



LCA Main Office:
1053 Spruce Road
Wescosville, PA 18106
610-398-2503

Agendas & Minutes Posted:
www.lehighcountyauthority.org

LEHIGH COUNTY AUTHORITY

Published: December 5, 2022

BOARD MEETING AGENDA – December 12, 2022 – 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 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

- *November 14, 2022 Board meeting minutes*

4. Public Comments

5. Action / Discussion Items:

FINANCE AND ADMINISTRATION

- *Special Recognition (Discussion) (ivory) (digital Board packet, pages 7-8)*
- *2023 Board Meeting Schedule (Approval) (goldenrod) (digital Board packet, pages 9)*
- *2021 Audit & Financial Statements (Acceptance) (information to be distributed at the meeting)*
- *Resolution 12-2022-1: Customer Facility Fees & Connection Fees (Approval) (blue) (digital Board packet, pages 10-15)*
- *Resolution 12-2022-2 & 12-2022-3: Authorizing the Authority's Applications for Grant Funding (Approval) (purple) (digital Board packet, pages 16-20)*
- *SMART Union Contract Changes – 2023-2025 (Approval) (digital Board packet, pages 21-26)*
- *Capital Works Plan Room – Storage and Scanning (Approval) (gray) (digital Board packet, pages 27-29)*

WATER

WASTEWATER

- *Contract Laboratory Analysis for Water and Wastewater Samples (Approval) (yellow) (digital Board packet, pages 30-33)*
 - *KISS Act 537 Planning – Financial & Institutional Evaluation, Phase 1 (Approval) (green) (digital Board packet, pages 34-38)*
 - *Sanitary Sewer Collection System: City of Allentown Manhole Inspections (Approval) (pink) (digital Board packet, pages 39-49)*
 - *Sanitary Sewer Collection System: City of Allentown Interceptor Inspections (Approval) (salmon) (digital Board packet, pages 50-60)*
6. Monthly Project Updates / Information Items (1st Board meeting per month) (digital Board packet, pages 61-67) – **December 2022 report attached**
 7. Monthly Financial Review (2nd Board meeting per month)
 8. Monthly System Operations Overview (2nd Board meeting per month)
 9. Staff Comments
 10. Solicitor's Comments
 11. Public Comments / Other Comments
 12. Board Member Comments
 13. Executive Sessions
 14. Adjournment

UPCOMING BOARD MEETINGS		
January 9, 2023	January 23, 2023	February 13, 2023

PUBLIC PARTICIPATION POLICY

In accordance with Authority policy, members of the public shall record their name, address, and discussion item on the sign-in sheet at the start of each meeting; this information shall also be stated when addressing the meeting. During the Public Comment portions of the meeting, members of the public will be allowed 5 minutes to make comments/ask questions regarding non-agenda items, but time may be extended at the discretion of the Chair; comments/questions regarding agenda items may be addressed after the presentation of the agenda item. Members of the public may not request that specific items or language be included in the meeting minutes.

REGULAR MEETING MINUTES

November 14, 2022

Notice of Preparation of Authority Meeting Minutes: Authority staff who are in attendance at each Authority Board meeting prepare a draft of the Minutes, which are subsequently distributed to all Board members for review. Board members may offer corrections prior to a vote of the full Board of Directors to approve the Minutes.

The Regular Meeting of the Lehigh County Authority Board of Directors was called to order at 12:01 p.m. on Monday, November 14, 2022, Vice Chairman Scott Bieber 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. Scott Bieber, Richard Bohner, Norma Cusick, Linda Rosenfeld, Jeff Morgan, Amir Famili, and Kevin Baker were present for the duration of the meeting. Brian Nagle and Ted Lyons entered the meeting after it started, at the times noted below, and were present for the subsequent duration of the meeting.

Solicitor Michael Gaul of KingSpry was present along with Authority Staff, Liesel Gross, Ed Klein, Chris Moughan, Chuck Volk, Andrew Moore, Phil DePoe, Susan Sampson, Albert Capuzzi, and Lisa Miller.

Vice Chairman Bieber announced that the Board received their electronic and hard copies of the Board packet in advance and asked if anyone did not receive their copy of the packet. A copy of the packet is also available online.

REVIEW OF AGENDA

Liesel Gross announced that there are no changes or additions to the agenda; however, there will be an Executive Session at the close of the regular meeting to discuss personnel.

APPROVAL OF MINUTES

October 24, 2022 Meeting Minutes

On a motion by Richard Bohner, seconded by Linda Rosenfeld, the Board approved the minutes of the October 24, 2022, Board meeting as written (5-0). Kevin Baker and Amir Famili abstained.

PUBLIC COMMENTS

None.

2023 Water & Wastewater Rate Schedules

Liesel Gross explained the schedule of rates with changes shown from the 2022 rate to the 2023 rate, including an explanation of the process to determine those rates. She noted that prior meetings and presentations covered factors that are used to determine the new rates, such as the Water Rate Study presented by David Busch from Keystone Alliance Consulting and the Western Lehigh Interceptor (WLI) User Charge Report from Jennifer Montero. The Allentown Division water and sewer rates are determined by formulas included in the Allentown Water & Sewer Lease Agreement. Ms. Gross noted the section for Line Inspection and Cleaning Services is recommended to be removed from the schedule, since any service of this type is charged at the actual cost.

On a motion by Linda Rosenfeld, seconded by Richard Bohner, the Board adopted the 2023 Water & Wastewater Rate Schedules as proposed (7-0).

Kline's Island WWTP – High-Rate Wet-Weather Treatment Pilot Study

Phil DePoe gave an overview of the wet-weather issues at Kline's Island Wastewater Treatment Plant (KIWWTP) and gave a presentation of the proposed BioActiflo pilot study. He also reviewed Phase 1 and Phase 2 of the peak wet-weather projects. Preliminary design of Phase 1 is under way with Phase 2 to be included in the Act 537 Plan for construction by 2028. Chris Curran from AECOM was also present and provided additional details. Mr. DePoe said that the two main goals of Act 537 Plan development process is to develop solutions to eliminate the use of Outfall 003 and to eliminate sanitary sewer overflows in the collection system. The most recent modeling work completed by Arcadis indicates the future peak flows are likely in the range of 160 to 180 million gallons per day (MGD). The Phase 1 and Phase 2 work will be designed to allow the KIWWTP to treat up to 120 MGD. Therefore, strategies to handle peak flows beyond the 120 MGD must be developed. One potential strategy that needs further vetting is a high-rate treatment system developed by Veolia Water Technologies known as "BioActiflo." A full-scale pilot is needed before this option can be included in the Act 537 Plan. If this option is proven to be viable and cost-effective, the BioActiflo system would only be utilized for peak wet-weather flows in excess of 120 MGD to KIWWTP.

Board members Brian Nagle and Ted Lyons entered the meeting during Mr. DePoe's presentation.

There was some Board discussion regarding the KIWWTP's trickling filter system and the ability to treat up to 120 MGD under the work planned for Phase 1 and Phase 2. The Board asked about the risks of getting to 120 MGD and how the trickling filter system will handle peak flows.

There was some additional discussion about the BioActiflo technology and Veolia's on-site pilot study approach. Mr. DePoe explained the pilot test will also provide data to support the overall evaluation of capital costs, operating and maintenance costs, and operational risks associated with this option. AECOM has provided an in-depth proposal outlining the scope of services for the engineering and pilot testing services. The proposal from Veolia describes the operation and sampling for the pilot study.

On a motion by Amir Famili, seconded by Linda Rosenfeld, the Board approved the Capital Project Authorization for the Regional Act 537 Plan Alternatives Analysis – KIWWTP BioActiflo Pilot Test Phase in the amount of \$264,750.00 which includes a Professional Services Authorization (AECOM) BioActiflo Pilot Test Phase – Engineering & Data Analysis in the amount of \$141,750.00 and a Professional Services Authorization (Veolia) BioActiflo Pilot Test Phase – Pilot Equipment Supplier & Operator in the amount of \$98,000.00 (9-0).

Suburban Division – Western Lehigh Manhole Rehabilitation Project

Chuck Volk reviewed the third annual manhole rehabilitation project to reduce infiltration and inflow in the Western Lehigh Interceptor and eliminate sanitary sewer overflows (SSOs). The scope of the project is to raise the manhole tops at or above the floodplain elevation and install new water-tight frames and covers. Jason Peters commented on the condition assessment and noted that flood waters and debris are the most damaging to the manholes. By using the USGS creek elevation gauges, it has enabled the Authority to see which manholes are most affected and be able to prioritize repairs. The new composite frame and cover system is bolted to the lid and frame, making them a much more secure fit than the previous lids and frames.

The Board asked about the wide range of bids that were received. Jason Peters explained that the bidders may specialize in performing different types of construction and installation work, and the lowest bidder may have some additional expertise or equipment that allows for greater efficiency. He noted that Scheuermann Excavating is very capable and has completed similar work for the Authority in the past.

On a motion by Linda Rosenfeld, seconded by Jeff Morgan, the Board approved the Capital Project Authorization for the Construction Phase in the amount of \$197,975.00 which includes the contract award for General Construction to Scheuermann Excavating, Inc. in the amount of \$157,475.00 and the Professional Services Authorization for the Construction inspection to Keystone Consulting Engineers in the amount of \$22,500.00 (9-0).

Allentown Division – Kline’s Island WWTP – Substation No. 1 and Switchgear Replacement

Chuck Volk gave an overview of the project noting that the switchgear and substation number 1 have reached the end of their service life and were highlighted in the Kline’s Island Wastewater Treatment Plant as a high priority capital improvement. In addition, the aged electrical components are not adequate to accommodate the future increase in pumping that will be installed as part of the Phase 1 and Phase 2 wet-weather improvements at the plant, as described earlier in the meeting. In a report from Keystone Engineering, it was recommended to replace the old breaker system with modern vacuum breaker with automatic transfer capabilities.

The City of Allentown Office of Compliance has reviewed and approved the project as a Major Capital Improvement, allowing the cost to be recovered via a capital cost recovery charge in the Allentown Division.

On a motion by Jeff Morgan, seconded by Linda Rosenfeld, the Board approved the Capital Project Authorization for the Design Phase in the amount of \$181,275.00 which includes the Professional Services Authorization to Keystone Engineering Group in the amount of \$151,275.00 (9-0).

MONTHLY PROJECT UPDATES / INFORMATION ITEMS

Liesel Gross noted that there are no agenda items for the November 28th Board meeting and most likely the meeting will be canceled. She highlighted a few items that will be on the agenda for the next meeting on December 12th. The monthly financial and operations reports will be sent out separately.

STAFF COMMENTS

None.

SOLICITOR’S COMMENTS

None.

PUBLIC COMMENTS / OTHER COMMENTS

None.

BOARD MEMBER COMMENTS

Scott Bieber asked about the monthly financial reports and asked if the reports could be shortened with less detail. Chairman Nagle said that this will be discussed in more detail at the upcoming Board retreat.

EXECUTIVE SESSION

There will be an Executive Session after the regular meeting to discuss matters of personnel. No action is expected.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 1:08 p.m.

Richard Bohner
Secretary

Proclamation

WHEREAS, Richard H. Bohner was initially appointed to serve on the Lehigh County Authority Board of Directors in 1972; and

WHEREAS, Richard H. Bohner served as Chairman of the Authority's Board during the 1990s and then as Secretary for 18 years until his retirement from the Authority's Board in 2022; and

WHEREAS, Richard brought community focus and business management expertise to the Authority based on experience gained through his lengthy and successful career at the Pennsylvania Power & Light Company and completion of a Master of Business Administration degree from Lehigh University; and

WHEREAS, during his 50 years of service to the Authority, Richard provided consistent leadership and participation in critical decisions that shaped the provision of water and wastewater services throughout the County of Lehigh; and

WHEREAS, Richard's signature appears on a variety of important Authority historical and contractual documents signaling his leadership in ensuring that reliable water and wastewater services would be available for growing communities in Lehigh County; and

WHEREAS, his committed service has meant so much to the Authority and to our community, as water and sewer services have played such an important role in supporting our region's economic vitality and ensuring the public's health and environment are protected; and

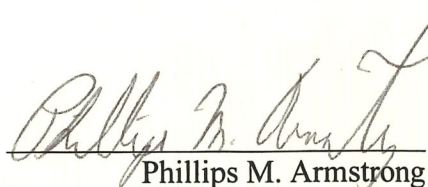
WHEREAS, the Lehigh County recognizes and appreciates Richard's 50-year dedication and commitment to the Board of Lehigh County Authority;

THEREFORE, I, Phillips M. Armstrong, County Executive of the County of Lehigh, do hereby recognize, on this seventh day of December, 2022.

RICHARD H. BOHNER

As we celebrate his 50 years of dedicated volunteer service on the LCA's Board of Directors.




Phillips M. Armstrong
County Executive



APPROVED

County of Lehigh
Pennsylvania
Board of Commissioners
Resolution

NO. 2022 - 58

**HONORING RICHARD H. BOHNER FOR 50 YEARS OF VOLUNTEER SERVICE TO
 THE LEHIGH COUNTY AUTHORITY**

WHEREAS, the mission of the Lehigh County Authority (LCA) is to protect public health and the environment by providing high-quality, safe and reliable water and wastewater services; and

WHEREAS, Richard H. Bohner has selflessly devoted an astounding 50 years of volunteer service to the Lehigh County Authority; and

WHEREAS, over these years, Mr. Bohner served on the LCA Board of Directors in several capacities, including Board Secretary and Chairman of the Board; and

WHEREAS, being a retired Customer Support Systems Manager at Pennsylvania Power & Light Company, Mr. Bohner has remained unwavering in his commitment to the provision of essential public services to our citizens; and

WHEREAS, the Pennsylvania Municipal Authorities Association had previously recognized Mr. Bohner for his service by presenting him with the Sahli Service Award and Extended Service Award; and

NOW, THEREFORE, the Board of Commissioners of Lehigh County do hereby commend Richard H. Bohner for the outstanding public service he has given to the Lehigh County Authority for the past fifty years.

ADOPTED BY THE LEHIGH COUNTY BOARD OF COMMISSIONERS on the

22nd day of November, 2022, by the following vote:

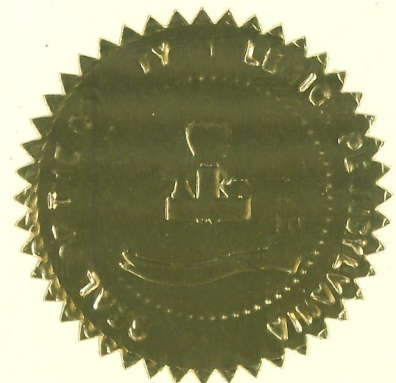
Commissioners**AYE****NAY**

Ron W. Beitler
 Geoff Brace
 Zach Cole-Borghi
 Jeffrey Dutt
 Bob Elbich
 Dave Harrington
 Dan Hartzell
 Antonio A. Pineda
 Zakiya Smalls

X
 X
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ATTEST:

Deputy Clerk to the Board of Commissioners





LEHIGH COUNTY AUTHORITY BOARD 2023 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. Due to the COVID-19 Pandemic
emergency, and until further notice, 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
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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 9, 23

February 13, 27

March 13, 27

April 10, 24

May 8, 22

June 12, 26

July 10, 24

August 14, 28

September 11, 18

October 9, 23

November 13, 27

December 11

BRIAN NAGLE
Chair

RESOLUTION No. 12-2022-1

(Duly adopted 12 December 2022)

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

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

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

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

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

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

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

1. The capital recovery fees for wastewater and water service in various of the Authority's wastewater and water systems as indicated and shown on Attachment A, *LCA Customer Facilities Fees and Connection Fees, Allentown and Suburban Divisions - Water and Wastewater*, attached hereto and made a part hereof, are adopted effective 1 January 2023.

2. The Authority's Schedules of Rates and Charges shall be amended to reflect the fees hereby adopted, which fees shall be effective as of 1 January 2023.

3. All other Authority cost recovery fees, customer facilities fees, connection fees, and tapping fees, not contained in Attachment A hereto, continue in place, and are unaffected hereby.

On motion of _____, seconded by _____, this Resolution was adopted the 12th day of December 2022.

Tally of Votes: Yeas _____ Nays _____



I, Michael A. Gaul, Esquire, of the law firm of King, Spry, Herman Freund & Faul, LLC, Solicitor of Lehigh County Authority, do hereby certify that the foregoing is a true, correct and complete copy of a resolution which was duly adopted by the Authority at a public meeting of the Authority held on 12 December 2022, after notice thereof had been duly given as required by law, at which meeting a quorum was present and voting and which resolution No. 12-2022-1 is now in full force and effect on the date of this certification.

Michael A. Gaul, Esquire King, Spry, Herman Freund & Faul, LLC Lehigh County Authority Solicitor	Date
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Attest:

Lisa J. Miller
Executive Administrative Support Specialist

ATTACHMENT A
LCA CUSTOMER FACILITIES FEES AND CONNECTION FEES
ALLENTOWN AND SUBURBAN DIVISIONS - WATER AND WASTEWATER

Suburban Division - Water System - Customer Facilities Fees

Meter Component - With DC Backflow

<u>Meter Size</u>	<u>2023 Supply Cost</u>	<u>2023 Labor Cost</u>	<u>2023 Rate</u>
5/8"	\$370	\$101	\$471
5/8" Pit	\$392	\$101	\$493
3/4"	\$389	\$101	\$490
3/4" Pit	\$409	\$101	\$509

Meter Component - With No Backflow

<u>Meter Size</u>	<u>2023 Supply Cost</u>	<u>2023 Labor Cost</u>	<u>2023 Rate</u>
5/8"	\$337	\$101	\$437
5/8" Pit	\$359	\$101	\$459
3/4"	\$356	\$101	\$456
3/4" Pit	\$375	\$101	\$475
1"	\$460	\$101	\$561
1" Pit	\$438	\$101	\$538
1 1/2" Displacement	\$812	\$50	\$862
1 1/2" Turbine	\$1,276	\$50	\$1,326
1 1/2" Compound	\$1,768	\$50	\$1,818
2" Displacement	\$1,071	\$50	\$1,121
2" Turbine	\$1,352	\$50	\$1,402
2" Compound	\$2,024	\$50	\$2,074

Suburban Division - Wastewater System - Customer Facilities Fees

Meter Purchase Only (Plumber Install)

<u>Meter Size</u>	<u>2023 Supply Cost</u>	<u>2023 Inspection Fee</u>	<u>2023 Rate</u>
5/8"	\$337	\$50	\$387
5/8" Pit	\$359	\$50	\$409
3/4"	\$356	\$50	\$406
3/4" Pit	\$375	\$50	\$425
1"	\$460	\$50	\$510
1" Pit	\$438	\$50	\$488
1 1/2" Displacement	\$812	\$50	\$862
1 1/2" Turbine	\$1,276	\$50	\$1,326
1 1/2" Compound	\$1,768	\$50	\$1,818
2" Displacement	\$1,071	\$50	\$1,121
2" Turbine	\$1,352	\$50	\$1,402
2" Compound	\$2,024	\$50	\$2,074

Allentown Division - Water System - Customer Facilities Fees

<u>Meter Size</u>	<u>2023 Meter Price</u>	<u>Components</u>	<u>2023 Labor Cost</u>	<u>2023 Rate</u>
5/8"	\$89	\$141	\$119	\$348
3/4"	\$162	\$141	\$119	\$422
1"	\$140	\$139	\$119	\$398
1 1/2"	\$301	\$286	\$119	\$706
2"	\$392	\$378	\$119	\$889
3" Compound	\$2,252	\$248	\$50	\$2,550
3" Turbine	\$1,572	\$248	\$50	\$1,870
4" Compound	\$3,880	\$290	\$50	\$4,219
4" Turbine	\$3,019	\$290	\$50	\$3,359
6" Compound	\$6,670	\$379	\$50	\$7,099
6" Turbine	\$5,401	\$379	\$50	\$5,830
8" Compound	\$10,748	\$540	\$50	\$11,339
8" Turbine	\$9,137	\$540	\$50	\$9,727

<u>Other Components</u>	<u>2023 Price</u>
5/8" Meter Horn	\$60.65
3/4" Meter Horn	\$71.00
Curb Box - Metal	\$75.08

Allentown Division - Water System - Water Connection Fees

Water Taps 3/4 inch - 2 inch

	<u>Corporation</u>	<u>Tail Piece</u>	<u>Saddle Clamp</u>	<u>Employee Wages</u>	<u>Equipment</u>	<u>2023 Rate</u>
Size 3/4 "	\$35	\$28	\$0	\$319	\$77	\$458
Size 1 "	\$51	\$40	\$0	\$319	\$77	\$487
Size 1 1/2"	\$158	\$106	\$58	\$319	\$77	\$717
Size 2 "	\$269	\$169	\$58	\$319	\$77	\$892

Water Sleeve and Valve Connectors

	<u>Valve</u>	<u>Casing</u>	<u>Tapping Fitting</u>	<u>Employee Wages</u>	<u>Equipment</u>	<u>2023 Rate</u>
Size 4"x 4"	\$947	\$197	\$787	\$939	\$255	\$3,124
Size 6"x 4"	\$947	\$197	\$820	\$939	\$255	\$3,158
Size 6" x 6"	\$1,336	\$197	\$934	\$939	\$255	\$3,662
Size 8"x 4"	\$947	\$197	\$849	\$939	\$255	\$3,187
Size 8"x 6"	\$1,336	\$197	\$944	\$939	\$255	\$3,672
Size 8"x 8"	\$1,985	\$197	\$1,173	\$939	\$255	\$4,550
Size 12"x 4"	\$947	\$197	\$1,091	\$939	\$255	\$3,428
Size 12"x 6"	\$1,336	\$197	\$1,200	\$939	\$255	\$3,928
Size 12"x 8"	\$1,985	\$197	\$1,451	\$939	\$255	\$4,828
Size 12"x 12"	\$4,521	\$197	\$2,722	\$939	\$255	\$8,635

Lehigh County Authority – High-Priority Project Summaries

Grant Application Background Data – December 2022

Project Name: Heidelberg Heights Sanitary Sewer Replacement Project

Location: Heidelberg Township, Lehigh County, Pennsylvania

Grant Program: 2022 DCED: COVID-19 ARPA Small Water and Sewer (SWS) PA Water Supply, Sanitary Sewer and Storm Water Projects

Application Number: 9496071

Grant Requested: \$386,750

LCA Match: \$68,250

Project Overview: Final phase (2023) of planned sewer system replacement to address historical environmental challenges in a small community of low- to moderate-income households in northern Lehigh County. Sewer system has history of overflows and significant leakage for many years prior to LCA assumption of ownership of the system. Due to small size of system, serving only 138 homes, every small project has significant impact on sewer rates. Sewer rates in this area are among the highest in the Lehigh Valley as a result of the system rehabilitation requirements. System is subject to Pa. DEP Consent Order.

Project Name: Upper Western Lehigh Pump Station Project

Location: Upper Macungie Township, Lehigh County, Pennsylvania

Grant Program: 2022 DCED: COVID-19 ARPA H2O PA Water Supply, Sanitary Sewer and Storm Water Projects

Application Number: 9496073

Grant Requested: \$5,235,795

LCA Match: \$2,617,898

Project Overview: This project will include the design and construction of a 2.5 million gallon pump station to divert excess sewer flows from a section of the regional system in Lehigh County that is currently overloaded. This area of the system overflows during wet-weather events, causing environmental damage and increasing public health risks. Required under the terms of the DEP-approved Corrective Action Plan and is necessary for DEP to continue approving new industrial and residential sewer system connection in the region. This project is the first step in a broader regional planning effort being undertaken by 15 municipalities in Lehigh County, including the City of Allentown.

Project Name: City of Allentown I&I Source Reduction Program Phases 1, 2 & 3

Location: City of Allentown, Lehigh County, Pennsylvania (*Note: City of Allentown is proposed grantee*)

Grant Program: 2022 DCED: COVID-19 ARPA H2O PA Water Supply, Sanitary Sewer and Storm Water Projects

Application Number: 9496074

Grant Requested: \$10,396,080

LCA Match: \$5,198,040

Project Overview: This project will include the design and construction of three years of projects to rehabilitate the sewer lines located in Allentown that have been identified as having high rates of leakage. The work is required under the terms of a Pa. DEP-approved Corrective Action Plan to eliminate sanitary sewer overflows. In addition, eliminating leakage from this regional system will bring long-term benefits by freeing up system capacity for growing communities in Lehigh County. Grant funding support for this project will also support low-income residents in the City of Allentown by reducing the impact of this rehab work on their sewer bill.

For more information, please contact Liesel Gross, CEO, at lieselgross@lehighcountyauthority.org.

RESOLUTION NO. 12-2022-2

(Duly adopted 12 December, 2022)

AUTHORIZING THE SUBMISSION OF A H2O PA WATER SUPPLY, SANITARY SEWER AND STORM WATER PROJECTS PROGRAM GRANT REQUEST; DESIGNATING LEHIGH COUNTY AUTHORITY OFFICIALS AUTHORIZED TO EXECUTE ALL DOCUMENTS AND AGREEMENTS IN CONNECTION WITH THE REQUESTED GRANT AND ASSIST IN OBTAINING THE REQUESTED GRANT; AND PROVIDING FOR OTHER MISCELLANEOUS MATTERS.

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 Authority owns, leases, and/or operates public water and sewer systems in the greater Lehigh Valley of Pennsylvania; and

WHEREAS, the Authority’s Board has determined to request a grant under the H2O PA Water Supply, Sanitary Sewer and Storm Water Projects Program (the “H2O PA Grant Program”) for financial assistance for the Upper Western Lehigh Pump Station Project (the “Project”); and

WHEREAS, in accordance with the H2O PA Grant Program requirements, the Board desires to declare its approval of the grant request for the Project, and designate an Authority official(s) authorized to execute documents and agreements and assist in obtaining the requested grant.

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

SECTION 1. The Lehigh County Authority, of the County of Lehigh, Pennsylvania, hereby requests a H2O PA grant of Five Million, Two Hundred Thirty-Five Thousand, Seven Hundred Ninety-Five Dollars (\$5,235,795) from the Commonwealth Financing Authority to be used for the Project.

SECTION 2. Liesel Gross, Authority Chief Executive Officer, and Edward Klein, Authority Chief Financial Officer, individually and collectively, are hereby designated as the official(s) (the “Designated Officials”) to execute all documents and agreements between the Lehigh County Authority and the Commonwealth Financing Authority, and

any other related Commonwealth entities, to facilitate and assist in obtaining the requested grant.

SECTION 3. The Designated Officials, and other Authority officers, individually and collectively, are hereby authorized, empowered and directed on behalf of the Authority to execute any and all papers and documents, and to do and cause to be done any and all acts and things necessary, proper, or convenient, for the execution or carrying out purposes of this Resolution.

On motion of _____, seconded by _____, this resolution was adopted the 12th day of December 2022.

Tally of Votes: Yeas _____ Nays _____

☞ ☞

I, Michael A. Gaul, of the law firm of King, Spry, Herman, Freund & Faul, LLC, Solicitor to the Lehigh County Authority, do hereby certify that the foregoing is a true, correct and complete copy of a Resolution No. 12-2022-2 which was duly adopted by the Authority Board at a public meeting of the Authority Board held on December 12, 2022, after notice thereof had been duly given as required by law, at which meeting a quorum was present and voting, and which Resolution has been recorded in the Minutes and is now in full force and effect on the date of this certification.

Michael A. Gaul, Esquire Date
King, Spry, Herman, Freund & Faul, LLC
Lehigh County Authority Solicitor

(SEAL)

Attest:

Lisa J. Miller Date
Executive Administrative Support Specialist

RESOLUTION NO. 12-2022-3

(Duly adopted 12 December, 2022)

AUTHORIZING THE SUBMISSION OF A PA SMALL WATER AND SEWER PROGRAM GRANT REQUEST; DESIGNATING LEHIGH COUNTY AUTHORITY OFFICIALS AUTHORIZED TO EXECUTE ALL DOCUMENTS AND AGREEMENTS IN CONNECTION WITH THE REQUESTED GRANT AND ASSIST IN OBTAINING THE REQUESTED GRANT; AND PROVIDING FOR OTHER MISCELLANEOUS MATTERS.

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 Authority owns, leases, and/or operates public water and sewer systems in the greater Lehigh Valley of Pennsylvania; and

WHEREAS, the Authority’s Board has determined to request a grant under the PA Small Water and Sewer Program (the “PSWS Grant Program”) for financial assistance for the Heidelberg Heights Sanitary Sewer Pipeline Replacement Project (the “Project”); and

WHEREAS, in accordance with the PSWS Grant Program requirements, the Board desires to declare its approval of the grant request for the Project, and designate an Authority official(s) authorized to execute documents and agreements and assist in obtaining the requested grant.

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

SECTION 1. The Lehigh County Authority, of the County of Lehigh, Pennsylvania, hereby requests a PSWS grant of Three Hundred Eighty-Six Thousand, Seven Hundred Fifty Dollars (\$386,750) from the Commonwealth Financing Authority to be used for the Project.

SECTION 2. Liesel Gross, Authority Chief Executive Officer, and Edward Klein, Authority Chief Financial Officer, individually and collectively, are hereby designated as the official(s) (the “Designated Officials”) to execute all documents and agreements between the Lehigh County Authority and the Commonwealth Financing Authority, and any other related Commonwealth entities, to facilitate and assist in obtaining the requested grant.

SECTION 3. The Designated Officials, and other Authority officers, individually and collectively, are hereby authorized, empowered and directed on behalf of the Authority to execute any and all papers and documents, and to do and cause to be done any and all acts and things necessary, proper, or convenient, for the execution or carrying out purposes of this Resolution.

On motion of _____, seconded by _____, this resolution was adopted the 12th day of December 2022.

Tally of Votes: Yeas _____ Nays _____



I, Michael A. Gaul, of the law firm of King, Spry, Herman, Freund & Faul, LLC, Solicitor to the Lehigh County Authority, do hereby certify that the foregoing is a true, correct and complete copy of a Resolution No. 12-2022-3 which was duly adopted by the Authority Board at a public meeting of the Authority Board held on December 12, 2022, after notice thereof had been duly given as required by law, at which meeting a quorum was present and voting, and which Resolution has been recorded in the Minutes and is now in full force and effect on the date of this certification.

Michael A. Gaul, Esquire Date
King, Spry, Herman, Freund & Faul, LLC
Lehigh County Authority Solicitor

(SEAL)

Attest:

Lisa J. Miller Date
Executive Administrative Support Specialist

MEMORANDUM

TO: LCA Board of Directors
FROM: Liesel Gross, CEO
DATE: December 5, 2022
RE: SMART Union Contract Changes – 2023-2025

Attached: Summary of Contract Changes – Effective January 1, 2023

On December 31, 2022, one of Lehigh County Authority's union contracts will expire. A significant effort was made by both the LCA staff and members / representatives of the Sheet Metal, Air, Rail and Transportation Workers (SMART), Local 19, to negotiate a new contract well in advance of the current contract expiration.

Key contract provisions reviewed and adjusted for the 2023-2025 contract period include:

- Addition of two-times (2X) pay for employees who work seven (7) consecutive days
- General wage increases for all employees included in the SMART unit
- Minor simplification of the career-path progression program with slightly higher starting pay for all positions
- Increase in compensatory time (comp time) accrual from 40 hours to 80 hours
- Addition of Martin Luther King Jr. Day as a company-paid holiday (previously approved by LCA's Board in 2021)
- Elimination of pay reduction for employee use of sick time, and addition of respite time as an allowable use of sick time (for situations where additional rest time is needed after an employee works an overnight emergency work assignment)
- Increase of the probationary period from 120 days to 180 days
- Various other minor language adjustments to reflect current practices, position titles, etc.

LCA staff believe the 2023-2025 proposed collective bargaining agreement with SMART, Local 19 represents a fair and appropriate update to the contract. Wages will remain competitive with the local job market, and in line with LCA's goals for internal equity. The contract adjustments also serve to maintain key features of LCA's employee development approach, including career-path progression for employees who obtain additional skills and certifications.

A more detailed review of the agreed-upon contract changes is attached for LCA Board review and approval. Approval for the Chief Executive Officer to execute the final agreement is also requested.

Collective Bargaining Agreement

Lehigh County Authority & Sheet Metal, Air, Rail and Transportation Workers, Local 19

Summary of Contract Changes – Effective January 1, 2023

Article 4 – Hours of Work

NOTE: Minor adjustments to language regarding Authority / SMART “meet and discuss” for any proposed schedule changes in advance of changing a work schedule.

Section 4.6 – NEW

Any Employee who works a full shift for seven consecutive calendar days shall receive two times (2x) his or her regular rate of pay for all hours worked on such seventh consecutive calendar day. However, work that begins on the sixth consecutive day and continues into the seventh calendar day shall not be considered to be a seventh day. Paid or unpaid time off will not count towards days worked for purposes of this section – the Employee must actually work a full shift each day of the seven-day period in order to be eligible for 2x pay on the seventh day.

Article 5 - Wages

Section 5.1 - REVISED

Wage Increases - LCA will increase each base wage rate in the following manner:

Full-time employees shall receive:

- Effective January 1, 2023 – 3.50% increase to base wages
- Effective January 1, 2024 – 2.25% increase to base wages
- Effective January 1, 2025 – 2.25% increase to base wages

The above increases will apply to all full-time Employees with the exception of red-circled employees.

NOTE: See Appendix A attached for full wage schedule during contract period.

Section 5.2 – REVISED

Red-Circled Employees (Foremen)

Employees whose pay is higher than Step 8 of their pay grade will receive pay increases as follows:

- January 1, 2023 – 2.00%
- January 1, 2024 – 1.50%
- January 1, 2025 – 1.50%

Section 5.3 – REVISED

Criteria for O&M Technician Step and Grade Movement

Step 1A	Complete Probation Skills, Obtain CDL License w/ necessary endorsements – Move to step 1B.
Step 1B	<u>Complete Probation Skills, Obtain CDL License w/ necessary endorsements, and complete Lead Beeper Skills – Move to Step 2.</u>
Step 2	Complete 2 rounds on Lead Beeper, Complete Core Skills – Move to Step 3.
Steps 3-8	Move to the next step on anniversary date, or January 1 for Employees hired before 1/1/2017.

NOTE: The change above reflects the elimination of Step 1A from the pay scale to slightly increase the starting rates for new hires.

NOTE: Miscellaneous other minor adjustments required in Article 5 to eliminate references to Step 1A and Step 1B, which have been consolidated into a single Step 1.

Section 5.7 – REVISED

~~SMART employees employed on or before December 31, 2019 will be able to progress to an O&M Technician II or III position in accordance with Section 5.3. Employees hired on or after January 1, 2020~~ Employees will be able to progress to an O&M Technician II position in accordance with Section 5.3 but shall only be able to progress to an O&M Technician III position only when there is a posted opening ~~but in no event later than five (5) years from their date of hire.~~

Article 6 – Overtime Compensation

Section 6.1 (a) – REVISED

Overtime equal to one-and-one-half (1 ½) times the Employee's hourly rate shall be paid to Employees:

- a) For all time worked in excess of forty (40) hours per week and/or the normal work shift in each work day, except as follows:
 - i. Those employees whose normal work schedule is less than forty (40) hours per week will not be eligible for such overtime pay until such time as the employee has worked in excess of forty (40) hours in the work week.
 - ii. There will be no “pyramiding” of overtime.

Section 6.8 (a) – REVISED

- a) Employees who receive compensatory time may accumulate up to ~~forty (40)~~ eighty (80) hours annually.

Section 6.9 – REMOVED

NOTE: Section 6.9 of the contract relates to Respite Time paid to employees who work 16 or more hours continuously. This section was removed, with additional adjustments to the Compensatory Time provision (Article 6, Section 6.8(a)) and the Sick Time provisions (Article 11) to address this need.

Article 8 – Holidays

Section 8.1 – REVISED

Note: This change was approved by the Authority for all employees (union and non-union) in 2021 and is reflected here to update the contract language.

Paid Holidays – The following holidays will be observed with full pay:

- New Year's Day
- Martin Luther King Jr. Day
- Memorial Day
- Independence Day
- Labor Day
- Thanksgiving Day
- Christmas

Article 11 – ~~Excused Leave~~ Sick Time

Section 11.1 – REVISED

Each Employee is entitled to up to ~~sixteen (16)~~ ten (10) sick days per year. Sick time can include illness of Employee, illness of dependent, medical appointment (limited to time of appointment plus necessary travel time), ~~or other valid reasons approved by the Employee's immediate supervisor~~ or respite time as approved by the Employee's immediate supervisor in situations where additional rest time is needed following an overnight emergency work assignment.

Sections 11.2 and 11.4 – REMOVED

NOTE: These sections specify how an employee is paid for their sick days depending on the number of days they use in a calendar year. These sections are removed from the contract so that employees receive 100% pay for all sick days used.

Section 11.2 – NEW

Unused sick time remaining at the end of the calendar year may be carried over to the following year, so long as the total accrual of sick time does not exceed 16 days. For the contract year beginning January 1, 2023, existing employees will be provided with 10 days sick time for 2023, and may carry over unused sick time from 2022 into 2023, subject to the 16-day cap.

Article 33 – Probationary Employees

Section 33.1 – REVISED

All new Employees shall be subject to a ~~120-day~~ 180-day probationary period. At the end of such period, the Employee shall advance to regular status. The Employer, with the concurrence of the Union, may extend the probationary period (not to exceed an additional ~~120-days~~ 180 days). Time on leave of absence or on layoff shall not count toward satisfying the probationary period or any extension thereof.

Miscellaneous Other Revisions

NOTE: Minor language adjustments throughout the contract to address the following items:

- *Contract dates, where referenced, will be updated to reflect a contract period of January 1, 2023 to December 31, 2025.*
- *Throughout the contract, adjustments required to add the Electrician and Customer Care Field Technician positions, which were added during the prior contract period.*
- *Various minor language adjustments related to benefits as a “clean up” item reflecting the employees’ previous election (beginning January 1, 2020) to move to benefits provided by the SMART union.*
- *Updated sections related to non-discrimination to reflect current standard language.*

APPENDIX A
LEHIGH COUNTY AUTHORITY
WAGE SCALE FOR S.M.A.R.T. EMPLOYEES LOCAL 19

JANUARY 1, 2023 - DECEMBER 31, 2023
3.50% GENERAL WAGE INCREASE EFFECTIVE 01/01/2023

GRADE	1	2	3	4	5	6	7	8
9	\$20.57	\$20.90	\$21.80	\$24.78	\$25.34	\$25.92	\$26.53	\$27.16
12	\$22.09	\$22.44	\$23.40	\$26.53	\$27.16	\$27.84	\$28.55	\$29.29
15	\$23.82	\$24.20	\$25.24	\$28.55	\$29.29	\$30.07	\$30.88	\$31.70
18	\$25.67	\$26.08	\$27.14	\$30.88	\$31.70	\$32.53	\$33.33	\$34.14

JANUARY 1, 2024 - DECEMBER 31, 2024
2.25% GENERAL WAGE INCREASE EFFECTIVE 01/01/2024

GRADE	1	2	3	4	5	6	7	8
9	\$21.03	\$21.37	\$22.29	\$25.33	\$25.91	\$26.50	\$27.13	\$27.77
12	\$22.58	\$22.95	\$23.93	\$27.13	\$27.77	\$28.47	\$29.19	\$29.94
15	\$24.35	\$24.74	\$25.81	\$29.19	\$29.94	\$30.74	\$31.57	\$32.42
18	\$26.25	\$26.66	\$27.75	\$31.57	\$32.42	\$33.26	\$34.08	\$34.91

JANUARY 1, 2025 - DECEMBER 31, 2025
2.25% GENERAL WAGE INCREASE EFFECTIVE 01/01/2025

GRADE	1	2	3	4	5	6	7	8
9	\$21.50	\$21.85	\$22.79	\$25.90	\$26.49	\$27.10	\$27.74	\$28.40
12	\$23.09	\$23.47	\$24.47	\$27.74	\$28.40	\$29.11	\$29.85	\$30.62
15	\$24.90	\$25.30	\$26.39	\$29.85	\$30.62	\$31.43	\$32.28	\$33.15
18	\$26.84	\$27.26	\$28.38	\$32.28	\$33.15	\$34.01	\$34.85	\$35.69

Grades & Positions

Grade 9	Operations & Maintenance Technician 1
Grade 12	Operations & Maintenance Technician 2
	Compliance Technician, Waste Water Sampler, <u>Customer Care Field Technician</u>
Grade 15	Operations & Maintenance Technician 3, <u>Electrician</u>
Grade 18	Foreman

* If an internal candidate is moving to a Foreman position, the candidate will start at ~~Step 4~~ Step 6 with eligibility to move to ~~Step 5~~ Step 7 on anniversary date so long as two rounds of back-up beeper have been completed.

** If an external candidate is hired as a Foreman, the candidate will start at Step 3 with progression to Step 4 following two (2) rounds on back-up beeper.

MEMORANDUM

Date: December 12, 2022

To: LCA Board of Directors
From: Christopher Moughan
Subject: LCA – Capital Works Planning Room Organizing, Secure Storage and Digitizing

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1.	Professional Services Authorization – Reynolds Business Systems	\$79,640.93

PROJECT OVERVIEW:

Reynolds Business Systems will work with LCA to digitize the existing plan storage room in the Capital Works department at the main office. Total volume of greater than 18,000 plans sheets are stored in paper format in the storage room currently. Reynolds will provide 225 plan storage boxes to aid in organization and proper secure storage of the plans. Once packaged the plans will be transported to Reynolds secure storage facility at their main office.

Reynolds will begin scanning and QCing the plans for readability based upon an agreed upon schedule with the Capital Works team. In the event there is a need for review of original paper documents before scanning is completed, Reynolds has a process in place to allow someone to go onsite and view plans.

The final output will be PDF files of all documents that will have undergone a QC process. In the event of low quality/resolution/visibility issues, Reynolds has the ability to reprocess with different options to enhance the overall image quality. These final digital documents will be delivered to LCA through a secure hosted site.

FINANCIAL:

This project is listed in the 2022 Internal Services budget.

PROJECT STATUS:

Pending Board approval.

THIS APPROVAL:

LCA intends to retain the services of Reynolds Business Systems to complete the organization and digitizing of all documents in our plan room. The following table summarizes the professional services to be performed under this approval:

Professional Services
1. Organize, transport and securely store plans
2. Scan and QC plans according to the agreed upon schedule.
3. Deliver digitally to LCA for final secure storage and access to internal staff

CONSULTANT SELECTION PROCESS:

The proposed vendor has worked with LCA in the past. They have proven to be a trusted partner and work well with the Authority, and meet the Authority's requirements related to data security, cybersecurity, and document control. The firm's capacity for secure storage is above the original expectation of the project, and allows LCA to move more quickly towards the final digitized product.

PROJECT SCHEDULE:

Pending Board approval, project is anticipated to begin in December of 2022 and be completed by October of 2023.

FUTURE AUTHORIZATIONS:

None



Lehigh County Authority

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

PROFESSIONAL SERVICES AUTHORIZATION

Professional: Reynold Business Systems
682 N. Brookside Rd
Allentown PA 18106
CoStars# - 009-E22-082

Date: December 12, 2022

Requested By: Christopher Moughan

Approvals

Department Head: _____

Chief Executive

Officer: _____

LCA – Capital Works Planning Room Organizing, Secure Storage and Digitizing

Previous Authorizations- None

This Authorization – Design Phase: \$79,640.93

Reynolds Business Systems will work with internal staff to organize and box up the roughly 18,000 (sheets) plans in our existing plan storage room. Once packaged up Reynolds will store the plans securely onsite at their main office and subsequently scan then deliver digitized documents on an agreed timeline.

Professional Services
1. Organize, transport and securely store plans
2. Scan and QC plans according to agreed up schedule
3. Deliver digitally back to LCA for secure storage

Cost Estimate (not to be exceeded without further authorization):

\$ 79,640.93

Time Table and Completion Deadline: As required to meet design timeline requirements

(For Authority Use Only)

Authorization Completion:

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

MEMORANDUM

Date: December 2, 2022

To: Lehigh County Authority Board of Directors

From: Andrew Moore, Director of Plant Operations

Subject: Contract Laboratory Analysis for Water and Wastewater Samples

APPROVALS REQUESTED

Approvals Requested	Brief Description	Amount
Professional Services Authorization	Suburban Testing Labs – one-year contract, with option to extend for two additional one-year terms	\$204,323*

** Estimated 2023 cost only. Additional costs will apply if contract extensions are granted. It is estimated that \$40,000 of this amount are Jacobs' costs as outlined below.*

BACKGROUND

The existing contract for laboratory services is set to expire at the end of 2022. A Request for Proposal (RFP) was prepared to solicit qualifications and unit prices for the testing needs of the Allentown Division, Suburban Division, and the Pretreatment Plant. Combining the needs of all LCA divisions was anticipated to result in favorable unit pricing from environmental laboratories.

More than 8,000 water, wastewater, and biosolids analyses are conducted for the Allentown Division, Suburban Division, and Pretreatment Plant each year. LCA's onsite laboratory does not hold the necessary accreditations or equipment to complete analysis for all water and wastewater regulatory requirements. The contracted laboratory will provide sample pick up, perform requested analyses, and provide laboratory reports to demonstrate regulatory compliance and operational performance.

The contract term is for one year with the option to extend for two additional one-year periods. All Pretreatment Plant testing will be invoiced separately and paid for by Jacobs.

RFP PROCESS

The RFP was issued to four contract laboratories including:

- Suburban Testing Labs
- MJ Reider and Associates
- Microbac Laboratories, Inc.
- CWM Environmental

LCA provided an estimated number of tests for water and wastewater analysis. The laboratories used the estimates to provide unit costs and an estimated total cost for 2023. In addition to the cost, the following qualifications were evaluated:

- Sample turnaround time
- Costs associated with pick up and transportation
- Key personnel qualifications and experience
- Innovative/value-added services
- List of subcontracted analysis

Unit Cost Total

Suburban Testing Labs	\$198,203
MJ Reider and Associates	\$218,864
Microbac Laboratories, Inc.	\$194,843
CWM Environmental	\$302,062

Pick Up Charge

Suburban Testing Labs	\$17
MJ Reider and Associates	\$60
Microbac Laboratories, Inc.	\$65
CWM Environmental	\$40

Total Cost Estimate

Suburban Testing Labs	\$204,323
MJ Reider and Associates	\$240,464
Microbac Laboratories, Inc.	\$218,243
CWM Environmental	\$316,462

FINANCIAL:

Costs incurred under this contract will be funded by LCA out of the Allentown and Suburban Division operational budgets. Costs associated with the LCA Pretreatment Plant are invoiced separately and paid for by Jacobs. Their costs are estimated to be approximately \$40,000 of the total cost in 2023. These estimates are provided for purposes of Board discussion. However, actual annual costs will be determined based on the needs and requirements encountered over the contract term.

PROJECT STATUS:

Pending Board approval.

THIS APPROVAL:

LCA intends to retain the services of a contractor for the analysis of water and wastewater samples. The following table summarizes the professional services to be performed under this approval:

Professional Services
1. Provide sample collection containers and chain of custodies
2. Provide sample pick up at requested locations
3. Provide analytical results and reports in accordance to PA Chapter 252 laboratory requirements

PROPOSALS:

The four firms along with their estimated total proposal amounts appear in the table below:

Contractor	Amount
Suburban Testing Labs	\$204,323
Microbac Laboratories, Inc.	\$218,243
MJ Reider and Associates	\$240,464
CWM Environmental	\$316,462

LCA staff reviewed and evaluated the four proposals on unit costs, qualifications, and estimated total cost. Based on these factors, Suburban Testing Labs is being recommended for authorization to award the contract. Suburban Testing Labs is located in Reading, Pa and is the closest laboratory in proximity to LCA's facilities. Suburban Testing Labs proposed competitive unit pricing and a low-cost pick-up fee. Turnaround time of sample results and the number of subcontractors used was an important factor in the selection process. Suburban Testing Labs ranked high in these areas and will be able to provide results in a timely manner in order to prepare regulatory reports and inform LCA staff for process control decisions. Suburban Testing Labs has been used in the past for laboratory services and has provided excellent service.

PROJECT SCHEDULE:

Pending Board approval, the contract term is for one year with the option to extend for two additional one-year periods

FUTURE AUTHORIZATIONS:

None for this project.



Lehigh County Authority

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

PROFESSIONAL SERVICES AUTHORIZATION

Professional: Suburban Testing Labs
1037 F MacArthur Road
Reading, PA 19605

Date: December 12, 2022

Requested By: Andrew Moore

Approvals

Department Head:

General Manager:

Description of Services:

Provide full service accredited external environmental testing for the Lehigh County Authority (LCA) as per the LCA Request for Proposal dated September 2022. The Professional Services Authorization is inclusive of the LCA Suburban Water and Wastewater Division, LCA Allentown Water and Wastewater Division, and the LCA Pretreatment Plant operated by Jacobs.

Previous Authorizations- None

This Authorization: \$204,323

The estimated cost for external laboratory services over the 2023 contract term is \$204,323. This cost is based on the estimate of quantities in the RFP and the unit prices submitted by Suburban Testing Labs on November 1, 2022. The actual costs will be based on the unit costs and the quantities analytical services provided. Suburban Testing Labs may only charge LCA for services rendered.

Cost Estimate (not to be exceeded without further authorization): **\$204,323**

Time Table and Completion Deadline:

January 1, 2023 through December 31, 2023

(For Authority Use Only)

Authorization Completion:

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

MEMORANDUM

Date: September 6, 2022

To: LCA Board of Directors

From: Liesel Gross, CEO

Subject: KISS Act 537 Planning – Financial & Institutional Evaluation, Phase 1

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – KISS Act 537 Plan Financial & Institutional Evaluation – Phase 1 Consultant Services	\$90,925
1A*	Professional Services Authorization: Financial & Institutional Evaluation Services – Raftelis*	\$70,925

** Included in the Capital Project Authorization*

PROGRAM OVERVIEW:

There are 15 individual municipalities and two municipal authorities that make up the Kline's Island Sewer System (KISS) in Allentown, PA, all working to meet the Pa. DEP requirement to prepare a regional Act 537 Plan by 2025. The Plan will be comprehensive, covering future service needs for all municipalities, municipal sewer system rehab programs, regional facility rehabilitation and expansion, wet-weather treatment facilities, treatment facility upgrades and potential expansion, industrial pre- treatment facility upgrades, and much more. The work being completed now is primarily focused on engineering tasks to define the problem and to develop alternative technical solutions that will be effective in achieving the program's goals. Current high-level cost estimates suggest \$350 to \$400 million in infrastructure investment will be needed over the next 20-30 years to address the regional sewer service needs of the KISS municipalities.

One of the Act 537 Plan requirements is to complete a financial evaluation of the selected alternative, including rate impacts, cost-sharing, and financing approach. Another requirement is to evaluate the institutional / governance approach to completing the projects, operating and maintaining the facilities, and monitoring performance. It is noteworthy that Pa. DEP has expressed a strong preference to see the KISS municipalities adopt a more simplified and/or regional approach as part of this Act 537 Plan development process. Achieving these non-technical goals of the program will be challenging due to the complexity of existing intermunicipal agreements and wide spectrum of political views and personal opinions among the municipal leaders involved in the process.

A phased approach to addressing the financial and institutional components of the Act 537 Plan development is recommended. Beginning the work in smaller increments and focusing on compiling factual information is a good place to start and will serve to engage all municipalities in the process. As information is gathered and presented in the initial phases of this work, discussions can be facilitated to dive into more complex topics such as future cost-sharing arrangements.

Phase 1 (now) – Financial Data Collection & Broad Analysis (2022-2023)

- Compiling and collating financial information from each KISS municipality
- Documentation of data sources, municipal financial processes that may impact the analysis, etc.

- Conducting a broad rate study to determine range of rates that KISS customers currently pay and applying broad assumptions to project future rates
- Determining overall cost to operate the KISS system today
- High-level financing analysis to determine borrowing capacity of the KISS system

Future phases of this work may include:

Phase 2 – Facilitated Signatory Engagement & Alternatives Review (2023)

Phase 3 – Final Alternatives Analysis (FAA) Financial & Institutional Review (2023-2024)

Phase 4 – Stakeholder Involvement & Facilitated Decision-Making (2024-2025)

THIS AUTHORIZATION – PHASE 1:

To get started, an initial phase of the financial evaluation will be initiated to gather baseline financial data from all KISS municipalities and authorities. This data would include:

- Customer profile (number of customers, account types, etc.)
- Existing rate structure & average sewer bill calculation
- Existing sewer system revenues and operating costs
- Tapping fees & non-operating revenues
- Existing sewer system debt service costs
- Sewer system reserve fund balances
- Anticipated future sewer system capital projects and financings planned

This data is needed for the Act 537 Plan anyway, and gathering it now will allow for broader financial analysis of the entire KISS system, versus having each municipality conduct their own analysis. After gathering the data, and meeting with municipal leaders to be sure it is accurately understood, some additional analysis can be completed, such as:

- Overall cost to operate the KISS system today
- Average cost to all KISS customers
- Future cash-flow estimates for each municipality individually and the system collectively
- Financial capacity of the entire KISS system to fund the Act 537 Plan
- Baseline rate analysis for each municipality and the system collectively

The purpose of these financial analyses is to begin developing information to be shared with all municipalities about the true cost of operating, maintaining, rehabilitating, and (if necessary) expanding the KISS system. Analysis can be conducted both at the municipal level and the broader system level. Further, this analysis can be used to evaluate modernized approaches to cost-sharing, rate-making, and financing that fall outside the scope of the current terms of the intermunicipal agreements. These approaches will be reviewed in greater detail in future phases of this work.

FINANCIAL:

The project will be funded by the City of Allentown as an Administrative Order (AO) project.

CURRENT STATUS:

LCA and City of Allentown representatives collaborated to develop the scope of services and review consultant proposals. The KISS municipalities had opportunity to review the scope of work and provide comment.

THIS APPROVAL – PHASE 1 FINANCIAL & INSTITUTIONAL EVALUATION SERVICES:

Lehigh County Authority (LCA) intends to retain the services of a utility management consulting firm to provide these services. These services include, but are not limited to, the following:

Professional Services
• Data Collection & Review
• “Current State” Cost Analysis of the KISS System
• “Current State” Financial Projection and High-Level Rate Study
• Phase 1 Report and Presentation

CONSULTANT SELECTION PROCESS:

Three firms were approached about supporting the KISS region with the Phase 1 financial data collection and analysis described above. All three firms have solid experience in conducting utility rate studies and supporting financial analysis on a regional and system level.

Raftelis - \$70,925 (recommended for approval)

Gannett Fleming - \$90,000 - \$100,000

Public Financial Management - \$125,000 - \$175,000

Based on review of proposals by LCA and City of Allentown representatives, the Raftelis proposal was determined to be the most responsive to the needs identified. In addition, Raftelis has an impressive array of experience in Pennsylvania working with regional systems similar to ours, including working on Act 537 financial evaluations.

The Raftelis proposal for Phase 1 services is available upon request.

SCHEDULE:

The Phase 1 Financial & Institutional Evaluation will kick off immediately following LCA Board authorization, and is expected to be completed in parallel with the Preliminary Screening of Alternatives (PSOA) that is being undertaken by Arcadis, with completion by May 2023.

FUTURE AUTHORIZATIONS:

A Capital Project Authorization (CPA) amendment will be brought to the Board for consideration of future phases of this work. It is expected that additional financial consultant support will be needed as we move into the Final Alternatives Analysis phase of the Act 537 Plan development. Additional legal services or other utility management support may also be required to support the creation of updated intermunicipal agreements to address how capital and ongoing operating costs will be shared by the KISS municipalities.

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	<u>AD-S-27</u>	BUDGET FUND:	<u>Allentown Division - Sewer</u>
PROJECT TITLE:	<u>KISS Act 537 Plan Evaluations</u>	PROJECT TYPE:	
THIS AUTHORIZATION:	<u>\$90,925</u>	<input type="checkbox"/>	Construction
TO DATE (W/ ABOVE)	<u>\$90,925</u>	<input type="checkbox"/>	Engineering Study
		<input type="checkbox"/>	Equipment Purchase
		<input type="checkbox"/>	Amendment
		<input checked="" type="checkbox"/>	Other

DESCRIPTION AND BENEFITS:

One of the Act 537 Plan requirements is to complete a financial evaluation of the selected alternative, including rate impacts, cost-sharing, and financing approach. Another requirement is to evaluate the institutional / governance approach to completing the projects, operating and maintaining the facilities, and monitoring performance. A phased approach to addressing these requirements is planned, including:

- Phase 1 (now) – Financial Data Collection & Broad Analysis (2022-2023)
- Phase 2 – Facilitated Signatory Engagement & Alternatives Review (2023)
- Phase 3 – Final Alternatives Analysis (FAA) Financial & Institutional Review (2023-2024)
- Phase 4 – Stakeholder Involvement & Facilitated Decision-Making (2024-2025)

Prior Related Work: Previous work was completed to create a financial model of the existing intermunicipal agreements. This model will be used during this Financial and Institutional Evaluation.

This Authorization: During Phase 1, LCA will begin developing data on the true cost of operating, maintaining, rehabilitating, and (if necessary) expanding the KISS system. Analysis can be conducted both at the municipal level and the broader system level. Further, this analysis can be used to evaluate modernized approaches to cost-sharing, rate-making, and financing that fall outside the scope of the current terms of the intermunicipal agreements.

Future Authorization: It is expected that additional financial consultant support will be needed as we move into the Final Alternatives Analysis phase of the Act 537 Plan development. Additional legal services or other utility management support may also be required to support the creation of updated intermunicipal agreements.

Requested This Authorization	
<i>Design Phase</i>	
Staff	\$15,000
Contractor	\$0
Consultant Services	\$70,925
Contingency	\$5,000
Total This Authorization	\$90,925

<i>Prior Authorizations</i>	<i>None</i>
<i>Future Authorizations</i>	<i>To be determined</i>

REVIEW AND APPROVALS:

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



Lehigh County Authority

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

PROFESSIONAL SERVICES AUTHORIZATION

Professional: Raftelis
227 W. Trade Street, Suite 1400
Charlotte, NC 28202

Date: December 12, 2022

Requested By: Liesel Gross

Approvals

Department Head: _____

Chief Executive

Officer: _____

KISS Act 537 Planning – Financial & Institutional Evaluation, Phase 1

One of the Act 537 Plan requirements is to complete a financial evaluation of the selected alternative, including rate impacts, cost-sharing, and financing approach. Another requirement is to evaluate the institutional / governance approach to completing the projects, operating and maintaining the facilities, and monitoring performance. To get started, an initial phase of the financial evaluation will be initiated to gather baseline financial data from all Kline's Island Sewer System (KISS) municipalities and authorities. Additional analysis will be completed using this data, including:

- Overall cost to operate the KISS system today & average cost to all KISS customers
- Future cash-flow estimates for each municipality individually and the system collectively
- Financial capacity of the entire KISS system to fund the Act 537 Plan
- Baseline rate analysis for each municipality and the system collectively

Raftelis will provide support for this project including the following services:

Professional Services
• Data Collection & Review
• "Current State" Cost Analysis of the KISS System
• "Current State" Financial Projection and High-Level Rate Study
• Phase 1 Report and Presentation

(1) Please reference the cover Memo for additional information.

Prior Approval:

Amount: \$0

This Approval:

Amount: \$70,925

Time Table and Completion Deadline: Expected completion in May 2023.

(For Authority Use Only)

Authorization Completion:

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

MEMORANDUM

Date: December 12, 2022

To: LCA Board of Directors
Liesel Gross, CEO

From: Phil DePoe, Senior Planning Engineer

Subject: Allentown Division – City of Allentown: 2023 Manhole Inspections

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization: Allentown Division – City of Allentown: 2023 Manhole Inspections	\$239,000
1A*	Professional Services Authorization: Arcadis – 2023 Manhole Inspections	\$199,000

**Included in the Capital Project Authorization*

1. Allentown Division – City of Allentown: 2023 Manhole Inspections

AUTHORIZATION OVERVIEW:

As the City of Allentown continues to work on inflow and infiltration source removal as part of the approved Interim Act 537 Plan, the next major milestone is to create a sanitary sewer manhole (MH) rehabilitation program. Staff field experience, coupled with the 2021 flow characterization study, indicate the MH inventory suffers from significant sheet inflow. To achieve the City's inflow reduction goals with their upcoming Source Reduction Plan, Year 1 of the program will consist of inspecting approximately 900 (out of ~7200 total) MHs. A consultant will assist in creating the Year 1 program, with the intent to pursue other inspection options in subsequent years if necessary.

See attached proposal for further details.

FINANCIAL:

This program (and therefore these 2023 manhole inspections) will be funded by the LCA Allentown Division.

CURRENT STATUS:

Pending Board approval for these 2023 manhole inspections.

THIS APPROVAL – 2023 MANHOLE INSPECTIONS:

Lehigh County Authority (LCA) intends to retain the services of an engineering consulting firm to provide these manhole inspection services. These services include, but are not limited to, the following:

Professional Services
• Inspection Work Plan
• MH Inspections – Field Work
• MH BOR (Basis of Rehab) Assessments
• MH Rehab Recommendation Table

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
- 2021 Flow Characterization Study
- 2021 Rain Derived Inflow and Infiltration (RDII) analysis
- 2021 KISS Model Development
- 2022 Nighttime Weiring investigations
- 2022 Capacity Problem Definition
- 2022 Preliminary Screening of Alternatives (PSOA)

SCHEDULE:

These inspections will start in late January 2023 and will conclude in the late Fall of 2023.

FUTURE AUTHORIZATIONS:

It is anticipated that every December from 2022 through 2032 will include a Board authorization request for this manhole rehabilitation program.

Mr. Philip DePoe
Planning 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 Inspections
Scope and Budget

Date:
October 21, 2022

Dear Mr. DePoe:

Arcadis is pleased to provide LCA and City of Allentown (City) with this scope and budget for detailed, focused inspection of the first cohort of 900 of the City of Allentown's sanitary sewer manholes for the purposes of developing rehabilitation scopes of work that achieve the inflow reduction goals anticipated in the City's Source Reduction Program.

Contact:
Jim Shelton

Phone:
302.723.1450

Email:
James.Shelton@arcadis.com

OBJECTIVES

Experience and flow data indicate City's inventory of manholes suffers significant sheet inflow during large storms and that manholes in stream beds and floodplains (ala the Allentown-Emmaus Interceptor) are often under inches or feet of water. This work is being done to significantly reduce inflow into these flood-prone manholes while compiling relevant information on infiltration and structural related conditions as well.

This work will inspect all accessible manholes within the first 900 manhole cohort of the City's manhole inventory. For purposes of this scope and budget, we assume ~40 are off-road, 10 require significant traffic control, and ~850 require limited traffic control.



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.

SCOPE OF WORK

Task 1 – Inspection Work Plans, Traffic Control Planning, CityWorks Tool Development, and Manhole Inspection Field Guide Development

Arcadis will prepare a detailed work plan and a Health and Safety Plan, including a limited traffic control plan, an arterial roadway traffic control plan, and an access plan for off-road locations. For locations that require significant traffic control (such as Hamilton Street, North 7th, Tilghman Street, Sumner Avenue, Hanover Avenue, etc.) such that leader boards, city intersection controls, traffic light controls, crash barricade protection and flaggers are necessary, Arcadis will work with City Public Works and Public Safety to develop site specific traffic control measures and adjust the time of work to minimize impact to transit and maximize worker safety. For locations requiring significant traffic controls measures, Arcadis will provide a separate cost proposal specific to traffic controls once the required measures are defined.

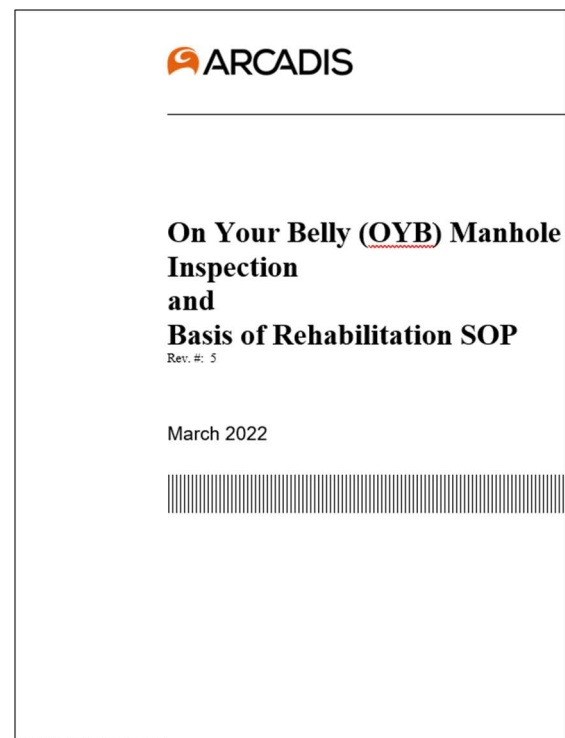
A kickoff meeting will be held to review H&S and workflow procedures. GIS figures showing the location and identification numbers of all manholes will also be prepared prior to the start of work. LCA's manhole inspection forms will be loaded onto tablets and pre-populated with appropriate GIS attribute data.

Arcadis will use the KISS model to identify manholes that are or are potentially intended to be operated with their hydraulic grade line above surrounding grade or above the rim of the manhole to ensure pressurization pressures are established and considered during the assessment process.

Arcadis will work with LCA staff to develop, beta-field test, then pilot field test the CityWorks based data capture system developed by LCA's GIS team. This will include development of a KISS-specific Manhole Inspection Protocol developed using Arcadis' Manhole Inspection and Basis of Rehabilitation (BOR) Standard Operating Procedures as a foundation for focusing on LCA's newly focused manhole inspection and asset management data capture needs/protocols and the primary KISS 537 driver of rapidly, significantly and permanently reducing inflow into the sanitary sewer through manhole lids.

Arcadis will develop a Field Guide for manhole inspection crews to recognize where and when to:

- Remove an existing damaged/malfunctioning manhole dish and determine whether it can be refurbished or recycled
- Install a new, finned gasket inflow dish (assumed to be provided by LCA or included in this scope via addendum)
- Not to install a new dish because the existing frame, cover, and chimney need to be rebuilt with a new watertight system that obviates the need for a dish



- ## Task 2 – Manhole Inspections- Field Work

Page 1.

On Your Belly Manhole Inspection Worksheet

Manhole ID: _____

ABBREVIATIONS:

F/C: Frame/Cover	MH: Manhole
PP: Pipe Penetrations	CS: Chimney Seal
JTS: Joints	NFA: No Further Action
IP: Inflow Protector	CRT: Chemical Root Treatment
NCC: New Castle County	FRLC: Fiber Reinforced Cement Liner
INFIL: Infiltration	H ₂ S: Hydrogen Sulfide

A 2-person field team will perform this work per the LCA-specific Manhole Inspection Protocol developed using Arcadis' Manhole Inspection and Basis of Rehabilitation (BOR) Standard Operating Procedures to ensure subsequent manhole rehabilitation works rapidly, significantly and permanently reducing inflow into the sanitary sewer through manhole lids. This team will gather all information needed to support a BOR recommendation as well as any additional information required by LCA's standard manhole inspection SOP/form.

Pre-inspection meetings will be held each morning to reinforce the H&S plan and confirm all PPE and equipment is present

It is assumed the following minimum information will be recorded at each manhole into the tablet as part of the CityWorks Manhole Inspection Protocol:

1. Manhole asset information (owner, inspector, date, time, location, GPS coordinates)
2. Measurements and general characteristics (pipe penetration clock positions and apparent diameters and materials, clear cover opening diameter, rim to invert depth)
3. General Materials of construction
4. Manhole Frame and Cover characteristics, including holes, flange watertightness, surcharge restraints, ventilation characteristics, restraints, structural condition, elevation relative to surrounding grade vis a vis inflow potential, and condition of surrounding pavement (as indication of RDII-initiated subsidence)
5. Inflow dish condition and watertightness
6. Manhole condition data focused on leakage and structural failure (i.e., not a full MACP Level 2 data capture, but only the data relevant to fixing the manhole)
7. BOR decision, including logic and additional notes considered
8. Digital cameras will take cell phone resolution photographs of location, frame and cover, pipe configuration, and any structural defects or maintenance issues observed
9. 360° camera images will be taken of the manhole frame-cone-barrel-bench at 5' intervals to capture high resolution images suitable for long term asset management data purposes

Where appropriate per the Field Guide developed in Task 1, Arcadis will remove and replace the existing inflow dish with a new finned gasket inflow dish.

There will be unanticipated field conditions. Arcadis field teams will review the findings daily with Arcadis senior engineers to ensure found field conditions are considered immediately so that program RDII reduction goals are achieved. Any changes necessary to the Manhole Inspection Protocol, CityWorks data capture tablet forms, Basis of Rehabilitation tree logic, or Field Guide will be communicated to the LCA and Arcadis team for immediate upgrade to ensure collected data meet the program needs. All field data will be uploaded to both the LCA manhole inspection interface and to Arcadis' SharePoint site.

Task 3 – Manhole BOR Assessments

Arcadis will set up and populate a Manhole BOR Tracker.

Arcadis' engineering staff will review inspection findings to recommend rehabilitation for appropriate manholes. If applicable, one or more of the following BORs may be prescribed to structurally rehabilitate and prevent leakage from entering the manhole. While primary objectives are to eliminate inflow, all aspects of leakage and structural integrity will be considered. Additionally, the sealing of specific manholes to prevent them from overflowing will be considered in the BOR evaluation. BOR categories anticipated include:

- **Frame and Covers:**

- Reset Frame and Cover when the frame and cover are not presently watertight, but if installed properly could be watertight.
- Replace Frame and Cover when the existing frame and cover or top of the chimney are not watertight and resetting will not make them watertight.
- Raise Frame and Cover when the manhole rim is located below grade or in an area with inflow potential and raising the rim is preferred to sealing the cover to either make it watertight or pressurizable. Elevation to be raised will be determined during subsequent design stage.
- Replace Gasket and/or Bolts if rubber gasket on the bottom edge of the cover is damaged and/or the bolts are damaged and can be rethreaded such that the manhole can be made watertight or pressurizable, as appropriate.
- Add or Replace Inflow Protector if the dish located under the manhole cover is defective or leaking.
- Install Pressurizable Frame and Cover where interceptor or trunkline is or is intended to be operated with hydraulic grade line above rim.

- **Chimneys:**

- Mechanical Chimney Seals are hard rubber seals that stop infiltration typically coming from bricks or the annular space between the frame and chimney.
- Flexible Chimney Seals are brush- or spray-applied onto the manhole chimney to stop leakage and are typically installed after FRCL or independent of lining if the chimney is the only leakage source.
- Rebuild Chimney if structural instability is observed. This is generally paired with a new frame and cover installation.
- Install Pressurizable Chimney where interceptor or trunkline is or is intended to be operated with hydraulic grade line that extends to rim and chimney extends above grade by <2'.
- Install Concrete Encasement Chimney where interceptor or trunkline is or is intended to be operated with hydraulic grade line that extends to rim and chimney extends above grade by >2'.

- **Manhole Liners:**

- Fiber-Reinforced Cement Liners (FRCL) are Portland cement based liner for brick manholes showing signs of leakage or structural deterioration without H₂S corrosion. It provides leakage elimination and structural enhancement.

- Sprayrog is a spray-applied polyurethane coating, usually placed on top of an FRCL liner, that provides leakage elimination, structural enhancement, and moderate H2S resistance in brick, block, and precast manholes.
- Epoxy Liners are a spray-applied coatings, usually placed on top of an FRCL liner, that provides leakage elimination, structural enhancement, and very good H2S resistance in brick, block, and precast manholes
- **Manhole Injection Grouting:**
 - Used to seal the manhole channel, bench, pre-cast wall joints, pipe penetration joints or other wall defects upon observing active infiltration or staining. Leakage is stopped by forcing grout through the joints or cracks into surrounding soil where it solidifies to form a gel curtain outside of the manhole. Typically best suited for block or precast manholes.
- **Bench and Channel:**
 - Manhole benches and channels may need to be rebuilt if either is missing or damaged, cracks in material are present, or if there is inadequate sloping to drain.
- **Replacement Manhole Installation:**
 - If the manhole is structurally unstable or near collapse, excavation and replacement is considered.
- **Vent Installation or Rehabilitation:**
 - If the manhole needs ventilation or has compromised ventilation, solutions such as air release and breathing systems will be recommended.

Task 4 – Manhole Rehabilitation Recommendations

Upon finalizing all manhole BOR assessments, Arcadis will provide a table summarizing significant findings from the manhole data spreadsheet and prioritizing future rehabilitation work. We have included 3 meetings with City and LCA staff to review recommendations and consider implementation pathways.

DELIVERABLES AND SCHEDULE

Arcadis will deliver the resultant basis of rehabilitation for each manhole in tabular form and will summarize findings in a technical recommendation memorandum. Work is scheduled to start on January 2023 and be completed by the end of the calendar year.

BUDGET ESTIMATE

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

Task		Hours	Cost
1	Inspection Work Plan	230	\$ 39,000
2	MH Inspections - Field Work	900	\$ 141,000
3	MH BOR Assessments	65	\$ 14,000
4	MH Rehab Recommendation Table	25	\$ 5,000
Total		1220	\$ 199,000

Mr. Philip DePoe
October 21, 2022



After LCA CityWorks tool development and traffic control and other pre-inspection planning, the cost of inspections and recommendations, including meetings, breaks down to **\$170 per manhole**.

We propose to complete these services on a time and materials basis in accordance with the Agreement between LCA and Arcadis 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: Tony Dill

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	AD-S-27	BUDGET FUND:	Allentown Div\Wastewater\Capital
PROJECT TITLE:	Allentown Division – City of Allentown: 2023 Manhole Inspections	PROJECT TYPE:	<input type="checkbox"/> Construction <input checked="" type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment
THIS AUTHORIZATION:	\$239,000		
TO DATE (W/ ABOVE)	\$239,000		

DESCRIPTION AND BENEFITS:

As the City of Allentown continues to work on inflow and infiltration source removal as part of the approved Interim Act 537 Plan, the next major milestone is to create a sanitary sewer manhole (MH) rehabilitation program. Staff field experience, coupled with the 2021 flow characterization study, indicate the MH inventory suffers from significant sheet inflow. To achieve the City's inflow reduction goals with their upcoming Source Reduction Plan, Year 1 of the program will consist of inspecting approximately 900 (out of ~7200 total) MHs. A consultant will assist in creating the Year 1 program, with the intent to pursue other inspection options in subsequent years.

Prior Authorization: None.

This Authorization: 2023 Manhole Inspections (this work will occur from January 2023 – Fall 2023).

See attached Board Memo for further project details.

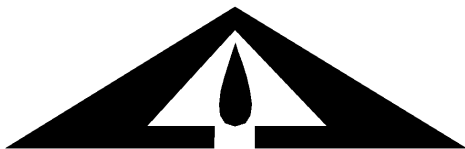
Authorization Status:

Requested This Authorization (2023 MH Inspections)	
<i>Planning Phase</i>	
Staff	\$30,000
Contractor	\$0
Engineering Consultant	\$199,000
Contingency	\$10,000
Total This Authorization	\$239,000

Prior Authorizations	\$0
Subtotal	\$239,000
<i>Future Authorizations</i>	<i>N/A</i>

REVIEW AND APPROVALS:

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



Lehigh County Authority

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

PROFESSIONAL SERVICES AUTHORIZATION

Professional: ARCADIS U.S., INC.
1600 Market Street, Suite 1810
Philadelphia, PA 19103

Date: December 12, 2022

Requested By: Phil DePoe

Approvals

Department Head: _____

Chief Executive

Officer: _____

Allentown Division – City of Allentown: 2023 Manhole Inspections

As the City of Allentown continues to work on inflow and infiltration source removal as part of the approved Interim Act 537 Plan, the next major milestone is to create a sanitary sewer manhole (MH) rehabilitation program. Staff field experience, coupled with the 2021 flow characterization study, indicate the MH inventory suffers from significant sheet inflow. To achieve the City's inflow reduction goals with their upcoming Source Reduction Plan, Year 1 of the program will consist of inspecting approximately 900 (out of ~7200 total) MHs. A consultant will assist in creating the Year 1 program, with the intent to pursue other inspection options in subsequent years. These inspections will start in late January 2023 and will conclude in the late Fall of 2023. These services include, but are not limited to, the following:

Professional Services ⁽¹⁾
1. Inspection Work Plan
2. MH Inspections – Field Work
3. MH BOR Assessments
4. MH Rehab Recommendation Table

(1) Please reference the cover Memo for additional information.

Prior Approval:

Amount: \$0

This Approval:

Amount: \$199,000

New Amended Amount (not to be exceeded without further authorization): \$199,000

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

(For Authority Use Only)

Authorization Completion:

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

MEMORANDUM

Date: December 12, 2022

To: LCA Board of Directors
Liesel Gross, CEO

From: Phil DePoe, Senior Planning Engineer

Subject: Allentown Division – City of Allentown: 2023 Interceptor Inspections

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization: Allentown Division – City of Allentown: 2023 Interceptor Inspections	\$88,000
1A*	Professional Services Authorization: Arcadis – 2023 Interceptor Inspections	\$53,000

**Included in the Capital Project Authorization*

1. Allentown Division – City of Allentown: 2023 Interceptor Inspections

AUTHORIZATION OVERVIEW:

As the region continues to develop the Act 537 Plan through the year 2050, the next major data collection effort revolves around the condition of the City's existing interceptors. This inspection will focus on 10 of the City's main sewer interceptors, with access occurring via approximately 80 different manholes. Numerous pieces of information will be collected at each manhole, including but not limited to: flow velocity, debris depth, evidence of surcharge, and photographs. Where physically possible, the pipe joints will be physically inspected in order to gauge their condition.

Regardless of the final Act 537 solution, it is necessary to determine the condition of these pipes so their ability to serve through the 2050 planning horizon is known. LCA field staff will assist the consultant as needed (clearing access, opening manholes, etc.).

See attached proposal for further details.

FINANCIAL:

The project is an Administrative Order (AO) Project and it will be funded by the City of Allentown. The terms of the concession lease agreement between LCA and the City specify that the City will directly fund projects associated with the AO, and LCA will collect fees from City customers to pay any associated debt service for these projects. The City determines the projects to be completed and directs LCA to complete the projects in the manner desired by the City.

CURRENT STATUS:

Pending Board approval for these 2023 interceptor inspections.

THIS APPROVAL – 2023 INTERCEPTOR INSPECTIONS:

Lehigh County Authority (LCA) intends to retain the services of an engineering consulting firm to provide these interceptor inspections. These services include, but are not limited to, the following:

Professional Services
<ul style="list-style-type: none"> • Inspection Work Plans, Traffic Control Planning, and Interceptor Maned Entry Inspection Template Development
<ul style="list-style-type: none"> • On-Tether Manned Entry Confined Space Pipe Inspections – Field Work
<ul style="list-style-type: none"> • Interceptor Assessments
<ul style="list-style-type: none"> • Findings Documentation

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 Administrative Order. 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
- 2021 Flow Characterization Study
- 2021 Rain Derived Inflow and Infiltration (RDII) analysis
- 2021 KISS Model Development
- 2022 Nighttime Weiring investigations
- 2022 Capacity Problem Definition
- 2022 Preliminary Screening of Alternatives (PSOA)

SCHEDULE:

These inspections will start and conclude in the first quarter of 2023.

FUTURE AUTHORIZATIONS:

None anticipated.

Mr. Philip DePoe
Planning 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 Manned Entry On-Tether Confined Space Interceptor
Inspections Scope and Budget

Dear Mr. DePoe:

Arcadis is pleased to provide LCA and City of Allentown (City) with this scope and budget for a manhole-based focused inspection of the City of Allentown's 10 sanitary sewer interceptors and trunklines.

OBJECTIVES

An Act 537 Sewerage Facilities Plan is being developed to guide the development of sewer facilities for the Kline's Island Sewer System through the year 2050. Currently, 100 percent of all sewage flows through one or more of the City of Allentown's ten sanitary sewer interceptors and trunklines. These sewers are anticipated to be used through the 2050 planning horizon. In some cases, these gravity lines may be repurposed to low pressure force mains due to hydraulic load. In all cases, it is necessary to know the condition of these pipes so that their ability to serve through the 2050 planning horizon is known. This includes identifying any needed rehabilitation, repairs, or modifications needed to suit any purposes as may be determined by the 537 Plan. This work will estimate the years remaining service life and identify if significant rehabilitation of these ten interceptors might be required before 2050.

Date:

October 20, 2022

Contact:

Jim Shelton

Phone:

302.723.1450

Email:

James.Shelton@arcadis.com

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.

SCOPE OF WORK

Task 1 – Inspection Work Plans, Traffic Control Planning, and Interceptor Manned Entry Inspection Template Development

Arcadis will prepare a detailed work plan and a Health and Safety Plan, including a limited traffic control plan and an access plan for off-road locations. Arcadis has used the KISS GIS App to identify manholes for these inspections. These are listed in the attached table but will be modified upon field reconnoiter to accommodate access, traffic, safety, and actual manhole configuration. This scope assumes LCA City Division staff will pre-locate, clear access to, offer alternative manhole sites, and open the approximately 80 manholes planned for entry inspection. No locations selected require significant traffic control such that leader boards, city intersection controls, traffic light controls, crash barricade protection, or flaggers. Many locations are off road, and many will require manual transport of safety entry gear.

GIS figures showing the location and identification numbers of all manholes will also be prepared prior to the start of work.

Arcadis will use established field procedures for manned entry on-tether pipe inspection. This will include a standard template for capturing interceptor data and photographs to establish years remaining service life and rehabilitation needs.

Task 2 – On-Tether Manned Entry Confined Space Pipe Inspections- Field Work

Arcadis will provide vehicles and equipment necessary to perform on-tether manned entry confined space pipe inspections, including manhole access and measurement tools, PPE, and routine limited traffic control equipment. This scope assumes LCA will provide at least one City Division staff member to guide the Arcadis team to the selected manholes and open and close all bolted covers. For locations that are difficult to access, Arcadis will work with LCA staff to use LCA's 6-wheel ATV to access. For inspection of the Allentown Emmaus Interceptor, Little Lehigh Interceptor, and lower portions of the Cedar Creek Interceptor, LCA will need to utilize the FEB and operate SCPS and PPS at depressed wet well

elevations. For inspection of the lower portions of the Jordan Creek Interceptor, Trout Creek Interceptor, and Eastside Interceptor, LCA will need to operate the KI MPS at depressed wet well elevations.

A 3-person field team will perform this work. This team will gather all information needed to support a years remaining service life determination, cleaning recommendations (where indicated), basis of rehabilitation recommendation, and identify any issues with pressurizing the pipeline.

Pre-inspection meetings will be held each morning to reinforce the H&S plan and confirm all PPE and equipment is present

It is assumed the following minimum information will be recorded at each manhole:

1. Manhole asset information (owner, inspector, date, time, location, GPS coordinates)
2. Depth of Pipe
3. Depth of Manhole
4. Manhole Material
5. Pipe Material
6. Pipe Diameter – vertical and horizontal
7. Flow Depth
8. Flow Velocity
9. Debris Depth
10. Debris Quality
11. Evidence of Surcharge
12. Gas Levels
13. Corrosion Levels
14. Photographs and videos of pipes
 - a. Digital cameras will take cell phone resolution photographs and videos of pipes

Task 3 – Interceptor Assessments

Arcadis will set up and populate a Pipe Inspection Tracker. Photographs and logs will be loaded into a PowerPoint findings template.

Arcadis' engineering staff will review inspection findings to estimate years remaining service life determination, determine cleaning recommendations (where indicated), make basis of rehabilitation recommendations, and identify any issues with pressurizing the pipeline.

Task 4 – Findings Documentation

Arcadis will provide a PowerPoint summary of all work. No workshops, reports, or presentations will be conducted.

DELIVERABLES AND SCHEDULE

Arcadis will complete the field work this winter.

Mr. Philip DePoe
October 20, 2022

BUDGET ESTIMATE

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

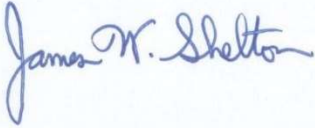
Task		Hours	Cost
1	Inspection Work Plans, Traffic Control Planning, and Interceptor Manned Entry Inspection Template Development	45	\$ 8,000
2	On-Tether Manned Entry Confined Space Pipe Inspections-Field Work	170	\$ 36,000
3	Interceptor Assessments	20	\$ 9,000
4	Findings Documentation	30	\$ -
Total		265	\$ 53,000

We propose to complete these services on a time and materials basis in accordance with the Agreement between LCA and Arcadis 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.



James W. Shelton, PE
Vice President

Cc: Tony Dill

ANTICIPATED INTERCEPTOR INSPECTION MANHOLE LOCATIONS

LITTLE LEHIGH INTERCEPTOR

14_DB
J_5_10
J_4_8
J_2_1
I_6_12
24_A_1A
I_4_9
24_7I
I_2_2
D_3_2
O_2_1

SOUTHSIDE INTERCEPTOR

M_4_10
M_3_8
M_2_6
M_2_1

TROUT CREEK INTERCEPTOR

7_7_19
34_14F
T_3_4
32_32A
26_17D
25_6A
25_1D
O_3_9

EASTSIDE TRUNK LINE

23_44A
23_6_D
21_37M
21_14
21_47A
B_5_12

JORDAN CREEK INTERCEPTOR

18_1D

Mr. Philip DePoe
October 20, 2022

12_9B
F_9B
F_9_15
9_19C
F_3_3
E_7_19 (J-4.01)
E_6_17
E_6_18
E_5_11
E_3_8
E_1_1

LEHIGH INTERCEPTOR

4_7B
4_3E
4_1B
4_22F

HANOVER TRUNK LINE

B2_6_17
B2_5_12A
B2_2_1
B1_1_2
B_2_2
B_2_1A
A_3_5
A_3_3

HANOVER AVENUE TRUNK LINE

20_21G
20_18DI
20_3F
B_8_2

ALLENTOWN EMMAUS INTERCEPTOR

U_26_84
A-16
U_24_77
U_22_70
U_19_58
U_16_48
U-12-38
U_10_26
U_7_14B

Mr. Philip DePoe
October 20, 2022

U_5_10
U_4_2

CEDAR CREEK INTERCEPTOR

W_5_11
W_2_2
A-AO (UNLOCK AND SHUNT FLOW THE
CCRI)
L-6-15
40-14A
L-3-7
17-4A
17_32C
K-5A-8A

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	AD-S-12	BUDGET FUND:	Allentown Div\Wastewater\Capital
PROJECT TITLE:	Allentown Division – City of Allentown: 2023 Interceptor Inspections		PROJECT TYPE:
THIS AUTHORIZATION:	\$88,000	<input type="checkbox"/>	Construction
TO DATE (W/ ABOVE)	\$88,000	<input checked="" type="checkbox"/>	Engineering Study
		<input type="checkbox"/>	Equipment Purchase
		<input type="checkbox"/>	Amendment

DESCRIPTION AND BENEFITS:

As the Region continues to develop the Act 537 Plan through the year 2050, the next major critical piece of missing information that must be captured revolves around the condition of the City's existing interceptors. This inspection will focus on ten of the City's main sewer interceptors, with access occurring via approximately 80 different manholes. Regardless of the final Act 537 solution, it is necessary to know the condition of these pipes so their ability to serve through the 2050 planning horizon is known. LCA field staff will assist the consultant as needed (clearing access, opening manholes, etc.)

Prior Authorization: None.

This Authorization: 2023 Interceptor Inspections (this work will occur in Q1 of 2023).

See attached Board Memo for further project details.

Authorization Status:

Requested This Authorization (2023 Interceptor Inspections)	
<i>Planning Phase</i>	
Staff	\$25,000
Contractor	\$0
Engineering Consultant	\$53,000
Contingency	\$10,000
Total This Authorization	\$88,000

Prior Authorizations	\$0
Subtotal	\$88,000
<i>Future Authorizations</i>	N/A

REVIEW AND APPROVALS:

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



Lehigh County Authority

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

PROFESSIONAL SERVICES AUTHORIZATION

Professional: ARCADIS U.S., INC.
1600 Market Street, Suite 1810
Philadelphia, PA 19103

Date: December 12, 2022

Requested By: Phil DePoe

Approvals

Department Head: _____

Chief Executive

Officer: _____

Allentown Division – City of Allentown: 2023 Interceptor Inspections

As the Region continues to develop the Act 537 Plan through the year 2050, the next major critical piece of missing information that must be captured revolves around the condition of the City's existing interceptors. This inspection will focus on ten of the City's main sewer interceptors, with access occurring via approximately 80 different manholes. Regardless of the final Act 537 solution, it is necessary to know the condition of these pipes so their ability to serve through the 2050 planning horizon is known. LCA field staff will assist the consultant as needed (clearing access, opening manholes, etc.) These inspections will start and conclude in the first quarter of 2023. These services include, but are not limited to, the following:

Professional Services ⁽¹⁾
1. Inspection Work Plans, Traffic Control Planning, and Interceptor Maned Entry Inspection Template Development
2. On-Tether Manned Entry Confined Space Pipe Inspections – Field Work
3. Interceptor Assessments
4. Findings Documentation

(1) Please reference the cover Memo for additional information.

Prior Approval:

Amount: \$0

This Approval:

Amount: \$53,000

New Amended Amount (not to be exceeded without further authorization): \$53,000

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

(For Authority Use Only)

Authorization Completion:

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

Lehigh County Authority – Monthly Report to Board of Directors

Upcoming Board Agenda Items & Project Updates – December 2022

Published: December 5, 2022

PART 1 – Upcoming Agenda Items – Action & Discussion Items

FINANCE & ADMINISTRATION

Project Title: 2023 Board Meeting Schedule

Division / Funding: n/a

Board Action Date: 12/12/2022

Status or Action Desired: Approval

Project Phase: n/a

Project Notes: The proposed Board meeting schedule for 2023 is presented for Board approval so the schedule can be advertised and posted to the Authority's website. Staff Responsibility: Liesel Gross

Project Title: 2021 Audit & Financial Statements

Division / Funding: n/a

Board Action Date: 12/12/2022

Status or Action Desired: Acceptance

Project Phase: n/a

Project Notes: The 2021 Audit & Financial Statements are complete and will be presented to the Board for review and acceptance. Staff Responsibility: Ed Klein

Project Title: Resolution 12-2022-1: Customer Facility Fees & Connection Fees

Division / Funding: n/a

Board Action Date: 12/12/2022

Status or Action Desired: Approval

Project Phase: n/a

Project Notes: Resolution No. 12-2022-1 is presented for Board consideration to update certain tapping fees including customer facilities and connection fees. The 2023 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: Resolutions 12-2022-2 & 12-2022-3: Authorizing the Authority's Applications for Grant Funding

Division / Funding: n/a

Board Action Date: 12/12/2022

Status or Action Desired: Approval

Project Phase: n/a

Project Notes: Through the Pennsylvania Department of Community & Economic Development, grant funding is available to municipalities and municipal authorities for a variety of project types that serve the public's interest, including infrastructure projects. Two special grant programs developed using COVID-19 American Rescue Plan Act (ARPA) funds for both small and large water and sewer system projects are currently available, with an application deadline of December 21, 2022. LCA will seek grant funding to support two projects: the Heidelberg Heights Sanitary Sewer Replacement Project and the Upper Western Lehigh Pump Station Project. A Resolution authorizing each grant application is required, and the Board will be asked to approve Resolutions 12-2022-2 and 12-2022-3 at the December 12, 2022 Board meeting. Staff Responsibility: Liesel Gross

Project Title: Capital Works Plan Room - Storage and ScanningDivision / Funding: All DivisionsStatus or Action Desired: ApprovalBoard Action Date: 12/12/2022Project Phase: n/a

Project Notes: This project will be a first step towards digitizing and document control of the plans in the Capital Works plans storage room. It encompasses organization, removal, secure storage and ultimate scanning of estimated 18,000 sheets of existing plans. Once digitized and stored on LCA's network, the digital plans will be attached in GIS with the appropriate assets or project. A professional services authorization for this work will be presented for Board approval at the 12/12/2022 meeting. Staff Responsibility: Chris Moughan

Project Title: Monthly Financial ReviewDivision / Funding: n/aStatus or Action Desired: DiscussionBoard Action Date: 12/26/2022Project Phase: n/a

Project Notes: November 2022 monthly financial report will be presented. Staff Responsibility: Ed Klein

SYSTEM OPERATIONS**Project Title: Laboratory Analysis Contract**Division / Funding: All DivisionsStatus or Action Desired: ApprovalBoard Action Date: 12/12/2022Project Phase: n/a

Project Notes: More than 8,000 water and wastewater samples are required to be analyzed annually to maintain system compliance and provide proper process control data. An external laboratory is used for analyses and methods for with LCA's in-house laboratory is not equipped or not accredited to complete. Cost proposals for the necessary 2023 laboratory services were solicited, and approval of the recommended contract award will be requested at the December 12, 2022 Board meeting. Staff Responsibility: Andrew Moore

Project Title: Monthly Operations ReportDivision / Funding: n/aStatus or Action Desired: DiscussionBoard Action Date: 12/26/2022Project Phase: n/a

Project Notes: November 2022 monthly operations report will be presented. Staff Responsibility: Andrew Moore & Chris Moughan

WASTEWATER PROJECTS

Project Title: KISS Act 537 Planning - Financial & Institutional Evaluation, Phase 1

Division / Funding: Allentown Division

Board Action Date: 12/12/2022

Status or Action Desired: Approval

Project Phase: Planning Phase

Project Notes: One of the Act 537 Plan requirements is to complete a financial evaluation of the selected alternative, including rate impacts, cost-sharing, and financing approach. Another key requirement is to evaluate the institutional / governance approach to completing the projects, operating and maintaining the facilities, and monitoring performance. As the municipalities that make up the Kline's Island Sewer System (KISS) have been working collaboratively to develop the regional Act 537 Plan, a consolidated approach to completing this financial and institutional evaluation is desired. At the December 12, 2022 Board meeting, authorization will be requested to retain a professional consultant to conduct phase 1 of this work, which is a preliminary financial evaluation focused on gathering data from all municipalities and conducting preliminary analyses that will be used to support future phases of this work including discussions with the municipalities about future cost-sharing approaches. Staff Responsibility: Liesel Gross

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

Division / Funding: Allentown Division

Board Action Date: 12/12/2022

Status or Action Desired: Approval

Project Phase: Planning 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 manholes need to be inspected. The inspections and subsequent rehabilitation work will be phased over the next 10 years. The Phase 1 inspection is scheduled to occur in 2023, Phase 2 inspections and Phase 1 rehab work will be completed in 2024, and the project will continue until all manholes in the City system have been inspected and rehabilitated as necessary. Board authorization for the Phase 1 inspection work is requested at the December 12, 2022 meeting. Staff Responsibility: Phil DePoe

Project Title: Sanitary Sewer Collection System: City of Allentown Interceptor Inspections

Division / Funding: City of Allentown (AO)

Board Action Date: 12/12/2022

Status or Action Desired: Approval

Project Phase: Planning Phase

Project Notes: As part of the Act 537 planning process, the condition and rehabilitation needs for each major interceptor in the system needs to be detailed for inclusion in the plan. In the City of Allentown, the condition of each interceptor is not currently known. Since all sewage generated by the Kline's Island Sewer System flows through one or more of the City's main interceptors, the condition of each interceptor must be determined and a rehabilitation plan developed if needed. This interceptor inspection work will identify any needed rehabilitation, repairs, or modifications needed to suit the regional sewer needs that will be determined by the Act 537 Plan. Board authorization for this interceptor inspection work is requested at the December 12, 2022 meeting. Staff Responsibility: Phil DePoe

PART 2 – Project Updates – Information Items

Project Title: Resolution 6-2022-1: Trexlertown Act 537 Special StudyDivision / Funding: Suburban DivisionBoard Action Date: n/aStatus or Action Desired: UpdatedProject Phase: Planning Phase

Project Notes: In late February 2022, the formal municipal approval process for the Trexlertown Act 537 Special Study started. The Upper Macungie Township, Lower Macungie Township, and Lehigh Valley Planning Commissions then started their 60-day allotted time window for review. The 30-day public comment period opened on May 2, 2022 and ended on June 1, 2022. Although not required by Act 537 regulations, an LCA Resolution was passed at the June 13, 2022 Board meeting as an illustration of support for the submission. After receiving the two required Resolutions from the Townships, the Trexlertown Act 537 Special Study was submitted to DEP on June 24, 2022. The primary focus of the Trexlertown Act 537 Special Study is the alternatives analysis completed to address the "Trexlertown Bottleneck" area in the Western Lehigh Interceptor, which will result in the Upper Western Lehigh Pump Station and Force Main project that is currently in design phase. Although DEP has yet to formally comment on the Special Study, a 60 day time extension was requested for their review on 11/4/22. Staff Responsibility: Phil DePoe

PART 3 – Open Project List – No Updates

Project Category	Project Title	Division / Funding	Project Phase	Staff Responsibility
Finance & Administration	LCA Strategic Plan - 2022 Quarterly Progress Reporting	All Divisions	n/a	Liesel Gross
Finance & Administration	Asset Management Roadmap & Strategic Asset Management Plan (SAMP)	All Divisions	Planning Phase	Albert Capuzzi
Finance & Administration	LCA Munis ERP System Planning & Re-Implementation	All Divisions	Planning Phase	Brooke Neve
System Operations	Large Diameter Valve Prioritization Program	Allentown Division	Planning Phase	Chris Moughan
System Operations	SmartBall Inspection - 30" and 36" Transmission Main - East Side	Allentown Division	Planning Phase	Chris Moughan
System Operations	Suburban Water Facilities - SCADA System Upgrade	Suburban Division	Construction Phase	Chris Moughan
System Operations	Watershed Monitoring Program	Suburban Division	Ongoing	Andrew Moore
Water - Suburban	Water Main Replacement Program Cycle 6	Suburban Division	Construction Phase	Jason Peters
Water - Suburban	I-78 Water Main Crossing	Suburban Division	Construction Phase	Ed Hoyle
Water - Suburban	Fixed Base Meter Reading Stations	Suburban Division	Planning Phase	Amy Kunkel
Water - Suburban	2022 Commercial Meter Replacement Project	Suburban Division	Construction Phase	Amy Kunkel
Water - Suburban	Upper System Pump Station and Main Extension	Suburban Division	Design Phase	Ed Hoyle
Water - Suburban	Central Lehigh and North Whitehall Systems – Water Supply Study	Suburban Division	Planning Phase	Phil DePoe
Water - Allentown	Lead Service Line Replacement Program Planning	Allentown Division	Planning Phase	Andrew Moore
Water - Allentown	Water Filtration Plant & System Master Plan	Allentown Division	Planning Phase	Phil DePoe

Project Category	Project Title	Division / Funding	Project Phase	Staff Responsibility
Water - Allentown	Water Main Replacement Program Cycles 7 & 8	Allentown Division	Design	Jason Peters
Water - Allentown	Water Main Replacement Program Cycle 6	Allentown Division	Construction Phase	Jason Peters
Water - Allentown	Water Filtration Plant: Filter Upgrade Project	Allentown Division	Design Phase	Chuck Volk
Water - Allentown	Water Filtration Plant: 2022 Indenture Upgrades	Allentown Division	Construction Phase	Bryan Geissel
Water - Allentown	Water Filtration Plant: High Lift Pump VFD Replacements	Allentown Division	Construction Phase	Chuck Volk
Sewer - Act 537	Kline's Island WWTP - High-Rate Wet-Weather Treatment Pilot Study	Allentown Division	n/a	Phil DePoe
Sewer - Act 537	Regional Sewer Capacity & Wet-Weather Planning - Regional Act 537 Plan Preparation	City of Allentown (AO)	Planning Phase	Phil DePoe
Sewer - Act 537	Kline's Island WWTP: Phase 1 AO Design Improvements	City of Allentown (AO)	On Hold	Phil DePoe
Sewer - Act 537	KISS System Modeling - Sewage Billing Meter QA/QC Data Analytics and 2021 Flow Metering Preparation	City of Allentown (AO)	Planning Phase	Phil DePoe
Sewer - Act 537	KISS System Modeling - Preliminary Screening of Alternatives (PSOA)	City of Allentown (AO)	Planning Phase	Phil DePoe
Sewer - Act 537	Regional Sewer Capacity & Wet-Weather Planning: Engineering & Program Support	Suburban Division	Planning Phase	Phil DePoe
Sewer - Act 537	Upper Western Lehigh Pump Station and Force Main	Suburban Division	Design Phase	Amy Kunkel
Sewer - Act 537	Western Lehigh Service Area - Engineering & Program Support	Suburban Division	Planning Phase	Phil DePoe
Sewer - Act 537	Industrial Pretreatment Plant Master Plan	Suburban Division	Planning Phase	Phil DePoe
Sewer - Suburban	Western Lehigh Manhole Rehabilitation Project - Phase 3	Suburban Division	Construction Phase	Jason Peters
Sewer - Suburban	Heidelberg Heights 2021 and 2022 Sanitary Sewer Replacement Project	Suburban Division	Construction Phase	Jason Peters

Project Category	Project Title	Division / Funding	Project Phase	Staff Responsibility
Sewer - Suburban	Heidelberg Heights Wastewater Treatment Plant - Mechanical Screen Project	Suburban Division	Design Phase	Chuck Volk
Sewer - Suburban	Heidelberg Heights Sanitary Sewer Consent Order & Agreement	Suburban Division	Planning Phase	Chuck Volk
Sewer - Suburban	Lynn Township Corrective Action Plan	Suburban Division	Ongoing	Jason Peters
Sewer - Suburban	Park Pump Station Phase 2 Upgrade	Suburban Division	Construction Phase	Chuck Volk
Sewer - Allentown	Kline's Island WWTP: Substation No. 1 and Switchgear Replacement	Allentown Division	Design Phase	Bryan Geissel
Sewer - Allentown	Kline's Island WWTP: Effluent Disinfection and Dechlorination System Improvements	Allentown Division	Construction Phase	Bryan Geissel
Sewer - Allentown	Kline's Island WWTP: Solids Process Boiler and HVAC System Upgrade Project	Allentown Division	Construction Phase	Bryan Geissel
Sewer - Allentown	Kline's Island WWTP: Wet Weather Capacity Enhancements	Allentown Division	Preliminary Design	Bryan Geissel
Sewer - Allentown	Kline's Island WWTP: 2022 Indenture Upgrades	Allentown Division	Construction Phase	Bryan Geissel
Sewer - Allentown	KIWWTP Primary Digester No. 1 Cleaning	Allentown Division	Construction Phase	Bryan Geissel
Sewer - Allentown	Kline's Island WWTP: Sludge Thickener Tank No. 3 Mechanical Upgrade	Allentown Division	Construction Phase	Bryan Geissel
Sewer - Allentown	Kline's Island WWTP: Main and Auxiliary Pump Station Improvements	Allentown Division	Preliminary Design	Chuck Volk
Sewer - Allentown	Kline's Island WWTP: Intermediate Pump Station Improvements	Allentown Division	Preliminary Design	Chuck Volk
Sewer - Allentown	Lehigh Street (Rte. 145) Water and Sewer Main Relocation Project	Allentown Division	Construction Phase	Jason Peters
Sewer - Allentown	Sanitary Sewer Collection System: I&I Source Reduction Program Plan (Year 3 and 4)	City of Allentown (AO)	Construction Phase	Phil DePoe