which are broken out by rehabilitation methods, to meet the \$1,000,000 per year manhole rehabilitation rate. These will be all the manholes requiring corrective measures in the Industrial, Tioga, and Juniata basins to facilitate post-rehabilitation effectiveness monitoring following the work. Arcadis will divide these manholes into two separate Construction Bid Packages: Reset & Replace and Trenchless Measures (approximately 150 manholes requiring lining, frame and cover replacement or resetting, injection grouting, chimney seals) and O&M Corrective Measure (approximately 300 manholes requiring inflow dishes, manhole frame or lid gaskets, inflow dish gaskets, frame and cover interface surface cleaning) packages. The balance of the approximately 1000 manholes that require corrective measures or rehabilitation in Trout Creek will be constructed in subsequent years.

SCOPE OF WORK

Task 1 – Design

There are approximately 1800 manholes in the Trout Creek sewershed. Approximately 1600 of these will require some form of corrective measure. For all the 1600 manholes in the Trout Creek sewershed requiring corrective action, Arcadis will prepare a pair of figures showing traffic control requirements and showing the inspection photos and describing the work needed, included key measurements needed by bidders to cost and construct the work.

Arcadis will select approximately 450 manholes for corrective measures from the Industrial, Tioga, and Juniata basins for inclusion in the Manhole Rehabilitation Year 2 work. For these 450 manholes, additional drawings describing the work, including site maps, note sheets, and construction details, will also be prepared.

Arcadis will also prepare inventory spreadsheets for each contract to support measurement and payment development, bid form development, and cost estimating and bid tabulation.

Arcadis will prepare GIS-based map book plan figures of the work showing Manhole IDs and other needed information for completing the rehabilitation to be used as the construction plans. The construction plans will include the following sheets:

- Cover sheet
- Site maps with aerial photography showing the segments, parcels, and manholes included in the work along with access pathways and traffic control designations
- Traffic control and access plan, notes, and details

Task 2 – Preparation of Construction Plan and Specification Documents

Arcadis will work with LCA and City of Allentown to identify general construction concerns such as:

- Laydown area location, size, power, water, and security
- Water for cleaning
- Sewer solids disposal
- Trash disposal
- Construction progress meetings and locations

- Access controls
- Property owner coordination

For each Construction Bid Package, Arcadis will prepare technical specifications for bidding and for construction of the work. This will include a measurement and payment section describing pay basis and a matched Bid Form. Arcadis will present these in a workshop with LCA, LCA will review these and provide comments, and Arcadis will finalize them. Specifications will include but not be limited to:

- 01 11 13 Summary of Work
- 01 22 13 Measurement and Payment
- 01 31 19.23 Progress Meetings
- 01 33 00 Submittal Procedures
- 01 35 14 Notification Procedures
- 01 35 26.23 Requirements for Confined Space Entry
- 01 41 25 Permitting
- 01 52 11 Temporary Construction Facilities
- 01 55 26 Maintenance and Protection of Traffic
- 01 71 33 Protection of the Work and Property
- 32 12 00 Flexible Paving
- 32 16 13 Concrete Curbs, Gutters, and Sidewalks
- 32 92 00 Vegetative Protection and Restoration
- 33 01 30.81 Manhole Rehabilitation

For each Construction Bid Package, Arcadis will prepare front end contract documents to support solicitation of bids from contractors for the construction. These front-end documents follow LCA standard front-end templates with embedded Supplementary Conditions. These will include LCA-provided latest version of:

- Notice to Bidders
- Instructions to Bidders
- Bid Form
- General Conditions with embedded Supplementary Conditions
- Bond Forms

For each Construction Bid Package, Arcadis will reach out to contractors and assess market readiness for a project of this size assuming a January 2026 mobilization date. Based on this, Arcadis will prepare an Engineers Estimate of Probable Construction Cost. Arcadis will request the appropriate Davis-Bacon prevailing wage forms for laborers for this work.

Task 3 – Bid and Bid Evaluation Support

For each Construction Bid Package, Arcadis will:

- Email prospective Contractors the Notice to Bidders and links to PennBid procurement site.
- Conduct pre-bid meeting (assumed virtual), including preparation of agenda reviewing contract requirements.
- Prepare pre-bid meeting minutes and addendum for distribution of minutes.
- Prepare addenda in response to Requests for Information from subcontractors during bidding.
- Identify and assess any exceptions or notes provided with bids.
- Prepare Notice of Award form

DELIVERABLES

For each Construction Bid Package, Arcadis will prepare the following deliverables:

- Draft and Final Technical Specifications
- Draft and Final Measurement and Payment Specification
- Draft and Final Bid Form
- Draft and Final Front End Documents
- Draft and Final Construction Plans
- Draft and Final Construction Cost Estimate
- Pre-bid meeting agenda and minutes
- Addenda
- Bid Tabulation
- Notices of Award

SCHEDULE

Arcadis will begin work upon receipt of Professional Service Authorization. We anticipate bid package will be ready for LCA review by November 2025, ready for advertisement in December 2025, bid opening January 2026, and start of construction February 2026.

BUDGET ESTIMATE

We estimate the cost and level of effort of this work as shown in the table below.

Task	Hours	Expenses	Cost
Design	546	\$ 400	\$ 81,000
Contract Documents	126	\$ 300	\$ 27,000
Bid and Bid Evaluation Support	51	\$ 300	\$ 13,000
Project Management and Meetings	44	\$ 500	\$ 9,000
Total	766	\$ 1,500	\$ 130,000

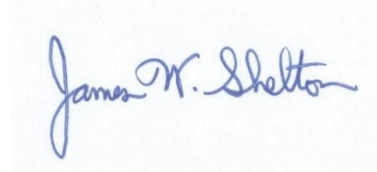
Mr. Philip DePoe
Manhole Rehab Year 2 Trout Creek Design Proposal

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. Arcadis will track the costs associated with this work and report them to LCA monthly throughout the project; we will not exceed the authorized budget without written professional services authorization from LCA. Payment for services will be based upon the actual labor and expenses incurred. Invoicing will be completed monthly. The invoice will include the defined contract tasks listing the day-by-day personnel performing the task with hourly rate and hours worked. The invoice will provide total billed for month. Support documents will be provided if there are any expenses incurred.

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.

Sincerely,

ARCADIS U.S., Inc.

A handwritten signature in blue ink that reads 'James W. Shelton'.

James W. Shelton, PE
Vice President

Cc: Dan Cooper, Emily Sadowsky

MEMORANDUM

Date: November 10, 2025

To: Lehigh County Authority Board of Directors

From: Charles Volk, P.E., CCWO, and Jason Peters, Linear Asset Project Manager

Subject: Suburban Division – Heidelberg Heights Sanitary Sewer Rehabilitation:
Private Lateral Lining Project – Construction Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – Construction Phase	\$461,020
2	Construction Contract: Musson Brothers, Inc.	\$326,520
3	Professional Services Authorization – Arcadis	\$115,000

BACKGROUND

This project is a continuation of the program requirements as part of the Heidelberg Heights DEP Consent Order and Agreement (dated 3/3/2020), which includes a Sanitary Sewer System Inflow and Infiltration Corrective Action Plan (“CAP”) that commits Lehigh County Authority (LCA) to eliminating hydraulic overloads and bypasses at the Heidelberg Heights Wastewater Treatment Plant (WWTP) caused by wet weather inflow and infiltration (I/I) into the sanitary sewage collection system. The CAP requires the replacement of all original vitrified clay pipe (VCP) sewer main and sewer laterals in the system (public side of sewer system), along with private side sewer rehabilitation and enforcement actions needed to restore long term NPDES discharge permit compliance at the WWTP. As of 2024, all public side VCP sanitary sewer main and lateral piping have been replaced, and all sewer manholes have been rehabilitated.

The persistence of elevated wet weather flows in the sewer system is attributed to the private side of the sewer system, consisting of private sewer laterals (from the curb to the house) and private plumbing. In late 2024, LCA retained Arcadis to perform an investigation of private lateral connections within the Heidelberg Heights sanitary sewer system. The investigation, which utilized CCTV inspection, revealed active leaks at several private lateral connections, misaligned or separated joints at the private lateral interface, and suspected cracked/leaking private lateral pipes at numerous lateral locations.

PROJECT OVERVIEW

This project consists of the internal cured-in-place lining of private laterals for 54 properties, all of which are located south of Heidelberg Heights Rd along Glen Court, Lakeview Drive and Thompson Street. This area was selected due to observed locations of damaged private sewer lateral pipe, misaligned or separated connections with the public sewer lateral pipe, and/or excess water entering the sanitary sewer system. The liner consists of a resin-impregnated flexible felt fiberglass product that is inserted through the PVC cleanout riser (located near the property line)

and installed up to the exterior of the building foundation. The liner bonds with the interior of the host pipe and forms a continuous, hard, impermeable liner that is chemically resistant and provides a watertight seal, helping to extend the life of the pipe. As open excavation is not required for this technology, there will be no disturbance to private property. The Contractor will notify property owners prior to work being performed at their property, and request that operation of the private sewer system be paused for a several hour period to allow for the liner to be installed and to cure. LCA will also send out mailers later this month to all affected properties to notify them of the project and contractor mobilization schedule.

FUNDING

The project will be funded by a Covid-19 ARPA Small Water and Sewer Program grant (\$386,750 awarded amount) and LCA Suburban Division.

PROJECT STATUS

Board authorization of construction phase.

THIS APPROVAL – CONSTRUCTION PHASE:

BIDDING SUMMARY

This project consists of one contract. The project was advertised for bid via PennBid on 10/8/25, a pre-bid meeting was conducted on 10/17/25 and bids were opened on 10/30/25. Bids results are follows:

General Construction	
Bidder	Bid Amount
Musson Brothers, Inc.	\$326,520

Musson Brothers, from Waukesha, WI is only bidder for the contract. Musson Brothers specializes in cured-in-place lining of sanitary sewer mains and laterals and has successfully completed numerous projects in the mid-Atlantic region. The company has an east coast branch in New Castle, DE and has completed several projects in that area that were designed and managed by Arcadis. Their closest project location is in Nazareth PA, where they currently have a three-year sewer rehabilitation contract. The bid documents are in order and the firm appears well qualified to perform the work for the contract. The engineer's construction estimate for this work is \$357,400. LCA staff recommend award of the construction contract to Musson Brothers.

PROFESSIONAL SERVICES

Arcadis will provide construction engineering services, which will include the following task items as detailed in their 10/30/25 proposal letter (attached):

- Prepare submittal register, pay item progress tracker, and lateral tracker
- Review schedules and shop submittals for compliance with specifications
- Provide full time construction inspection services (assume 6 hours/day for duration of field work) with senior engineer oversight
- Prepare daily inspection reports
- Verify daily job quantities
- Review pre and post-construction CCTV inspection data
- Attend progress meetings as required
- Perform substantial completion inspection, prepare punchlist and verify completion

- Perform final and warranty inspections
- Provide databases for incorporation into GIS and/or CMMS

PROJECT SCHEDULE

Based on Board authorization at the November 10, 2025 meeting, construction will be completed by late spring 2026.

FUTURE WORK AND AUTHORIZATIONS

A renewed effort to inspect private plumbing for prohibited connections with the sanitary sewer system will commence in 2027 following the results of this lateral rehabilitation work, in accordance with the PA DEP Consent Order and Agreement. Also, additional private side sewer rehabilitation work is TBD based on the results of this project.



1053 SPRUCE RD * P.O. BOX 3348 * ALLENTOWN, PA 18106-0348
610-398-2503 * email: service@lehighcountyauthority.org
www.lehighcountyauthority.org

REQUEST FOR BOARD AUTHORIZATION

Board of Directors Meeting Date: 11/10/25
Staff Member Requesting Authorization: CHARLES VOLK, P.E., CHIEF CAPITAL WORKS OFFICER
Department: CAPITAL WORKS
Short Description / Title of Project / Purchase: HEIDELBERG HEIGHTS PRIVATE SEWER LATERAL
REHABILITATION – CONSTRUCTION PHASE
Project Number (if applicable):

Capital Expense: (check all that apply)

- ☒ Capital Project >\$250,000
☒ Construction / Other Contract(s)
☒ Professional Services Authorization
☐ Initial Authorization
☐ Amended Authorization
☐ Professional Services Authorization >\$100,000
☐ Equipment Purchase >\$250,000
☐ Upsizing / Extension >\$250,000
☐ Aggregate Change Order >10% of contract and >\$100,000
☐ Stand-Alone Change Order >\$50,000

Operations Expense:

- ☐ Construction / Other Contract >\$250,000
☐ Professional Services Authorization >\$100,000
☐ Equipment / Other Individual Item >\$250,000
☐ Emergency Authorization >\$50,000
☐ Aggregate Change Order >10% of contract and >\$100,000
☐ Stand-Alone Change Order >\$50,000

LCA Enterprise Fund: ☐ Allentown Division ☐ Suburban Water ☒ Suburban Wastewater ☐ Internal Service / Admin

Current Project Phase: ☐ N/A (skip to Description) ☐ Planning ☐ Conceptual Design ☐ Design / Bid ☒ Construction

Prior Authorization(s):

Date	Phase	Description	Amount Authorized
6/2/25	Design	Final Design and bid phase	\$42,000
			\$
			\$
Total Prior Authorizations:			\$42,000

Current Authorization Requested:

Description	Amount Requested
Construction Contract – Private Lateral Rehabilitation: Musson Brothers	\$326,520
Professional Services – Construction Engineering: Arcadis	\$115,000
Staff	\$10,000
Contingencies	\$10,000
	\$
	\$
	\$
Total Amount Requested (this authorization):	\$461,020

Future Authorizations:

Phase	Note / Description	Estimated Cost
	TBD	\$
		\$
Estimated Total Project Cost:		\$

Short Description: (please attach supporting documentation, cost justification, trade-in values, proposals, memos, etc.)

This project consists of the internal cured-in-place lining of private laterals for 54 properties in the Heidelberg Heights sewer system as part of an ongoing corrective action plan to address wet-weather inflow and infiltration. The properties included in the project are located south of Heidelberg Heights Rd along Glen Court, Lakeview Drive and Thompson Street. This area was selected due to observed locations of damaged private sewer lateral pipe, misaligned or separated connections with the public sewer lateral pipe, and/or excess water entering the sanitary sewer system.

Purchasing Procedure: ☒ Formal Bid ☐ Request for Proposal ☐ Cooperative Purchasing Group / CoStars ☐ N/A - Emergency

Motion: _____ **Second:** _____ **Approved?** _____ **Certified by:** _____

Mr. Charles Volk
Capital Works Project Manager
Lehigh County Authority
1053 Spruce Road
Allentown, PA 18106-0348

Arcadis U.S., Inc.
1600 Market Street
Suite 1810
Philadelphia
Pennsylvania 19103
Tel 215 625 0850
www.arcadis.com

Subject:
Heidelberg Heights CIPLL Lateral Rehabilitation
Construction Engineering Scope and Budget Proposal

WATER

Dear Mr. Volk:

Arcadis U.S., Inc. (Arcadis) is pleased to submit this proposal to provide construction engineering services to LCA for the Heidelberg Heights CIPLL Lateral Rehabilitation construction project. This scope and budget cover construction engineering, administration, and inspection services for this project. This scope and budget covers work from project pre-construction meeting through final completion following warranty inspections.

Date:
October 30, 2025

Contact:
Dan Cooper

Phone:
215.931.4343

Email:
Daniel.Cooper@
arcadis.com

OBJECTIVES

The objective of this work is to work with the contractor and LCA to ensure the construction plans and specifications for CCTV, cleaning, CIPLL installation and post/warranty inspections are implemented to provide reduced I/I in this neighborhood system.

ASSUMPTIONS

Contract time is 120 calendar days to reach substantial completion and 150 calendar days to reach final completion. This assumes 1 month for preparation of preconstruction submittals and 0.5 months for delivery of final construction inspection deliverables. This scope assumes full time construction oversight inspection for 3.5 months of this project and 16 days of work per month. This project will utilize up to 3 progress meetings. LCA staff

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.

will coordinate with each resident through the LCA customer care department for inclusion in the project and any potential access requirements to private property.

SCOPE OF WORK

Arcadis will provide construction engineering and contract administration services for the duration of the contract.

Arcadis will:

- Attend Procore training and orientation sessions facilitated by LCA.
- Prepare submittal register, Pay Item Progress Tracker, and Lateral Tracker.
- Review schedules and shop submittals for compliance with the contract documents.
- Review and respond to requests for information.
- Provide Construction Engineer for 6 hours per day during field work.
- Provide half-time senior Construction Engineer oversight during first week of lateral lining to ensure lining techniques, pipe preparation, and work documentation expectations are understood and implemented properly by the Contractor.
- Provide senior oversight biweekly to construction engineer and Contractor's crews to successfully guide the work.
- Prepare inspectors daily reports (IDRs), update Pay Item Progress Tracker, Lateral Tracker, and update Issues Tracker daily.
- Review monthly pay estimates submitted by the contractor and prepare recommendations to LCA.
- Review work conducted by the Contractor, recommend remedial action or deductions for out-of-specification defects, and prepare punch list.
- Review Post-construction inspections conducted by the Contractor, recommend remedial action or deductions for out-of-specification defects, and prepare punch list.
- Provide LCA with all inspections and lining reports, videos, and databases for incorporation into their GIS or CMMS as part of the Record Plan for the project.
- Provide final Lateral Tracker databases to LCA as part of the Record Plan for the project.
- Provide any GIS corrections via paper map markups to LCA.
- Participate in the preparation of the certificate of completion (issued for Substantial Completion).
- Coordinate contract close-out.

LCA will:

- Attend preconstruction meeting.
- Respond to request for information in a timely fashion.
- Attend monthly progress meetings.
- Coordinate with each resident through LCA customer care department for CIPLL permission and any potential access requirements to private property.

Budget

We estimate the cost and level of effort of this work as shown in the below table.

Task No.	Task Name	Total Hours	Expenses and Subs	Estimated Budget
1	Construction Administration	140	\$ 300	\$ 22,000
2	Construction Engineering	440	\$ 6,600	\$ 84,000
PM	Project Management and Non-Progress Meetings	40	\$ -	\$ 7,000
Total		620	\$ 6,900	\$ 115,000

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. Arcadis will track the costs associated with this work and report them to LCA monthly throughout the project; we will not exceed the authorized budget without written professional services authorization from LCA. Payment for services will be based upon the actual labor and expenses incurred. Invoicing will be completed monthly. The invoice will include the defined contract tasks listing the day-by-day personnel performing the task with hourly rate and hours worked. The invoice will provide total billed for month. Support documents will be provided if there are any expenses incurred.

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.

Sincerely,

Arcadis U.S., Inc.



Daniel P. Cooper
Certified Project Manager

Copies:

Cc: Tony Dill, Jim Shelton



Lehigh County Authority

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

MEMORANDUM

Date: November 10, 2025

To: LCA Board of Directors
Liesel Gross, C.E.O.

From: Jason Peters, Capital Works Linear Asset Project Manager

Subject: Allentown Division I&I Source Reduction Plan Improvements Year 2:
Contract No. 2 Sewer Main Capital Grouting

MOTIONS /APPROVALS REQUESTED:

No.	Item	Amount
1	<u>Rejection of Bids:</u> Construction Phase: SRP Year 2 Contract 2 - Sewer Capital Grouting	n/a

PROJECT OVERVIEW:

In 2023, LCA and the City of Allentown coordinated in the preparation of a 10-year inflow and infiltration (I&I) Source Reduction Plan (SRP). The City SRP, along with the I&I reduction plans developed by the other municipalities in the Kline's Island Sewer System (KISS), is required as part of the regional Act 537 Plan, which was recently approved by all signatory municipalities. The total construction cost for the City's 10-year SRP program is estimated to be approximately \$50 million. The goal of the work is the cost-effective reduction of I&I, to reduce both dry-day and wet-weather flows in the KISS. Under the terms of the Lease Agreement with the City, LCA is responsible for implementing the City's I&I SRP.

LCA structured the SRP Year 2 project into three separate bid contracts, strategically staged for bid opening and authorization. This phased approach was designed to foster greater competition among bidders and secure more favorable contract pricing.

SCOPE OF PROJECT AND BID RESULTS:

Contract No. 2 focuses on trenchless rehabilitation through Capital Grouting. The scope included the rehabilitation of approximately 9,400 linear feet of sanitary sewer mains and 100 sewer laterals, all located within the Trout Creek Sewer Basin in the City of Allentown. Construction for Contract No. 2 was advertised for bid August 18, 2025 and bids were opened October 9, 2025 with the following results:

Table 1	
General Construction – SRP Year 2 Contract No. 2	
Bidder	Amount
<i>Insituform Technologies USA, LLC</i>	<i>\$3,597,781</i>

Based on average pricing from similar recent projects, LCA included \$1.5 million in the 2026 budget for work under this contract. The engineer’s construction cost estimate for this contract is \$1.21 million. The bid price far exceeds both the engineer’s estimate and LCA’s budget for this contract.

ACTION REQUESTED:

LCA staff recommend that the Board reject the bid for construction of SRP Improvements Year 2 Contract No. 2 Project, due to the bid price coming in significantly higher than anticipated or previously estimated by the design engineer. The project cost from the sole bidder is more than double the budgeted amount.

FUTURE AUTHORIZATIONS:

To complete the scope of work of Contract No. 2, LCA staff intend to pursue formal change order requests from the contractor for Contract No. 1 and Contract No. 3, based on the itemized bid items pricing established in those contracts for both the sewer main rehabilitation (Contract No. 1) and sewer laterals rehabilitation (Contract No. 3). LCA anticipates seeking Board authorization for those two change orders in December 2025.



Lehigh County Authority

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

MEMORANDUM

Date: November 10, 2025

To: LCA Board of Directors
Liesel Gross, C.E.O.

From: Jason Peters, Capital Works Linear Asset Project Manager

Subject: Allentown Division I&I Source Reduction Improvements – LCA
Program Year 2: Contract No. 3 Lateral Capital Grouting

MOTIONS /APPROVALS REQUESTED:

No.	Item	Amount
1	<u>Capital Project Authorization:</u> Construction Phase: SRP Year 2 Contract 3 - Sewer Lateral Capital Grouting	\$1,183,070
2 *	<u>Professional Services Authorization:</u> Construction Phase Professional Services: SRP Year 2 Contract 3 - Arcadis	\$267,000
3 *	<u>General Construction Contract:</u> General Construction: SRP Year 2 Contract 3 - Insituform Technologies USA, LLC	\$826,070

() Included in the Capital Project Authorization*

BACKGROUND:

In 2023, LCA and the City of Allentown collaborated to prepare of a 10-year inflow and infiltration (I&I) Source Reduction Plan (SRP), which consists of annual SRP projects. The first year of construction was completed in 2024. The City SRP, along with the I&I reduction plans developed by the other municipalities in the Kline's Island Sewer System (KISS), is required as part of the regional Act 537 Plan, which was recently approved by all signatory municipalities. The total construction cost for the City's 10-year SRP program is estimated to be approximately \$50 million. The goal of the work is the cost-effective reduction of I&I, to reduce both dry-day and wet-weather flows in the KISS. Under the terms of the Lease Agreement with the City, LCA is responsible for implementing the City's I&I SRP, with the City having final determination of the scope of the annual projects to be performed.

PROJECT OVERVIEW:

This authorization request is for the construction phase of Contract No. 3 of the I&I Source Reduction Improvements Year 2 project, which consists of grouting sewer laterals. In accordance with the City's approval process, the Trout Creek sewer system basin will be addressed in this Year 2 project. This sewer basin was ranked highest following the year 1 project based on results of the 2021 Flow Characterization Study and the 2022 RDII analysis. High priority sewer basins are those which have a high rate of rainfall derived I&I, contributing significant baseline and peak flows to the system during wet weather events.

FINANCIAL:

Under the terms of the Lease Agreement as amended in 2020, LCA will provide funding for the SRP from its Allentown Division revenues or reserves. After the first \$650,000 is spent each year, additional project costs beyond that amount will be recaptured through LCA sewer rates through a Capital Cost Recovery Charge. Note that in 2023, the City was awarded an H2O PA grant through a collaborative grant application process with LCA, with proceeds to be used for this program in order to reduce the future rate impact to City customers.

PROJECT STATUS:

In May 2024 the Board approved the Design and Bid Phase Engineering services for Year 2 of the SRP Program. Working closely with the City, LCA has obtained Major Capital Improvement approval for the SRP Year 2 Construction Phase Contracts No. 1 through No. 3.

THIS APPROVAL: CONSTRUCTION PHASE CONTRACT NO. 3

LCA has structured the SRP Year 2 project into three separate bid contracts, strategically staged for bid opening and authorization. This phased approach is designed to foster greater competition among bidders and secure more favorable contract pricing. This specific authorization pertains to Contract No. 3 under the SRP Year 2 Improvements Program.

Contract No. 3 focuses on trenchless rehabilitation of sewer laterals through Capital Grouting. The scope includes the rehabilitation of approximately 724 sewer laterals connected to sewer mains which are scoped for rehabilitation by cured in place pipe lining in Contract No. 1, all located within the Trout Creek Sewer Basin in the City of Allentown.

Key components of the work include:

- Capital Grouting of sanitary sewer laterals.
- Disposal of materials resulting from operations.
- Bypass pumping and traffic control.

BIDDING SUMMARY: CONSTRUCTION CONTRACT NO.3

The project was advertised for bid on August 18, 2025, and a mandatory pre-bid meeting was held virtually on September 30, 2025. Bids were opened on October 13, 2025, and one bid was received. The bidding results are as shown in Table 1:

Table 1	
General Construction	
Bidder	Amount
<i>Insituform Technologies USA, LLC</i>	<i>\$826,070</i>

Insituform Technologies USA, LLC, (located in Chesterfield, MO) is the lowest bidder. Reference checks for Insituform Technologies USA, LLC (Insituform) have identified no issues, and the company has completed many projects of similar scope and size. In fact, Insituform has recently been awarded Contract No.1 for the SRP year 2 project and satisfactorily completed the WLSP Year 1 lateral lining project that was administered by LCA for Upper and Lower Macungie townships along with LCA's Upper Milford system. Insituform was agreeable to work with, followed up with any issues that required correction and completed the rehabilitation work as described in the plans and specifications. Based on reference checks and previous experience working with Insituform, LCA recommends Contract 3 award to Insituform Technologies USA, LLC.

PROFESSIONAL SERVICES:

Construction Field Inspection

Arcadis will provide construction administration services for the construction phase of contract #3. The work will include the tasks below as outlined in the attached proposal dated October 14, 2025:

SRP Contract No. 3 Lateral Grouting Field Representative

- Provide input to and attend kickoff/preconstruction meetings organized and led by Kleinfelder.
- Review shop drawing submittals as assigned by Kleinfelder for compliance with the contract documents.
- Prepare Sequence Trackers, Lateral Trackers, Issues Tracker, and Pay Item Progress Trackers.
- Provide full-time field representative during grouting operations.
- Provide regular senior Construction Engineer oversight of field work.
- Provide senior oversight remotely daily to construction inspector and Contractor's crews to successfully guide the work.
- Review Pre-construction mainline inspections conducted by the Contractor that are electronically transferred to Arcadis by the Contractor, make decisions on which grouting techniques should be used for a given asset, recommend alternative rehabilitation techniques to LCA, Kleinfelder, and the City should grouting not be the clear choice for rehabilitation, and communicate desired rehabilitation techniques to Contractor.
- Prepare daily inspection reports; share with Kleinfelder and LCA through Procore and answer any questions from Kleinfelder and LCA regarding work and pay basis.
- Collaborate with Kleinfelder to prepare agendas and report progress in monthly progress meetings.
- Assist Kleinfelder with review of monthly pay estimates submitted by the contractor and prepare recommendations to LCA.

- Review Post-construction inspections conducted by the Contractor, recommend remedial action or deductions for out-of-specification defects, and prepare punch list.
- Provide LCA and Kleinfelder with all inspections and grouting reports, videos, and databases for incorporation into their GIS or CMMS as part of the Record Plan for the project.

PROJECT SCHEDULE:

Assuming Board approval at the November 10, 2025 meeting, Notice to Proceed will be issued by early December 2025 with an anticipated construction completion by September 2026.

FUTURE AUTHORIZATIONS:

LCA anticipates seeking LCA Board authorization for the SRP Year 3 Project Design and Bid Phases mid-2026.



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REQUEST FOR BOARD AUTHORIZATION

Board of Directors Meeting Date: 11/10/25
Staff Member Requesting Authorization: Jason Peters / Charles Volk
Department: Capital Works
Short Description / Title of Project / Purchase: I&I source reduction improvements – LCA Program, year 2
Contract 3 Lateral Capital Grouting
Project Number (if applicable): Munis 50567

Capital Expense: (check all that apply)

- ☒ Capital Project >\$250,000
☒ Construction / Other Contract(s)
☒ Professional Services Authorization
☐ Initial Authorization
☐ Amended Authorization
☐ Professional Services Authorization >\$100,000
☐ Equipment Purchase >\$250,000
☐ Upsizing / Extension >\$250,000
☐ Aggregate Change Order >10% of contract and >\$100,000
☐ Stand-Alone Change Order >\$50,000

Operations Expense:

- ☐ Construction / Other Contract >\$250,000
☐ Professional Services Authorization >\$100,000
☐ Equipment / Other Individual Item >\$250,000
☐ Emergency Authorization >\$50,000
☐ Aggregate Change Order >10% of contract and >\$100,000
☐ Stand-Alone Change Order >\$50,000

LCA Enterprise Fund: ☒ Allentown Division ☐ Suburban Water ☐ Suburban Wastewater ☐ Internal Service / Admin

Current Project Phase: ☐ N/A (skip to Description) ☐ Planning ☐ Conceptual Design ☐ Design / Bid ☒ Construction

Prior Authorization(s):

Date	Phase	Description	Amount Authorized
5/20/24	Design	Design, Permit and Bid Phase	\$461,771
10/13/25	Construction	Contract No.1 CIPP lining	\$2,624,001
			\$
Total Prior Authorizations:			\$3,085,772

Current Authorization Requested:

Construction Phase Contract No. 3 Lateral Capital Grouting	Amount Requested
Staff	\$10,000
Construction Field Inspection - Arcadis	\$267,000
General Construction Contract 1 CIPP Lining – Insituform Technologies USA, LLC	\$826,070
Contingency	\$80,000
	\$
	\$
	\$
Total Amount Requested (this authorization):	\$1,183,070

Future Authorizations:

Phase	Note / Description	Estimated Cost
Construction	Contract No.1 & No. 3 Change order requests	\$591,000
Estimated Total Project Cost:		\$4,859,842

Short Description: (please attach supporting documentation, cost justification, trade-in values, proposals, memos, etc.)

The construction scope of Contract No. 3 of the I&I Source Reduction Program – Year 2 – Lateral Capital Grouting 724 sewer laterals connected to sewer mains which are scoped for rehabilitation by cured in place pipe lining in Contract No. 1, all located within the Trout Creek Sewer Basin in the City of Allentown.

The scope of work includes, but is not limited to, Capital Grouting of sanitary sewer lateral, bypassing of sewage flows, removal of debris caused by operations, and traffic control to complete the work.

Purchasing Procedure: ☒ Formal Bid ☐ Request for Proposal ☐ Cooperative Purchasing Group / CoStars ☐ N/A - Emergency

Motion: _____ **Second:** _____ **Approved?** _____ **Certified by:** _____

Mr. Jason Peters
Capital Works
Lehigh County Authority
1053 Spruce Road
Allentown, PA 18106-0348

Arcadis U.S., Inc.
1600 Market Street
Suite 1810
Philadelphia
Pennsylvania 19103
Tel 215 625 0850
www.arcadis.com

Subject:
SRP2-3 Rehabilitation
Construction Engineering Scope and Budget Proposal

Dear Mr. Peters:

Arcadis U.S., Inc. (Arcadis) is pleased to offer our continued services as experts in trenchless rehabilitation, especially packer injection grouting techniques, to Lehigh County Authority (LCA) and the City of Allentown (City) for the SPR2-3 grouting project in the City intended to remove infiltration and inflow (I&I) from the sewer system by sealing key leakage points into City's Trout Creek sewers using capital grouting techniques on pipe segments previously lined with cured in place pipe lining (CIPP). This scope and budget cover construction engineering, administration, and inspection services for the lateral tap connection (LTC) grouting contract for SRP2-3. This work will be done in close collaboration with Kleinfelder, the design engineer, who will also provide design services during construction, contract administration services, and inspection services on this contract as well as other SRP2 construction contracts.

As both third party construction resident engineer/inspectors and as the actual contractor for Construction Manager at Risk projects, the Arcadis staff proposed for this project have undergone extensive training and have overseen and directed hundreds of miles of packer injection grouting, cured-in-place mainline and lateral liners, and manhole rehabilitation projects. It is rare that a consulting firm can make the claim of being uniquely qualified and have that be completely the case, but for this project, it is truth. Regarding packer injection grouting, which is the primary technology of this project, Arcadis' Buried Infrastructure team has no equal. Arcadis' master technical specification for test and seal work formed the basis for National Association

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.

WATER

Date:
October 30, 2025

Contact:
Jim Shelton

Phone:
302.723.1450

Email:
James.Shelton@arcadis.com

of Sewer Service Companies (NASSCO) Capital Grouting specification published in 2021 and our inspector training program is being used to frame the upcoming ITCP-Grouting Certification program. Our knowledge of the technology application will safeguard LCA's and the City's interests.

This scope and budget covers work from project pre-construction meeting through substantial completion. (It does not cover the contract required warranty inspections or warranty evaluations expected to occur 1-2 years after Substantial Completion).

OBJECTIVES

The objective of this work is to work with the successful contractor, Kleinfelder, LCA, and the City to ensure the construction plans and specifications for sewer rehabilitation using capital grouting techniques in SRP2-3 LTC rehabilitation project provide highly effective inflow and infiltration reduction for at least 30 years while adding at least 30 years to the life of the rehabilitated pipes.

ASSUMPTIONS

SRP2-2 has approximately 900 laterals to be grouted under the SRP2-3 Contract. Contract award/Notice to Proceed in December 2025 with construction starting in February (work will follow lining work under SRP2-1) and completed by end of September 2026. We have assumed SRP2-3 will be awarded in December and construction will start in February, with 7 months of construction time and 1 month of time for the contractor to prepare and submit final documents and deliverables.

SCOPE OF WORK

Successful use of trenchless rehabilitation methods, especially capital grouting, requires rigorous evaluation of the contractor's submittals and oversight by knowledgeable, experienced personnel to ensure the work is properly constructed given the field conditions at the time of installation. We will staff the construction oversight of this work with only staff experienced in the capital grouting and cured in place techniques being used. As a licensed contractor who has built several large grouting and CIPPL projects, we understand this type of construction far better than typical consulting inspectors and usually far better than contractors performing the work, to the point that we usually train the contractor's field staff in the proper installation of capital grouting and lining methods. We know that grout crews especially will require both significant coaching and sharp attention. The value to LCA and the City in having Arcadis conduct these services is the peace of mind that comes from knowing a team of engineers knowledgeable and experienced in the design and construction of these technologies, especially with those aspects that prevent construction and post-construction failures, is overseeing the work.

As part of our scope of work, Arcadis will provide construction engineering and contract administration services for the duration of the contract. Arcadis will:

- Attend Procore training and orientation sessions facilitated by LCA.
- Provide input to and attend kickoff/preconstruction meetings organized and led by Kleinfelder.
- Use submittal registers for each contract as prepared by Kleinfelder to review shop submittals for SRP2-3 as assigned by Kleinfelder for compliance with the contract documents.
- Prepare Sequence Trackers, Lateral Trackers, Issues Tracker, and Pay Item Progress Trackers for SRP2-3.
- Provide half-time senior Construction Engineer oversight during first two weeks of grouting to ensure capital grouting techniques, pipe preparation, and work documentation expectations are understood and implemented properly by the Contractor.
- Provide half-time field representative during grouting operations. For the purposes of this proposal, we have assumed contractor will work 1-2 crews at four days per week for 7 months and that we will provide construction oversight for 5 hours per construction field day. We will adjust construction engineering oversight based on how many crews are on-site.
- Provide regular senior Construction Engineer oversight of field work. For purposes of this proposal, we have assumed Jim Shelton will be on-site one day per month and that Emily Sadowsky will be on-site one day every other week.
- Provide senior oversight remotely daily to construction inspector and Contractor's crews to successfully guide the work.
- Review Pre-construction mainline inspections conducted by the Contractor that are electronically transferred to Arcadis by the Contractor, make decisions on which grouting techniques should be used for a given asset, recommend alternative rehabilitation techniques to LCA, Kleinfelder, and the City should grouting not be the clear choice for rehabilitation, and communicate desired rehabilitation techniques to Contractor.
- Prepare inspectors daily reports, update Sequence Tracker, update Lateral Tracker, update Pay Item Progress Tracker, and update Issues Tracker daily, share with Kleinfelder and LCA through Procore at frequency requested by either, and answer any questions from Kleinfelder regarding work and pay basis.
- Collaborate with Kleinfelder to prepare agendas and report progress in monthly progress meetings for each of the three contracts.
- Assist Kleinfelder with review of monthly pay estimates submitted by the contractor and prepare recommendations to LCA.
- Review Post-construction inspections conducted by the Contractor, recommend remedial action or deductions for out-of-specification defects, and prepare punch list.
- Provide LCA and Kleinfelder with all inspections and grouting reports, videos, and databases for incorporation into their GIS or CMMS as part of the Record Plan for the project.

- Provide final Sequence Tracker and Lateral Tracker databases to Kleinfelder as part of the Record Plan for the project.
- Provide any GIS corrections via paper map markups to Kleinfelder and LCA.

Work by Others Assumptions

LCA will:

- Attend preconstruction and progress meetings.
- Respond to request for information in a timely fashion.

Kleinfelder will:

- Provide bulk of the construction administration services, including but not limited to meeting agenda and minutes preparation, contractor progress payment reviews, management of RFIs and documentation in Procore, change work directives/change order preparation, etc.
- Provide primary construction engineering services for the CIPPL contract.
- Respond to request for information in a timely fashion.

Budget

We have broken this work into four tasks.

Task		Hours	Expenses	Cost
1	Pre-Construction CCTV Basis of Rehab Review and Decision	95	\$ 2,000	\$ 16,000
2	Construction Administration	251	\$ 2,000	\$ 45,000
3	Construction Engineering	771	\$ 30,000	\$ 179,000
PM	Project Management and Coordination Meetings	108	\$ -	\$ 27,000
Total		1224	\$ 32,000	\$ 267,000

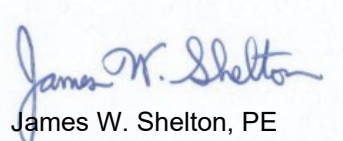
We propose to complete these services on a time and materials basis in accordance with the Agreement between LCA and Malcolm Pirnie, Inc., and the current Summary of Standard Charges for Lehigh County Authority. The above costs anticipate that 70% of this work will be conducted under the 2026 billing rates; we have anticipated a 2% increase in rates. Arcadis will track the costs associated with this work and report them to LCA monthly throughout the project; we will not exceed the authorized budget without written professional services authorization from LCA. Payment for services will be based upon the actual labor and expenses incurred. Invoicing will be completed monthly. The invoice will include the defined

contract tasks listing the day-by-day personnel performing the task with hourly rate and hours worked. The invoice will provide total billed for month. Support documents will be provided if there are any expenses incurred.

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.

Sincerely,

Arcadis U.S., Inc.



James W. Shelton, PE
Vice President – Buried Infrastructure

Copies:

MEMORANDUM

Date: November 10, 2025

To: Lehigh County Authority Board of Directors
From: Amy B. Rohrbach, Project Manager
Subject: Allentown Division - Kline's Island WWTP Electrical Substation No. 1 & Primary Switchgear Replacement – Construction Change Order

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Electrical Construction Change Order #3 – Philips Brothers Electrical Contractors, Inc.	\$81,727.06

PROJECT OVERVIEW

The Kline's Island Wastewater Treatment Plant's (KIWWTP) electrical service is supplied by one of two 12.4 kV power transmission line feeds from the electric utility, PPL. The transmission lines enter Substation 1 and connect to the switchgear, which distributes the power to Substation 1 and 2. The power is then distributed to various Motor Control Centers and loads throughout the KIWWTP. The replacement of Substation 2 was completed in 2019. Substation 1 has reached the end of its useful life and is not adequate to accommodate a future increase in equipment loads from planned capacity improvements projects. The switchgear is an old technology "air-magnetic circuit breaker" that was phased out in favor of "vacuum breaker" type switchgear in the early 1980s. Due to the critical function of the switchgear and the fact that it has been in service for approximately 45 years, Substation 1 and Primary Switchgear will be replaced during this project. A construction contract was issued to Philips Brothers Electrical Contractors Inc. and a Notice to Proceed was issued on February 1, 2024.

PROJECT STATUS

The contractor mobilized in Spring of 2025 and has installed the required ductbanks and conduits, constructed the Switchgear platform, received and installed the new 15kV Switchgear, transferred loads to temporary gear and demolished the existing substation 1 and transformer, begun work on demolition of the existing concrete pad and installing the new raised platform for the new Substation gear. New PPL poles have also been installed and wired and are ready for final connections by PPL to energize the new switchgear. Final completion is currently anticipated for October 2026.

FINANCIAL

The City of Allentown has reviewed and approved this project as a Major Capital Improvement, thereby allowing the cost to be recovered via a capital cost recovery charge (CCRC).

THIS APPROVAL - CONSTRUCTION CHANGE ORDER

This request is for a construction change order to the existing Electrical Construction contract with Philips Brothers Electrical Contractors, Inc. for the KIWWTP Substation 1 and Primary Switchgear project. In connecting to the temporary switchgear, the contractor discovered that one

of the feeder cables had cracked and brittle insulation. This change order is for the cost to replace the entire run of 5,240 feet of 350MCM XHHW feeder cable from the switchgear to MCC-14 Odor Control. The total increase to the electrical construction contract with Philips Brothers Electrical Contractors, Inc. is \$81,727.06.

PROFESSIONAL SERVICES

Keystone Engineering Group continues to provide construction administration services for the project and no additional services are required as part of this change order.

PROJECT SCHEDULE

The project is scheduled to be completed in the fall of 2026.

FUTURE AUTHORIZATIONS

No future authorizations are anticipated for this project.



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REQUEST FOR BOARD AUTHORIZATION

Board of Directors Meeting Date: 11/10/2025
Staff Member Requesting Authorization: Amy Rohrbach
Department: Capital Works
Short Description / Title of Project / Purchase: KIWWTP Electrical Substation No. 1 and Primary Switchgear Replacement – Construction Phase EC Change Order 03
Project Number (if applicable): AD-S-20 / Munis Project # 50154

Capital Expense: (check all that apply)

- ☒ Capital Project >\$250,000
☒ Construction / Other Contract(s)
☐ Professional Services Authorization
☐ Initial Authorization
☐ Amended Authorization
☐ Professional Services Authorization >\$100,000
☐ Equipment Purchase >\$250,000
☐ Upsizing / Extension >\$250,000
☐ Aggregate Change Order >10% of contract and >\$100,000
☒ Stand-Alone Change Order >\$50,000

Operations Expense:

- ☐ Construction / Other Contract >\$250,000
☐ Professional Services Authorization >\$100,000
☐ Equipment / Other Individual Item >\$250,000
☐ Emergency Authorization >\$50,000
☐ Aggregate Change Order >10% of contract and >\$100,000
☐ Stand-Alone Change Order >\$50,000

LCA Enterprise Fund: ☒ Allentown Division ☐ Suburban Water ☐ Suburban Wastewater ☐ Internal Service / Admin

Current Project Phase: ☐ N/A (skip to Description) ☐ Planning ☐ Conceptual Design ☐ Design / Bid ☒ Construction

Prior Authorization(s):

Date	Phase	Description	Amount Authorized
4/4/22	Prelim. Engineering	Preliminary Engineering PSA – Keystone Engineering Group	\$10,000
11/14/22	Design/Bid	Design & Bidding Phase Board Authorization	\$181,275
12/11/23	Construction	Construction Phase Board Authorization	\$6,561,934
12/19/24	Construction	Electrical Construction CO 1 – Philips Brothers Electrical Contractors, Inc. (PPL required Intertie Protection Relay cabinet)	\$4,479.26
9/8/25	Construction	Electrical Construction CO 2 – Philips Brothers Electrical Contractors, Inc. (PPL charges, directional drilling, and new Manhole)	\$109,481.89
Total Prior Authorizations:			\$6,867,170.15

Current Authorization Requested:

Description	Amount Requested
Electrical Construction CO 3 – Philips Brothers Electrical Contractors, Inc.	\$81,727.06
Total Amount Requested (this authorization):	\$81,727.06

Future Authorizations:

Phase	Note / Description	Estimated Cost
	none	\$
Estimated Total Project Cost:		\$6,948,897.21

Short Description: (please attach supporting documentation, cost justification, trade-in values, proposals, memos, etc.)

This request is for a construction change order to the existing Electrical Construction contract with Philips Brothers Electrical Contractors, Inc. for the KIWWTP Substation 1 and Primary Switchgear Project. This change order is to replace an existing feeder cable that was found to have cracked and brittle insulation.

Purchasing Procedure: ☒ Formal Bid ☐ Request for Proposal ☐ Cooperative Purchasing Group / CoStars ☐ N/A - Emergency

Motion: _____ Second: _____ Approved? _____ Certified by: _____

CHANGE ORDER NO.: EC-03

Owner:	Lehigh County Authority	Owner's Project No.:	50154
Engineer:	Keystone Engineering Group, Inc.	Engineer's Project No.:	2023.00265
Contractor:	Philips Brothers Electrical Contractors, Inc.	Contractor's Project No.:	2860
Project:	LCA KIWWTP Switchgear 50154		
Contract Name:	Contract 01 – Electrical Construction		
Date Issued:	10/28/25	Effective Date of Change Order:	10/28/25

The Contract is modified as follows upon execution of this Change Order:

Description:

PBEC discovered that the feeder cables to MCC14 is THHN and its insulation is brittle and cracked while connecting the temporary switchgear to the existing load wires from Substation 1. This change order is to replace the feeder cables with XHHW insulation type.

There is no timeline adjustment to the contract at this time.

Attachments:

PBEC Document, "RFI-13 Feeder Replacement to MCC-14 Odor Control", 10/28/25

Cost Summary:

Change Order EC-03 Totals	Cost
Feeder Replacement to MCC-14 Odor Control	\$81,727.06
Total Cost	\$81,727.06

Contract Adjustment:

Change in Contract Price		Change in Contract Times	
Original Contract Price:		Original Contract Times:	
\$ 4,974,999.00		Substantial Completion: January 20 th , 2026	
		Ready for final payment: March 22 nd , 2026	
Increase from previously approved Change Orders No. 1		Increase from previously approved Change Orders No.1:	
\$ 113,961.15		Substantial Completion: 0 days	
		Ready for final payment: 0 days	
Contract Price prior to this Change Order:		Contract Times prior to this Change Order:	
\$ 5,088,960.15		Substantial Completion: January 20 th , 2026	
		Ready for final payment: March 22 nd , 2026	
Increase this Change Order:		Increase this Change Order:	
\$ 81,727.06		Substantial Completion: 0 days	
		Ready for final payment: 0 days	
Contract Price incorporating this Change Order:		Contract Times with all approved Change Orders:	
\$ 5,170,687.21		Substantial Completion: January 20 th , 2026	
		Ready for final payment: March 22 nd , 2026	

<p>Recommended by Engineer (if required)</p> <p>By: <u>Kerstin M. Hezek, P.E.</u></p> <p>Title: <u>Senior Project Manager / Associate</u></p> <p>Date: <u>10/28/25</u></p> <p><u>Accepted by Contractor</u></p> <p>By: _____</p> <p>Title: _____</p> <p>Date: _____</p>	<p>Authorized by Owner</p> <p>_____</p> <p>_____</p> <p>_____</p> <p><u>Approved by Funding Agency (if applicable)</u></p> <p>_____</p> <p>_____</p> <p>_____</p>
---	---

October 28, 2025
Job #2860

Keystone Engineering
590 Lancaster Avenue
Suite 200
Frazer, PA 19355

Attn: Kerstin Hezek

Re: Kline's Island Switchgear & Substation #1
Electrical Contract #1

Sub: RFI-13 Feeder Replacement to MCC -14 Odor Control

Dear Sir,

See below our cost to replace the THHN feeder to MCC-14 with a new set of 350MCM and #2 ground XHHW Copper. Price does not include temporary power, assumes we can pull through spare conduits and connect to new gear with 1 or 2 outages 30-40 minutes long each. So that a temporary generator is not needed.

Material

Qty	Unit	Description	Amt. Per Unit	Total
1500	FT	String	.05	75.00
5240	FT	350MCM XHHW	9.87	51,718.80
1310	FT	#2 XHHW Ground	2.23	2,921.30
1	LOT	Misc – Tie Wraps, Rags, Soap, Tape, Etc..	75.00	75.00
Subtotal				\$54,790.10
15% overhead & profit				8,218.52
Total				\$63,008.62

Equipment

Qty	Unit	Description	Amt. Per Unit	Total
1	day	UG Locator Seek Tech	170.00	170.00
2	days	Skid Steet Loader	430.00	860.00
1	day	Wire Trailer	850.00	850.00
Total				\$1,880.00

As29467-2860-25

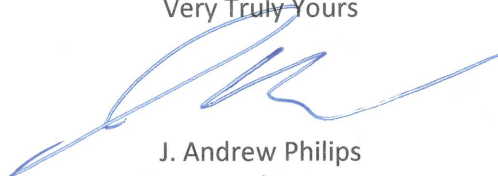
Labor

Description	Men	Hours	Total Hours
Investigate & Find Manhole	2	16	32
Pull Ropes	2	4	8
Pull Wire/Splices	6	8	48
Switch Over to New	2	4	8
Demo/Scrap Old	4	6	24
Document, Close Manhole	1	2	2
Total Hours			122
PBEI Rate			\$138.02
Total Labor			\$16,838.44

Summary

Material	\$63,008.62
Equipment	\$1,880.00
Labor	<u>\$16,838.44</u>
Total	\$81,727.06

Very Truly Yours



J. Andrew Philips
Secretary/Treasurer

Lehigh County Authority – Monthly Report to Board of Directors

Upcoming Board Agenda Items & Project Updates – November 2025

Published: November 3, 2025

PART 1 – Upcoming Agenda Items – Action & Discussion Items

FINANCE & ADMINISTRATION

Project Title: 2026 Water & Wastewater Rate Schedules

Division / Funding: All Divisions

Board Action Date: 11/10/2025

Status or Action Desired: Approval

Project Phase: n/a

Project Notes: Following completion of the 2025 Budget process, a complete package of water and wastewater rate updates is presented to the Board for consideration and adoption. The Suburban Water rates shown in proposed rate schedules are a result of the budget process and recent cost-of-service study. The City Division water and sewer rates reflect terms of the Concession Lease Agreement. Board approval for the updated rate schedule is requested at the November 10, 2025 meeting to allow for proper notification to customers prior the January 1, 2026 effective date.

Staff Responsibility: Liesel Gross

Project Title: PENNVEST Financing Resolutions: Lead Service Line Replacement Cycle 2 Project

Division / Funding: Allentown Division

Board Action Date: 11/10/2025

Status or Action Desired: Approval

Project Phase: n/a

Project Notes: Three Resolutions are required to be reviewed and approved by the Board in order to complete the planned PENNVEST grant and loan financing for the Allentown Division Lead Service Line Cycle 2 project to remove and replace lead service lines in the City of Allentown. Staff Responsibility: Liesel Gross

Project Title: 2026 Board Meeting Schedule

Division / Funding: n/a

Board Action Date: 11/10/2025

Status or Action Desired: Approval

Project Phase: n/a

Project Notes: The proposed Board meeting schedule for 2026 is presented for Board approval so the schedule can be advertised and posted to the Authority's website. Staff Responsibility: Liesel Gross

Project Title: Monthly Financial Review

Division / Funding: n/a

Board Action Date: 11/24/2025

Status or Action Desired: Information

Project Phase: n/a

Project Notes: The October 2025 monthly financial reports will be presented. Staff Responsibility: Ed Klein

SYSTEM OPERATIONS

Project Title: Monthly Operations Report

Division / Funding: n/a

Board Action Date: 11/24/2025

Status or Action Desired: Information

Project Phase: n/a

Project Notes: The October 2025 monthly operations report will be presented. Staff Responsibility: Andrew Moore & Chris Moughan

WATER PROJECTS – ALLENTOWN DIVISION

Project Title: Lead Service Line Replacement Project Cycle 2

Division / Funding: Allentown Division

Board Action Date: 11/10/2025

Status or Action Desired: Approval

Project Phase: Construction Phase

Project Notes: This project focuses on Cycle 2 of the lead service line (LSL) replacement program in the City of Allentown. The scope of the project consists of the replacement of approximately 1,000 lead service lines within a prioritized project area. LCA will be seeking grants and low interest loans from PennVest for each cycle of this program. The LCA Board authorized the Design and Bid phases at the February 26, 2024 meeting. The Board approved an amended professional services authorization for CDM Smith to conduct community canvassing and provide other project support at the August 26, 2024 LCA Board meeting. CDM Smith was authorized for a second amendment in October 2025 for additional construction management and ordinance development tasks. At the November 10, 2025 Board meeting, construction phase authorization will be requested, including approval of two contracts for replacement of 500 service lines each, and additional construction inspection services. Staff Responsibility: Anton Siekmann

WASTEWATER PROJECTS – KISS ACT 537

Project Title: Sanitary Sewer Collection System: City of Allentown Manhole Rehabilitation

Division / Funding: Allentown Division

Board Action Date: 11/10/2025

Status or Action Desired: Approval

Project Phase: Design Phase

Project Notes: As part of the Act 537 planning process, a rainfall derived inflow and infiltration (RDII) analysis was performed in the first quarter of 2022 for the City of Allentown system. This analysis shows the overall system suffers from inflow problems. Some of the existing manholes in the City system have inflow dishes and some have been previously inspected. However, due to the critical nature of Act 537 planning, all the public side manholes need to be inspected. The inspections and subsequent rehabilitation work will be phased over the next 10 years (refer to the MH Inspection project detail for more information). The design for the 2024 manhole rehabilitations will be treated as a "pilot" to identify the best means and methods to fix inspected issues. The bids for this first MH Rehab project were opened on 8/28/24. Construction phase authorization for the Cycle 1 project was granted at the 9/23/24 Board meeting. The project was completed by the end of summer 2025. At the November 10, 2025 Board Meeting, design authorization is requested for "MH Rehab Year 2" and is focused on manhole rehab within the Trout Creek sewershed. Approximately 450 manholes are slated for rehab, pending further changes as the design progresses. Staff Responsibility: Jason Peters

WASTEWATER PROJECTS – SUBURBAN DIVISION

Project Title: Heidelberg Heights Sewer System: I&I Source Reduction Program

Division / Funding: Suburban Division

Board Action Date: 11/10/2025

Status or Action Desired: Approval

Project Phase: Construction Phase

Project Notes: In accordance with the Consent Order and Agreement (CO&A) executed by LCA and DEP in 2020, LCA is required to complete annual sanitary sewer system replacement projects to eliminate hydraulic overloads and bypasses at the Heidelberg Heights wastewater treatment plant. The Corrective Action Plan, which is incorporated into the CO&A, includes an implementation schedule that requires all original VCP sewer main and public laterals to be replaced by the end of 2024, followed by the investigation of private-side sewer components and removal/disconnection of all prohibited connections (basement drains, sump pumps, roof leaders, etc.). To date all original VCP sewer main and public laterals have been replaced. LCA notified all sewer system customers in early 2022 of private side sewer inspections, and secured services from Keystone Engineering to perform third-party inspections to identify prohibited connections. Data from this planning/inspection effort was used to document illegal/prohibited connections in order to comply with the Heidelberg Township Sewer System Rules and Regulations Ordinance (#2019-1). As of the end of 2022, approximately 27% of residences granted permission to perform a private-side sewer inspection. A comprehensive private side sewer rehabilitation project is to commence in 2025, to be funded in part by a state grant. The project will consist of the internal lining of private sewer laterals from the sewer main in the street to the pipe entrance at the building foundation. Following additional CCTV investigations of lateral connections in 2024, LCA retained Arcadis to provide final design and bid phase services for the rehabilitation of 50 private laterals in an area of the development with documented private side leakages. The project was advertised for bid in October and will be on the 11/10/25 LCA Board meeting agenda for construction phase authorization. Staff Responsibility: Chuck Volk

WASTEWATER PROJECTS – ALLENTOWN DIVISION

Project Title: Sanitary Sewer Collection System: I&I Source Reduction Program (LCA Year 2)

Division / Funding: Allentown Division

Board Action Date: 11/10/2025

Status or Action Desired: Approval

Project Phase: Construction Phase

Project Notes: In 2023, LCA and the City of Allentown collaborated to prepare a 10 Year inflow & infiltration (I&I) source reduction plan, and the first year of construction was authorized in 2024. The plan, along with the I&I reduction plans developed by the other municipalities in the Kline's Island Sewer System, is required for the regional Act 537 Plan. The LCA Board authorized the year 2 design and bid phases at the May 20, 2024 meeting. LCA paused the design efforts late in 2024 until a more robust sanitary sewer evaluation study (SSES) program was developed and deployed in the City. Based on the SSES findings, LCA has prepared and placed out for bid the SRP year 2 project with three separate construction contracts in hopes of garnering more interest by area contractors and more competitive pricing. Bids for contract # 1 were opened on 9/18/2025. LCA secured Board approval of Contract # 1 at the 10/13/2025 meeting. Bids for contract # 2 were opened on 10/9/2025 and Bids for contract # 3 were opened on 10/13/2025. LCA will be seeking Board approval to reject bids for Contract # 2 and award the bid for Contract # 3 at the 11/10/2025 LCA Board meeting. Staff Responsibility: Jason Peters

Project Title: Kline's Island WWTP: Substation No. 1 and Switchgear ReplacementDivision / Funding: Allentown DivisionBoard Action Date: 11/10/2025Status or Action Desired: ApprovalProject Phase: Construction Phase

Project Notes: The KIWWTP electrical service is supplied by two 12.4 kV power feeds from PPL. Two substations distribute power to the various MCCs and loads throughout the plant. The substations and primary switchgear are at the end of their useful life and in need of replacement. Substation No. 2 was replaced in 2019. This project will replace Substation No. 1. The preliminary basis of design was submitted to the City of Allentown as part of Major Capital Improvement approval process, with approval received in October 2022. Design phase approval was authorized at the 11/14/2022 Board meeting. The Substantially Complete Design package was submitted to the City of Allentown, with approval received on 8/1/2023. Construction Phase Authorization was granted at the 12/11/2023 LCA Board meeting. Authorization for an electrical contract construction change order was authorized by the Board at the 9/8/2025 meeting to add a new electrical manhole, complete directional drilling to install conduits, and additional fees from PPL Electric Utilities for the Interconnection Impact Review. Authorization for an electrical construction contract change order is being requested at the 11/10/2025 meeting for the replacement of the feeder cable for MCC-14 which was discovered to have cracked insulation. Staff Responsibility: Amy Rohrbach

PART 2 – Project Updates – Information Items

Project Title: Safety Process & Procedures

Division / Funding: All Divisions

Status or Action Desired: Discussion

Board Action Date: 12/8/2025

Project Phase: n/a

Project Notes: Discussion of LCA safety tracking, root cause analysis, and processes related to job safety analyses.

Staff Responsibility: Jeff Nelson

Project Title: Resolution 12-2025-1: Customer Facility Fees & Connection Fees

Division / Funding: n/a

Status or Action Desired: Approval

Board Action Date: 12/8/2025

Project Phase: n/a

Project Notes: Resolution No. 12-2025-1 will be presented for Board consideration to update certain tapping fees including customer facilities and connection fees. The 2026 Customer Facilities Fees and Connection 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. Staff Responsibility: Liesel Gross

Project Title: Collective Bargaining Agreement: SMART Local 19

Division / Funding: n/a

Status or Action Desired: Approval

Board Action Date: 12/8/2025

Project Phase: n/a

Project Notes: Board approval of the terms of a new collective bargaining agreement with the Sheet Metal, Air, Rail & Transportation Workers (SMART), Local 19 is requested for an effective date of January 1, 2026. Staff Responsibility: Liesel Gross

Project Title: Water Filtration Plant: Fluoride System Upgrades

Division / Funding: Allentown Division

Status or Action Desired: Approval

Board Action Date: 12/8/2025

Project Phase: Construction Phase

Project Notes: This project is to prepare detailed design and bidding documents for upgrades to the existing fluoride system at the Water Filtration Plant. The existing system is past its useful life and in need of replacement. The intent is for the design and bidding phases to be completed by the end of 2024 with construction beginning in 2025. Professional Services Authorization was granted at the 8/26/2024 Board meeting. Design phase was completed in the summer of 2025 and the project was advertised for bid on 10/8/2025 with bids due 11/6/25. Construction authorization is anticipated in December 2025. Staff Responsibility: Amy Rohrbach

Project Title: Large Diameter Valve Rehabilitation & Replacement ProgramDivision / Funding: Allentown DivisionBoard Action Date: n/aStatus or Action Desired: UpdatedProject Phase: Construction Phase

Project Notes: In 2022, LCA identified the need to develop a prioritization plan to guide the maintenance, replacement, and renewals of water system valves sized 16-inch and greater within the Allentown Division water system. The result of the plan will be used to establish budgeting needs to implement an annual large diameter valve maintenance and replacement program as well as optimize the investments in that program. Approval was granted in April 2022 to begin the planning phase of this work. Prioritization work has been completed, and an annual capital program was initiated for replacement based on risk prioritization of the large valves. Phase 1 project design phase authorization was granted at the 3/27/2023 LCA Board meeting. Design was completed and bid phase commenced in September 2024, with bid opening on 9/24/24. Construction phase authorization was granted at the 10/14/2024 Board meeting. Construction mobilization occurred the week of 10/20/25 and completed the large valve replacement on 12th St. The large valve replacements along MLK Drive will be completed by mid-November, and design of next year's large valve replacement project will begin by the end of the year. Staff Responsibility: Chuck Volk

PART 3 – Open Project List – No Updates

Project Category	Project Title	Division / Funding	Project Phase	Staff Responsibility
Finance & Administration	LCA Building Optimization Study & Master Plan	All Divisions	Planning Phase	Stephen Boone
Finance & Administration	LCA Munis ERP System Planning & Re-Implementation	All Divisions	Planning Phase	Chris Moughan & Brooke Neve
Finance & Administration	Project Management / Construction Management Software Installation & Setup	All Divisions	Planning Phase	Jason Peters
Finance & Administration	Capital Program Management Services	All Divisions	Planning Phase	Chuck Volk
Finance & Administration	LCA Strategic Plan - Progress Reporting	All Divisions	n/a	Liesel Gross
Finance & Administration	Allentown Water & Sewer Lease Bonds: Bondholder Consent	Allentown Division	n/a	Ed Klein
System Operations	Suburban Water & Wastewater Facilities - SCADA System Upgrade	Suburban Division	Construction Phase	Chris Moughan
System Operations	Watershed Monitoring Program	Suburban Division	Planning Phase	Andrew Moore
Water - Suburban	2025 Water Meter Replacements	Suburban Division	Construction Phase	Amy Kunkel
Water - Suburban	North Whitehall Division - Second Water System Interconnection	Suburban Division	Design Phase	Amy Kunkel
Water - Suburban	Suburban Division Lead Service Line Inventory Program & Compliance Planning	Suburban Division	Planning Phase	Albert Capuzzi
Water - Suburban	Central Lehigh and North Whitehall Systems – Water Supply Study	Suburban Division	Planning Phase	Phil DePoe
Water - Suburban	Upper System Pump Station and Main Extension	Suburban Division	On Hold	Amy Kunkel
Water - Suburban	Water Main Replacement Program Cycle 8	Suburban Division	Design Phase	Jason Peters
Water - Suburban	Buss Acres Water System Interconnection & PFAS Remediation	Suburban Division	Design Phase	Amy Kunkel

Project Category	Project Title	Division / Funding	Project Phase	Staff Responsibility
Water - Allentown	Water Filtration Plant: PFAS Treatment	Allentown Division	Design Phase	Amy Rohrbach
Water - Allentown	Water Filtration Plant: Redundant Raw Water Line	Allentown Division	Design Phase	Amy Rohrbach
Water - Allentown	30" & 36" East Side Transmission Main Repair Project	Allentown Division	Construction Phase	Jason Peters
Water - Allentown	Lehigh River Pump Station Upgrades	Allentown Division	Design Phase	Amy Rohrbach
Water - Allentown	Allentown Division Lead Service Line Inventory Program & Compliance Planning	Allentown Division	Planning Phase	Reni Keane-Dengel
Water - Allentown	Badger Meter Replacements	Allentown Division	Construction Phase	Amy Kunkel
Water - Allentown	Water Filtration Plant: Emergency Power Design	Allentown Division	Design Phase	Amy Rohrbach
Water - Allentown	Water Main Replacement Program Cycles 9 - 11	Allentown Division	Design Phase	Jason Peters
Water - Allentown	Water Filtration Plant: Filter Upgrade Project	Allentown Division	Construction Phase	Amy Rohrbach
Water - Allentown	Lead Service Line Replacement Project Cycle 1	Allentown Division	Construction Phase	Reni Keane-Dengel
Sewer - Act 537	Sanitary Sewer Collection System: City of Allentown Manhole Inspections	Allentown Division	Planning Phase	Phil DePoe
Sewer - Act 537	Kline's Island Sewer System - Act 537 Plan	City of Allentown (AO)	Planning Phase	Phil DePoe
Sewer - Act 537	KISS System Modeling - Sewage Billing Meter QA/QC Data Analytics and Flow Metering Program	City of Allentown (AO)	Planning Phase	Phil DePoe
Sewer - Act 537	KISS Act 537 Planning - Financial & Institutional Evaluation, Phase 3	City of Allentown (AO)	Project Closeout	Liesel Gross
Sewer - Act 537	Legal Services: Development of New Intermunicipal Agreement(s)	City of Allentown (AO)	Planning Phase	Liesel Gross
Sewer - Act 537	KISS Relief Interceptor Pre-Design Study	Suburban Division	Project Closeout	Phil DePoe

Project Category	Project Title	Division / Funding	Project Phase	Staff Responsibility
Sewer - Act 537	Regional Sewer Capacity & Wet-Weather Planning: Engineering & Program Support	Suburban Division	Project Closeout	Phil DePoe
Sewer - Act 537	Western Lehigh Interceptor Municipalities Test & Seal Lateral Grouting Project, Year 2 (2025)	Suburban Division	Construction Phase	Jason Peters
Sewer - Act 537	Western Lehigh Service Area - Engineering & Program Support	Suburban Division	Planning Phase	Phil DePoe
Sewer - Act 537	Upper Western Lehigh Pump Station & Force Main	Suburban Division	Construction Phase	Amy Kunkel
Sewer - Act 537	Western Lehigh Interceptor Municipalities Test & Seal Lateral Grouting Project	Suburban Division	Construction Phase	Jason Peters
Sewer - Suburban	Industrial Pretreatment Plant Master Plan	Suburban Division	Planning Phase	Liesel Gross & Albert Capuzzi
Sewer - Suburban	Pretreatment Plant - Critical Upgrades	Suburban Division	Construction Phase	Chuck Volk
Sewer - Suburban	North Whitehall Township Act 537 Plan	Suburban Division	Planning Phase	Phil DePoe
Sewer - Suburban	Arcadia WWTP Screening System Project	Suburban Division	Construction Phase	Anton Siekmann
Sewer - Suburban	LCA Meter Stations 1 and 2 Upgrades	Suburban Division	Construction Phase	Chuck Volk
Sewer - Suburban	Wynnewood Terrace WWTP Expansion - Developer Cost-Sharing Agreement	Suburban Division	Design Phase	Chuck Volk
Sewer - Suburban	Pretreatment Plant (PTP) Electrical Study	Suburban Division	Planning Phase	Chuck Volk
Sewer - Suburban	Lynn Township Corrective Action Plan	Suburban Division	Planning Phase	Jason Peters
Sewer - Allentown	Kline's Island WWTP - Building Renovations	Allentown Division	Design Phase	Anton Siekmann
Sewer - Allentown	Kline's Island WWTP - Plastic Media Trickling Filter Rehabilitation	Allentown Division	Construction Phase	Amy Rohrbach
Sewer - Allentown	Kline's Island WWTP - Wet Weather Improvements - Phase 1	Allentown Division	Design Phase	Amy Rohrbach

Project Category	Project Title	Division / Funding	Project Phase	Staff Responsibility
Sewer - Allentown	Kline's Island WWTP: Chemically Enhanced Primary Treatment Study	Allentown Division	Planning Phase	Stephen Boone
Sewer - Allentown	Allentown Division I&I Program – Programmatic Support, Trout Creek & Eastside Basins	Allentown Division	Planning Phase	Stephen Boone
Sewer - Allentown	Kline's Island WWTP: 2025 Architectural and Structural Upgrades	Allentown Division	Construction Phase	Anton Siekmann
Sewer - Allentown	Kline's Island WWTP - Final Settling Tanks 1-4 Upgrades	Allentown Division	Construction Phase	Amy Rohrbach
Sewer - Allentown	Sanitary Sewer Collection System: I&I Source Reduction Program (LCA Year 1)	Allentown Division	Construction Phase	Jason Peters