



LEHIGH COUNTY AUTHORITY

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

Agendas & Minutes Posted:
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BOARD MEETING AGENDA – MAY 9, 2016

1. Call to Order
 - *Public Participation Sign-In Request*
2. Review of Agenda / Executive Sessions
4. Approval of Minutes
 - *April 25, 2016 Board meeting minutes*
5. Public Comments
6. Action / Discussion Items:

FINANCE AND ADMINISTRATION

WATER

WASTEWATER

- *Suburban Division – Western Weisenberg Wastewater Treatment Plant Improvements (**green**)*
 - *Suburban Division – SCARP – Western Lehigh Interceptor Test and Seal Project (**tan**)*
 - *Suburban Division – Wynnewood Terrace Test and Seal Project (**blue**)*
7. Monthly Project Updates / Information Items (1st Board meeting per month)
 8. Monthly Financial Review (2nd Board meeting per month) – **NOTE: March Financials Attached**
 9. Monthly System Operations Overview (2nd Board meeting per month)
 10. Staff Comments
 11. Solicitor's Comments
 12. Public Comments / Other Comments
 13. Executive Sessions
 14. Adjournment

UPCOMING BOARD MEETINGS

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

May 23, 2016
June 13, 2016
June 27, 2016

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

April 25, 2016

The Regular Meeting of the Lehigh County Authority was called to order at 12:10 p.m., on Monday, April 25, 2016, Chairman Brian Nagle presiding. Other Members present at the commencement of the meeting were: Linda Rosenfeld, Kevin Baker, Tom Muller, Richard Bohner, Norma Cusick, Scott Bieber and Deana Zosky. Ted Lyons was on the conference phone and did not participate in any discussion or vote. Authority Staff present were Liesel Gross, Ed Klein, Brad Landon, John Parsons, Chuck Volk, Pat Mandes and Lisa Miller.

REVIEW OF AGENDA

Chairman Nagle stated that there will be an Executive Session after the regular meeting to discuss potential litigation.

APPROVAL OF MINUTES

April 11, 2016 Regular Meeting Minutes

Richard Bohner said there are two corrections that need to be made. The first one is the second line under Public Comments, the word should be *odor*, not *odors*, and second on page 3, the vote should read (4-1), not (4-0-1). On a motion by Richard Bohner, seconded by Norma Cusick, the Board approved the Minutes of the April 11, 2016 Regular meeting as corrected (5-0). Linda Rosenfeld, Scott Bieber and Kevin Baker abstained because they were not in attendance.

PUBLIC COMMENTS

Matt Szuchlyt, Rep. Pat Browne's office, introduced himself to the Authority and said that he was present to keep the Representative informed of any important issues.

ACTION AND DISCUSSION ITEMS

Financial Health / Revenue Modeling – continued discussion from March Board meeting

As a follow-up to the March Board meeting, Ed Klein presented additional details on the Authority's revenue requirements in the Suburban Division, focusing on key indicators such as change in net position, cash flow, and debt service coverage. In his presentation, he recommended that a revenue model be used by the Authority based on the philosophy that revenues should cover all operating expenses plus depreciation and planned capital expenses for system repair and replacement activities, and that future borrowing should be limited to revenue-enhancing projects and unplanned / emergency projects. The model as presented would help the Authority achieve financial sustainability and rate stability.

Additional discussion followed, with several Board members requesting to see the financial statements that were used to prepare the presentation. Deana Zosky asked several questions related to where the additional revenue would come from, and how the financial statements were used to produce the model, especially how capital expenses are calculated and incorporated into the model. The Board also discussed the need for a rate study, and what information a rate study could provide to help further this discussion. Liesel Gross explained that the purpose of the discussions at this point is to gather Board feedback on the philosophical shift to incorporating depreciation and capital expense into the calculation of revenue requirements, versus relying more heavily on financing such expenses.

Ed Klein agreed to prepare additional information to help answer the Board's questions, possibly convening another Finance Committee meeting to review details in the interim.

Lead in Drinking Water – Discussion of LCA Water Testing Program

As a follow-up to a presentation on lead in drinking water given to the Board in March, Liesel Gross presented additional details about the issue and the recommended next steps the Authority should take. She presented data related to blood lead levels reported by the Pennsylvania Department of Health, lead levels in water as reported by water utilities in Pennsylvania, and other information about research that is ongoing

related to lead service lines and public education about lead in drinking water. The recommendations she presented for the Authority's next steps included continued monitoring of regulatory changes and industry research, efforts to build a network of health professionals to discuss lead issues on a holistic basis, public education efforts, developing an inventory of service line information for the Authority's systems, and offering water testing to customers who are concerned about lead in drinking water.

Lengthy discussion followed, including several clarifying questions about the presentation.

Deana Zosky discussed easy, low-cost ways to remove lead from tap water by flushing the faucets prior to use. She also highlighted homeowner responsibility for water quality related to plumbing materials located in the home. Her comments also highlighted the risk of lead exposure among all water users, including private well owners, due to the interior plumbing in individual homes.

Tom Muller recommended that the Authority follow-up on any homes included the required lead and copper monitoring done in 2013 that showed lead levels above the threshold of 15 parts per billion as a way to understand more about where lead is coming from in those homes. This information may be helpful in preparing public education materials about the potential sources of lead in drinking water that can be shared with all customers. Liesel Gross responded that this effort would be added to the program for staff to follow-up on. In addition, because the Authority will be testing for lead and copper in 2016 as part of the regular three-year monitoring cycle, if any of the homes that previously had higher results are included in the 2016 round of testing, the new results can be compared to the prior results to determine if there is any change and why.

Liesel Gross highlighted that the Lehigh County Board of Commissioners had proposed a Resolution regarding this issue, to be considered at their April 27, 2016 meeting. The Resolution requests the Authority take specific steps to offer water testing for lead, report test results to regulatory agencies, make test results available to the public, and immediately notify customers who have a lead service line or whose service line material is unknown. Following Board discussion, she agreed to notify the Commissioners of the Authority's planned course of action, which includes many of the initiatives the Commissioners have requested and includes several additional initiatives beyond the scope of the Commissioners' request.

On a motion by Linda Rosenfeld, seconded by Norma Cusick, the Board approved the fee to be added to the schedule of rates and charges of \$30 per sample for Authority customers requesting a water test for lead(8-0).

Ted Lyons left the meeting at 2:10 p.m. by hanging up his telephone.

MONTHLY FINANCIAL REVIEW

Ed Klein did not present a report for this meeting due to time constraints associated with the ongoing audit. He also informed the Board that the audit will not be completed by the April 30, 2016 deadline due primarily to new government accounting standards that required an actuarial study of the Authority's pension program. This study was completed and provided by the Pennsylvania Municipal Retirement System last week, which was later than anticipated, and so the auditors require additional time to incorporate the results into the final documents.

MONTHLY SYSTEM OPERATIONS OVERVIEW

John Parsons reviewed the report that was attached to the Board agenda.

STAFF COMMENTS

None.

SOLICITOR'S COMMENTS

None.

OTHER COMMENTS

None.

EXECUTIVE SESSION

The Chairman called an Executive Session at 2:19 p.m. to discuss potential litigation.

The Executive Session ended at 2:40 p.m.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 2:40 p.m.

Richard H. Bohner
Secretary

MEMORANDUM

Date: April 29, 2016

To: Authority Board
From: Frank Leist
Subject: Suburban Division- Western Weisenberg Wastewater Treatment Plant Cold Weather Improvements– Construction Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Budget Amendment	\$251,095
2	Capital Project Authorization – Construction Phase	\$529,595
3 ⁽¹⁾	Professional Services Authorizations	
	1. Gannett Fleming, Inc., Amendment No. 1- Construction. Engineering	\$ 9,600
	2. Cowan Associates. Construction. Management & Inspection	\$ 31,000
4 ⁽¹⁾	Construction Contracts	
	1. JEV Construction LLC, General Contract	\$394,500
	2. Albarell Electric Electrical Contract	\$37,494

(1) Included in the Capital Project Authorization.

BACKGROUND: *(see attached photograph of the WWTP)*

The Western Weisenberg Wastewater Treatment Plant (WWTP) provides service to a small area in Western Weisenberg Township that is primarily composed of the Arcadia West Industrial Park; Westhills Business Center; the Northern Lehigh Elementary school and certain commercial properties fronting Route 863 (Golden Key Road). It currently serves twelve non-residential customers with combined average wastewater flow of ~14,000 gallons-per/day

The 40,000 gallon –per/day Sequencing Batch Reactor WWTP was designed by Herbert, Roland and Grubic (HRG) and put in service in January 2014. Primarily because of the impact of cold weather the during the five-month period January 2014 through May of 2014; and the three-month period January 2015 through March 2015 the WWTP was unable to meet the National Pollutant Discharge Elimination System permit (NPDES) Ammonia discharge limit.

Discussions with HRG and the manufacturer of the WWTP Ashbrook /Simon-Hartley regarding correction of this issue did not result in any substantive remedies. LCA then retained Gannett Fleming, Inc. to undertake a third- party review of the design, operating methodology and other potential issues to identify the contributing factors causing this problem.

The Gannett Fleming report identified that the primary cause of the WWTP's inability to properly nitrify during cold weather is reactor temperatures dropping below the optimum 10-15 C range. Temperatures below the optimum range in addition to wastewater influent characteristics related to the levels copper, zinc and Quaternary ammonia inhibit the nitrification process, resulting in an ammonia level that exceeds the NPDES winter discharge limit.

PROJECT OVERVIEW

This Project implements the Gannett Fleming, Inc. recommendations to correct the cold weather nitrification issue at the Wastewater Treatment Plant and will include the following improvements.

- (1) *To limit heat loss*- insulating the exposed exterior reactor walls; covering the two-reactor tanks and insulating the blower piping
- (2) *To maintain temperature with in the optimum range*- the installation of submersion heaters in the reactor tanks.

Gannett Fleming executed the design of the aforementioned improvements

FUNDING:

The Project will be funded by the LCA Suburban Western Weisenberg Division

BUDGET AMENDMENT

The primary reasons for requesting this budget amendment are:

- At budget time it was envisioned that the emersion heaters would be installed in 2017, however after a re-evaluation of the inhibitory impact that the elevated levels of copper, zinc and Quaternary ammonia in the wastewater influent would have on the nitrification process during cold weather the time frame was moved to 2016.
- The General Contract bid price exceeded the engineers estimate
- Some expenditures anticipated for 2015 were actually spent in early 2016

PROJECT STATUS:

Board approval is requested for the Construction Phase.

THIS APPROVAL –CONSTRUCTION PHASE

BIDDING SUMMARY

This project requires General Construction and Electrical Construction Contracts. The project was advertised for bid on March 22, 2016. A mandatory pre-bid meeting was held on April 1, 2016. Bids were received on April 25, 2016, the results of which follow:

General Construction	
Bidder	Amount
JEV Construction Inc.	\$394,500

Electrical Construction	
Bidder	Amount
<i>Albarell Electric, Inc.</i>	\$ 37,495
Billitier Electric, Inc.	44,897

JEV Construction, LLC. - General Construction has worked for LCA before and performed their work in a satisfactory manner. Reference checks for Albarell Electric, Inc. - Electrical Contract and have identified no issues. Therefore, we recommend awarding the applicable contract to the aforementioned contractors, subject to the receipt of the necessary Performance Bonds, Insurance and other required documentation.

PROFESSIONAL SERVICES:

1. Gannet Fleming, Inc., the design engineer will provide construction engineering services to include:

Professional Services
1. Attend Pre-Construction Meeting
2. Attend Progress Meeting
3. Respond to design related RFIs
4. Log, review and process shop drawing submittals

2. Cowan Associates, Inc.-will provide construction management and inspection services to include:

Professional Services
1. Attend Pre-Construction Meeting and Prepare/distribute minutes
2. Provide Contract Administration
3. Provide Inspection Services
4. Conduct Progress Meetings & Prepare/distribute meeting minutes
5. Assess work for Contractor Payments and work completion
6. Compile and review as-built drawings; from Contractors

PROJECT SCHEDULE:

It is anticipated that from the date of the Notice to Proceed will be completed in approximately by the end of December 2016

FUTURE AUTHORIZATIONS:

None





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(610)398-2503 * FAX (610)398-8413 * Email: service@lehighcountyauthority.org

BUDGET AMENDMENT REQUEST
Budget Year - 2016

Date: 04/29/16

Type: Transfer _____
 Addition X
 Deletion _____

Requested By: FJL
Approved By: *Edward O'Brien*

Budget: Suburban -Wastewater- Capital-
 Western Weisenberg Division

Amount \$251 095

Item(s) Requested:		Source(s) of Funds:	
Western Weisenberg WWTP Cold Weather Improvements	\$251,095	Capital Reserves	\$251,095

TOTAL	\$251,095	\$251,095
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Reason:

- At budget time it was envisioned that the emersion heaters would be installed in 2017, however ,after a re-evaluation of the inhibitory impact that the elevated levels of copper, zinc and Quantenary ammonia in the wastewater influent would have on the nitrification process during cold weather the time frame was moved to 2016
- General Contract Bid prices exceeded the engineers estimate.
- Some expenditures anticipated for 2015 were actually spent in early 2016

CAPITAL PROJECT AUTHORIZATION

Amendment No. 1

PROJECT NO.:	SD-W-15-7	BUDGET FUND:	Suburban Div\Wastewater\Capital
PROJECT TITLE:	Suburban Division- Western Weisenberg WWTP Cold Weather Improvements-	PROJECT TYPE:	
THIS AUTHORIZATION:	\$ 529,595	<input checked="" type="checkbox"/>	Construction
TO DATE (W/ ABOVE)	\$ 571,595	<input type="checkbox"/>	Engineering Study
		<input type="checkbox"/>	Equipment Purchase
		<input checked="" type="checkbox"/>	Amendment

DESCRIPTION AND BENEFITS:

This Project implements the Gannett Fleming, Inc. recommendations to correct the cold weather nitrification issue at the Wastewater Treatment Plant and will primarily include insulating the exposed exterior reactor walls; covering the reactor tanks; insulating the blower piping and the installation of electric submersion heaters in the reactor tanks. .

Previous Authorizations	
Design Phase	\$42,000

REQUESTED THIS AUTHORIZATION	
Construction Phase	
Staff	\$29,000
Professional Services	
Construction Engineering- Gannett Fleming	\$9,600
Construction Management- Cowan Associates	\$31,000
Contract 1-General Construction	\$394,500
Contract 2- Electrical	\$37,495
Misc.	\$3,000
Contingency	\$25,000
Total This Authorization	\$529,595

Future Authorization	
None	

<i>Total Estimated Project</i>	<i>\$571,595</i>
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REVIEW AND APPROVALS:

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



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**PROFESSIONAL SERVICES AUTHORIZATION
Amendment No. 1**

Professional: GANNETT FLEMING, INC.
P.O. Box 67100
Harrisburg, PA 17106

Date: April 29, 2016

Requested By: Frank Leist

Approvals

Department Head: _____

Chief Executive

Officer: _____

¹ Suburban Division- Western Weisenberg Wastewater Treatment Plant Cold Weather Improvements

Previous Authorizations- Design Phase; \$33,850

This Authorization- Construction Phase, \$9,600

Gannett Fleming, Inc. will provide construction engineering related services for the aforementioned project

Professional Services
1. Attend Pre-Construction Meeting
2. Attend Progress Meeting
3. Respond to design related RFIs
4. Log, review and process shop drawing submittals

Cost Estimate (not to be exceeded without further authorization): **\$43,450**

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

(For Authority Use Only)

Authorization Completion:

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



Lehigh County Authority

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**PROFESSIONAL SERVICES AUTHORIZATION
Amendment No. 3**

Professional: Cowan Associates, Inc.
120 Penn-Am Drive
PO Box 949
Quakertown, PA 18951

Date: May 2, 2016
Requested By: Frank Leist
Approvals
Department Head: _____
Chief Executive Officer: _____

Suburban Division- Western Weisenberg Wastewater Treatment Plant Cold Weather Improvements

Previous Authorizations- *None.*

This Authorization – Construction Phase: \$31,000

Cowan Associates, Inc. will provide Construction Management and Inspection Services for the aforementioned project

Professional Services
1. Attend Pre-Construction Meeting and Prepare/distribute minutes
2. Provide Contract Administration
3. Provide Inspection Services
4. Conduct Progress Meetings & Prepare/distribute meeting minutes
5. Assess work for Contractor Payments and work completion
6. Compile and review as-built drawings; from Contractors

Cost Estimate (not to be exceeded without further authorization): **\$ 31,000**

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

(For Authority Use Only)

Authorization Completion:

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



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MEMORANDUM

Date: May 9, 2016

To: Authority Board

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

Subject: Suburban Division – SCARP – Western Lehigh Interceptor – Test & Seal Project
Signatory I&I Investigation/Remediation Program

MOTIONS /APPROVALS REQUESTED:

No.	Item	Amount
1	<u>Capital Project Authorization – Amendment No. 24:</u> <u>Construction Phase</u>	\$1,828,500
2	<u>Contract Award (construction):</u>	\$1,590,000
**	Test & Seal Contract (AMB Trunk Lines and SAPR Lines) – Video Pipe Services, Inc.	
3	<u>Professional Services Authorization:</u> <u>Construction Engineering, Management, & Inspection - Arcadis</u>	\$198,500

*(**) Included in the Capital Project Authorization*

PROJECT BACKGROUND:

Based on the EPA Administrative Order and the PADEP Chapter 94 requirements, LCA and the LCA Signatories are required to reduce infiltration and inflow (I & I) from the system and eliminate SSOs from LCA and Signatory sewer systems. The SCARP Program (Sewer Capacity Assurance and Rehabilitation Program) has been developed to investigate the sources of I & I and to remediate pipeline areas identified as having excessive I & I. The SCARP Program consists of engineering tasks necessary to define and quantify the problems, to evaluate methods of redress and to recommend and design the corrective actions required to meet the regulatory requirements. This is the first major construction project undertaken under the Order to aggressively reduce infiltration leakage and mitigate sanitary sewer overflows in the Western Lehigh Interceptor service area.

PROJECT OVERVIEW:

The project consists of sanitary sewer cleaning, inspections via closed circuit TV, cured-in-place point repairs, pressure testing and chemical grout sealing of pipe joints, and post construction inspection for sanitary sewer lines located in western and central Lehigh County previously identified as areas subject to infiltration leakage. Sewer pipeline areas include portions of the Western Lehigh Interceptor: Albutis/Macungie Trunk Line; Breinigsville Trunk Lines; Upper Milford Trunk Line, and several sections of pipe at the connection to the WLI (10.4 miles total length).

FINANCIAL:

The Project will be funded by the LCA Suburban Division.

PROJECT STATUS

The Invitation to Bidders was advertised on March 5, 2016. A mandatory pre-bid meeting was held on March 24, 2016 and representatives from three contractors attended. Bids were opened on April 7, 2016; one bid was submitted (see “Bids” below). The bid was reviewed by Arcadis and LCA staff.

THIS APPROVAL: Construction Phase

BIDS

Representatives from three (3) prime contractors attended the mandatory pre-bid meeting. A single bid was submitted from Video Pipe Services, Inc. The total bid amount is shown in Table 1 below:

Table 1 – Bid Results		
Construction Phase		
Contractor	WLI Amount	Total Bid
<i>Video Pipe Services, Inc.</i>	<i>\$1,590,000</i>	<i>\$1,851,806</i>
<i>Pipe Services Corp.</i>		<i>No bid</i>
<i>Baker Corp.</i>		<i>No bid</i>

The total bid amount includes \$1,590,000 that is classified as within the Western Lehigh Interceptor/Signatory service area and \$261,765 that is within the Northern Lehigh Wynnewood Terrace service area (separate authorization request). The total bid amount is within 2% of the engineer’s (Arcadis) estimate.

MATERIAL PROCUREMENT: N/A

PROFESSIONAL SERVICES:

Arcadis services consist of the following scope:

Task 1 – Construction Management and Contract Administration

- Conduct preconstruction and progress meetings, including agendas and minutes
- Review schedules and submittals
- Review change order proposals
- Review CCTV inspection data, recommend remedial action or deductions for defects
- Prepare punchlist and certificate of completion

Task 2 – Resident Project Representative Services

- Prepare daily inspection reports

- Verify daily job quantities
- Document installation data
- Attend monthly progress meetings
- Review monthly payment applications
- Respond to Requests for Information
- Coordinate and communicate with affected property owners for access
- Prepare and verify punchlist completion

SCHEDULE

Assuming approval at the May 9, 2016 Board meeting, the Work is anticipated to be started in July and will be completed by the end of March 2017.

FUTURE AUTHORIZATIONS:

None at this time.

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	S-08-5	BUDGET FUND:	WLI Sewer Capital
PROJECT TITLE:	Signatory I & I Investigation/Remediation Program	PROJECT TYPE:	
TOTAL PROJECT THIS AUTHORIZATION	Prior: \$4,245,831 Current: \$1,828,500	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment	

DESCRIPTION AND BENEFITS:

Full Project Overview:

Based on the EPA Compliance Order and the PADEP Chapter 94 requirements, LCA and the LCA Signatories are required to reduce infiltration and inflow (I & I) from the system and eliminate SSOs from the LCA and Signatory sewer systems. The SCARP Program (Sewer Capacity Assurance and Rehabilitation Program) has been developed to investigate the sources of I & I and to remediate pipeline areas identified as having excessive I & I. The SCARP Program consists of engineering tasks necessary to define and quantify the problems, to evaluate methods of redress and to recommend and design the corrective actions required to meet the regulatory requirements. This is the first major construction project undertaken under the Order to aggressively reduce infiltration leakage and mitigate sanitary sewer overflows in the Western Lehigh Interceptor service area.

Test and Seal Contract:

The project consists of sanitary sewer cleaning, inspections via closed circuit TV, cured-in-place point repairs, pressure testing and chemical grout sealing of pipe joints, and post construction inspection for sanitary sewer lines located in western and central Lehigh County previously identified as areas subject to infiltration leakage. Sewer pipeline areas include portions of the Western Lehigh Interceptor: Albutis/Macungie Trunk Line; Breinigsville Trunk Lines; Upper Milford Trunk Line, and several sections of pipe at the connection to the WLI (10.4 miles total length).

Previously Approved		This Authorization	Total Approval
Flow Monitoring ADS (thru 2014)	\$1,775,031		\$ 1,775,031
Flow Monitoring TFE			
Engineering Consulting	\$2,160,800	\$198,500	\$2,359,300
Rehabilitation		\$1,590,000	\$1,590,000
Staff	\$300,000	\$30,000	\$330,000
Contingencies	\$10,000	\$10,000	\$20,000
Totals	\$ 4,245,831	\$1,828,500	\$6,074,331



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PROFESSIONAL SERVICES AUTHORIZATION

AMENDMENT NUMBER 24

Professional:

Arcadis U.S., Inc.

Att: Jim Shelton, P.E.

1128 Walnut St, 4th Fl

Philadelphia, PA 19107

Date: 4/27/2016

Requested By: Charles Volk

Approvals

Department Head: Pat Mandes

Chief Executive

Officer: _____

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

2016 Test and Seal Construction Management

Provide construction management, engineering support, contract administration, and construction observation services for the testing and chemical grouting contract activities for leakage control of portions of the Western Lehigh Interceptor sewer system, portions of the WLI north of Schantz Road, the UMiT trunkline, Alburdis-Macungie Trunkline, Brenigsville Trunkline and identified connector sewers that are directly connected to the WLI in accordance with the Arcadis proposal dated April 21, 2016.

The scope of work includes:

- Prepare preconstruction meeting agenda, conduct the meeting, and prepare and distribute meeting minutes.
- Review schedules and submittals for compliance with the contract documents.
- Prepare six monthly progress meeting agendas, conduct the meetings, and prepare and distribute meeting minutes.
- Review change order proposals from the contractor and make recommendations to LCA.
- Work with Contractor to determine weekly anticipated work and assign appropriate resources to document the work.
- Review pay estimates (up to 6 total) submitted by the contractor and prepare recommendations to LCA.
- Review Post Construction CCTV conducted by the Contractor, recommend remedial action or deductions for out-of-specification defects, and prepare punch list.
- Participate in the preparation of the punch list and certificate of completion (issued for Substantial Completion).
- Prepare and electronically submit the Inspector's Daily Reports.
- Verify daily and job total quantities of work per the bid form and per best construction practices.
- Collect and document important material preparation and installation data pertinent to the long-term performance of the completed work.
- Attend monthly progress meetings (up to 6 total) with LCA and contractor.
- Review monthly payment applications (up to 6 total) and make recommendations to LCA.
- Review and make recommendations on Work Change Directives.
- Serve as project liaison between LCA and Contractor to respond to requests for interpretation (RFIs) and to coordinate written responses to stakeholders.
- Participate in the ongoing coordination and communication with homeowners affected by the work.
- Monitor the notification process required by the contract documents.
- Prepare the punch list.

Cost Estimate (not to be exceeded without further authorization): Proposed consulting service described in the Proposal dated April 27, 2016 is on a time and materials basis estimated not to exceed \$198,500 in accordance with the agreement between LCA and Arcadis U.S., Inc.

Time Table and Completion Deadline:

Work to be completed in conjunction with the Test and Seal Contract.

(For Authority Use Only)

Authorization Completion:

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

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



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MEMORANDUM

DATE: May 9, 2016

To: Authority Board
From: Charles Volk, P.E. Asset Management Engineer
Subject: Suburban Division- Test & Seal Project, Wynnewood Terrace – Construction Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Budget Amendment	\$144,895
2	Capital Project Authorization – Construction Phase	\$319,895
3 ⁽¹⁾	Professional Services Authorization: 1. Arcadis,U.S., Inc. - Construction. Inspection & Engineering	\$ 40,630
4 ⁽¹⁾	Construction Contract: Video Pipe Services, Inc.	\$261,765

(1) Included in the Capital Project Authorization.

BACKGROUND:

The goal of this project is to reduce infiltration leakage into the sewage collection system for Wynnewood Terrace, in order to reduce hydraulic overload conditions at the wastewater treatment plant and preserve capacity in the sewage collection system.

PROJECT OVERVIEW

The project consists of sanitary sewer cleaning, inspections via closed circuit TV, cured-in-place point repairs (identified in prior studies), pressure testing and chemical grout sealing of pipe joints, and post construction inspection for sanitary sewer collector lines located in Wynnewood Terrace in northeast Lehigh County (2.0 miles total length). This project is a sub-part of the single contract Test & Seal Project, which also includes the Western Lehigh Interceptor and signatory service areas, and was bid as part of the larger project to realize economy of scale.

FUNDING:

The Project will be funded by the LCA Suburban Wynnewood Division

BUDGET AMENDMENT

The primary reasons for requesting this budget amendment are:

- The bid price exceeds the engineer’s estimate.
- The schedule for the work and the scope of the work (including testing requirements) for the infiltration remediation were modified and expanded to be bid as part of the Western Lehigh Test & Seal Project.

PROJECT STATUS:

Board approval is requested for the Construction Phase.

THIS APPROVAL – CONSTRUCTION PHASE

BIDDING SUMMARY

This project consists of one contract. The project was advertised for bid on March 5, 2016. A mandatory pre-bid meeting was held on March 24, 2016. Bids were received on April 7, 2016, the results of which follow:

General Construction		
Bidder	Wynnewood Amount	Overall Bid Amount
Video Pipe Services, Inc.	\$261,765	\$1,851,806

Video Pipe Services, Inc. (VPS) has previously worked extensively with LCA in performing sanitary sewer line trenchless repair and rehabilitation work. All work to date has been satisfactory and in accordance with LCA specifications and schedules. The total bid amount is within 2% of the Engineer’s estimate. Therefore, we recommend awarding the contract to VPS, subject to the receipt of the necessary Performance Bonds, Insurance and other required documentation.

PROFESSIONAL SERVICES:

Construction phase inspection and engineering to be provided by Arcadis, U.S., Inc. Scope is summarized below:

Professional Services Scope - Arcadis
<ul style="list-style-type: none"> • Prepare preconstruction meeting agenda, conduct the meeting, and prepare and distribute meeting minutes. • Review schedules and submittals for compliance with the contract documents. • Prepare six monthly progress meeting agendas, conduct the meetings, and prepare and distribute meeting minutes. • Review change order proposals from the contractor and make recommendations to LCA. • Work with Contractor to determine weekly anticipated work and assign appropriate resources to document the work. • Review pay estimates (up to 6 total) submitted by the contractor and prepare recommendations to LCA. • Review Post Construction CCTV conducted by the Contractor, recommend remedial action or deductions for out-of-specification defects, and prepare punch list. • Participate in the preparation of the punch list and certificate of completion (issued for Substantial Completion). • Prepare and electronically submit the Inspector’s Daily Reports. • Verify daily and job total quantities of work per the bid form and per best construction practices. • Collect and document important material preparation and installation data pertinent to the long-term performance of the completed work. • Attend monthly progress meetings (up to 6 total) with LCA and contractor. • Review monthly payment applications (up to 6 total) and make recommendations to LCA.

- Review and make recommendations on Work Change Directives.
- Serve as project liaison between LCA and Contractor to respond to requests for interpretation (RFIs) and to coordinate written responses to stakeholders.
- Participate in the ongoing coordination and communication with homeowners affected by the work.
- Monitor the notification process required by the contract documents.
- Prepare the punch list and substantial completion documents.

PROJECT SCHEDULE:

Based on contract award following the May 9, 2016 board meeting, the project is anticipated to be completed by the end of March 2017.

FUTURE AUTHORIZATIONS:

None



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

BUDGET AMENDMENT REQUEST
Budget Year - 2016

Date: 04/29/16

Type: Transfer _____
 Addition X
 Deletion _____

Requested By: FJL
Approved By: *[Signature]*

Budget: Suburban -Wastewater- Capital –
 Wynnewood Division

Amount \$144,895

Item(s) Requested:		Source(s) of Funds:	
Wynnewood Test & Seal	\$144,895	Capital Reserves	\$144,895

TOTAL	\$144,895		\$144,895
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Reason:

- Bid prices exceeded the engineers estimate.
- The schedule for the work and scope of work and testing requirements for the infiltration remediation were modified to be bid as part of the Western Lehigh Test & Seal Project

CAPITAL PROJECT AUTHORIZATION

Amendment No. 1

PROJECT NO.:	SD-S-6	BUDGET FUND:	Suburban Div\Wastewater\Capital
PROJECT TITLE:	Suburban Division- Western Weisenberg WWTP Cold Weather Improvements-	PROJECT TYPE:	
THIS AUTHORIZATION:	\$ 319,895	<input checked="" type="checkbox"/>	Construction
TO DATE (W/ ABOVE)	\$359,895	<input type="checkbox"/>	Engineering Study
		<input type="checkbox"/>	Equipment Purchase
		<input checked="" type="checkbox"/>	Amendment

DESCRIPTION AND BENEFITS:

Test and Seal Contract:

The project consists of sanitary sewer cleaning, inspections via closed circuit TV, cured-in-place point repairs (identified in prior studies), pressure testing and chemical grout sealing of pipe joints, and post construction inspection for sanitary sewer collector lines located in Wynnewood Terrace in northeast Lehigh County (2.0 miles total length). This project is a sub-part of the single contract Test & Seal Project, that also includes the Western Lehigh Interceptor and signatory service areas, and was bid as part of that project to realize economy of scale.

Previous Authorizations	
Design Phase	\$40,000

REQUESTED THIS AUTHORIZATION	
Construction Phase	
Staff	\$7,500
Professional Services:	
Construction Inspection & Engineering - Arcadis	\$40,630
Contract 1-General Construction Test & Seal	\$261,765
Contingency	\$10,000
Total This Authorization	\$319,895

Future Authorization	
None	

<i>Total Estimated Project</i>	\$359,895
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REVIEW AND APPROVALS:

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



Lehigh County Authority

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(610)398-2503 * FAX (610)398-8413 * Email: service@lehighcountyauthority.org

**PROFESSIONAL SERVICES AUTHORIZATION
Amendment No. 1**

Professional: ARCADIS U.S., INC.
1128 Walnut St
Philadelphia, PA 19107

Date: May 9, 2016

Requested By: Charles Volk

Approvals

Department Head: _____

Chief Executive

Officer: _____

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

Suburban Division- Test & Seal Project, Wynnewood Terrace

Previous Authorizations- Design Phase; \$40,000 (Arcadis, U.S., Inc.)

This Authorization- Construction Phase - \$40,630

Arcadis will provide construction engineering related services for the aforementioned project, in accordance with their proposal dated 4/21/16:

Professional Services
<ul style="list-style-type: none"> • Prepare preconstruction meeting agenda, conduct the meeting, and prepare and distribute meeting minutes. • Review schedules and submittals for compliance with the contract documents. • Prepare six monthly progress meeting agendas, conduct the meetings, and prepare and distribute meeting minutes. • Review change order proposals from the contractor and make recommendations to LCA. • Work with Contractor to determine weekly anticipated work and assign appropriate resources to document the work. • Review pay estimates (up to 6 total) submitted by the contractor and prepare recommendations to LCA. • Review Post Construction CCTV conducted by the Contractor, recommend remedial action or deductions for out-of-specification defects, and prepare punch list. • Participate in the preparation of the punch list and certificate of completion (issued for Substantial Completion). • Prepare and electronically submit the Inspector's Daily Reports. • Verify daily and job total quantities of work per the bid form and per best construction practices. • Collect and document important material preparation and installation data pertinent to the long-term performance of the completed work. • Attend monthly progress meetings (up to 6 total) with LCA and contractor. • Review monthly payment applications (up to 6 total) and make recommendations to LCA. • Review and make recommendations on Work Change Directives. • Serve as project liaison between LCA and Contractor to respond to requests for interpretation (RFIs) and to coordinate written responses to stakeholders. • Participate in the ongoing coordination and communication with homeowners affected by the work. • Monitor the notification process required by the contract documents. • Prepare the punch list and substantial completion documents.

Cost Estimate (not to be exceeded without further authorization): **\$80,630**

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



(For Authority Use Only)

Authorization Completion:

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

FINANCE & ADMINISTRATION

ACTION ITEMS

DISCUSSION ITEMS

INFORMATION ITEMS

1. 2016 Organizational Goals

The staff will prepare and present a 2nd Quarter Progress Report on each of the Authority's four organizational goals, to be presented in June and July 2016.

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

CERTIFICATES OF DEPOSIT						
27-Apr-16			Gross	Date of	Date	Net Rate
Fund	Bank	Location	Amount	Purchase	Due	%
Cons Wtr (2)	Comenity Bank	Wilmington, DE	200,000.00	4/27/16	4/27/18	1.05
Cons Wtr (2)	The Citizens State Bank	Okemah, OK	245,000.00	4/29/16	10/30/17	0.75
Cons Wtr (2)	United Bankers' Bank	Bloomington, MN	245,000.00	4/29/16	10/30/17	0.7
Cons Wtr (2)	Peoples Bank	Paris, TX	245,000.00	4/29/16	10/27/17	0.7

Fund Descriptions for Investments:

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

WATER

ACTION ITEMS

1. **Allentown Division – Water Filtration Plant: Filter Room Ceiling Improvements – May 23, 2016**

This project will involve the installation of a new ceiling system at the Water Filtration Plant's filter room. This system was already installed above the filters themselves approximately 10 years ago. The project is needed for both a combination of aesthetic (highly visible location to guests) and operational issues (to eliminate the possibility of chipped paint to enter the filters). Bids were received on 4/26/16 and are currently being reviewed. Board approval for the construction phase will be requested at the 5/23/16 Board Meeting.

DISCUSSION ITEMS

INFORMATION ITEMS

1. **Suburban Division – Pumping Station Projects**

This project will involve upgrades at two existing small system booster stations and the installation of one new major booster station in the Central Lehigh Division (CLD). The Pine Lakes Project will feature the conversion of the existing hydro-pneumatic station to a variable frequency drive controlled double pumping system (along with other miscellaneous improvements). The Crestwood Project consists of abandonment of existing wells and storage tank currently serving higher elevation customers and a connection of the pumping station to the main North Whitehall Division System. The CLD Auxiliary Pump Station Project will feature the installation of a new booster station and main extension to pump water from the Lower to the Upper System. The projects will also involve installation/conversion to a SCADA system at each of the sites. The design for all three projects commenced in June 2015. The PADEP Public Water Supply (PWS) Permit applications were submitted for the Crestwood and Pine Lakes Projects. Comments on the CLD Auxiliary Pump Station Project PWS permit application were returned to our consultant. **(No Change)**

2. **Suburban Division – Capece Tract, WL #20 and Res #3 Improvements**

WL #20 will be switched over to a variable frequency drive motor to better control power usage and maintain steady output. Reservoir #3 will receive a motor activated control valve to maintain filling capabilities and chlorine contact levels. Both facilities will receive an upgrade to their SCADA systems. The design phase is under way. **(No change)**

3. **Suburban Division – Route 309 Crossing at Sand Spring Road**

A 12" water line will cross Route 309 through a previously installed 24" casing. Completion of this line will bring public water to the property line of Lehigh Carbon Community College. The design phase is under way. PennDOT Highway Occupancy Permits have been obtained.

4. **Allentown Division – Prelease Valve Replacements**

The project is the replacement of approximately 55 inoperable valves in multiple locations throughout the City that existed prior to the lease settlement. Design is currently under way. This project is identified as Un-Completed Work and will be funded by the City. **(No Change)**

5. **Allentown Division – Water Main Replacement Program- Cycle 2**

The project is the replacement of 2-miles of aged and/or failing Cast Iron water main in multiple locations throughout the City. Construction is currently complete and project close out is under way. This Project is identified as Schedule-7 Work and will be funded by LCA Allentown Division. **(No Change)**

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

The project consists of the replacement of 2.85 miles of aged and/or failing Cast Iron water main. Board approval of the Construction phase and budget amendment for this project was given at the 4/11/16 Board meeting. Construction is anticipated to begin the second week in May 2016 by Anrich Inc.

7. **Allentown Division – Water Main Replacement Program- Cycle 3**

The project is the replacement of 4.39 miles of aged and/or failing Cast Iron water main in multiple locations throughout the City. Board approval of the Construction phase and budget amendment for this project was given at the 4/11/16 Board meeting. Construction is anticipated to begin the first week in May 2016 by JOAO & Bradley. This Project is identified as Schedule-7 Work and will be funded by LCA Allentown Division.

8. **Allentown Division - Miscellaneous Water Filtration Plant / Water Distribution**

- WFP Stormwater Pump/Control - Upgrades to the existing stormwater pump/control for the WFP and D&C parking lot is needed to equipment age. Design is currently underway with a likely Fall 2016 construction start date.
- WFP Schantz Spring/Crystal Spring Permanent Generator - A study is needed to investigate permanent power solutions to the Springs and is expected to be complete by the Fall of 2016.
- D&C Parking Lot Paving Modifications – This project was necessary to alleviate ponding water. The project was completed in mid-April.
- WFP 20 Ton A/C and 40 Ton Chiller Replacement – Delivery of the AC unit occurred on 4/25/16 and delivery of the chiller unit occurred on 4/26/16. Installation is expected to be complete by the second week of May.
- WFP Painting Phase II – Work (blasting, pressure washing) began in the filter pipe gallery in mid-April and painting is expected to be complete by the end of May.

All of these capital projects will be funded by the LCA Allentown Division.

9. **Allentown Division – Water System Master Plan**

This project involves the creation of a Master Plan for the Allentown Water Plant, water storage tanks, water storage reservoirs, pressure booster stations, raw water springs, and surface water intakes. The Master Plan will involve several key sections including, but not limited to: full-scale condition assessments, treatment process optimization, and

development of short term/long term capital plans. The Master Plan is a requirement included within the City of Allentown lease, and it also needs to be updated every 5 years throughout the life of the lease. The project kick-off meeting with Arcadis will be held on May 4, 2016. The project will be funded by the LCA Allentown Division.

10. **Developments**

Water system construction is occurring in the following developments:

- Fields at Indian Creek, Phase 1, 43 private, age-restricted/senior residential units (sfd), with a community clubhouse, UMiIT & LMT, water & sewer
- Hamilton Crossings, 2 commercial lots with 20 buildings having retail, financial, convenience and restaurant uses, LMT
- Liberty at Mill Creek, 2 industrial lots, UMT
- Spring Creek Settlement Properties, 14 commercial/industrial lots, LMT
- Valley West Estates, Phases 4, 5 & 6, 46 residential lots (sfd), UMT (currently on hold)

Water system plans are being reviewed for the following developments:

- Ciocca Subaru, 1 additional commercial building at existing business, LMT
- Diocesan Pastoral Center, 2 commercial lots, 3 additional lots and residual lot for existing cemetery, LMT
- Farr Tract, 94 residential lots (sfd), LMT (currently on hold)
- Grant Street Townes, 18 residential lots (sfa), WashT
- Hickory Park Estates, 3 residential lots (sfd), UMT
- Hillview Farms, 31 residential lots (sfd), LMT/SWT
- Indian Creek Industrial Park, 6 commercial lots, UMiIT, water and sewer
- Lehigh Hills, Lot 5, Phase 1, 273 apartments & clubhouse, UMT
- Mary Ann's Plaza, 1 lot with 12 commercial units, NWT
- Morgan Hills, 40 residential lots (sfd), WeisT, water and sewer
- North Whitehall Commercial Center (Walmart), 5 commercial lots, NWT, water & sewer
- Shepherd's Corner, 1 commercial lot, LMT
- Stone Hill Meadows, 24 residential lots (sfd), LMT
- Trexler Business Center, 1 Commercial Lot with 6 commercial buildings, LMT
- Weilers Road Twins, 82 residential lots (sfa), UMT
- West Hills Business Center, 2 industrial lots, WeisT, water & sewer
- Woodmere Estates, 60 residential units (sfd), UMT

WASTEWATER

ACTION ITEMS

1. **Suburban Division – Western Weisenberg Wastewater Treatment Plant Improvements – May 9, 2016**

This project includes: (1) the improvements necessary to rectify the cold weather nitrification issue at the WWTP, and (2) the installation of additional equipment to enhance operation. This project will be funded by the LCA Suburban Western Weisenberg Division. Bids were received on April 25, 2016 and are being reviewed. Construction phase approval will be requested at the May 9th Board meeting.

2. **Suburban Division – SCARP – Western Lehigh Interceptor Test and Seal Project – May 9, 2016**

This project consists of sanitary sewer cleaning, pre and post-construction inspections via closed circuit TV, cured-in-place point repairs, pressure testing and chemical grout sealing of pipe joints for sanitary sewer lines previously identified as areas subject to infiltration leakage. Chuck Volk will supply information on the bid for the Western Lehigh Interceptor service area Test and Seal Project. Project approval will be requested at the May 9th Board Meeting. A budget amendment will be required.

3. **Suburban Division – Wynnewood Terrace Test and Seal Project – May 9, 2016**

This work is part of the Western Lehigh Interceptor Test and Seal Project, which was bid as one contract for economy of scale. This phase of work includes sewer collector lines located within the Wynnewood Terrace development in North Whitehall Township, and the scope is consistent with the WLI work (sanitary sewer cleaning, pre and post-construction inspections via closed circuit TV, cured-in-place point repairs, pressure testing and chemical grout sealing of pipe joints for sanitary sewer lines previously identified as areas subject to infiltration leakage). Chuck Volk will supply information on the bid cost for this phase of work for the Test and Seal Project. Project approval will be requested at the May 9th Board Meeting. A separate budget amendment will be required for the Wynnewood phase of the project.

DISCUSSION ITEMS

INFORMATION ITEMS

1. **Wastewater Treatment Capacity**

The PaDEP has suggested that a 537 Plan for the additional 4 MGD of capacity be submitted to them at the time when the 4 MGD is needed or after the SCARP improvements are made. They anticipate that if the 537 Plan is submitted in the near term, the Department will require a revised Plan prior to any capital improvements. The 537 planning process has currently been side-lined until such time as the wastewater capacity is limited or a 537 plan update is needed for an Administrative Order project must be submitted. A 537 Planning summary report is being drafted by our consultant and will be distributed to the Board. **(No change)**.

2. **Suburban Division -Wynnewood Terrace Pump Station and Force Main Replacement**

Work started on April 13, 2015 and was Substantially Complete on October 12, 2015. The pump station contractor recently completed all outstanding items to close out the project.

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

The project will upgrade the WWTP head works. The revised specifications are being reviewed.

4. **Allentown Division – Sanitary Sewer Manhole Lining: Cycle 3**

This annual project will install a lining system (to eliminate infiltration) in approximately 111 aged brick manholes identified by LCA staff. LCA has submitted the Conceptual Design to the City and the bid advertisement is expected to be published in mid-May. Board approval of the construction phase will be requested at the 6/27/16 Board Meeting. The project is identified as Administrative Order Work and will be funded by the City.

5. **Allentown Division – Manhole Collars with Water Tight Frame and Covers: Cycle 3**

This project will permanently secure the frame and cover of approximately 57 aged brick manholes identified by current LCA staff. This work will eliminate inflow from entering these manholes and eliminate the potential for sanitary sewer overflows (SSO's) from these manholes. LCA has submitted the Conceptual Design to the City and the bid advertisement is expected to be published in mid-May. Board approval of the construction phase will be requested at the 6/27/16 Board Meeting. The project is identified as Administrative Order and will be funded by the City.

6. **Allentown Division – WWTP: Replacement of Motor Control Centers**

This Project will replace five aged motor control centers that provide power on a 24/7 basis to various parts of the WWTP. The project has been approved by the City as a Major Capital Improvement (MCI). Project completion is expected by the end of April 2016 (minor punch list items remain). This Project is identified in the Lease as Schedule 7 (required) project and will be funded the LCA Allentown Division.

7. **Allentown Division – Roof Rehabilitation and Replacements: Phase 1**

The Project consists of replacing 26 facility roofs that were identified as in need of immediate replacement in the Roof Evaluation report performed by D'Huy Engineering. The design of these replacements are proceeding. The project was presented to the City for review/approval as a Major Capital Improvement (MCI), but the city rejected it as such. Construction began in October and will be completed by the end of April 2016 (minor punchlist items remain). The project will be funded by the LCA Allentown Division.

8. **Allentown Division- SCADA System Installation –Wastewater Treatment Plant:**

System cutover and site acceptance test was completed on March 18, 2016. Operator training was conducted March 30 & 31, 2016. Administrator training was conducted on March 31, 2016. Additional work remaining to be completed is the integration of the new MCC will be into at PLC7. The project is being funded by the City.

9. Allentown Division – Wastewater Treatment Plant: Miscellaneous Improvements

- Main Pump Station Suction Piping – LCA staff is in the process of acquiring quotes from contractors to repair this piping. This project involves either the lining or replacement of the suction piping for Pump #1 at the Main Pumping Station. Holes have developed in the suction piping and without this repair, the ability to operate this pump properly may be compromised in the future.
- Main Pump Station Locker Room Renovation – Construction has been completed.
- Chlorine Building Permanent Generator – Construction has been completed.
- Trickling Filter Odor Control Tower Repairs – Construction started in mid-April and is expected to be complete by August of 2016.
- Locker Room Phase II Renovation – A study is currently underway and is expected to be complete by May of 2016.
- Disinfection Alternative Study – A RFP is being developed to solicit Engineering Firms to study disinfection alternatives at the WWTP. Board Approval is expected at the 7/11/16 Meeting

All of these capital projects will be funded by the LCA Allentown Division.

10. Allentown Division – Wastewater Treatment Plant: Digester Cover Replacements

This project involves the cover replacement of both the Primary Digester No. 1 and the Secondary Digester (the cover for Primary Digester No. 2 was previously replaced in 2010). A Major Capital Improvement (MCI) Conceptual Design has been submitted to the City and has been approved. Board approval of the construction phase was received at the 2/8/16 Board Meeting. The Secondary Digester is expected to be replaced by October 2016 and the Primary No. 1 Digester is expected to be replaced by October 2017. This Project is identified in the Lease as Schedule 7 (required) project and will be funded by the LCA Allentown Division.

11. Consolidated Systems - SharePoint:

GHD presented the 4 applications, (1 & 2) Team sites – Plant services, customer service; (3) Workflow – Board/Staff notes, New employee orientation; (4) KPI/Dashboard – Employee safety, Bond coverage on April 11, 2016 for comment.

12. Suburban Division – SCARP

Monthly meetings with the LCA Suburban Division Signatories began in January to negotiate a Memo of Cooperation for completion of the SCARP Capital Improvements Plan. Cash flow plans prepared by the Program Consultant have been presented to the Signatories so they can begin analyzing their borrowing needs and schedule. A communications plan is being developed to help the Signatories with discussions with their Boards and the public.

A meeting is being scheduled with EPA and DEP for the Partners and the City to present the draft Capital Improvements Plan, Basis of Design, a tentative schedule and an update on the work and being performed.

In May LCA will participate in a meeting between the City and the City Signatories to present the City's Phase 2 Study.

13. **Suburban Division – Spring Creek Pump Station**

This project involves the following upgrades to the existing pumping station: Evaluate the feasibility of installing a comminutor to reduce buildup of debris on the bar screens, replace the manually operated weir gates with new motorized weir gates, and upgrades to the SCADA system. The project has been identified as a Major Capital Improvement (MCI). Request for Proposals for engineering services have been sent. This project will be funded by the LCA Suburban Division.

**LEHIGH COUNTY AUTHORITY
COMPARATIVE STATEMENT FORMAT
CITY DIVISION**

	Mar-2016			2016 YTD			Annual
	Actual	Budget	Prior Yr	Actual	Budget	Prior Yr	Budget
OPERATING REVENUES							
Customer Charges	2,652,735	2,627,435	2,221,417	7,452,320	7,882,305	6,670,522	31,529,219
Rental Income	-	-	-	-	-	-	-
Other Operating Income	27,840	25,233	10,999	64,499	75,700	65,872	302,800
Total Operating Revenues	2,680,575	2,652,668	2,232,416	7,516,819	7,958,005	6,736,394	31,832,019
OPERATING EXPENSES							
Salaries & Wages	375,827	427,831	403,068	1,250,460	1,283,493	1,246,659	5,133,971
Overtime	51,983	62,708	58,810	153,261	186,124	152,198	752,495
Employee Benefits	198,922	187,420	202,317	623,665	562,261	614,208	2,249,045
Utilities	179,284	175,398	112,147	483,572	526,194	423,471	2,104,778
Insurance	22,304	39,752	23,327	114,459	119,257	112,459	477,027
Maintenance	71,711	69,442	74,427	140,123	208,328	128,035	833,305
Engineering	4,095	1,917	8,406	5,605	5,760	8,406	23,000
Legal	8,068	6,033	4,249	15,829	18,099	10,377	72,396
Lab Analysis	1,426	1,667	1,363	1,808	5,000	3,334	20,000
Supplies & Equipment	116,629	144,829	113,353	267,501	434,487	256,674	1,737,946
Other Outside Services	117,509	77,573	157,114	324,322	232,720	373,857	930,882
Treatment & Transportation	-	-	-	-	-	-	-
Miscellaneous Operating Expenses	40,968	51,255	34,350	87,431	153,768	102,490	615,066
Depreciation & Amortization	450,000	450,000	441,114	1,350,000	1,350,000	1,323,342	5,400,000
Total Operating Expenses	1,638,727	1,695,826	1,634,043	4,817,956	5,087,478	4,755,510	20,349,911
OPERATING INCOME(LOSS)	1,041,848	956,842	598,373	2,698,863	2,670,527	1,980,884	11,482,106
NON-OPERATING REVENUES (EXPENSES)							
Water Tapping Fees	-	11,500	810	-	34,500	20,137	138,000
WW Capacity & Connection Fees	-	8,250	680	-	18,750	16,431	75,000
Meter Sales	816	1,417	1,117	2,050	4,250	3,714	17,000
Inspection & Plan Reviews	7,910	2,250	10,500	8,410	6,750	12,000	27,000
Other Non-Operating Income	2,985	1,667	2,885	9,735	5,000	9,675	20,000
Other Non-Operating Expense	-	-	-	4,830	-	4,830	-
Total Non-Operating Income (Expenses)	11,711	23,083	15,972	25,025	69,250	66,787	277,000
INCREASE (DECREASE) IN NET POSITION BEFORE INTEREST AND CAPITAL CONTRIBUTIONS	1,053,559	979,926	614,344	2,723,888	2,939,777	2,047,670	11,759,106
INTEREST INCOME (EXPENSES)							
Interest Income	374	35,833	2,083	1,069	107,500	2,421	430,000
Interest Expense	(1,315,456)	(1,315,458)	(1,001,195)	(3,946,374)	(3,946,374)	(3,003,585)	(15,785,500)
Total Interest Income (Expenses)	(1,315,084)	(1,279,625)	(999,112)	(3,945,305)	(3,838,874)	(3,001,164)	(15,355,500)
CAPITAL CONTRIBUTIONS							
Capital Grants	-	-	-	-	-	-	-
Capital Assets Provided	-	-	-	-	-	-	-
Total Capital Contributions	-	-	-	-	-	-	-
INCREASE (DECREASE) IN NET POSITION	(261,525)	(299,699)	(384,768)	(1,221,417)	(899,097)	(953,494)	(3,596,392)
CAPITAL EXPENDITURES							
LCA Costs (1)	(132,345)	(1,391,425)	(71,613)	(230,968)	(4,174,275)	(186,938)	(16,697,100)
Contractor/Other Costs (1)	(695,059)	-	(595,728)	(1,121,194)	-	(1,362,985)	-
Total Capital Expenditures	(827,404)	(1,391,425)	(667,341)	(1,352,161)	(4,174,275)	(1,549,924)	(16,697,100)
PRINCIPAL REDUCTION	-	-	-	-	-	-	-
KEY METRICS							
Operating Income (Expense) Before Depreciation	1,491,848	1,406,842	1,039,487	4,048,863	4,220,527	3,304,226	16,882,108
Operating Income (Expense) Before Depreciation / Operating Revenues (%)	55.7%	53.0%	46.8%	53.9%	53.0%	49.1%	53.0%
Operating Income (Expense) / Operating Revenues (%)	38.9%	36.1%	26.8%	35.9%	36.1%	29.4%	36.1%
Net Position Before Interest & Capital Contrib. / Operating Revenue (%)	39.3%	36.9%	27.5%	36.2%	36.9%	30.4%	36.9%
Interest Coverage Ratio	0.801	0.772	0.616	0.690	0.772	0.683	0.772
Debt Service Coverage Ratio	1.022	0.985	0.616	0.881	0.965	0.683	0.965
Debt Service Coverage Ratio (excluding depreciation)	1.459	1.422	1.058	1.317	1.422	1.123	1.422

(1) Capital costs budgeted as total LCA and Contractor Costs

**LEHIGH COUNTY AUTHORITY
COMPARATIVE STATEMENT FORMAT
SUBURBAN DIVISION**

	Mar-2016			2016 YTD			Annual Budget
	Actual	Budget	Prior Yr	Actual	Budget	Prior Yr	
OPERATING REVENUES							
Customer Charges	1,953,071	2,025,134	2,036,979	6,059,322	6,075,402	6,222,774	24,301,807
Rental Income	8,733	14,917	29,436	25,962	44,751	40,528	179,004
Other Operating Income	2,893	50,789	31,939	17,715	152,998	37,309	609,592
Total Operating Revenues	1,964,797	2,090,850	2,099,354	6,102,999	6,272,551	6,300,611	25,090,203
OPERATING EXPENSES							
Salaries & Wages	134,424	141,840	120,238	420,916	425,521	396,707	1,702,085
Overtime	12,185	9,217	8,835	26,298	27,952	26,244	110,607
Employee Benefits	63,698	49,259	51,300	193,746	144,777	168,213	579,108
Utilities	64,947	64,259	50,095	186,012	192,778	164,877	771,112
Insurance	12,487	16,583	12,771	52,205	49,688	49,585	198,751
Maintenance	42,057	75,432	76,968	70,874	226,297	169,612	905,190
Engineering	7,899	15,458	401	7,699	46,375	801	185,500
Legal	3,044	2,987	1,542	5,887	8,901	3,667	35,604
Lab Analysis	6,455	12,533	6,730	11,224	37,598	18,414	150,390
Supplies & Equipment	41,528	65,709	39,065	80,540	197,128	106,794	788,511
Other Outside Services	650,205	630,960	516,777	2,178,239	1,892,881	1,530,758	7,571,523
Treatment & Transportation	458,720	444,321	534,002	1,376,160	1,332,963	1,606,631	5,331,851
Miscellaneous Operating Expenses	21,263	35,423	24,049	66,819	106,269	72,148	425,076
Depreciation & Amortization	572,918	572,926	591,210	1,718,754	1,718,778	1,773,630	6,875,111
Total Operating Expenses	2,091,631	2,135,668	2,033,982	6,397,373	6,407,606	6,106,109	25,630,419
OPERATING INCOME(LOSS)	(126,834)	(45,018)	61,372	(294,374)	(135,055)	192,502	(540,216)
NON-OPERATING REVENUES (EXPENSES)							
Water Tapping Fees	17,000	16,165	9,075	60,525	48,495	44,670	193,980
WW Capacity & Capital Recovery Fees	116,203	99,250	111,146	269,132	288,750	493,435	1,155,000
Meter Sales	8,922	6,250	5,355	27,399	18,750	22,706	75,000
Inspection & Plan Reviews	3,899	8,000	46,900	5,899	24,000	68,553	96,000
Other Non-Operating Income	1,860	458	5,110	5,715	1,375	9,525	5,500
Other Non-Operating Expense	(219)	(583)	(220)	(2,046)	(1,750)	(1,797)	(7,000)
Total Non-Operating Income (Expenses)	147,665	126,540	177,366	365,624	379,620	637,093	1,518,480
INCREASE (DECREASE) IN NET POSITION BEFORE INTEREST AND CAPITAL CONTRIBUTIONS	20,831	81,522	238,738	71,249	244,565	829,595	978,264
INTEREST INCOME (EXPENSES)							
Interest Income	5,196	3,152	2,102	16,664	9,457	8,041	37,826
Interest Expense	(105,528)	(139,076)	(107,696)	(312,209)	(417,227)	(353,164)	(1,686,907)
Total Interest Income (Expenses)	(100,332)	(135,923)	(105,594)	(295,545)	(407,770)	(345,123)	(1,631,081)
CAPITAL CONTRIBUTIONS							
Capital Grants	-	6,250	-	-	18,750	-	75,000
Capital Assets Provided	-	-	-	-	-	-	-
Total Capital Contributions	-	6,250	-	-	18,750	-	75,000
INCREASE (DECREASE) IN NET POSITION	(79,501)	(48,151)	133,144	(224,296)	(144,455)	484,472	(577,817)
CAPITAL EXPENDITURES							
LCA Costs (1)	(55,008)	(998,023)	(60,881)	(154,867)	(2,994,068)	(162,896)	(11,976,270)
Contractor/Other Costs (1)	(126,883)	-	(106,077)	(173,252)	-	(184,953)	-
Total Capital Expenditures	(181,891)	(998,023)	(166,958)	(328,119)	(2,994,068)	(347,860)	(11,976,270)
PRINCIPAL REDUCTION	(220,864)	(152,405)	(241,585)	(664,102)	(152,405)	(654,608)	(1,828,859)
KEY METRICS							
Operating Income (Expense) Before Depreciation	446,084	527,908	652,582	1,424,380	1,583,723	1,966,132	6,334,895
Operating Income (Expense) Before Depreciation / Operating Revenues (%)	22.7%	25.2%	31.1%	23.3%	25.2%	31.2%	25.2%
Operating Income (Expense) / Operating Revenues (%)	-6.5%	-2.2%	2.9%	-4.8%	-2.2%	3.1%	-2.2%
Net Position Before Interest & Capital Contrib. / Operating Revenue (%)	1.1%	3.8%	11.4%	1.2%	3.9%	13.2%	3.9%
Interest Coverage Ratio	0.247	0.609	2.236	0.262	0.609	2.372	0.609
Debt Service Coverage Ratio	0.080	0.280	0.690	0.090	0.446	0.831	0.290
Debt Service Coverage Ratio (excluding depreciation)	1.835	2.256	2.382	1.851	3.463	2.591	2.256

(1) Capital costs budgeted as total LCA and Contractor Costs