



BOROUGH OF NORTH WALES

300 School Street, North Wales, PA 19454
Phone: 215-699-4424 • Fax: 215-699-3991
<http://northwalesborough.org>

COUNCIL MEETING Tuesday, January 8, 2019

Salvatore Amato
James Cherry
Ronald S. Little, Jr.
Wendy McClure
Sally Neiderhiser

Eion O'Neill
Daniel H. O'Connell, Sr.
James Sando
Paula Scott
Gregory J. D'Angelo, Mayor

Call to Order, Date and Time
Roll Call
Pledge of Allegiance

1. Public Comment

**2. Consideration: Preliminary/Final Minor Subdivision - SD-18-02
690-700 E. Walnut Street, 2-Lot Subdivision**

**3. Presentation: Keystone Lighting and DVRPC – Regional Streetlight Procurement
Program (RSLPP)**

4. Consideration: North Penn Volunteer Fire Co. Loan Payment Reduction Plan

5. Consideration: Acceptance of Donation from Military Living History Association

6. Consideration: Certificate of Appropriateness: 320 W. Walnut Street

7. Discussion: Boards and Commissions, 2019 Appointments

8. Consideration: Appointment of President Pro-tem for 2019

9. Consideration: Minutes: November 27, 2018

10. Consideration: 2018 December Disbursements: \$287,045.04

11. Old Business/Committee & Board Reports/Zoning Applications

12. Solicitor / Mayor / Council / Manager

Adjournment

Mayor's Office Hours

2 nd & 4 th Tuesdays	2:00 - 4:00 PM
2 nd & 4 th Wednesdays	7:00 - 8:30 PM

Monthly Meeting Information:

Boards and Commissions

Borough Council	2 nd & 4 th Tuesday of Month
Zoning Hearing Board	1 st Tuesday of Month as Needed
Planning Commission	1 st Wednesday of Month
HARB	3 rd Wednesday of Month
Park & Recreation Board	2 nd Thursday of Month
Shade Tree Commission	2 nd Thursday of Month
Nor-Gwyn Pool Commission	2 nd Thursday of Month – 7:30 PM
Historic Commission	3 rd Tuesday of Month

All above meetings begin at 7 P.M. in the Municipal Building, unless noted otherwise.

North Wales Water Authority	2nd & 4th Wednesday of Month 5:00 PM, 200 W. Walnut Street
------------------------------------	---

Please note: The meeting is being digitally recorded.

December 5, 2018

TO: North Wales Borough Council

FROM: Mark Tarlecki, Vice-Chairman, North Wales Borough Planning Commission

RE: SD-18-02, 690-700 East Walnut Street

At their regularly scheduled meeting of December 5, 2018 the North Wales Borough Planning Commission reviewed the Preliminary/Final Subdivision Plan dated 10-18-18, the review letter dated November 29, 2018 prepared by Borough Engineer Melissa E. Prugar, P.E., and the MCPC review letter dated November 14, 2018 prepared by Margaret Dobbs, Senior Planner.

The Planning Commission voted 3-0 to recommend that North Wales Borough Council approve the plans as currently submitted and the requested waivers from the Subdivision and Land Development Ordinance as follows:

1. Section 184-33.(C).(1).(a) through (l)
2. Section 184-33.(C).(2).(d)
3. Section 184-33.C(2).(g)

The Planning Commission also voted 3-0 to recommend that North Wales Borough Council:

1. Request the Borough Solicitor to look at a mandated shared parking agreement and/or advise on whether or not it can be imposed as a contingency to approval of the two lot subdivision.
2. Encourage the installation of sidewalks for the 690-700 East Walnut Street property.

cc: Alan Guzzardo, Assistant Borough Manager/Zoning Officer
Christine Hart, Borough Manager
North Wales Borough Planning Commission



Boucher & James, Inc.
CONSULTING ENGINEERS

AN EMPLOYEE OWNED COMPANY
INNOVATIVE ENGINEERING

Fountainville Professional Building
1456 Ferry Road, Building 500
Doylestown, PA 18901
215-345-9400
Fax 215-345-9401

2756 Rimrock Drive
Stroudsburg, PA 18360
570-629-0300
Fax 570-629-0306

Mailing:
P.O. Box 699
Bartonsville, PA 18321

559 Main Street, Suite 230
Bethlehem, PA 18018
610-419-9407
Fax 610-419-9408

www.bjengineers.com

November 29, 2018

Christine Hart, Borough Manager
North Wales Borough
300 School Street
North Wales, Pennsylvania 19454-31367

**SUBJECT: DONNA MENGEL– MENGEL MINOR SUBDIVISION
PRELIMINARY/FINAL MINOR SUBDIVISION PLAN REVIEW NO. 2
NORTH WALES BOROUGH, MONTGOMERY COUNTY, PA
PROJECT NO. 1868023R**

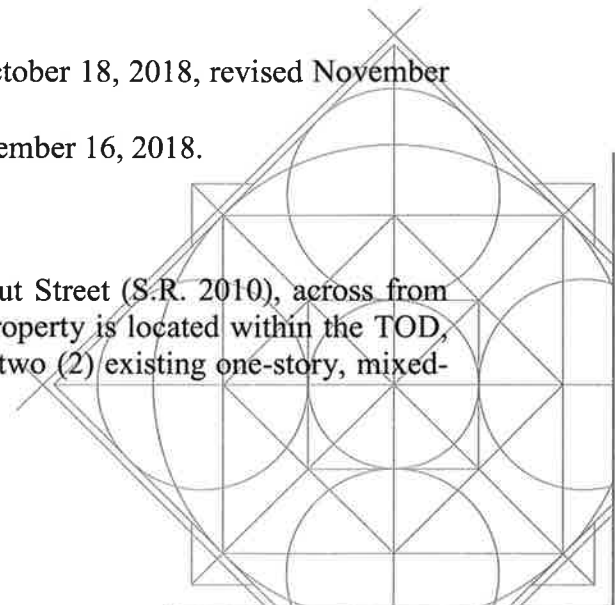
Dear Ms. Hart:

Pursuant to your request, we have completed our second review of the Preliminary/Final Minor Subdivision Plan submitted for the above referenced project. The submitted information was prepared by Carroll Engineering Corporation and consists of the following items:

- Response letter dated November 16, 2018.
- Letter citing list of Requested Waivers, dated November 16, 2018.
- Legal Description of Proposed Lot #1 dated September 9, 2018, revised November 28, 2018.
- Lot Closure Report for Lot #1.
- Legal Description of Proposed Lot #2 dated September 9, 2018, revised November 28, 2018.
- Lot Closure Report for Lot #2.
- Legal Description of a “Proposed Access Easement Over Lot #1 for the Benefit of Lot #2”, dated September 9, 2018, revised November 28, 2018.
- Legal Description of a “Proposed Access Easement Over Lot #2 for the Benefit of Lot #1”, dated September 9, 2018, revised November 28, 2018.
- Revised Lot Closure Report for “Access Lot #1”.
- Revised Lot Closure Report for “Access Lot #2”.
- Preliminary/Final Subdivision Plan (1 sheet), dated October 18, 2018, revised November 16, 2018.
- Aerial Image 400’ Boundary Plan (1 sheet), dated November 16, 2018.

BACKGROUND INFORMATION

The existing 36,151 square foot property is located on Walnut Street (S.R. 2010), across from South Seventh Street (Parcel No. 14-00-14500-00-4). The property is located within the TOD, Transit Oriented Development Zoning District. It consists of two (2) existing one-story, mixed-



Ms. Christine Hart, Borough Manager

Donna Mengel, Mengel Minor Subdivision-- Preliminary/Final Minor Subdivision Review No. 2

November 29, 2018

Page 2 of 3

use buildings, landscape areas, paved parking areas, and a paved driveway taking access from Walnut Street (S.R. 2010).

The Applicant is proposing to subdivide the existing property into two (2) lots. Proposed Lot #1 will have a net lot area of 16,099 square feet and will consist of one (1) existing one-story building, a paved parking area, and a portion of the existing access drive from Walnut Street (S.R. 2010). Proposed Lot #2 will have a net lot area of 20,052 square feet and will consist of one (1) existing one-story building a paved parking area, and a portion of the existing access drive from Walnut Street (S.R. 2010). No construction is proposed.

Based on our review of the above information and our previous letter dated November 1, 2018, we offer the following comments for your consideration.

SUBDIVISION AND LAND DEVELOPMENT ORDINANCE COMMENTS

1. Per §184-33.(C)(1)(a) through (l), the plan shall show the required existing features within 400 feet of the proposed subdivision. *We would support a waiver of this requirement provided the Applicant submit an aerial image clearly showing the property boundary and areas within 400 feet of the proposed subdivision. (Previous Comment 7) An aerial image has been provided. A waiver from §184-33.(C)(1)(a) through (l) is now requested. As discussed above, we have no objection to the request.*
2. Per §184-33.(C)(2)(d), the plan shall show “man-made structures and natural features which limit the potential layout of lots and buildings, including the location of marshland, slopes over 15% and other topographical features. Whenever the parcel contains slopes in excess of 15%, topographical data may be required by the Borough Engineer.” *Existing contours of the property must be shown on the plan, or a waiver requested. All waivers must be requested in writing and listed on the plan. (Previous Comment 8) A waiver from §184-33.(C)(2)(d) is now requested. No development is proposed, therefore we have no objection to the request.*
3. Per §184-33.(C)(2)(g), the plan shall show “location and size of all soil types, as per Montgomery County Soil Survey or by other survey reports prepared by qualified agencies and firms.” *Soil types must be shown on the plan, or a waiver requested. All waivers must be requested in writing and listed on the plan. (Previous Comment 9) A waiver from §184-33.(C)(2)(g) is now requested. No development is proposed, therefore we have no objection to the request.*

PLAN REVISION COMMENT

4. The plan has been revised to demonstrate that the existing number of parking spaces is sufficient for each use on the proposed lots. However, we still have concern that without a physical barrier between parking areas residential parking may occur on the commercial property (Lot #1), and vice-versa. We believe a means to designate parking i.e., signage, and/or an agreement are needed to avoid future conflict. *(New Comment)*

Ms. Christine Hart, Borough Manager

Donna Mengel, Mengel Minor Subdivision– Preliminary/Final Minor Subdivision Review No. 2

November 29, 2018

Page 3 of 3

All previous engineering related comments have been satisfied. We recommend the remaining comments be addressed to the satisfaction of North Wales Borough prior to approval of this Preliminary/Final Minor Subdivision Plan.

Please contact me if you have any additional questions or concerns.

Sincerely,



Melissa E. Prugar, P.E.
Borough Engineer

MEP/cmr/cg

cc: Alan Guzzardo – Assistant Borough Manager
Gregory R. Gifford, Attorney at Law, Rubin, Glickman, Steinberg and Gifford, P.C. – Borough Solicitor
Donna Mengel – Owner/Applicant
John L. Koutsouros, P.E., Carroll Engineering Corporation – Applicant's Engineer
Margaret Dobbs – Montgomery County Planning Commission



Carroll Engineering Corporation

November 16, 2018

Christine Hart, Borough Manager
North Wales Borough
300 School Street
North Wales, PA 19454-31367

Dear Ms. Hart:

Subject: Donna Mengel-Mengel Minor Subdivision Preliminary/Final Minor Subdivision Plan Review No. 1
North Wales Borough, Montgomery County, PA, Project No. 1868023R

WAIVER LIST

1. Request waiver from section §184-33.(c)(1)(a) through (1), the plan shall show the required existing features within 400 feet of the proposed subdivision. *We are submitting an aerial image clearly showing the property boundary and areas within 400 feet of the proposed subdivision as requested.*
2. Request waiver from section §184-33.(c)(2)(d), the plan shall show "man-made structures and natural features which limit the potential layout of lots and buildings, including the location of marshland, slopes over 15% and other topographical features. Whenever the parcel contains slopes in excess of 15%, topographical data may be required by the borough engineer."
3. Request waiver from section §184-33.(c)(2)(g), the plan shall show "location and size of all soil types, as per Montgomery county soil surveyor by other survey reports prepared by qualified agencies and firms."

Should you have any questions or require additional information regarding this request, please do not hesitate to contact me at 215-343-5700, extension 355 or jkoutsouros@carrollengineering.com.

Very truly yours,

CARROLL ENGINEERING CORPORATION



John L. Koutsouros, P.E.
Planning and Site Design Dept. Mgr.

JLK:cam

Today's Commitment to Tomorrow's Challenges

Corporate Office:
949 Easton Road
Warrington, PA 18976
215.343.5700

630 Freedom Business Center
Third Floor
King of Prussia, PA 19406
610.489.5100

101 Lindenwood Drive
Suite 225
Malvern, PA 19355
484.875.3075

105 Raider Boulevard
Suite 206
Hillsborough, NJ 08844
908.874.7500



Carroll Engineering Corporation

November 16, 2018

Christine Hart, Borough Manager
North Wales Borough
300 School Street
North Wales, PA 19454-31367

Subject: Donna Mengel-Mengel Minor Subdivision
Preliminary/Final Minor Subdivision Plan Review No.1 North Wales Borough,
Montgomery County, Pa, Project No. 1868023R

Dear Ms. Hart:

We offer the following responses (in italic) to the comments dated November 1, 2018:

ZONING COMMENTS

1. Per §208-104.(C), parking for a Mixed-Use Structure is determined by the number of parking spaces required for each individual use. The Applicant shall provide the existing uses within each mixed-use building and provide calculations showing each lot will have sufficient parking. In addition, per §208-105(BJ(1)(f), shared parking is encouraged. If the Applicant intends to share parking, an agreement between proposed Lot #1 and Lot #2 must be provided.

Provided on sheet 1.

SUBDIVISION AND LAND DEVELOPMENT ORDINANCE COMMENTS

2. Per §184-23, survey monuments shall be located on the right-of-way lines at comers, angle points, beginning and end of curves and as otherwise required. No monuments are shown. Any existing monuments/pins shall be shown on the plan. Where monuments/pins do not exist, concrete monuments must be placed in accordance with this Section.

Existing monuments shown on sheet 1 along with proposed missing monuments and proposed future monuments.

3. Per §184-33.(A)(6), the plan shall provide "a key map relating the subdivision to at least three existing intersections of Borough streets." A north arrow must be provided for the Location Map.

Provided on sheet 1.

Today's Commitment to Tomorrow's Challenges

Corporate Office:
949 Easton Road
Warrington, PA 18976
215.343.5700

630 Freedom Business Center
Third Floor
King of Prussia, PA 19406
610.489.5100

101 Lindenwood Drive
Suite 225
Malvern, PA 19355
484.875.3075

105 Raider Boulevard
Suite 206
Hillsborough, NJ 08844
908.874.7500

4. Per §184-33.(B)(1), the plan shall provide "the name and address of the subdivider, developer and/or builder, and the registered engineer, surveyor, or other qualified person who developed the plan." The name and address of the Applicant must be shown on the plan.

This is shown in the title block on sheet 1.

5. Per §184-33.(B)(7), the plan shall provide "a legend sufficient to indicate clearly between existing and proposed conditions." A legend must be provided on the plan. Additionally, the existing and proposed boundaries are shown with the same line type. The plan shall be revised for clarity by providing a solid existing boundary line.

Legend added and linetype changes as requested.

6. Per §184-33.(B)(8), the plan shall "include a note setting forth the zoning requirements, including the applicable lot size and yard requirements. The plan also shall show the requirements of any other Borough ordinance, if any, on both the land to be subdivided and the adjacent land." If it is found that the mixed-use buildings contain dwellings, a density calculation will be required on the plan.

Provided on sheet 1.

7. Per §184-33.(C)(1)(a) through (1), the plan shall show the required existing features within 400 feet of the proposed subdivision. We would support a waiver of this requirement provided the Applicant submit an aerial image clearly showing the property boundary and areas within 400 feet of the proposed subdivision.

Waiver requested and sheet 2 was added to the set to show the requested aerial image.

8. Per §184-33.(C)(2)(d), the plan shall show "man-made structures and natural features which limit the potential layout of lots and buildings, including the location of marshland, slopes over 15% and other topographical features. Whenever the parcel contains slopes in excess of 15%, topographical data may be required by the Borough Engineer." Existing contours of the property must be shown on the plan, or a waiver requested. All waivers must be requested in writing and listed on the plan.

Waiver requested.

9. Per §184-33.(C)(2)(g), the plan shall show "location and size of all soil types, as per Montgomery County Soil Surveyor by other survey reports prepared by qualified agencies and firms." Soil types must be shown on the plan, or a waiver requested. All waivers must be requested in writing and listed on the plan.

Waiver requested.

Christine Hart, Borough Manager
Page Three
November 16, 2018

10. Per §184-33.(E)(I)(c) and (d) the plan shall show "the location and size of existing and proposed sanitary sewers, manholes, storm sewers, and inlets" and "the location and size of existing and proposed utilities above and below ground (e.g., electric facilities, fire hydrants, gas mains, water lines and other utilities)," respectively. Existing water and sewer laterals must be shown on the plan to ensure the existing services remain on the respective lots for each building.

Provided on sheet 1.

MISCELLANEOUS COMMENTS

11. The Legal Descriptions for Lots #1 and #2 currently reference a plan dated August 31, 2018 and must be revised to reference the submitted Subdivision Plan, dated October 18, 2018, or date last revised.

Revised

12. The Legal Descriptions for the proposed Access Easements currently reference a plan dated August 31, 2018 and must be revised to reference the submitted Subdivision Plan, dated October 18, 2018, or date last revised.

Revised

13. Segment #3 in the lot closure report for Lot #1 is inconsistent with that provided on the plan. The lot closure report or plan must be revised.

Revised

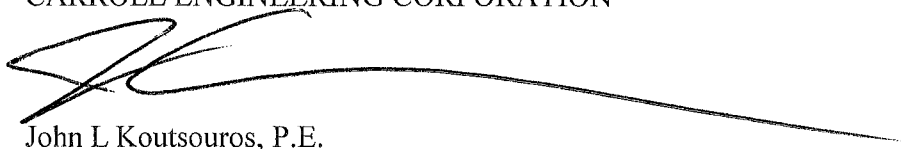
14. The proposed access easement shall extend the entire width of the existing driveway. We also suggest it be extended to the western limit of the access driveway (at the eastern accessible parking space on proposed Lot #2).

Revised and shown on sheet 1.

Should you have any questions or require additional information regarding this matter, please do not hesitate to contact me at 215-343-5700, extension 355 or at jkoutsouros@carrollengineering.com.

Very truly yours,

CARROLL ENGINEERING CORPORATION



John L. Koutsouros, P.E.
Planning and Site Design Department Manager

JK:cam

Roadway, Street & Area Lighting Upgrade Feasibility Study

North Wales Borough
1/3/2019

Prepared by:



Keystone Lighting Solutions
Michael Fuller, President

In Partnership with:

**Delaware Valley Regional Planning Commission's
Regional Streetlight Procurement Program**

Table of Contents

Section	Page
Executive Summary	1
<ul style="list-style-type: none">○ RSLPP Overview○ Feasibility Study Overview & Approach○ Project Goals and Special Applications○ Project Scope of Work○ Executive Financial Summary	
Existing Lighting System	4
<ul style="list-style-type: none">○ Unmetered Streetlight Baseline○ Metered Area Lighting Baseline○ Traffic Signals Baseline	
Design Approach and Standardized Upgrade Plan	7
<ul style="list-style-type: none">○ Design Approach○ Standardized Upgrade Plan	
Upgrade Details & Savings	9
<ul style="list-style-type: none">○ Annual Energy Savings○ Annual Maintenance Savings○ Bill of Material and Project Costs	
Financial Analysis & Summary	13
<ul style="list-style-type: none">○ Payback Analysis Matrix○ Cash Flow Analysis	
Phase I Action Items	15
<ul style="list-style-type: none">○ Municipality Staff/Management Action Items○ Municipality Council Action Items	
Appendix	
<ul style="list-style-type: none">○ A – RSLPP Phase Overview○ B – Project Assumptions○ C – DSP & Program Fees Breakdown○ D – Photometric Analysis Example	

Executive Summary

RSLPP Overview

The Delaware Valley Regional Planning Commission's Regional Streetlight Procurement Program (RSLPP) allows regional municipalities to improve the performance of municipal street lighting, and specifically to design, procure, install, and finance the transition to light-emitting-diode (LED) lighting technology, and to maintain those improvements. The RSLPP is organized in four Phases: Phase 1: Feasibility; Phase 2: Project Development; Phase 3: Construction; and Phase 4: Post-Construction Operations and Maintenance. These Phases are described in greater detail in Appendix A.

Keystone Lighting Solutions (KLS) was competitively selected by the RSLPP to serve as the Design Services Professional for all four Phases of the program. In Phase 1, KLS is contracted with DVRPC to provide Feasibility Studies for all participating municipalities. By using existing available information and with financial support from DVRPC and the PA Department of Environmental Protection, the RSLPP is able to offer this study at no-cost to the municipality.

Feasibility Study Overview & Approach

This report has been prepared by KLS. The purpose of this Feasibility Study is to provide an assessment of the opportunity associated with the upgrade of a municipalities existing roadway, street and area lighting systems to LED, which may also include traffic signals. This study will act as a decision-making tool for your municipality to decide whether to proceed to Phase 2 of the RSLPP, Project Development. Project Development Phase will include comprehensive audits, design and analysis resulting in a final project design proposal.

Phase 1, Feasibility, is a "data-driven" effort that uses existing available information to assess the opportunity associated with an upgrade to your existing lighting system. No field work has been conducted for the development of this Feasibility Study. General design principals have been used by KLS to identify LED upgrade opportunities, described in the Design Approach and Photometric Analysis section. Project costs from Round 1 of the RSLPP (2015-2018) have been used to develop this financial assessment of the municipalities upgrade opportunity.

Project Goals and Special Applications

The following list of project goals and special applications was developed during discussions between municipality staff/management and KLS as preparation for this initial study.

- **Project Goals**
 - Reduce Energy Costs
 - Reduce Maintenance Costs
 - Meet or Exceed Existing Lighting System Performance

- **Special Applications**
 - Some parks not lit or underlit (to be evaluated in Phase II)

Project Scope of Work

The following is a list of all possible energy conservation measures (ECMs) presented for the lighting upgrade project. The “In Scope” column indicates which ECMs the municipality has chosen to include in the scope of work for this Feasibility Study:

Upgrade Category	In Scope
PECO Buyback	No
Cobrahead Lighting	Yes
Decorative Lighting	Yes
Area Lighting	Yes
Traffic Signals	No

Executive Financial Summary

Below is an Executive Financial Summary. This summary table provides Total Annual Operating Cost Savings, Total Project Costs, and Payback for each ECM as well as for common Control Alternatives to be considered. Typical combinations of ECMs are provided for municipalities to consider. Additional ECM combinations are provided in the Financial Analysis and Summary section of this study.

ECM	Total Annual Operating Savings	Total Project Costs	Payback w/ Financing (Years)	Payback w/o Financing (Years)	GHG Reduction (MT/Year)
PECO Buyback	\$0	\$0			
Cobrahead (with buyback)	\$5,160	\$90,714	17.6	10.4	21.5
Decorative	\$1,847	\$90,970	49.3	29.7	3.9
Area Lighting	\$1,010	\$17,001	16.8	10.0	
Traffic Signals	\$0	\$0			
Totals	\$8,017	\$198,685	24.8	14.8	25.4

Existing Lighting System

Unmetered Streetlight Baseline

The table below represents the current lighting inventory for Unmetered Streetlights. This baseline represented in the table below was developed using information from the municipality's unmetered PECO streetlight bill(s). Though the quantities, types, and wattages of fixtures reflected on the PECO bill(s) may vary from what is actually installed in the municipality, this project's energy baseline for unmetered service will be tied to the inventory of equipment on your unmetered PECO streetlight bill. Any energy cost savings realized from upgrades to the unmetered fixtures installed in your community will be realized through changes to this PECO bill(s). If known by the municipality, this table may indicate whether a baseline fixture is style other than a cobrahead, though this classification has no impact on baseline energy use or cost.

PECO Unmetered Streetlight Baseline <i>(Consolidated Summary of all PECO Streetlight Bills)</i>								
Fixture Type Code	Fixture Type Description	Location Count	Fixture Quantity	Fixture Watts	Total kW	Annual Operating Hours	Total kWh/Year	Total Annual Electric Costs
Cobrahead								
05800S	Cobrahead, 70W HPS		131	94	12.3	4,092	50,389	\$3,356
09500S	Cobrahead, 100W HPS		39	131	5.1	4,092	20,906	\$1,392
16000S	Cobrahead, 150W HPS		1	192	0.2	4,092	786	\$52
LED70W	Cobrahead, 72W LED		14	70	1.0	4,092	4,010	\$267
Cobrahead Totals			185		18.6		76,091	\$5,068
Decorative								
CA-150W-HPS	Caged Acorn, 150W, HPS		41	192	7.9	4,092	32,212	\$2,145
Decorative Totals			41	192	7.9		32,212	\$2,145
Energy Usage Sub-Total			226		26.5		108,303	\$7,213
Locations	Service Locations	204						\$16,402
Total Electric Bill Costs		204						\$23,614

*Service Location Distribution Charge, also known as the "Tap Fee" is based on \$6.70 per location, per month. This is a fixed charge on your bill, and it is not impacted by the wattage of the fixture at each location. The costs associated with SLDC are expected to stay the same unless the quantity of service locations changes as a result of your RSLPP project. Estimates for any expected changes in SLDC as a result of the project will be modeled if the municipality proceeds to Phase 2, Project Development.

Metered Area Lighting Baseline

The table below represents the current lighting inventory and baseline for all metered outdoor lighting, which may include decorative, area lighting, and in some cases cobrahead lighting as well. The inventory of fixture quantities, type, wattages, and operating hours was estimated using information provided by the municipality. The energy use and cost baselines associated with this equipment were estimated according your municipality's PECO rates for metered service. Because this is a metered service, this baseline may be adjusted in Phase 2, Project Development, to reflect the actual inventory of installed equipment identified in your field audit.

Metered Area Lighting Baseline <i>(Municipality provided information)</i>							
Fixture Type Code	Fixture Type Description	Fixture Quantity	Fixture Watts	Total kW	Annual Operating Hours	Total kWh/Year	Total Annual Electric Costs
WP-70W-HPS	Wallpack, 70W HPS	1	94	0.1	4,092	385	\$29
SB-150W-HPS	Shoebox Area Light, 250W HPS	7	192	1.3	4,092	5,500	\$417
05800S	Cobrahead, 70W HPS	6	94	0.6	4,092	2,308	\$175
CANOPY-150W-HPS	Canopy, 150W HPS	1	192	0.2	4,092	786	\$60
CANOPY-175W-MH	Canopy, 175W MH	1	192	0.2	4,092	786	\$60
CA-150W-HPS	Caged Acorn, 150W, HPS	2	192	0.4	4,092	1,571	\$119
ACAP-175W-MH	Acorn w/ Cap, 175W, MH	2	192	0.4	4,092	1,571	\$119
BOLLARD-70W-HPS	Bollard, 70W HPS	5	94	0.5	4,092	1,923	\$146
90PARFL	PAR Lamp, 90W, INC	6	90	0.5	4,092	2,210	\$167
Total Electric Bill Costs		31		4.2		17,039	\$1,291

Design Approach and Standardized Upgrade Plan

Design Approach

The following section explains the design approach for standardized upgrade recommendations.

KLS has conducted a photometric analysis for 5 typical lighting applications in order to compare the lighting performance of a “traditional” fixture type and technology (e.g. high-pressure sodium, metal halide, mercury vapor, incandescent) with that of a new fixture using LED technology. When keeping all application details the same (e.g. road width, pole spacing, fixture mounting height, etc.) this analysis identifies LED fixtures that perform equal or better than existing older technology fixtures. An example of this photometric analysis comparison can be seen in Appendix D.

For each typical application analysis KLS evaluates illumination levels and uniformity ratios against IES RP-8 standards. Actual municipality applications will likely not match typical applications (i.e. pole spacing, fixture mounting height) and therefore will not meet IES RP-8 standards. The design goal and strategy for the RSLPP is to “meet or exceed” existing lighting performance. Performance is not solely based on illumination levels (quantity of light) but is heavily impacted by light distribution, uniformity, glare, cut-off, source-brightness and color temperature. Many of these factors impact a human’s perceived visibility of a lit environment.

Upgrade recommendations will also be advised by a less technical, but equally relevant approach, which is to utilize the general knowledge of what upgrades have worked well on previous rounds of the RSLPP and other KLS projects. This secondary assessment is to be used as a sanity check to the previous analysis driven approach discussed above.

Typical Applications include:

- **Cobrahead Roadway Applications**
 - Arterial > Roadways
 - Collector > Roadways
 - Local Residential Street
- **Decorative Street Applications**
 - Commercial District
 - Local Residential Street

Note: The above list of Typical Applications will be expanded during Phase II, Project Development. Intersection typical designs will be considered in Phase II, when fixture location information is available. Typical designs will be provided for high and low volume Local Residential Streets in Phase II, when roadway volume information is available.

Standardized Upgrade Plan

Based on the general design approach discussed above, the following standardized upgrade plan has been developed for this Feasibility Study.

Typical Applications and Upgrade Plan

Cobrahead Roadway & Street Applications

Arterial Roadway

Existing Lamp & Wattage	Proposed LED Fixture & Wattage	Distribution Type	Color Temp
400W High-Pressure Sodium	215W LED Cobrahead	Defined in Phase II	Defined in Phase II
400W Metal Halide	215W LED Cobrahead		
400W Mercury Vapor	215W LED Cobrahead		
250W High-Pressure Sodium	108W LED Cobrahead		
250W Metal Halide	108W LED Cobrahead		
250W Mercury Vapor	108W LED Cobrahead		

Collector Roadway

Existing Lamp & Wattage	Proposed LED Wattage	Distribution Type	Color Temp
150W High-Pressure Sodium	72W LED Cobrahead	Defined in Phase II	Defined in Phase II
175W Metal Halide	72W LED Cobrahead		
175W Mercury Vapor	72W LED Cobrahead		

Local Residential Street

Existing Lamp & Wattage	Proposed LED Wattage	Distribution Type	Color Temp
100W High-Pressure Sodium	54W LED Cobrahead	Defined in Phase II	Defined in Phase II
70W High-Pressure Sodium	35W LED Cobrahead		
100W Metal Halide	35W LED Cobrahead		
100W Mercury Vapor	35W LED Cobrahead		

Decorative Street Applications

Commercial District Street (Premium Decorative)

Existing Lamp & Wattage	Proposed LED Wattage	Distribution Type	Color Temp
150W or Less High-Pressure Sodium	63W LED Retrofit Kit	Defined in Phase II	Defined in Phase II
175W or Less Metal Halide Sodium	63W LED Retrofit Kit		

Local - High Volume Street (Standard Decorative)

Existing Lamp & Wattage	Proposed LED Wattage	Distribution Type	Color Temp
150W High-Pressure Sodium	52W LED Decorative (i.e. 4SC)	Defined in Phase II	Defined in Phase II
100W High-Pressure Sodium	38W LED Decorative (i.e. 4SC)		
70W or Less High-Pressure Sodium	25W LED Decorative (i.e. 4SC)		
100W or Less Metal Halide Sodium	25W LED Decorative (i.e. 4SC)		
100W or Less Mercury Vapor Sodium	25W LED Decorative (i.e. 4SC)		

Upgrade Details & Savings

Annual Energy Savings

The following table shows the annual energy savings for each existing fixture type and the upgrade recommendation.

Unmetered Streetlight Energy Savings

Existing							Upgrade							Savings
Fixture Type Code	Fixture Type Description	Watts/ Fixture	Fixture Quantity	Total kW	Total kWh/ Year	Annual Electric Costs	Fixture Type Code	Fixture Type Description	Watts/ Fixture	Fixture Quantity	Total kW	Total kWh/ Year	Annual Electric Costs	Annual Energy Cost Savings
Unmetered Streetlight														
Cobrahead														
05800S	Cobrahead, 70W HPS	94	131	12.3	50,389	\$3,356	CHS-35W16LED-4K	Cobrahead, 38W, LED	38	121	4.6	18,815	\$1,253	\$2,103
09500S	Cobrahead, 100W HPS	131	39	5.1	20,906	\$1,392	CHS-54W16LED-4K	Cobrahead, 53W, LED	53	44	2.3	9,543	\$636	\$757
16000S	Cobrahead, 150W HPS	192	1	0.2	786	\$52	CHM-72W32LED-4K	Cobrahead, 73W, LED	73	1	0.1	299	\$20	\$32
LED70W	Cobrahead, 72W LED	70	14	1.0	4,010	\$267	CHM-72W32LED-4K	Cobrahead, 73W, LED	70	14	1.0	4,010	\$267	\$0
Cobrahead Total			185	18.6	76,091	\$5,068			180	8.0	32,666	\$2,176	\$2,892	
Decorative														
CA-150W-HPS	Caged Acorn, 150W, HPS	192	41	7.9	32,212	\$2,145	RTK-68W-4K	Decorative Retrofit Kit, 68W, LED	68	58	3.9	16,139	\$1,075	\$1,070
Decorative Total			41	7.9	32,212	\$2,145			58	3.9	16,139	\$1,075	\$1,070	
Unmetered Total			226	26.5	108,303	\$7,213			238	11.9	48,805	\$3,250	\$3,962	

Metered Area Lighting Energy Savings

Existing							Upgrade							Savings
Fixture Type Code	Fixture Type Description	Watts/ Fixture	Fixture Quantity	Total kW	Total kWh/ Year	Annual Electric Costs	Fixture Type Code	Fixture Type Description	Watts/ Fixture	Fixture Quantity	Total kW	Total kWh/ Year	Annual Electric Costs	Annual Energy Cost Savings
Metered Area Lighting														
Cobrahead														
05800S	Cobrahead, 70W HPS	94	6	1	2,307.9	\$175	CHS-35W16LED-4K	Cobrahead, 38W, LED	38	6	0.2	933	\$71	\$104
Cobrahead Total			6	0.6	2,308	\$175				6	0.2	933	\$71	\$104
Decorative														
CA-150W-HPS	Caged Acorn, 150W, HPS	192	2	0	1,571.3	\$119	RTK-68W-4K	Decorative Retrofit Kit, 68W, LED	68	2	0.1	557	\$42	\$77
ACAP-175W-MH	Acorn w/ Cap, 175W, MH	192	2	0	1,571.3	\$119	RTK-68W-4K	Decorative Retrofit Kit, 68W, LED	68	2	0.1	557	\$42	\$77
Decorative Total			4	0.8	3,143	\$238				4	0.3	1,113	\$84	\$154
Area Lighting														
WP-70W-HPS	Wallpack, 70W HPS	94	1	0.1	385	\$29	WP-29W-4K	Wallpack, 29W, LED	29	1	0.0	119	\$9	\$20
SB-150W-HPS	Shoebox Area Light, 250W HPS	192	7	1.3	5,500	\$417	SB-96W-4K	Shoebox, 96W, LED	96	7	0.7	2,750	\$208	\$208
CANOPY-150W-HPS	Canopy, 150W HPS	192	1	0.2	786	\$60	CANOPY-49W-4K	Canopy, 49W, LED	49	1	0.0	201	\$15	\$44
CANOPY-175W-MH	Canopy, 175W MH	192	1	0.2	786	\$60	CANOPY-49W-4K	Canopy, 49W, LED	49	1	0.0	201	\$15	\$44
BOLLARD-70W-HPS	Bollard, 70W HPS	94	5	0.5	1,923	\$146	TOPAZ-20W-COB	Corn Cob, 20W, LED	20	5	0.1	409	\$31	\$115
90PARFL	PAR Lamp, 90W, INC	90	6	0.5	2,210	\$167	18PARLED	PAR Lamp, 18W, LED	49	3	0.1	602	\$46	\$122
Area Lighting			21	2.8	11,589	\$878				18	1.0	4,280	\$324	\$554
Metered Area Lighting Total			31	4.2	17,039	\$1,291				28	1.5	6,326	\$479	\$811

Annual Maintenance Savings

The following table shows the annual maintenance savings for each existing fixture type and the upgrade recommendation. Average annual maintenance expenses were modeled for both the existing and proposed fixture types. Average annual maintenance expenses for proposed fixtures were further reduced to reflect a 1-year labor warranty and a 10-year parts warranty. The assumptions used to estimate Annual Maintenance savings are provided in Appendix B, Project Assumptions.

Unmetered Streetlight Maintenance Savings

Fixture Type Code	Fixture Type Description	Fixture Quantity	Annual Maintenance Costs	Fixture Type Code	Fixture Type Description	Fixture Quantity	Annual Maintenance Costs	Annual Maintenance Savings
Unmetered Streetlight								
Cobrahead								
05800S	Cobrahead, 70W HPS	131	\$2,263	CHS-35W16LED-4K	Cobrahead, 38W, LED	121	\$614	\$1,649
09500S	Cobrahead, 100W HPS	39	\$674	CHS-54W16LED-4K	Cobrahead, 53W, LED	44	\$244	\$430
16000S	Cobrahead, 150W HPS	1	\$17	CHM-72W32LED-4K	Cobrahead, 73W, LED	1	\$6	\$11
LED70W	Cobrahead, 72W LED	14	\$242	CHM-72W32LED-4K	Cobrahead, 73W, LED	14	\$242	\$0
Cobrahead Total		185	\$3,196			180	\$1,106	\$2,090
Decorative								
CA-150W-HPS	Caged Acorn, 150W, HPS	41	\$708	RTK-68W-4K	Decorative Retrofit Kit, 68W, LED	58	\$145	\$563
Decorative Total		41	\$708			58	\$145	\$563
Unmetered Total		226	\$3,904			238	\$1,251	\$2,654

Metered Area Lighting Maintenance Savings

Fixture Type Code	Fixture Type Description	Fixture Quantity	Annual Maintenance Costs	Fixture Type Code	Fixture Type Description	Fixture Quantity	Annual Maintenance Costs	Annual Maintenance Savings
Metered Area Lighting								
Cobrahead								
05800S	Cobrahead, 70W HPS	6	\$104	CHS-35W16LED-4K	Cobrahead, 38W, LED	6	\$30	\$73
Cobrahead Total		6	\$104			6	\$30	\$73
Decorative								
CA-150W-HPS	Caged Acorn, 150W, HPS	2	\$35	RTK-68W-4K	Decorative Retrofit Kit, 68W, LED	2	\$5	\$30
ACAP-175W-MH	Acorn w/ Cap, 175W, MH	2	\$35	RTK-68W-4K	Decorative Retrofit Kit, 68W, LED	2	\$5	\$30
Decorative Total		4	\$69			4	\$10	\$59
Area Lighting								
WP-70W-HPS	Wallpack, 70W HPS	1	\$17	WP-29W-4K	Wallpack, 29W, LED	1	\$3	\$15
SB-150W-HPS	Shoebox Area Light, 250W HPS	7	\$121	SB-96W-4K	Shoebox, 96W, LED	7	\$18	\$103
CANOPY-150W-HPS	Canopy, 150W HPS	1	\$17	CANOPY-49W-4K	Canopy, 49W, LED	1	\$3	\$15
CANOPY-175W-MH	Canopy, 175W MH	1	\$17	CANOPY-49W-4K	Canopy, 49W, LED	1	\$3	\$15
BOLLARD-70W-HPS	Bollard, 70W HPS	5	\$86	TOPAZ-20W-COB	Corn Cob, 20W, LED	5	\$15	\$71
90PARFL	PAR Lamp, 90W, INC	6	\$246	WP-49W-4K	Wallpack, 49W, LED	3	\$8	\$238
Area Lighting		21	\$505			18	\$48	\$457
Unmetered Total		31	\$677			28	\$88	\$589

Bill of Material and Project Costs

The following table shows the bill of material (BOM) for proposed upgrade scope of work. In addition to material and installation costs, a summary of DSP Fees and Program Fees are included – all per unit costs associated with, material, installation, DSP fees, and Program fees are further defined in Appendix C. Rebates from PECO and PJM (regional transmission organization) are also included in this table and further defined in Appendix B.

Fixture Type Code	Fixture Type Description	Fixture Quantity	Material Costs	Install Costs	Rebates	KLS Fees	Program Fees	Contingency	Interest Costs	Total Project Costs
Cobrahead										
CHM-72W32LED-4K	Cobrahead, 73W, LED	1	\$187	\$110	(\$7)	\$34	\$11	\$30	\$243	\$607
CHS-35W16LED-4K	Cobrahead, 38W, LED	127	\$18,106	\$13,970	(\$483)	\$4,318	\$1,178	\$3,208	\$26,636	\$66,932
CHS-54W16LED-4K	Cobrahead, 53W, LED	44	\$7,309	\$4,840	(\$2,117)	\$1,496	\$439	\$1,215	\$9,993	\$23,176
Cobrahead Total		172	\$25,602	\$18,920	(\$2,607)	\$5,848	\$1,628	\$4,452	\$36,871	\$90,714
Decorative										
RTK-68W-4K	Decorative Retrofit Kit, 68W, LED	62	\$37,014	\$9,920	(\$365)	\$2,108	\$1,513	\$4,693	\$36,086	\$90,970
Decorative Total		62	\$37,014	\$9,920	(\$365)	\$2,108	\$1,513	\$4,693	\$36,086	\$90,970
Area Lighting										
WP-29W-4K	Wallpack, 29W, LED	1	\$428	\$160	(\$4)	\$34	\$19	\$59	\$457	\$1,153
SB-96W-4K	Shoebox, 96W, LED	7	\$3,523	\$1,120	(\$40)	\$238	\$151	\$464	\$3,590	\$9,046
CANOPY-49W-4K	Canopy, 49W, LED	2	\$894	\$320	(\$137)	\$68	\$40	\$121	\$942	\$2,248
TOPAZ-20W-COB	Corn Cob, 20W, LED	5	\$288	\$250	(\$322)	\$170	\$25	\$54	\$513	\$977
WP-49W-4K	Wallpack, 49W, LED	3	\$1,340	\$480	\$0	\$102	\$60	\$182	\$1,413	\$3,578
Area Lighting Total		18	\$6,472	\$2,330	(\$504)	\$612	\$295	\$880	\$6,916	\$17,001
BOM		252	\$69,088	\$31,170	(\$3,476)	\$8,568	\$3,436	\$10,026	\$79,873	\$198,685

Financial Analysis & Summary

Payback Analysis Matrix

The payback analysis matrix is provided as a decision-making tool to assess the opportunity of ECMs available and to define a project scope that best meets the needs of the municipality. If a PECO buyback is planned prior to this project being implemented, we show the payback associated with that activity. A separate payback calculation is made for each ECM as well as for common control alternates to be considered. This section also shows typical combinations of upgrade solutions to aid with the project scoping decision.

ECM	Energy Savings	Maintenance Savings	Total Operating Savings	Material Costs	Install Costs	KLS Fees	Program Costs	Cost Contingency	Interest Costs	Rebates	Total Project Costs	Payback w/ Financing (Years)	Payback w/o Financing (Years)
PECO Buyback													
Cobrahead (with buyback)	\$2,996	\$2,164	\$5,160	\$25,602	\$18,920	\$5,848	\$1,628	\$4,452	\$36,871	(\$2,607)	\$90,714	17.6	10.4
Decorative	\$1,224	\$622	\$1,847	\$37,014	\$9,920	\$2,108	\$1,513	\$4,693	\$36,086	(\$365)	\$90,970	49.3	29.7
Area Lighting	\$554	\$457	\$1,010	\$6,472	\$2,330	\$612	\$295	\$880	\$6,916	(\$504)	\$17,001	16.8	10.0
Traffic Signals													
Totals	\$4,774	\$3,243	\$8,017	\$69,088	\$31,170	\$8,568	\$3,436	\$10,026	\$79,873	(\$3,476)	\$198,685	24.8	14.8

Cash Flow Analysis

The cash flow analysis shows how the project savings offset project costs, resulting in little to no capital outlay for this project.

Project Cash Flow (*Requested ECM Scope*)

Project Summary	
Construction Cost	\$100,258
DSP Fees	\$8,568
Program Fees	\$3,436
Contingency	\$10,026
Total Project Cost	\$122,288
Buyback Costs	\$0
Financed Amount	\$122,288
Loan Rate	4.31%
Loan Term (Years)	25
Loan Payment	\$8,086
Interest Paid	\$79,873

ECM	In Scope
PECO Buyback	No
Cobrahead Lighting	Yes
Decorative Lighting	Yes
Area Lighting	Yes
Traffic Signals	No

Period	Energy Cost Savings	Maintenance Cost Savings	Rebates	Total Savings	DSP & Program Fees	Loan Payment	Balance
Design				\$0	\$4,763		(\$4,763)
Construction				\$0	(\$4,763)		\$4,763
1	\$4,774	\$3,243	\$3,476	\$11,493		\$8,086	\$3,406
2	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
3	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
4	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
5	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
6	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
7	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
8	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
9	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
10	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
11	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
12	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
13	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
14	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
15	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
16	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
17	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
18	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
19	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
20	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
21	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
22	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
23	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
24	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
25	\$4,774	\$3,243		\$8,017		\$8,086	(\$70)
Total	\$95,478	\$64,858	\$3,476	\$163,812		\$161,729	\$2,083

Cash Flow Analysis (Cobrahead Only)

The cash flow analysis shows how the project savings offset project costs, resulting in little to no capital outlay for this project.

Project Cash Flow (Cobrahead Only)

Project Summary	
Construction Cost	\$44,522
DSP Fees	\$5,848
Program Fees	\$1,628
Contingency	\$4,452
Total Project Cost	\$56,450
Capital Contribution	\$0
Financed Amount	\$56,450
Loan Rate	4.31%
Loan Term (Years)	16
Loan Payment	\$4,956
Interest Paid	\$22,846

ECM	In Scope
PECO Buyback	No
Cobrahead Lighting	Yes
Decorative Lighting	No
Area Lighting	No
Traffic Signals	No

Period	Energy Cost Savings	Maintenance Cost Savings	Rebates	Total Savings	DSP & Program Fees	Loan Payment	Balance
Design				\$0	\$4,763		(\$4,763)
Construction				\$0	(\$4,763)		\$4,763
1	\$2,996	\$2,164	\$2,607	\$7,767		\$4,956	\$2,811
2	\$2,996	\$2,164		\$5,160		\$4,956	\$204
3	\$2,996	\$2,164		\$5,160		\$4,956	\$204
4	\$2,996	\$2,164		\$5,160		\$4,956	\$204
5	\$2,996	\$2,164		\$5,160		\$4,956	\$204
6	\$2,996	\$2,164		\$5,160		\$4,956	\$204
7	\$2,996	\$2,164		\$5,160		\$4,956	\$204
8	\$2,996	\$2,164		\$5,160		\$4,956	\$204
9	\$2,996	\$2,164		\$5,160		\$4,956	\$204
10	\$2,996	\$2,164		\$5,160		\$4,956	\$204
11	\$2,996	\$2,164		\$5,160		\$4,956	\$204
12	\$2,996	\$2,164		\$5,160		\$4,956	\$204
13	\$2,996	\$2,164		\$5,160		\$4,956	\$204
14	\$2,996	\$2,164		\$5,160		\$4,956	\$204
15	\$2,996	\$2,164		\$5,160		\$4,956	\$204
16	\$2,996	\$2,164		\$5,160		\$4,956	\$204
17	\$2,996	\$2,164		\$5,160		\$0	\$5,160
18	\$2,996	\$2,164		\$5,160		\$0	\$5,160
19	\$2,996	\$2,164		\$5,160		\$0	\$5,160
20	\$2,996	\$2,164		\$5,160		\$0	\$5,160
Total	\$59,923	\$43,273	\$2,607	\$105,802		\$79,296	\$26,506

Phase 1 Action Items

The purpose of this Feasibility Study is to provide an assessment of the opportunity associated with the upgrade of a municipalities existing outdoor lighting system to LED, which may include roadway and area lighting fixtures as well as traffic signals. This study will act as a decision-making tool for your municipality to decide whether to proceed to Phase 2 of the RSLPP, Project Development. Project Development Phase will include comprehensive audits, design and analysis resulting in a final project design proposal.

The following is a list of action items for municipality staff, management and council members to aid finalizing the Feasibility Study and presenting the opportunity for council consideration and a decision on whether to continue to Phase 2, Project Development.

Staff/Management Action Items

- Municipal Staff/Management - provide additional data to improve or clarify the Feasibility Study
- KLS - make final modifications to the Feasibility Study
- Municipal Staff/Management – final approval of Feasibility Study
- Municipal Staff/Management – establish position on agenda for relevant committee or council meetings
- Municipal Staff/Management – prepare packet information with Feasibility Study for relevant committee or council meetings
- Municipal Staff/Management – continue to build awareness and provide preliminary updates to other municipality staff and management as well as council members

Council Action Items

- KLS – present summary of Feasibility Study to relevant committee or council meetings
- Municipality Solicitor – Review resolutions and contracts required to proceed to the Project Development Phase
- Council – Review, analyze and discuss Feasibility Study with municipality staff and management and KLS
- Council – Take action to approve or reject decision to continue to the Project Development Phase and authorize municipality management to sign Project Development Phase contract with KLS.

Appendix A:

RSLPP Phase Overview

Phase 1: Feasibility: Data-driven analysis of upgrade opportunities resulting in a no-cost Feasibility Study.

- Municipalities receive a data-driven, no-cost Feasibility Study showing estimated savings, project costs, rebates and financial payback. This study is developed by KLS using data, information, and input provided by the municipality.
- **Municipalities use the Feasibility Study as a tool to decide whether to proceed to Phase 2 and contract with KLS for Project Development Services.**
- The RSLPP Project Team provides a contract form and resolution for municipalities to proceed to Phase 2.

Phase 2: Project Development: Field audits, design and analysis resulting in a final design project proposal.

- KLS conducts field audits of the municipality's existing lighting system showing GPS location and attributes of each fixture. KLS also conducts a comprehensive and standardized design of upgraded lighting system.
- KLS develops and DVRPC issues solicitations and contracts for materials, distributor, and installation contractor for the purpose of arranging cooperative purchasing agreements that municipalities are able to piggyback off of.
- The RSLPP Project Team organizes a pool of financing for municipalities who wish to finance their projects.
- KLS prepares final design proposal showing forecasted savings, final project costs, rebates, and financial payback.
- **Municipalities use the Final Design Proposal as a tool to decide whether to proceed to Phase 3, Construction.**
- The RSLPP Project Team provides a contract form and resolution for contracting between municipality and installation contractor for construction (the construction contract). Municipalities piggyback off of DVRPC's installation contract for construction.
- Municipalities that finance participate in the pool of financing arranged by the RSLPP.

Phase 3: Construction: Comprehensive Installation Services and Project Management of Installation including reporting and issue resolution during construction.

- Construction, including the procurement of all equipment, is provided by the RSLPP selected installation contractor according to the municipality's construction contract.
- KLS provides robust project management services ensuring consistent communication of progress and issue resolution.
- KLS manages the municipality's PECO Bill Updates and the applicable rebate application processes.

Phase 4: Post Construction Operations and Maintenance Confirmation of project savings and strategies for on-going maintenance.

- KLS provides the municipalities strategies for maintaining new system and on-going standardization, verification of project savings, and (if desired) prepare and/or update municipality lighting ordinances.
-

Appendix B:

Project Assumptions

The following assumptions were used in the development of this Feasibility Study:

1) Energy use

a. Un-metered:

- i. **Streetlights:** Energy use for un-metered streetlight service is calculated by PECO using the following algorithm:
 1. $\text{kWh} = \text{Billed Wattage of fixture} \times \text{quantity of fixture} \times 4092 \text{ (annual operating hours)}/1000$
- ii. **Traffic Signals:** Energy use for un-metered traffic signal service is calculated by PECO using the following algorithm:
 1. $\text{kWh} = \text{Billed Wattage of fixture} \times \text{quantity of fixture} \times \text{annual operating hours (yellow} = 175.2 \text{ hours; green} = 3766.8 \text{ hours; red} = 4819 \text{ hours)}/1000$.

- b. **Metered:** Energy use for metered fixtures is calculated using the estimated wattage of each fixture X annual operating hours (4092 hours assumed for all metered streetlight fixtures and area lighting, while a lower number of hours may be used for other outdoor lighting types if provided or indicated by the municipality)/1000.

2) Energy Costs:

- a. Across the entire RSLPP, energy costs were estimated according to the following PECO rates included in PECO's Proposed Tariff Electric Pa. P.U.C. No. 6, filed as a 2018 Electric Distribution Rate Case with the Pennsylvania Public Utility Commission.
 - i. SL-E, SL-S, SL-C, TSLs, and GS.
- b. KLS used the generation supply rate listed for each PECO account on the utility bills supplied by the municipality.

3) Maintenance cost savings

- a. Average annual maintenance expenses were modeled for both the existing and proposed fixture types.
 - i. Maintenance expenses are based on the probability a component (e.g. lamp, ballast/driver, fixture, photocell) will fail multiplied by the material and labor replacement cost. Failure probability is based on the annual operating hours of a component divided by its published rated or expected life.
- b. Use of average annual maintenance expenses assumes that both the existing and new lighting systems have a standard distribution fixture and component ages. Average annual maintenance expenses for proposed LED fixtures were further reduced by 50% to reflect a 1-year labor warranty, a 10-year parts warranty and the expected life of a new fixture and its components.

4) Project rebates: There are two rebate types available to municipalities in the RSLPP:

- a. **PECO Smart Ideas:** Through Phase 3 of Act 129, PECO's offers lighting rebates to municipal customers. These rebates vary from \$25 - \$75 per streetlight and vary from \$10 - \$60 for metered area lighting depending on the watts reduced by each fixture conversion. Rebates have been estimated in Phase 1 based on the scope of work included in this Feasibility Study. Municipalities that proceed to Phase 2 will have a pre-application submitted on their behalf by the KLS to PECO based on the scope of work

defined in the municipality's Final Design Proposal. Submitting a pre-application will "reserve" rebates for municipalities that proceed to Phase 3, construction.

- b. **PJM:** PJM, the Regional Transmission Operator for this region offers rebates for outdoor lighting projects through its Capacity Market. Energy efficiency projects can receive PJM Capacity Market rebates for the first four years that a project is installed based on the kW reductions of the project, and the price/kW of this rebate is determined by a "forward auction" in each utility territory within PJM. The current rate for these incentives in PECO territory ranges from \$18.70-\$28.90 per kW reduced depending on the year. The PJM Capacity Market rebate has been estimated based on the scope of work defined in this Feasibility Study, the associated kW reduction and a \$15.00 per kW rebate. Municipalities that proceed to Phase 3 (Construction) of the RSLPP will have the opportunity to have receive this rebate through a RSLPP-arranged aggregator.

5) Project Contingency

- a. For project budgeting we used a 10% contingency.

6) Material & Installation Costs

- a. RSLPP Round I costs, with some minor adjustments to reflect price increases for labor, were used for material and installation.

7) Financing

- a. For financing forecasts, a 4.5% interest rate was used.
-

Appendix C:

DSP & Program Fees Breakdown

Design Service Professional (KLS) Unit Pricing

DVRPC conducted a comprehensive RFP process to identify and select a design services professional to support all four Phases of the RSLPP. Municipalities are able to “piggy-back” off the DVRPC’s cooperative purchasing agreement for DSP services. The table below not only defines the final DSP unit priced fee structure but also shows the assumed volume for your project and the total associated fees. The finance resolution provided for RSLPP municipalities who wish to proceed to Phase 2, Project Development, includes provisions for reimbursement of Project Development Phase fees with a financing package put in place for the Construction Phase.

DSP Unit Price Schedule and Payment Milestones					
DSP Service Item	KLS Unit Price (Fee) Schedule	KLS Billing Milestones	Fixture & Signal Quantity	DSP Fees	DVRPC Program Fees
Project Development (Phase II)					
Field Audit	\$9/Fixture	100% at Completion of audit (if less than 1 month); Otherwise on monthly auditing progress	252	\$2,268	\$113
Field Audit (Traffic Signals)	\$8/Signal (not lamp)		0	\$0	\$0
Mapping	\$1/Fixture or Signal		252	\$252	\$13
Design	\$7/Fixture or Signal	50% at Preliminary Design Review; 50% at Final Design Review	252	\$1,764	\$88
Design (Traffic Signals)	\$6/Signal (not lamp)		0	\$0	\$0
Utility bill update & rebate processes	\$1/Fixture or Signal	50% at Final Utility Bill Update; 50% at Final Rebate Submittal	252	\$252	\$13
Project Development Sub-Total				\$4,536	\$227
Construction Project Management (Phase III)					
Project Management Services	\$10/Fixture or Signal	20% at Pre-Construction Meeting; Remainder on Monthly Installation Progress Billing	252	\$2,520	
PECO Buyback	\$5/Fixture (with max fee of \$5,000 and min fee of \$1,000)	At Buyback Completion		\$0	
Field deployable installation data capture	\$3/Fixture or Signal	Monthly Installation Progress Billing	252	\$756	
Project Management Sub-Total				\$3,276	\$3,008
Post-Construction Services (Phase IV)					
Project annual Energy and Operational Savings Report	\$1/Fixture or Signal	100% at Report Delivery	252	\$252	
Operations and Maintenance Plan for a municipality’s new LED system.	\$1/Fixture or Signal	100% at Plan Delivery	252	\$252	
Development of Operation and Maintenance Manual	\$1/Fixture or Signal	100% at Manual Delivery	252	\$252	
Development or update of a lighting ordinance	\$1,000/municipality (minimum)	Estimated Cost Between \$1,000 - \$10,000	0	\$0	
Project Management Sub-Total				\$756	
Total				\$8,568	\$3,235

DVRPC Program Fees

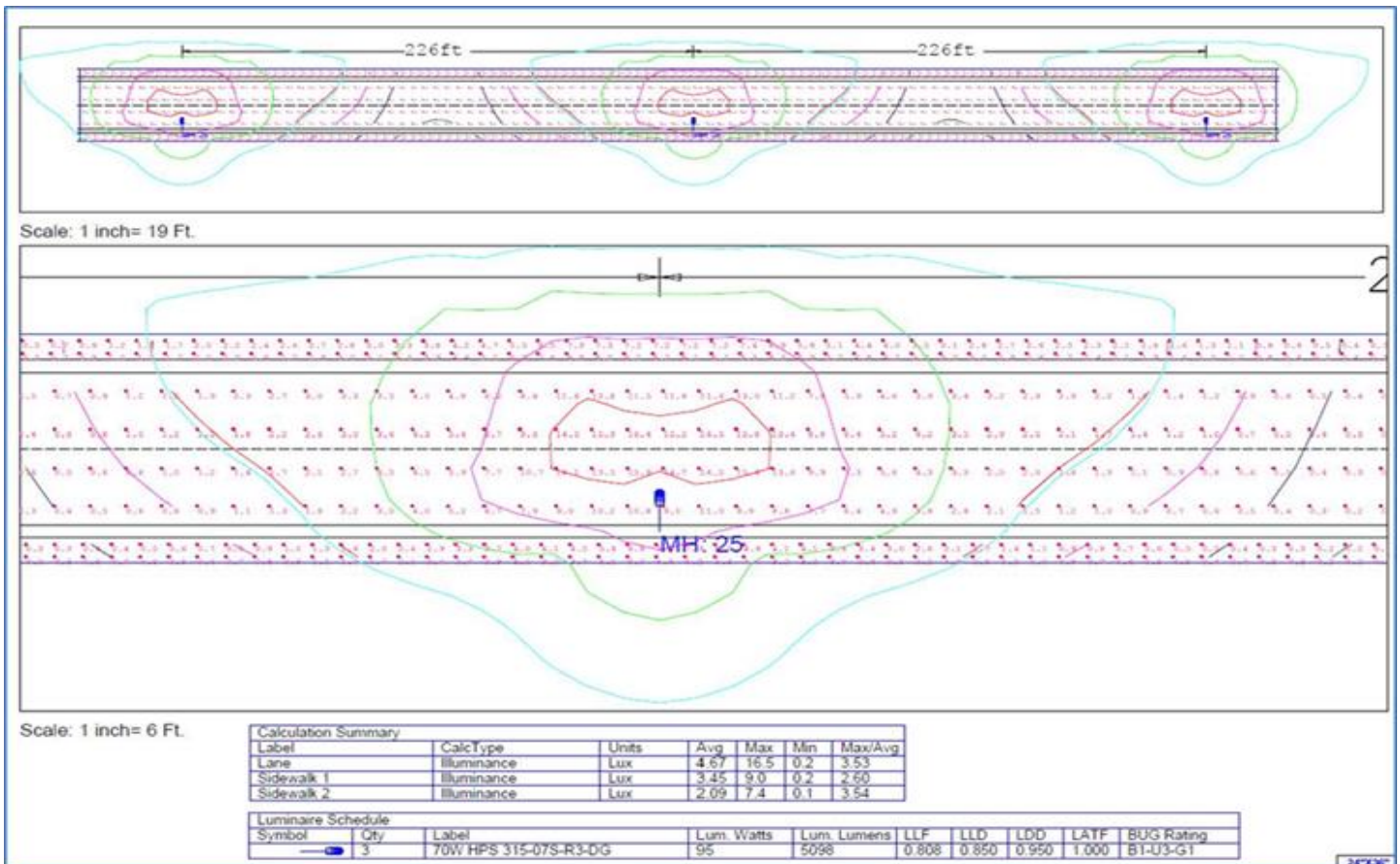
The following Program Fees have been established by DVRPC to allow DVRPC to recoup the upfront costs DVRPC has incurred for program development, program management, and for the development and issuance of contracts and solicitations associated with material, distributor, installation contractor, and finance. These fees are reflected throughout this Feasibility Study as “Program Fees”:

- 5% of DSP Total Fees
 - Up to 3% of Construction Costs (Material & Installation costs only).
 - 3% has been used as a conservative estimate for this Feasibility Study.
-

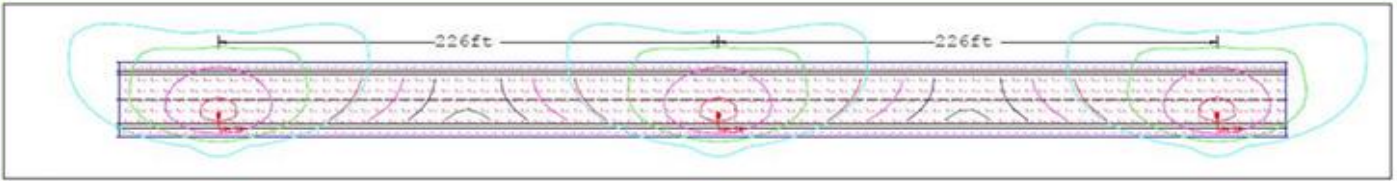
Appendix D: Photometric Analysis Example

The photometric comparison below shows how a traditional fixture and technology compares to a similar style fixture using LED technology. With all application specifications the same for both it allows for a fair comparison between the existing and new lighting solutions.

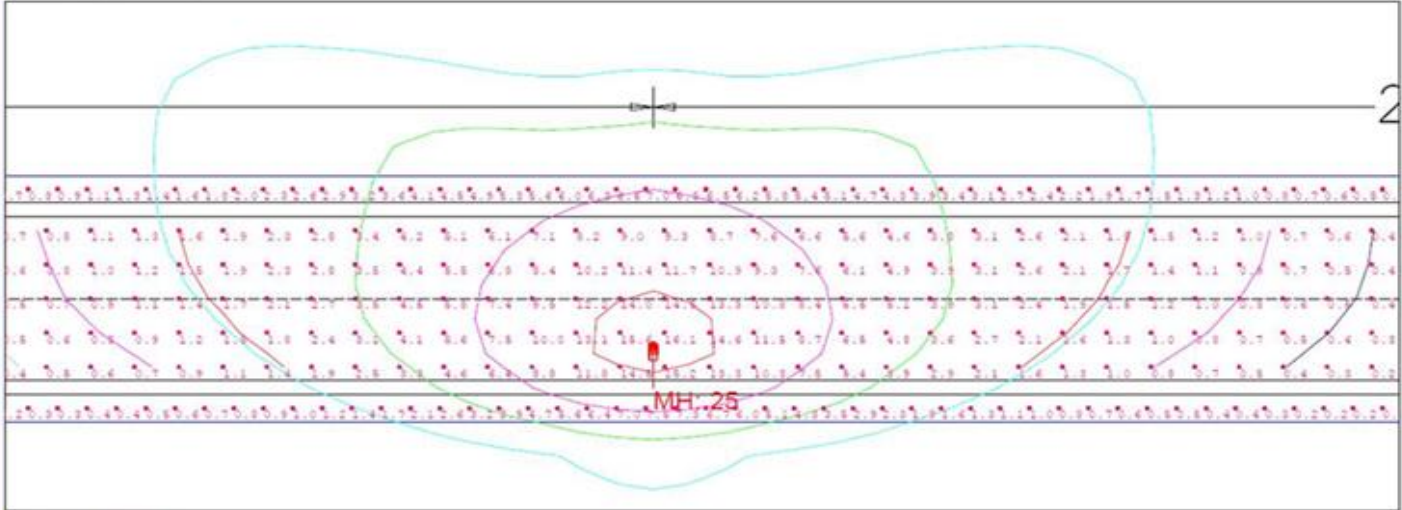
Traditional 70W High-Pressure Sodium Cobrahead on a Local Street



New 35W LED Cobrahead on a Local Street



Scale: 1 inch= 20 Ft.



Scale: 1 inch= 6 Ft.

Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Max/Avg
Lane	Illuminance	Lux	4.24	16.3	0.2	3.33
Sidewalk 1	Illuminance	Lux	3.09	7.0	0.2	1.86
Sidewalk 2	Illuminance	Lux	2.22	7.5	0.1	3.03

Luminaire Schedule									
Symbol	Qty	Label	Lum. Watts	Lum. Lumens	LLF	LLD	LDD	LATF	BUG Rating
	3	RFS-35W16LED4K-T-R3M	38	4030	0.903	0.950	0.950	1.000	B1-U0-G1

**North Penn Volunteer Fire Company
141 South Main Street
North Wales, Pa 19454
(215) 699-4337**

November 14, 2018

Christine Hart
Borough Manager
North Wales Borough
300 School Street
North Wales, PA 19454

Dear Ms. Hart,

Enclosed you will find a check in the amount of \$36,420 coving the annual bond payment for the 800 MHz radios.

As you are aware the North Penn Volunteer Fire Company has undertaken a huge upgrade of our existing fire station and purchased a 2018 KME Ladder truck to replace our 20 year old ladder truck. The upgrade to our 90 year old building was to repair the leaking roof, install a clock tower housing an elevator, bring the building electrical wiring up to code, install fire sprinkler system, extend the ladder bay and raise the overhead door to allow our scheduled replacement ladder truck to fit in our station. Both the station renovations and the purchased of our ladder truck were scheduled expenses which we have been planning for over 20 years. What was not a scheduled expense was the purchase of the 800 MHz radios.

Each year the North Penn Volunteer Fire Company has to pay the loan payment the more our long range planning is effected which in turn effects the replacement or repair of needed firefighting equipment. Any assistance the Borough can offer, on the reduction of this loan will go a long way in keeping our department a first class volunteer department.

Sincerely,



David Quinn
President
North Penn Volunteer Fire Company

Cc: Donald Holt, Fire Chief- North Penn Volunteer Fire Company



3
7

**NORTH WALES BOROUGH
ORDINANCE #801**

AN ORDINANCE THAT APPROVES CERTAIN CAPITAL PROJECTS; AUTHORIZES A BORROWING BY THE BOROUGH OF NORTH WALES, MONTGOMERY COUNTY, PENNSYLVANIA (THE "BOROUGH") FROM THE COUNTY OF MONTGOMERY, PENNSYLVANIA (THE "COUNTY") AND THE ISSUANCE OF A PROMISSORY NOTE, 2015 SERIES (THE "2015 NOTE") IN THE MAXIMUM PRINCIPAL AMOUNT OF \$222,709.72 ; APPROVES THE SUBSTANTIAL FORM OF THE 2015 NOTE AND APPROVES THE EXECUTION OF THE 2015 NOTE AND DELIVERY OF THE 2015 NOTE TO THE COUNTY OF MONTGOMERY, PENNSYLVANIA (THE "COUNTY"); AUTHORIZES EXECUTION AND DELIVERY OF ALL OTHER NECESSARY DOCUMENTS; STATES THE AMORTIZATION SCHEDULE FOR THE 2015 NOTE; STATES THAT THE BOROUGH IS OBLIGATED TO MAKE PAYMENTS ON THE 2015 NOTE ONLY FROM FUNDS IF AND TO THE EXTENT APPROPRIATED FOR THE THEN CURRENT FISCAL YEAR OF THE BOROUGH; AUTHORIZES ANY PAYMENTS MADE ON THE 2015 NOTE TO BE MADE AS DIRECTED BY THE DELAWARE VALLEY REGIONAL FINANCE AUTHORITY WHICH HAS BEEN APPOINTED AS COLLECTION AGENT FOR THE COUNTY; AUTHORIZES ADVERTISEMENT OF ENACTMENT; AND REPEALS INCONSISTENT ORDINANCES.

WHEREAS, North Wales Borough, Montgomery County, Pennsylvania (the "Borough") is a [borough] and a local government unit of the Commonwealth of Pennsylvania (the "Commonwealth"); and

WHEREAS, the County of Montgomery, Pennsylvania (the "County") has entered into a Bulk Purchasing Agreement with Motorola Solutions, Inc. ("Motorola") with respect to emergency radio equipment and services; and

WHEREAS, the County has made available to municipalities within the County, the ability to purchase from Motorola emergency radio equipment at a discount, and has further agreed to provide an interest-free loan (the "Loan") from funds borrowed by the County from the Delaware Valley Regional Finance Authority ("DelVal") to any municipality that desires to

purchase such emergency radio equipment through the County arranged Bulk Purchasing Agreement; and

WHEREAS, the Borough desires to receive the Loan from the County and issue a Promissory Note, Series 2015 (the "2015 Note") to the County to evidence its obligations under the Loan in order to: (i) purchase certain radio equipment and services for the Borough police, fire and emergency personnel; and (ii) pay for costs of issuance incurred by the Borough in connection with the Bulk Purchasing Agreement and the 2015 Note (collectively, the "2015 Project"); and

WHEREAS, the payments due on the 2015 Note are subject to annual appropriation by the Borough, will not constitute a debt or general obligation of the Borough and will be a current expense solely payable from funds appropriated and lawfully available for such use during the then current fiscal year of the Borough; and

WHEREAS, the 2015 Project will benefit the health and welfare of the residents of the Borough; and

WHEREAS, the 2015 Project shall be for the benefit and use of the general public, and no private party shall have any special legal entitlement to the beneficial use of the 2015 Project, through a lease, management contract, or any other arrangement that would result in a private business use under the *Internal Revenue Code of 1986*, as amended; and

NOW, THEREFORE, BE IT ORDAINED AND ENACTED BY THE COUNCIL OF THE BOROUGH OF NORTH WALES, MONTGOMERY COUNTY, PENNSYLVANIA, AND IT IS HEREBY ORDAINED AND ENACTED BY THE AUTHORITY OF SAID COUNCIL THAT:

SECTION 1. APPROVAL OF THE 2015 PROJECT AND AUTHORIZATION TO ISSUE THE 2015 NOTE

The Council (the "Council") hereby authorizes and approves the 2015 Project. The Board hereby authorizes and approves the Loan from the County in the maximum principal amount of \$222,709.72 as evidenced by the issuance of the 2015 Note.

SECTION 2. APPROVAL OF THE FORMS OF THE 2015 NOTE AND AUTHORIZATION TO EXECUTE AND DELIVER ALL NECESSARY DOCUMENTS

The substantial form of the 2015 Note attached hereto as Exhibit A is hereby approved. The President or Vice-President of the Council, and the Secretary (collectively, the "Authorized Officers") are hereby authorized and directed to execute and deliver the 2015 Note, in the substantial form attached hereto, but with such alterations, deletions and additions as the Authorized Officers may approve (such approval to be conclusively established by the execution of the 2015 Note by the Authorized Officers). The Authorized Officers also are hereby authorized and directed (i) to execute and deliver such other certificates, instruments, and agreements (including those required by DelVal or otherwise related to the 2015 Note) and (ii) to take all actions that may be necessary or beneficial to issue the 2015 Note.

SECTION 3. AMORTIZATION SCHEDULE

The indebtedness of the 2015 Note shall be a current expense subject to annual appropriation by the Borough and payable solely from funds lawfully available for such use during the then current fiscal year of the Borough and shall be evidenced by the 2015 Note in the maximum principal amount of TWO HUNDRED TWENTY TWO THOUSAND, SEVEN HUNDRED NINE DOLLARS AND SEVENTY TWO CENTS (\$222,709.72). The 2015 Note shall not bear interest. The 2015 Note shall be subject to optional redemption by the Borough as set forth in the 2015 Note. The amortization schedule of the principal payments under the 2015 Note (the "Loan Principal") are shown below:

Promissory Note, 2015 Series Principal Amortization Schedule

[To be provided]

SECTION 4. CURRENT EXPENSE

Payments due on the 2015 Notes are a current expense, subject to annual appropriation by the Borough, payable solely from funds lawfully available to the Borough for such purpose during the then current fiscal year of the Borough. The obligations of the Borough to pay the Loan Principal under the 2015 Note (and any other sums due thereunder) do not constitute a lien or charge upon the funds of the Borough beyond the fiscal year for which the Borough has appropriated money to pay the Loan Principal (and any other sums due thereunder) and that the

obligations of the Borough under the 2015 Note do not constitute a debt or general obligation of the Borough. Neither the full faith and credit nor the taxing power of the Borough or of any other political subdivision of the Commonwealth has been or will be pledged to the payment of the Loan Principal (and any other sums due thereunder).

SECTION 5. ACH DEBIT AUTHORIZATION

The Borough hereby authorizes payments on the 2015 Note to be made by ACH Debit Authorization to Wells Fargo Bank, N.A., acting as co-Trustee for DelVal, the collection agent of the County with respect to the 2015 Note. The Authorized Officers are hereby authorized and directed to execute and deliver the ACH Debit Authorization form attached hereto as Exhibit B, the IRS Form W-9 attached hereto as Exhibit C and such other certificates, instruments, and agreements as may be required for purposes of making payments on the 2015 Note.

SECTION 6. CONFLICTING ORDINANCES

All Ordinances or parts of Ordinances not in accord with this Ordinance are hereby repealed insofar as they conflict herewith.

ADOPTED this 24th day of November 2015.

Borough Council of the
Borough of North Wales

BY: Christine A. Hart
Christine A. Hart, Vice President

ATTEST: Claire A. Liebel
Claire Liebel, Assistant Secretary

APPROVED by the Mayor this 24th day of November, 2015.

BY: Gregory J. D'Angelo
Gregory J. D'Angelo, Mayor

EXHIBIT A

Form of 2015 Note

<u>PAYMENT DATE</u>	<u>PAYMENT AMOUNT</u>	
1/25/2016	\$ 44,541.94	
1/25/2017	\$ 44,541.94	
1/25/2018	\$ 44,541.94	
1/25/2019	\$ 44,541.94	
1/25/2020	\$ 44,541.94	
	<u>\$ 222,709.72</u>	TOTAL RE-PAYMENT AMOUNT

2019 General Budget Overview

Income

Fundraising

Fund Drive (Net) (Mailing)	\$21,000
Fund raising (net) (coin toss)	\$11,000

Calendar	\$3,000
----------	---------

Misc.	\$40,000
--------------	----------

Donations

Social Club Payment to FC	\$50,000
---------------------------	----------

Ladies Check	\$0
--------------	-----

Public Contributions	\$11,000
----------------------	----------

Rental

Rental Income Net all expenses	\$77,564
--------------------------------	----------

Taxes

LG Tax	\$66,113
--------	----------

Extra Payment from LGT	\$28,787
------------------------	----------

NW Tax	\$19,500
--------	----------

Net Income	\$327,964
-------------------	-----------

Less Current Liabilities (Cap Projects)

Station 2% Loan	\$24,144
-----------------	----------

Ladder 62 - 2% Loan	\$19,416
---------------------	----------

Squad 62 - 2% Loan	\$7,722
--------------------	---------

Engine 62-1 Commercial loan	\$20,000
-----------------------------	----------

Total Liabilities	\$71,282
-------------------	----------

Available after Liabilities	\$256,682
------------------------------------	-----------

Less Expense Budget

Grant Matching Expenses	0
-------------------------	---

2019 General Operations Budget	\$216,197
--------------------------------	-----------

- Over/Under Budget	\$40,485
----------------------------	----------

Capital Expenses

Proposed for 2019	TBD
-------------------	-----

General Approved Expenses 2019

ADMINISTRATIVE	Unit Amount	Requested		Officers/Approved	
		Qty	Total	Qty	Total
Accounting Services	6,000.00		6,000.00		6,000.00
Insurance - Selective	29,000.00		29,000.00		29,000.00
Elevator Inspect/Misc. Fees	300.00		300.00		300.00
			\$35,300		\$35,300.00

BUILDING AND GROUNDS	Unit Amount	Requested		Officers/Approved	
		Qty	Total	Qty	Total
Budget	29,150.00		29,150.00		29,150.00
			\$29,150		\$29,150.00

COMMUNICATIONS (Relief)	Unit Amount	Requested		Officers/Approved	
		Qty	Total	Qty	Total
Budget			8,207.00		8,207.00
			\$8,207		\$8,207.00

PUBLIC RELATIONS	Unit Amount	Requested		Officers/Approved	
		Qty	Total	Qty	Total
Budget			1,250.00		1,250.00
			\$1,250		\$1,250.00

FIRE HOUSE UTILITIES	Unit Amount	Requested		Officers/Approved	
		Qty	Total	Qty	Total
Water/Sewer	2,200.00	1	2,200.00	1	2,200.00
Gas/Electric	18,000.00	1	18,000.00	1	18,000.00
Oil	600.00	6	3,600.00	6	3,600.00
Telephone	500.00	12	6,000.00	12	6,000.00
			\$29,800		\$29,800.00

FIRE PREVENTION	Unit Amount	Requested		Officers/Approved	
		Qty	Total	Qty	Total
Budget		1	760.00		760.00
			\$760		\$760.00

LOSAP	Unit Amount	Requested		Officers/Approved	
		Qty	Total	Qty	Total
Contributions	200.00	26	5,200.00	26	5,200.00
Administration Fees	1,050.00	1	1,050.00	1	1,050.00
			\$6,250		\$6,250.00

MEMBERSHIP	Unit Amount	Requested		Officers/Approved	
		Qty	Total	Qty	Total
Banquet		1	13,000.00	1	13,000.00
Misc (Submitted By Dave Q)		1	2,500.00	1	2,500.00
Misc (Submitted By Mat T)		1	1,500.00	1	1,500.00
Fire House Gym Equip		1	350.00	1	350.00
Sunshine		1	1,800.00	1	1,800.00
			\$19,150		\$19,150.00

QRS	Unit Amount	Requested		Officers/Approved	
		Qty	Total	Qty	Total
Budget		1	14,000.00	1	14,000.00
Note Donnie place this under General			\$14,000		\$14,000.00

OFFICE AND COMPUTERS	Unit Amount	Requested		Officers/Approved	
		Qty	Total	Qty	Total
Budget		1	2,000.00	0	2,000.00
Postage			300.00		300.00
			\$2,300		\$2,300.00

PRE-PLAN	Unit Amount	Requested		Officers/Approved	
		Qty	Total	Qty	Total
Budget	3,000.00	1	3,000.00	1	3,000.00
			\$3,000		\$3,000.00

FUND DRIVE	Unit Amount	Requested		Officers/Approved	
		Qty	Total	Qty	Total
Budget		1		1	
			\$0		

SAFETY	Unit Amount	Requested		Officers/Approved	
		Qty	Total	Qty	Total
Budget		1	395.00	1	395.00
			\$395		\$395.00

TRAINING (GENERAL)	Unit Amount	Requested		Officers/Approved	
		Qty	Total	Qty	Total
North Penn Training Center			6,000.00		6,000.00
Budget			1,900.00		1,900.00
			\$7,900		\$7,900.00

TOOLS AND EQUIPMENT	Unit Amount	Requested		Officers/Approved	
		Qty	Total	Qty	Total
Budget		1	17,910.00	1	17,910.00
			\$17,910		\$17,910.00

UNIFORMS	Unit Amount	Requested		Officers/Approved	
		Qty	Total	Qty	Total
Budget			14,325.00		14,325.00
Dave and Donnie submitted a budget number for uniforms Donnie=\$9700, Dave=\$14,325			\$14,325		\$14,325.00

Engineer's	Unit Amount	Requested		Officers/Approved	
		Qty	Total	Qty	Total
Budget		1	26,500.00	1	26,500.00
			\$26,500		\$26,500.00

Totals			\$216,197.00		\$216,197.00
---------------	--	--	---------------------	--	---------------------

2019 Relief Budget Overview

Relief

Income

Taxes

LG 2%	\$42,000	
NW 2%	\$22,000	

Net Income		\$64,000
-------------------	--	-----------------

Less Future Operations Reserve

Relief Fund Savings	\$0	
---------------------	-----	--

Net Future Operations Reserve		\$0
		\$64,000

Less Loan Payments

800 Radio Payment to NWB	\$36,428	
--------------------------	----------	--

\$27,572

Less Expense Budget

FY 2019 Budget	\$103,340	
----------------	-----------	--

All 2019 Budget Expenses		
- Over/Under Budget		-\$39,340

Relief Proposed Expenses 2019

		Requested		Officers/Approved	
		Total		Total	
FIRE POLICE					
Budget			2,300.00	8	2,300.00
			\$2,300		\$2,300.00

		Requested		Officers/Approved	
TRAINING					
Budget			19,750.00		19,750.00
			\$19,750		\$19,750

		Requested		Officers/Approved	
SCBA					
Budget			11,935.00		11,935.00
			\$11,935		\$11,935

		Requested		Officers/Approved	
PROTECTIVE EQUIPMENT					
Budget			44,555.00	1	44,555.00
			\$44,555		\$44,555

		Unit	Requested		Officers/Approved	
		Amount				
Insurance						
Health and Welfare	5,000.00	1	5,000.00	1	5,000.00	
Bond/Misc. Insurance	2,400.00	1	2,400.00	1	2,400.00	
Death Insurance	5,000.00	1	5,000.00	1	5,000.00	
			\$12,400		\$12,400	

		Amount	Requested		Officers/Approved	
Rescue Equipment						
Health and Welfare						
Insurance	5,000.00	1	5,000.00	1	5,000.00	
Bond/Misc. Insurance	2,400.00	1	2,400.00	1	2,400.00	
Death Insurance	5,000.00	1	5,000.00	1	5,000.00	
			\$12,400		\$12,400	

Total Budget

\$103,340.00

Rental Property 2019

Estimated Income

Rental Property Income net of property manager fees	16K/month	192,000.00
Rental Property: 137 Income net of property management fee		0.00
Mortgage Payback Stopped in 2018		0.00
Total Estimated Income		\$192,000.00

Property Expenses	Unit Amount	Requested		Approved	
		Qty	Total	Qty	Total
Oil heat	7,500.00	0	0.00	0	0.00
PECO	13,900.00	1	13,900.00	0	13,900.00
Grass Cutting	2,700.00	0	0.00	0	0.00
Plowing	13,000.00	0	0.00	0	0.00
Pest Control	760.00	0	0.00	0	0.00
Water	2,200.00	1	2,200.00	1	2,200.00
Telephone	70.00	12	840.00	12	840.00
Mortgage (@4.625%)	3,583.00	12	42,996.00	12	42,996.00
Insurance	6,500.00	1	6,500.00	1	6,500.00
Taxes	46,500.00	1	46,500.00	1	46,500.00
Advent Security	1,000.00	0	0.00	0	0.00
Maint/Repair	5,000.00	0	0.00	0	0.00
Cleaning	1,500.00	1	1,500.00	1	1,500.00
Less Proposed expenses			\$114,436		\$114,436.00

Total Available to the General Budget

\$77,564.00

Currently being paid by Big Reality

HISTORICAL ARCHITECTURAL REVIEW BOARD

Record of Action

Date December 21, 2018

Application: 1218-01

Application date: 12.12.2018

Applicant/Property Owner: Ms. Gretchen Owheya
320 West Walnut Street
North Wales, PA 19454

Block/Unit # _____

Request: Replace portions of deteriorated slate roofing and metal lined box gutter in kind.

Submittals: Application, contractor/roofer proposal and photographs

...

HARB Meeting: December 19, 2018

In attendance: Mr. James Schiele
Rev. Amy Smith
Mr. Joe Del Ciotto
Mr. Charlie Guttenplan
Mr. Ray Tschoepe

Applicant in Attendance: No one

Action: Approve as presented

Findings of fact: The Sec. of the Interior recommends "Identifying, retaining and preserving roofs – and their functional and decorative features... This includes ... roofing materials such as slate, wood, clay tile and metal, as well as its size color and patterning."

Recommendation to Council: Issue Certificate of Appropriateness

Respectfully submitted,



HARB Chairman/Vice-chairman



2019 Boards and Commissions Positions Available

- **Civil Service Commission**
 - 1 open seat, 6-year term, expires 12/31/2024
- **Historical Architectural Review Board**
 - 1 vacant real estate broker seat, 5-year term, expires 12/31/2023
 - 1 open seat, 5-year term, expires 12/31/2023
- **History Commission**
 - 1 open seat, 5-year term, expires 12/31/2023
- **Nor-Gwyn Pool Commission**
 - 1 open seat, 5-year term, expires 12/31/2023
- **North Wales Area Library Board**
 - 1 open seat, 3-year term, expires 12/31/2021
- **North Wales Water Authority Board**
 - 1 open seat, 5-year term, expires 12/31/2023
- **Parks & Recreation Board**
 - 1 vacant seat, 1-year term, expires 12/31/2019
 - 2 open seats, 5-year terms, expires 12/31/2023
- **Pension Committee**
 - 3 open seats, 1-year terms, expires 12/31/2019
- **Planning Commission**
 - 1 vacant seat, 2-year term, expires 12/31/2020
 - 1 open seat, 4-year term, expires 12/31/2022
- **Shade Tree Commission**
 - 1 vacant seat, 1-year term, expires 12/31/2019
 - 1 open seat, 5-year term, expires 12/31/2023
- **Vacancy Board**
 - 1 open seat, 1-year term, expires 12/31/2019
- **Zoning Hearing Board**
 - 1 open seat, 5-year term, expires 12/31/2023

Please submit a letter of interest for any one or more of the above listed openings, addressed to the North Wales Borough Council in care of the Borough Manager. Letters can be submitted electronically to: chart@northwalesborough.org. **The deadline to submit a letter is Wednesday, January 16th.**

Borough of North Wales
BILLS LIST
December 2018

GENERAL FUND	Date	Vendor	Account	Amount
	12/11/2018	DELAWARE VALLEY HEALTH TRUST	-SPLIT-	\$ 10,856.62
	12/11/2018	DELAWARE VALLEY HEALTH TRUST	0141031 · PROFESSIONAL SERVICES, POLICE	\$ 200.00
	12/11/2018	VOYAGER FLEET SYSTEMS INC.	0141033 · GASOLINE, POLICE	\$ 799.83
	12/11/2018	D.E. WALKER & SON, INC.	0140923 · HEATING FUEL 1409230	\$ 719.34
	12/11/2018	D.E. WALKER & SON, INC.	0140923 · HEATING FUEL 1409230	\$ 501.02
	12/11/2018	D.E. WALKER & SON, INC.	0140923 · HEATING FUEL 1409230	\$ 272.34
	12/11/2018	D.E. WALKER & SON, INC.	0140923 · HEATING FUEL 1409230	\$ 410.33
	12/11/2018	JANICE M. GORENFLO	0140146 · MEETINGS	\$ 160.00
	12/11/2018	RICHARD HAGY	0140922 · OPERATING EXP	\$ 120.00
	12/11/2018	DANIEL NATALE	-SPLIT-	\$ 278.96
	12/11/2018	RICHARD HAGY	0140935 · JANITORIAL	\$ 74.53
	12/11/2018	PCPA	0141042 · DUES/SUBSCRIPTIONS, POLICE	\$ 250.00
	12/11/2018	POLICE CHIEFS ASSN OF MONTG COUNTY	0141042 · DUES/SUBSCRIPTIONS, POLICE	\$ 150.00
	12/11/2018	UNIFORM GEAR, INC	0141028 · UNIFORMS, POLICE	\$ 275.00
	12/11/2018	MICHAEL E. EVES	0141044 · UNIFORM MAINTENANCE, POLICE	\$ 125.00
	12/11/2018	CENTER FOR EDUCATION & EMPLOYMENT LAW	0141046 · TRAINING, POLICE	\$ 254.95
	12/11/2018	MRM WORKERS COMP FUND	0148435 · COMPENSATION INSURANCE	\$ 11,187.17
	12/11/2018	CARDMEMBER SERVICE	-SPLIT-	\$ 1,006.58
	12/11/2018	PITNEY BOWES - POSTAGE	0140635 · POSTAGE 1406325	\$ 200.00
	12/18/2018	BOUCHER & JAMES INC.	-SPLIT-	\$ 743.00
	12/18/2018	BOUCHER & JAMES INC.	0140831 · ENGINEER 1408313	\$ 875.00
	12/18/2018	BOUCHER & JAMES INC.	0140831 · ENGINEER 1408313	\$ 628.75
	12/18/2018	BOUCHER & JAMES INC.	0140831 · ENGINEER 1408313	\$ 396.25
	12/18/2018	BOUCHER & JAMES INC.	0140831 · ENGINEER 1408313	\$ 47.50
	12/18/2018	BOUCHER & JAMES INC.	0140831 · ENGINEER 1408313	\$ 1,180.00
	12/18/2018	BOUCHER & JAMES INC.	0140831 · ENGINEER 1408313	\$ 1,852.08
	12/18/2018	BOUCHER & JAMES INC.	-SPLIT-	\$ 1,467.80
	12/18/2018	RUBIN GLICKMAN STEINBERG & GIFFORD	0140431 · SOLICITOR	\$ 3,000.00
	12/18/2018	RUBIN GLICKMAN STEINBERG & GIFFORD	0140431 · SOLICITOR	\$ 630.00
	12/18/2018	RUBIN GLICKMAN STEINBERG & GIFFORD	0140431 · SOLICITOR	\$ 90.00
	12/18/2018	RUBIN GLICKMAN STEINBERG & GIFFORD	0140431 · SOLICITOR	\$ 90.00
	12/18/2018	SWIF - STATE WORKERS' INSURANCE FUND	0148410 · FIRE CO WORKERS COMP	\$ 1,608.00

Borough of North Wales
BILLS LIST
December 2018

<u>Date</u>	<u>Vendor</u>	<u>Account</u>	<u>Amount</u>
12/18/2018	NWWA	0143024 · DIESEL	\$ 369.14
12/18/2018	NWWA	0140222 · OPERATING EXPENSE	\$ 25.90
12/18/2018	VERIZON WIRELESS	-SPLIT-	\$ 194.57
12/18/2018	PITNEY BOWES - EQUIP LEASE	0140638 · EQUIPMENT RENTAL	\$ 159.66
12/18/2018	PA ONE CALL SYSTEM INC.	-SPLIT-	\$ 17.76
12/18/2018	PECO 63864-01609 WALNUT SQUARE	0145436 · ELECTRICITY 1459461	\$ 39.34
12/18/2018	PECO 66955-01103 PW GARAGE	0143361 · ELECTRICITY 1430361	\$ 235.53
12/18/2018	PECO 63863-01003 PW GARAGE	0143023 · HEATING FUEL 1430230	\$ 475.77
12/18/2018	PECO 02951-60039 HESS PARK	0145436 · ELECTRICITY 1459461	\$ 33.36
12/18/2018	PECO 79323-09073 125 N MAIN	0140936 · ELECTRICITY 1409361	\$ 118.06
12/18/2018	PECO 32937-01304 BORO HALL	0140923 · HEATING FUEL 1409230	\$ 407.84
12/18/2018	JL REYES ACCOUNTING & TAX SERVICE LLC	-SPLIT-	\$ 900.00
12/18/2018	DAVIDHEISER'S INC.	0141031 · PROFESSIONAL SERVICES, POLICE	\$ 49.00
12/18/2018	UNIFORM GEAR, INC	0141028 · UNIFORMS, POLICE	\$ 176.62
12/18/2018	UNIFORM GEAR, INC	0141028 · UNIFORMS, POLICE	\$ 223.14
12/18/2018	UNIFORM GEAR, INC	0141028 · UNIFORMS, POLICE	\$ 69.98
12/18/2018	UNIFORM GEAR, INC	0141028 · UNIFORMS, POLICE	\$ 756.92
12/18/2018	UNIFORM GEAR, INC	0141028 · UNIFORMS, POLICE	\$ 149.95
12/18/2018	UNIFORM GEAR, INC	0141028 · UNIFORMS, POLICE	\$ 152.15
12/18/2018	UNIFORM GEAR, INC	0141028 · UNIFORMS, POLICE	\$ 104.97
12/18/2018	UNIFORM GEAR, INC	0141028 · UNIFORMS, POLICE	\$ 179.98
12/18/2018	UNIFORM GEAR, INC	0141028 · UNIFORMS, POLICE	\$ 880.95
12/18/2018	PECO 70344-01702 BORO HALL	0140936 · ELECTRICITY 1409361	\$ 464.72
12/18/2018	UNIFORM GEAR, INC	0141028 · UNIFORMS, POLICE	\$ 278.59
12/18/2018	UNIFORM GEAR, INC	0141028 · UNIFORMS, POLICE	\$ 35.96
12/18/2018	NEW ACE CLEANERS	0141044 · UNIFORM MAINTENANCE, POLICE	\$ -
12/18/2018	POLICEONE.COM	0141046 · TRAINING, POLICE	\$ 325.00
12/18/2018	KIRKLAND PRINTING INC.	0141034 · PRINTING, POLICE	\$ 349.00
12/18/2018	U. S. BANK EQUIPMENT FINANCE	0140637 · REPAIRS/MAINTENANCE	\$ 185.23
12/18/2018	NATIONAL ELEVATOR INSPECTION	0140937 · REPAIRS/MAINTENANCE SERVICES	\$ 91.85
12/18/2018	NAPA AUTO PARTS	-SPLIT-	\$ 572.25
12/18/2018	FENCE CITY	0140937 · REPAIRS/MAINTENANCE SERVICES	\$ 342.00
12/18/2018	JANICE M. GORENFLO	0140146 · MEETINGS	\$ 80.00

Borough of North Wales
BILLS LIST
December 2018

<u>Date</u>	<u>Vendor</u>	<u>Account</u>	<u>Amount</u>
12/18/2018	ASSOCIATED IMAGING	0141025 · MAINT/REPAIRS	\$ 222.00
12/18/2018	METRO ELEVATOR CO.	0140637 · REPAIRS/MAINTENANCE	\$ 103.50
12/18/2018	METRO ELEVATOR CO.	0140937 · REPAIRS/MAINTENANCE SERVICES	\$ 103.50
12/18/2018	METRO ELEVATOR CO.	0140937 · REPAIRS/MAINTENANCE SERVICES	\$ 103.50
12/18/2018	METRO ELEVATOR CO.	0140937 · REPAIRS/MAINTENANCE SERVICES	\$ 103.50
12/18/2018	METRO ELEVATOR CO.	0140937 · REPAIRS/MAINTENANCE SERVICES	\$ 103.50
12/18/2018	METRO ELEVATOR CO.	0140637 · REPAIRS/MAINTENANCE	\$ 205.00
12/18/2018	MICHAEL E. EVES	0141044 · UNIFORM MAINTENANCE, POLICE	\$ 142.00
12/31/2018	BOROUGH OF NORTH WALES POLICE PENSIONPLAN	0121500 · POLICE PENSION CONTRIBUTIONS 01	\$ 1,830.85
12/31/2018	PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM	-SPLIT-	\$ 1,343.66
12/31/2018	OFFICE BASICS	-SPLIT-	\$ 83.06
12/31/2018	CARDMEMBER SERVICE	-SPLIT-	\$ 649.52
12/31/2018	SALLY BOSLER	0140922 · OPERATING EXP	\$ 300.00
12/31/2018	PITNEY BOWES - POSTAGE	0140635 · POSTAGE 1406325	\$ 208.15
12/31/2018	SELECTIVE INSURANCE COMPANY	0148635 · CASUALTY & LIABILITY	\$ 547.00
12/31/2018	W. RONALD SMEAL	0141031 · PROFESSIONAL SERVICES, POLICE	\$ 1,582.48
12/31/2018	BOUCHER & JAMES INC.	0124810 · DEVELOPER ESCROW ACCOUNT	\$ 317.40
12/31/2018	BOUCHER & JAMES INC.	0140831 · ENGINEER 1408313	\$ 468.00
12/31/2018	BOUCHER & JAMES INC.	0140831 · ENGINEER 1408313	\$ 165.00
12/31/2018	REPUBLIC SERVICES #320	0143365 · SOLID WASTE DISPOSAL	\$ 112.76
12/31/2018	21st Century Media - Philly Cluster	0140634 · ADVERTISING	\$ 152.68
12/31/2018	MCMAHON ASSOCIATES INC.	-SPLIT-	\$ 2,244.04
12/31/2018	VERIZON S0007570	-SPLIT-	\$ 162.65
12/31/2018	METRO ELEVATOR CO.	0140937 · REPAIRS/MAINTENANCE SERVICES	\$ 103.50
12/31/2018	DCED	0141339 · STATE PERMIT FEES	\$ 243.00
			<u>\$ 60,495.49</u>
STREET LIGHT FUND			
12/18/2018	PECO 67276-01407 STREET LIGHTS	-SPLIT-	\$ 2,028.56
			<u>\$ 2,028.56</u>
WEINGARTNER FUND			
12/18/2018	PECO 79540-01509 WEINGARTNER	1945436 · ELECTRICITY 1945436	\$ 38.57
			<u>\$ 38.57</u>
LIQUID FUELS FUND			

Borough of North Wales

BILLS LIST

December 2018

<u>Date</u>	<u>Vendor</u>	<u>Account</u>	<u>Amount</u>
12/11/2018	COUZINS INC.	3543837 · HIGHWAY MAINTENANCE PROJECTS	\$ 223,451.00
12/18/2018	PECO 82667-00208 RED LIGHT	3543336 · ELECTRICITY/SIGNAL	\$ 12.44
			<u>\$ 223,463.44</u>
RECYCLING FUND			
12/18/2018	HOME DEPOT CREDIT SERVICES	-SPLIT-	\$ 1,018.98
			<u>\$ 1,018.98</u>
GRAND TOTALS			
			<u><u>\$ 287,045.04</u></u>