CITY COUNCIL AGENDA
JANUARY 6, 2014
7:00 PM MEETING
PUBLIC SAFETY BUILDING TRAINING ROOM (401 EAST THIRD STREET)

Mission Statement

The City of Newberg serves its citizens, promotes safety, and maintains a healthy community.

Vision Statement

Newberg will cultivate a healthy, safe environment where citizens can work, play and grow in a friendly, dynamic and diverse community valuing partnerships and opportunity.

I. CALL MEETING TO ORDER

II. ROLL CALL

III. PLEDGE OF ALLEGIANCE

IV. CITY MANAGER'S REPORT

V. PUBLIC COMMENTS

(30 minutes maximum, which may be extended at the Mayor's discretion, with an opportunity to speak for no more than 5 minutes per speaker allowed)

VI. ELECTION OF COUNCIL PRESIDENT

Consider a motion electing a Council President from among the City Council. (Pg. 3)

VII. CONSENT CALENDAR

Consider a motion adopting **Resolution No. 2013-3106** authorizing the city manager pro tem to issue a task order with HDR Engineering, Inc., to provide construction services for the wastewater treatment plant influent pump station, headworks, and dewatering construction project. (Pgs. 5-15)

VIII. NEW BUSINESS

Presentation from Interim Public Works Director Jay Harris on the PGE LED Street Lighting Conversion. (Pgs. 17-29)

The Mayor reserves the right to change the order of items to be considered by the Council at their meeting. No new items will be heard after 11:00 p.m., unless approved by the Council.

IX. ADJOURNMENT

ACCOMMODATION OF PHYSICAL IMPAIRMENTS: In order to accommodate persons with physical impairments, please notify the City Recorder's Office of any special physical or language accommodations you may need as far in advance of the meeting as possible and no later than 48 business hours prior to the meeting. To request these arrangements, please contact the City Recorder at (503) 537-1283. For TTY services please dial 711.

Council accepts comments on agenda items during the meeting. Fill out a form identifying the item you wish to speak on prior to the agenda item beginning and turn it into the City Recorder. The exception is land use hearings, which requires a specific public hearing process. The City Council asks written testimony be submitted to the City Recorder before 4:30 p.m. on the preceding Wednesday. Written testimony submitted after that will be brought before the Council on the night of the meeting for consideration and a vote to accept or not accept it into the record.

The Mayor reserves the right to change the order of items to be considered by the Council at their meeting. No new items will be heard after 11:00 p.m., unless approved by the Council.

REQUEST FOR COUNCIL ACTION

DATE ACTION REQUESTED: January 6, 2014				
Order ___ No.	**Ordinance ___ No.**	**Resolution ___ No.**	**Motion** XX	**Information ___**
SUBJECT: Election of Council President			**Contact Person (Preparer) for this Motion: Norma Alley, City Recorder Dept.: Administration**	

RECOMMENDATION:

Elect a member of the city council to serve as council president.

EXECUTIVE SUMMARY:

The City Charter states that, at its first meeting each year, the council must elect a president from its membership. The president presides in the absence of the mayor and acts as mayor when the mayor is unable to perform his or her duties.

The position of council president is currently held by **Councilor Rierson**.

FISCAL IMPACT:

None.

STRATEGIC ASSESSMENT:

The position of council president needs to be filled to ensure that the duties and authority of the office of mayor can be legally exercised in the event that the mayor is absent or unable to fulfill his or her duties.

THIS PAGE INTENTIONALLY LEFT BLANK

REQUEST FOR COUNCIL ACTION

DATE ACTION REQUESTED: January 6, 2014				
Order No. ___	**Ordinance No. ___**	**Resolution No. XX 2014-3106**	**Motion ___**	**Information ___**
SUBJECT: A Resolution authorizing the city manager to negotiate and issue a Task Order with HDR Engineering, Inc. Consulting Engineers, to provide construction services for the wastewater treatment plant Influent Pump Station, Headworks, and Dewatering construction project.			**Contact Person (Preparer) for this Motion: Jason Wuertz, Project Manager Jay Harris, City Engineer Dept.: Engineering Services Department File No.:**	

RECOMMENDATION:

Adopt Resolution No. 2014-3106

EXECUTIVE SUMMARY:

On May 18, 2009, the City Council adopted resolution 2009-2844 authorizing the City Manager to enter into a professional services agreement with HDR Engineering, Inc. to provide design services for the wastewater treatment plant (WWTP) repair, renovation and expansion (RRE) project for an initial amount not to exceed $3,000,000. The following projects have been completed with these initial funds allocated:

• Task Order 1 - CM/GC Solicitation	$148,315.00
• Task Order 2 - Mixing Zone Study	$75,560.00
• Task Order 3 - Concept Design Review	$76,550.00
• Task Order 4a - Clarifier #4 Design Start	$100,000.00
• Task Order 4b - Design of 4th secondary Clarifier	$559,088.00
• Task Order 4c - Design of Urgent Repairs	$64,266.00
• Task Order 5a - Flow Monitoring	$31,510.00
• Task Order 6 - HWY 240 PS Construction Services	$38,171.00
• Task Order 7 - Design of Headworks, IPS & Dewatering	$1,472,740.00
• Task Order 17 - Preliminary Design Report	$388,000.00
Total =	**$2,954,200.00**

The design of the Headworks, Influent Pump Station and Dewatering was completed and is now beginning construction. The City Council adopted resolution #2012-3006, which authorized the City Manger to enter into a contract with Mortenson Construction Inc. for the construction of the aforementioned improvements.

For a successful project, it is necessary to have our design consultant, HDR Engineering, Inc., provide construction services. Some of the main objectives of these services are to provide engineering oversight of the construction, to ensure that it is constructed per the design and specifications, as well as provide necessary documentation to the Oregon Department of Environmental Quality, and many other tasks. More details of the scope of services is included in the scope and fee documents referenced as Exhibit A. The fee for these construction related services is $858,986.

FISCAL IMPACT:

These upgrades are included in the fiscal year 2013-2014 budget under the account number 36.5150.706401, and funds are available through the original $11.4 million and second $14.5 million Clean Water State Revolving Fund loan through the Oregon Department of Environmental Quality. City Council accepted the first loan in February, 2011, by Resolution No. 2011-2926, and the second loan in June, 2012, by Resolution No. 2012-3010.

STRATEGIC ASSESSMENT:

This project will allow for necessary upgrades and increases to capacity for the influent pumping, headworks, and dewatering facilities identified as part of the WWTP Repair, Renovation and Expansion Project.

RESOLUTION NO. 2014-3106

A RESOLUTION AUTHORIZING THE CITY MANAGER PRO TEM TO NEGOTIATE AND ISSUE A TASK ORDER WITH HDR ENGINEERING, INC., CONSULTING ENGINEERS TO PROVIDE CONSTRUCTION SERVICES FOR THE WASTEWATER TREATMENT PLANT INFLUENT PUMP STATION, HEADWORKS, AND DEWATERING CONSTRUCTION PROJECT

RECITALS:

1. On May 18, 2009, the city council adopted Resolution No. 2009-2844 authorizing the city manager to enter into a professional services agreement with HDR Engineering, Inc., to provide design services for the wastewater treatment plant (WWTP) repair, renovation and expansion (RRE) project for an initial amount not to exceed $3,000,000.00.

2. To this date, $2,954,200.00 has been used for many design related projects associated with the WWTP RRE Project.

3. The city council adopted Resolution No. 2012-3006, which authorized the city manger to enter into a contract with Mortenson Construction, Inc., for the construction of the Headworks, Dewatering, and Influent Pump Station project.

4. Engineering construction related design services are required for this construction project. The details of the scope for these services can be seen in Exhibit A, which is hereby attached and by this reference incorporated. The HDR Engineering, Inc., fee for these services is $858,986.00.

THE CITY OF NEWBERG RESOLVES AS FOLLOWS:

The city council does hereby authorize the city manager pro tem to negotiate and issue task order #8 with HDR Engineering, Inc., to provide design related construction services for the wastewater treatment plant influent pump station, headworks, and dewatering project in the amount of $858,986.00.

- **EFFECTIVE DATE** of this resolution is the day after the adoption date, which is: January 7, 2014.

ADOPTED by the City Council of the City of Newberg, Oregon, this 6th day of January, 2014.

_____
Norma I. Alley, MMC, City Recorder

ATTEST by the Mayor this 9th day of January, 2014.

_____
Bob Andrews, Mayor

Task Order 8 – Phase II Plant Expansion – Dewatering, Headworks, and Influent Pump Station

Construction Services Scope of Work

Introduction

The Predesign Report completed in March 2012 indicated that the three highest priority projects for improving the Newberg Wastewater Treatment Plant are Headworks, Influent Pump Station (IPS), and Dewatering facilities. These projects have been through the design phase. This Task Order will provide construction engineering services support for the three facilities including the record drawings for the access road to the IPS.

DEWATERING

The existing dewatering belt filter presses are near the end of their service life. Two new 90 gpm Huber screw presses were designed which are to be placed where the existing belt presses are located. This will require coordination between treatment plant staff and the construction company to replace the filter presses while operations of the treatment plant need to be ongoing and interruption needs to be minimized.

HEADWORKS

The existing headworks facility does not have sufficient capacity for future flows and has poor odor control and grit removal. The new headworks facility has four major components, influent flow metering, screening, grit removal, and flow split of RAS and oxidation ditch influent. Because the existing perforated plate screens are still relatively new and in good shape they will be relocated to the new headworks.

Construction of the new headworks also includes a new combined RAS line from the RAS pump station to the headworks, new WAS line from the headworks to the WAS storage tank, and the four new oxidation ditch influent lines, two of which will be connected to the existing oxidation ditches and the other two will be installed part way and capped for the future oxidation ditches.

Following the commissioning of the new headworks, the old headworks will be demolished and the area landscaped.

IPS

The new influent pump station will be located next to the existing influent pump station and will serve as an overflow wetwell to the existing pump station. Electrical equipment will be located in the existing electrical building next to the administrative building. The header piping and valve assembly will be located outside of the wetwell right next to the new pump station.

General Assumptions

- The existing biological odor control system has sufficient capacity to treat the foul air from the headworks.
- The geotechnical analysis for all sites has been completed as part of Task Order 7.
- The existing headworks will be completely demolished to 4 ft below grade, backfilled, and landscaped.

Scope of Services

1.0 Project Management and Administration

Objective:

The purpose of this task is to plan and execute the construction engineering of the headworks, IPS, and dewatering improvements in accordance with the schedule and budget established in this scope of services. Work activities described below are provided to cover the project management activities.

Assumptions:

- This task includes: administrative procedures, such as invoicing and communication protocol, monitor project progress including work completed, work remaining, budget expended, schedule, estimated cost of work remaining, and estimated cost at completion.
- Attend one meeting for the projects with City staff and CM/GC in the City of Newberg to kickoff and review the construction effort.
- Prepare and submit monthly narrative report and invoice for the duration of the project.
- The construction phase of the three projects is assumed to be 19 months.
- City will participate in conference calls and workshops/meetings.
- City will review narrative report amendments and approve invoices.
- City will review and approve modifications to approach, schedule, and deliverables as appropriate.

Deliverables:

- Monthly progress narrative and monthly invoices.

2.0 Construction Engineering Services - Dewatering, Headworks, IPS

Objective

Assist the City of Newberg with the construction projects by supporting administration of the construction phase of the work, reviewing CM/GC Submittals and RFIs, performing site visits, coordinating with the CM/GC, development of required reports for DEQ approval, and completing construction closeout activities. Specific construction activities identified below will be provided for concurrent construction of Dewatering, Headworks and IPS project areas.

Assumptions

- HDR will provide a Resident Engineer on site for the duration of the project construction phase. The Resident Engineer will be on site approximately 80% of the construction period, on average, although at times the on site time will fluctuate between full time and less than 80% time. It is also possible that more than one person could be on site for parts of the project that are critical. Project budget has assumed that the combination of construction services activities and on site time will equal one person on site for the 19 month period for up to 80% of the working time during that period. Responsibilities of the Resident Engineer are as follows:
    - RFI, submittal, change order coordination
    - Coordination with contractor on site
    - Resolution assistance in the field
    - Coordination with design team for contractor questions/clarifications
    - Assistance with development of shut down procedures for construction activities
    - Site observation for compliance with design plans and specifications
- The HDR Team will provide responses to specific issues that arise in the field that cannot otherwise be resolved. These responses will be addressed through Submittal Reviews, RFIs, and Change Order reviews.
- The HDR Team will complete site visits by design team members for construction observation. HDR staff will photograph major elements of construction as part of the site visits. HDR Resident Engineer will determine when site visit should be completed. Budget for site visits is an allowance that will be used for visits. HDR will not exceed the allowance without authorization from the City. HDR will notify the City PM when the site visit allowance budget is at 50 and 75% spent to determine if site visit allowance or approach should be modified.
- Geotechnical observation during installation of auger cast piles is included in construction services. HDR's subconsultant will confirm the bearing stratum and depth; and development of pile installation records. On-call, part time site visits to observe the foundation subgrade conditions, excavation and structural fill placement activities are included in the scope. The assumption is five (5) 3-hour visits for this task with for one person.

- HDR will develop draft and final Performance Evaluation Standards for DEQ requirements.
- HDR will prepare acceptance-testing protocols and preside over acceptance testing, final inspection, and commissioning of the completed Task Order work. This effort will include one (1) full day (8 hours) site visit for one person, as well as preparation time for deliverables listed in this scope of work.
- HDR will prepare the DEQ Construction Certification to certify that based on the constrained observation period of the resident engineer during construction period, the construction, materials, and testing appear to be in compliance with approved plans and specifications and testing appears to be adequately documented. Budget provides for one site visit and preparation of Construction Certification. If construction is deemed incomplete, additional budget will be required to re-certify construction.
- HDR's review and approval of submittals will not relieve the contractor from responsibility for complying with the requirements of the construction contract.
- The project budget is based on completing 50 submittal reviews at 4 hours per submittal.
- The project budget is based on completing 200 RFI reviews at 3 hours per RFI. RFI quantities are dependent on the complexity of the project and coordination with the CM/GC. HDR will monitor RFI quantities and discuss status in relation to construction milestones with Newberg and CM/GC to project final RFI quantities.
- Change order status will be monitored and communicated as RFIs occur so that appropriate budget control is maintained. Change orders are the responsibility of the CM/GC. HDR will review the change orders prepared by the CM/GC.
- Budget is allocated for 10 change order reviews to check the costs associated with the technical work that has been proposed to be changed. As with RFIs, the quantities are dependent on the complexity of the project and coordination with the CM/GC. Additionally, change orders may also be driven by City requested changes. Change order review will be monitored and communicated as change occurs so that appropriate budget control is maintained.
- CM/GC will provide final red-line markups of design drawings and notes to clarify markups 30 days after final acceptance. No field verification will be completed to verify the accuracy of the CM/GC red-line markups.
- HDR will prepare record drawings in AutoCAD and pdf format based on CM/GC provided red lines. Record drawings will incorporate CM/GC red-line markups to original design drawings, including the access road. Budget for record drawings assumes that red-line markups are legible and understandable. HDR will review red-line markups and discuss with Newberg additional budget should the effort to understand the red-line mark ups exceed the budget allocated for record drawings. The effort for the record drawings will include 164 drawings at 2 hrs per drawing. Record drawings will be 2D drawings, the 3D model will not be provided with the record drawing deliverable.
- HDR will provide start-up and commissioning services for 80 hours performed by an operation specialist and 120 hours for a senior engineer. One full day (8 hours) of operator training will be provided.

- HDR will prepare the Performance Evaluation Report for DEQ after 11 months of operation, documenting performance of the system compared with the Performance Evaluation Standards.
- HDR will prepare the Performance Certification for DEQ after 12 months of operation, confirming whether or not the facility meets performance and operational requirements applicable to the project.

Deliverables

- Materials for pre-construction conference.
- Digital photographs of construction progress.
- Up to 50 Submittal Reviews
- Up to 200 RFI responses
- Draft and Final Performance Evaluation Standards.
- Acceptance-testing protocol and acceptance testing supervision.
- Final punch list for contractor and inspection of completion.
- Final construction inspection/walk-through.
- Construction Certification.
- Startup checklists and training materials.
- One training session (full day).
- Record drawings in 2D digital format and 11"x 17" sized hardcopy within 30 days after CM/GC final red lines have been received.
- Performance Evaluation Report
- Performance Certification

3.0 O&M Manual

Objective

Provide the City of Newberg with the Operation and Maintenance Manual section for the Headworks, IPS, and Dewatering facilities, which will be merged with O&M sections from previous task orders and the existing O&M Manual.

Assumptions

- City staff will be actively involved in development of a Manual that is tailored to their specific needs.
- The O&M manual will be developed to DEQ guidelines.
- The O&M Manual will be provided as a searchable PDF and as a hardcopy document.

- CM/GC will submit all manufacturer O&M information to HDR in searchable PDF format. Screen capture images from manufacturer websites will not be acceptable.

- The new headworks O&M section will incorporate the O&M information of the relocated equipment.

- HDR will prepare modifications to operating procedures based on results of the commissioning phase.

Deliverables

- Electronic draft and final copies in searchable PDF format.

- Four (4) Draft and Final hard copies.

- Draft and Final O&M manual to DEQ

4.0 SCADA Integration

SCADA Integration was not included in the original project scope and fee. It was not determined how this work would be completed. Typically SCADA integration is completed by the construction contractor, however, at Newberg HDR has a high degree of familiarity with the existing SCADA system. Due to this, the City requested that HDR provide SCADA integration services during construction.

Objective

To provide SCADA Integration for the new equipment installed for the new Influent Pump Station, new Headworks facility, and the new components of the Dewatering Facility.

- Provide PLC and Wonderware programming during the construction period to integrate the new and modified systems into the City's existing SCADA system. The programming will be done on-line at the Wastewater Treatment Facility using the City's programming equipment. The programming will be based on the PLC I/O List furnished by HDR as part of the 100% design (bidding documents).

- Startup of the automated controls will be conducted after the contractor has provided written confirmation that they have checked the terminations of the control signals and that the appropriate manufacturer representatives have performed their field services and have certified the equipment for operation.

- Substantial completion is expected to be July, 2015. The startup activities are anticipated to take place over one period of time and not separated into individual events.

Assumptions

1. The City's programming software and computers will be used for programming of the existing system.
2. The PLC hardware, installation of the hardware, control panel wiring modifications, and panel wiring diagrams is provided by others.
3. Field instruments (e.g. pressure switches, flowmeters) are to be installed and calibrated by others.
4. Signals will be tested by others.
5. The programming level of effort is based on a quantity of approximately 265 new PLC I/O points (not including spare points).
6. The existing Wonderware Screens will be modified to incorporate operator interface to the new or replaced equipment. The City's current version of Wonderware will be used for this project.
7. The new hardware has been properly terminated and is ready for operation on the scheduled dates.

Deliverables

1. Installed and tested PLC logic and Wonderware configuration.
2. Electronic files and hardcopy print-outs of PLC logic.

Exhibit A to
Resolution No. 2014-3106

Level of Effort and Fee Estimate Task Order 8 – Phase II Plant Expansion – Dewatering, Headworks, and Influent Pump Station - Reduced Services for Resident Engineer & Task Order 7 amendment		HDR Engineering																Geotechnical Engineering - Shannon & Wilson	Geotechnical Engineering - Shannon & Wilson				Total Fee (includes sub-consultant mark-up)
		Project Manager	QC Review	Civil	Mechanical	Electrical	Structural	Architectural	Project Engineer	Operations	Technician	Project Controller	Admin	Hours	Labor	Total Expenses	HDR Fee			Labor	Expenses	Subconsultant Total	
*Composite Rate**		$ 222	$ 197	$ 120	$ 136	$ 200	$ 210	$ 175	$ 126	$ 202	$ 89	$ 101	$ 77					$ 155	$ 95				
Headworks																							
Task 1	**Project Management**																						
	Project Management Activities	272	0	0	0	0	0	0	0	0	0	184	204	660	$ 94,554	$ 2,862	$ 97,416			$ -		$ -	$ 97,416
	Sub-total	**272**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**184**	**204**	**660**	**$ 94,554**	**$ 2,862**	**$ 97,416**	**0**	**0**	**$ -**	**$ -**	**$ -**	**$ 97,416**
Task 2	**Construction Services - Dewatering, Headworks, IPS**																						
	Pre-Construction Meeting	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	4		$ 620		$ 620	$ 651
	Submittal Review (50)	6	0	20	20	40	22	24	68	0	0	0	0	200	$ 31,833	$ 740	$ 32,573	12		$ 1,860		$ 1,860	$ 34,526
	RFIs (200)	0	8	63	43	63	53	45	300	0	25	0	0	600	$ 86,565	$ 2,220	$ 88,785			$ -		$ -	$ 88,785
	COs (10)	20	0	0	0	20	0	0	120	0	80	0	20	260	$ 32,188	$ 962	$ 33,150			$ -		$ -	$ 33,150
	Site Visits	24	0	48	24	48	16	16	184	0	0	0	0	360	$ 53,271	$ 6,832	$ 60,103	6	56	$ 6,250	$ 600	$ 6,850	$ 67,296
	Performance Evaluation Standards DEQ	16	4	0	16	16	16	16	80	0	16	0	8	188	$ 27,980	$ 696	$ 28,675			$ -		$ -	$ 28,675
	Performance Evaluation Report DEQ	16	4	0	16	16	16	16	80	0	16	0	8	188	$ 27,980	$ 696	$ 28,675			$ -		$ -	$ 28,675
	Construction Certification/Acceptance Testing	8	4	0	4	4	4	4	24	0	0	0	4	56	$ 8,774	$ 207	$ 8,981			$ -		$ -	$ 8,981
	Construction Administration	74	12	0	0	0	0	0	1106	0	0	32	60	1284	$ 165,876	$ 14,903	$ 180,779			$ -		$ -	$ 180,779
	Start Up Services	16	0	0	48	24	0	0	32	80	0	0	0	200	$ 35,054	$ 5,240	$ 40,294			$ -		$ -	$ 40,294
	Record Drawings	2	0	0	0	0	0	0	41	0	287	0	0	330	$ 31,090	$ 1,221	$ 32,311			$ -		$ -	$ 32,311
	Performance Certification	8	0	0	0	0	0	0	30	0	0	0	0	38	$ 5,554	$ 641	$ 6,194			$ -		$ -	$ 6,194
	Sub-total	**190**	**32**	**131**	**171**	**231**	**127**	**121**	**2,065**	**80**	**424**	**32**	**100**	**3,704**	**$ 506,165**	**$ 34,357**	**$ 540,522**	**22**	**56**	**$ 8,730**	**$ 600**	**$ 9,330**	**$ 550,318**
Task 3	**O&M Manual**																						
	Collecting Vendor Information	16	0	0	0	0	0	0	48	0	0	0	0	64	$ 9,596	$ 237	$ 9,833			$ -		$ -	$ 9,833
	Draft O&M Manual	8	0	0	12	12	0	0	72	120	16	0	24	264	$ 42,368	$ 977	$ 43,345			$ -		$ -	$ 43,345
	QC	0	12	0	0	0	0	0	0	0	0	0	0	12	$ 2,359	$ 44	$ 2,404			$ -		$ -	$ 2,404
	Draft Submittal	8	0	0	0	0	0	0	12	48	0	0	24	92	$ 14,819	$ 340	$ 15,160			$ -		$ -	$ 15,160
	Review Meeting	4	0	0	0	0	0	0	12	12	0	0	0	28	$ 4,823	$ 104	$ 4,927			$ -		$ -	$ 4,927
	Sub-total	**36**	**12**	**0**	**12**	**12**	**0**	**0**	**144**	**180**	**16**	**0**	**48**	**460**	**$ 73,965**	**$ 1,702**	**$ 75,667**	**0**	**0**	**$ -**	**$ -**	**$ -**	**$ 75,667**
Task 4	**SCADA Integration**																						
	PLC & Wonderware programming	0	0	0	0	400	0	0	0	0	0	0	0	400	$ 80,074	$ 1,480	$ 81,554			$ -		$ -	$ 81,554
	Start-Up of controls	0	0	0	0	265	0	0	0	0	0	0	0	265	$ 53,049	$ 981	$ 54,030			$ -		$ -	$ 54,030
	Sub-total	**0**	**0**	**0**	**0**	**665**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**665**	**$ 133,123**	**$ 2,461**	**$ 135,584**	**0**	**0**	**$ -**	**$ -**	**$ -**	**$ 135,584**
	Hours	**498**	**44**	**131**	**183**	**908**	**127**	**121**	**2,209**	**260**	**440**	**216**	**352**	**5,489**				**22**	**56**				
	Fee	**110,546**	**8,650**	**15,688**	**24,816**	**181,768**	**26,629**	**21,230**	**278,164**	**52,518**	**39,068**	**21,794**	**26,936**		**$ 807,808**	**$ 41,381**	**$ 849,189**			**$ 8,730**	**$ 600**	**$ 9,330**	
	Fee including Subconsultant Mark-up														**$ 807,808**	**$ 41,381**	**$ 849,189**			**$ 9,167**	**$ 630**	**$ 9,797**	**$ 858,986**

THIS PAGE INTENTIONALLY LEFT BLANK

MEMORANDUM
ENGINEERING SERVICES DEPARTMENT

To: **Newberg City Council**

From: **Jay Harris, City Engineer**

cc:

Subject: **PGE LED Street Lighting Conversion**

Date: **December 18, 2013**

Council:

Over the last 6 months, City staff has been discussing with Portland General Electric (PGE) the potential of converting the existing City street lighting system (PGE Schedule 91) from high pressure sodium and mercury vapor lights to energy saving light emitting diode (LED) lights (PGE Schedule 95).

The City has a total of 1,649 public street lights. PGE owns and maintains 497 lights (PGE Option 'A' lights) and the City owns and PGE maintains 1,152 lights (PGE Option 'B' lights). The City has zero lights that we own and maintain (PGE Option 'C').

The City has several different types of street light fixture styles that are named 'cobra head', 'acorn', and 'shoebox'. PGE currently has an approved LED replacement fixture for only the 'cobra head' type of light fixtures in the City system and only for lights rated less than 300 watts. The number of Option 'A' lights that can be replaced is reduced to 427 (70 will need to be replaced later), and 909 Option 'B' lights that can be replaced (243 will need to be replaced later).

Attached is a spreadsheet provided from PGE that shows the type and number of PGE Option 'A' and Option 'B' street lights and the yearly cost for each light for our current system (PGE Schedule 91), and the proposed LED system (PGE Schedule 95).

The PGE spreadsheet has two choices to consider, as follows:

Choice #1: PGE converts all of the Option 'A' and Option 'B' street lights to LED lights, saving the City $21,505.44 per year. The City would continue to own and PGE would maintain the 909 Option 'B' street lights.

Choice #2: PGE converts all of the Option 'A' and Option 'B' street lights to LED lights, and PGE purchases the 825 City poles at a cost of $429,099.19, at an additional cost to City of $48,155.76 per year. PGE then would own and maintain the 909 existing Option 'B' street lights. Note that the City has 84 (909-825) lights that are mounted directly on the wood transmission poles that are not proposed to be replaced.

Choice #2 above will remove the City from the ownership of the street lights in the City. Currently as the 825 City owned light poles reach end of life or are damaged, the City hires a licensed electrical contractor to remove and replace the existing pole to PGE standards, and then has PGE convert the pole to an Option 'A', PGE owned pole. Since the City does not have the equipment or a licensed electrician on staff, the goal of the City maintenance division is to eventually transition all of the street lights to be owned and maintained by PGE (Option 'A'), as PGE locally has the expertise and equipment to properly operate and maintain the system. The City does also have an near-term need

to replace approximately 31 custom painted wood poles (the poles are older than 24 years) in the near future at a cost of approximately $43,090.00, which will be completed by PGE at the time the new LED fixture is installed, if Council chooses Choice #2.

If Choice #2 is selected by Council, PGE will allow the City to use to the street light pole purchase revenue of $429,099.19 to offset the increased operations and maintenance costs of the 909 Option 'B' lights that are converted to PGE Option 'A' lights. The result is that the City will not have an increase to their yearly street lighting costs for 8.9 years ($429,099.19/$48155.76), and PGE will have full responsibility of the system.

Note that all of the proposed cobra head LED street lights are dark sky compliant.

PGE just finished the installation of a LED demonstration street light on Meridian Street between 3rd and 4th, pole #2833 (a fixture sold by 'Cree' Corporation was installed). Council is encouraged to visit the location (hopefully at night) to view the difference in the aesthetics, light color, intensity, and light distribution of LED fixtures, when compared to the existing high pressure sodium street lights located nearby.

Also attached to this memo is the LED street lighting offer prepared by PGE. Representatives from PGE will be present at the Council business meeting to answer questions.

In future Council meetings, Staff will be speaking to Council regarding the potential of adopting a street utility fee for the maintenance of pavement, street trees, sidewalks, and ADA ramps. Council may also want to consider a portion of a future street utility fee to be put towards yearly costs paid to PGE for public street lighting.

Please do not hesitate to contact me if you have any questions regarding the information.

Thanks,

James (Jay) O. Harris
City Engineer
City of Newberg
503-537-1211, Fax 503-537-1277
jay.harris@newbergoregon.gov

CITY OF NEWBERG 47150

					Existing System		LED System		
Option A (Cobras under 300w)		Owner	Maint		Schedule 91 - A		Schedule 95 - A		Net Change (Decrease)
19	70W HPS COBRA 6,300 LUMEN	PGE	PGE	12	$7.93	$1,141.92	$6.11	$879.84	
21	175W MV COBRA 7,000 LUMEN	PGE	PGE	86	$9.15	$9,442.80	$6.48	$6,687.36	
34	100W HPS COBRA 9,500 LUMEN	PGE	PGE	265	$9.15	$29,097.00	$6.48	$20,606.40	
23	400W MV COBRA 21,000 LUMEN	PGE	PGE	4	$12.83	$615.84	$7.94	$381.12	
39	200W HPS COBRA 22,000 LUMEN	PGE	PGE	59	$12.83	$9,083.64	$7.94	$5,621.52	
36	250W HPS COBRA 27,500 LUMEN	PGE	PGE	1	$14.94	$179.28	$10.00	$120.00	
	Grand Total			427		$49,560.48		$34,296.24	$ (15,264.24)
Option B (Cobras under 300w)		Owner	Maint		Schedule 91 - B		Schedule 95 - A		
33	70W HPS COBRA 6,300 LUMEN	CUST	PGE	27	$5.54	$1,794.96	$6.11	$1,979.64	
21	175W MV COBRA 7,000 LUMEN	CUST	PGE	234	$6.67	$18,729.36	$6.48	$18,195.84	
34	100W HPS COBRA 9,500 LUMEN	CUST	PGE	424	$6.67	$33,936.96	$6.48	$32,970.24	
35	150W HPS COBRA 16,000 LUMEN	CUST	PGE	71	$8.40	$7,156.80	$7.00	$5,964.00	
39	200W HPS COBRA 22,000 LUMEN	CUST	PGE	105	$9.97	$12,562.20	$7.94	$10,004.40	
36	250W HPS COBRA 27,500 LUMEN	CUST	PGE	48	$12.04	$6,935.04	$10.00	$5,760.00	
	Grand Total			909		$81,115.32		$74,874.12	$ (6,241.20)
1.	**FIXTURES ONLY - TOTAL ANNUAL SAVINGS**					**$130,675.80**		**$109,170.36**	**$ (21,505.44)**
26	**Pole Description**	**Owner**	**Maint**	Total	Schedule 91 - B		Schedule 95 - A		
32	CUST FIBERGLASS POLE 30 FT GRAY DB	CUST	PGE	411	$0.18	$887.76	$5.49	$27,076.68	
3	CUST ALUMINUM POLE 25 FT REGULAR TYPE	CUST	PGE	249	$0.32	$956.16	$9.48	$28,326.24	
74	CUST FIBERGLASS POLE 35 FT REGULAR DB	CUST	PGE	52	$0.25	$156.00	$7.47	$4,661.28	
19	CUST ALUMINUM DAVIT POLE 30 FT	CUST	PGE	51	$0.35	$214.20	$10.44	$6,389.28	
26	CUST PAINTED WOOD POLE 35 FT OR LESS	CUST	PGE	31	$0.20	$74.40	$4.71	$1,752.12	
18	CUST ALUMINUM POLE 30 FT REGULAR TYPE	CUST	PGE	25	$0.34	$102.00	$10.26	$3,078.00	
54	CUST ALUMINUM POLE 35 FT	CUST	PGE	5	$0.38	$22.80	$11.29	$677.40	
10	CUST ALUMINUM DAVIT POLE 25 FT	CUST	PGE	1	$0.33	$3.96	$9.79	$117.48	
	Grand Total			825		$2,417.28		$72,078.48	$ 69,661.20
	Potential Pole Purchase (Option B Poles)			$ 429,099.19					
	Pole Charge Offset (Years)			6.0					
2.	**OPTION A POLES & FIXTURES - TOTAL ANNUAL DELTA**					**$133,093.08**		**$181,248.84**	**$ 48,155.76**
	OVERALL CASH INFLUX OFFSET (Years)			8.9					

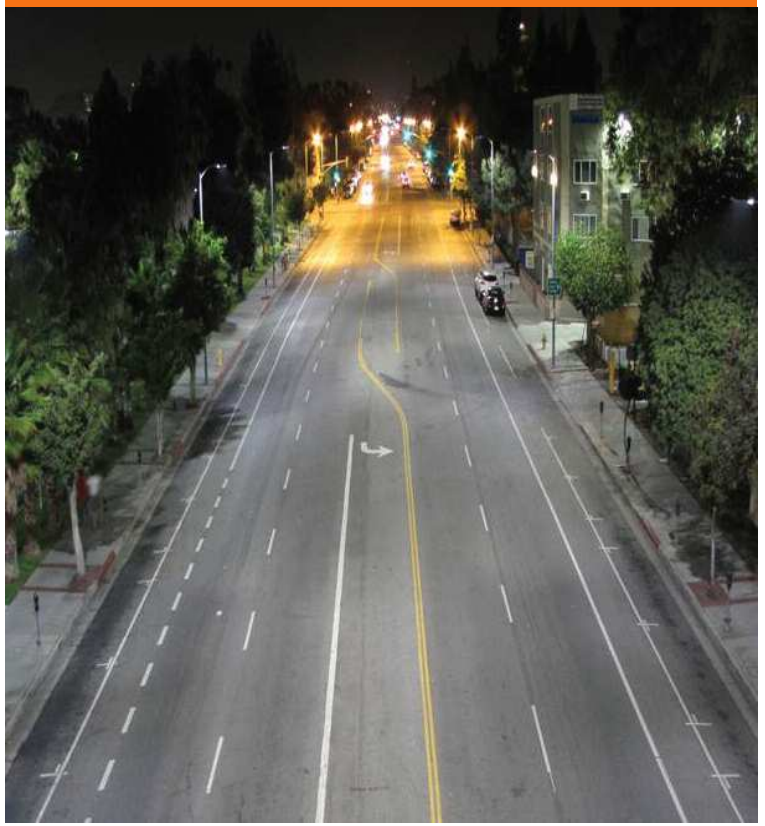
City Choice #1

City Choice #2

Wood Poles at or beyond replacement age (24 Years)	*Count*
CUST PAINTED WOOD POLE 35 FT OR LESS	*31*
Total	*31*
Avoided Replacement Costs ($1390 / new fiberglass 30' pole)	*$ 43,090.00*

Annual savings or increases reflected above are based only on the fixtures that are currently eligible for LED conversion (<300 W Cobrahead style) and the associated poles, and do not represent the overall streetlight bill for the entity.

City of Newberg
LED Streetlight offer



November 22, 2013
Draft

Portland General Electric

Benefits of LED Streetlights

Cost-effective

More sustainable

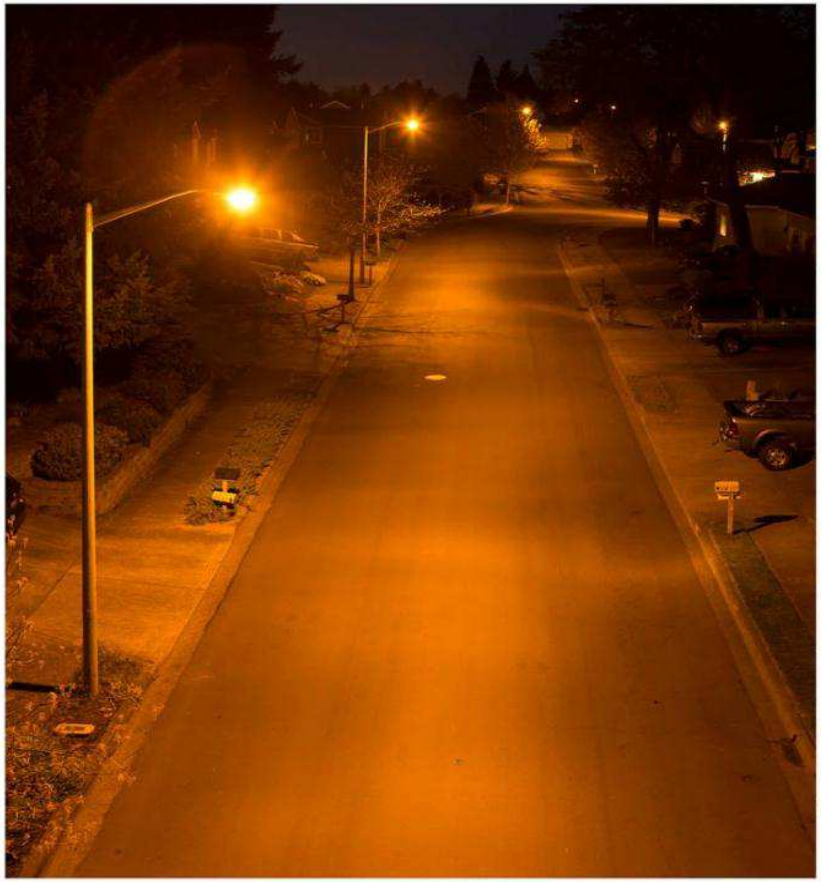
- 100 & 150-watt equivalent LEDs use 60-70 percent less energy. Components are recyclable. Fewer trips required to replace, maintain lights.

Better light quality

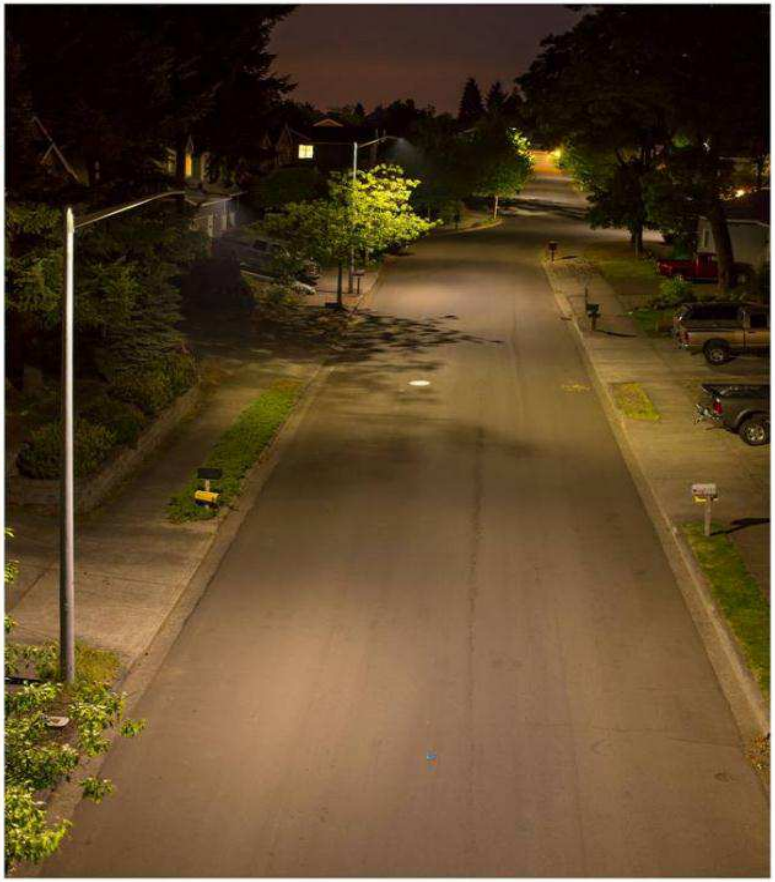
- Improved visibility and color rendering.
- Dark-sky friendly.

Improved Visibility

Before: High Pressure Sodium



After: Light Emitting Diode

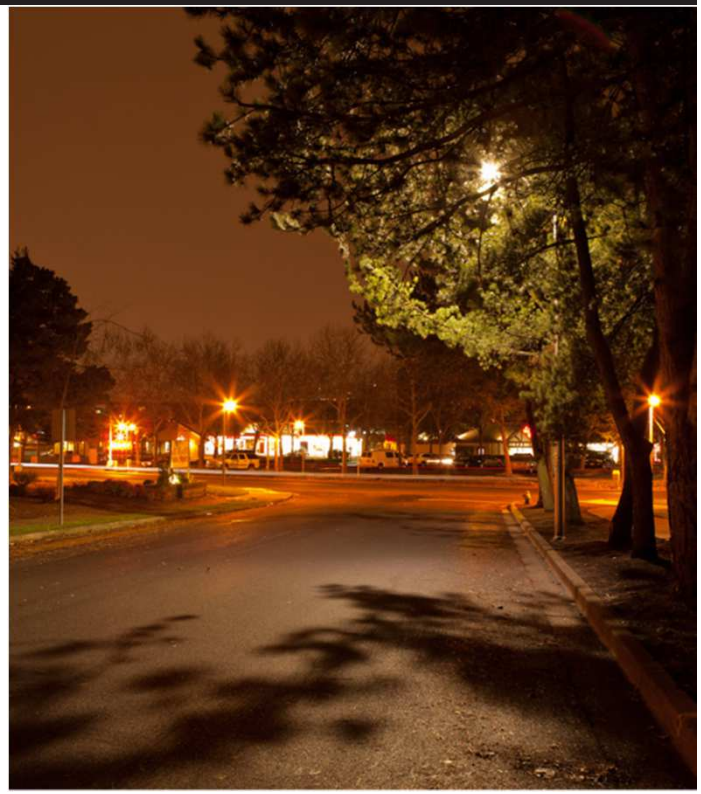


LED Conversions Completed and In Progress

Clackamas County	Salem	Oregon City
Milwaukie	West Linn	East Salem Service District
Woodburn	Gladstone	Estacada
Hubbard	Aurora	Turner
Rivergrove	Banks	Sandy
North Plains	Molalla	Johnson City

Option 1: PGE Purchases Eligible Streetlight Poles

- PGE will purchase 909 of the City's streetlight poles and lights.
- PGE will convert cobrahead HPS streetlights to LED lights



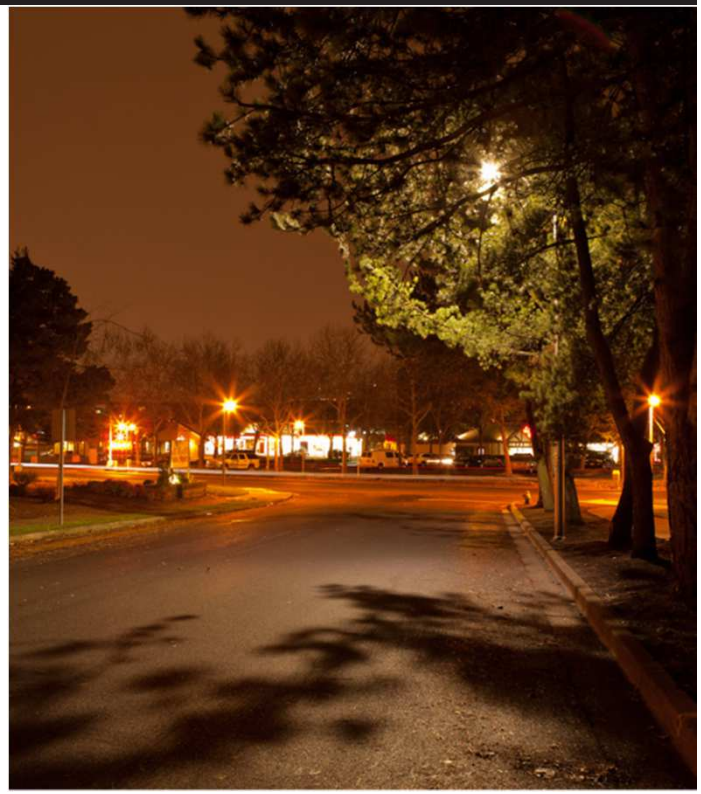
Option 1 Financial Information

Pole Purchase Price	$ 429,099.15
Savings from LED Conversion*	$ (21,505.44)
Pole Charge Increase Due to Change from Option B (municipality owned and PGE maintained) to Option A (PGE owned and maintained)	$ 69,661.20
Net Increase (Decrease)	$ 48,155.76

*Annual savings or increases reflected above are based only on the fixtures that are currently eligible for LED conversion (<300 W Cobrahead style) and the associated poles, and do not represent the overall streetlight bill for the entity.
Figures are estimated based on current tariff pricing and wattage conversion from HPS to LED lights. Actuals may vary based on field conditions, customer light level selection, and other factors. Savings reflect savings related to subset of poles included in offer.

Option 2: Light Fixture Ownership Transferred to PGE

- Ownership of 259 light fixtures is transferred from City of Newberg to PGE
- PGE will convert cobrahead streetlights to LED fixtures
- As poles reach end of life, PGE will replace them as PGE poles (PGE owned and maintained)
- The City incurs no cost to replace poles at end of life



Option 2 Financial Information

Pole Purchase Price	$ 0
Savings from LED Conversion*	$ (21,505.44)
Pole Charge Increase Due to Change from Option B (municipality owned and PGE maintained) to Option A (PGE owned and maintained)	$ 0
Net Increase (Decrease)	$ (21,505.44)

*Annual savings or increases reflected above are based only on the fixtures that are currently eligible for LED conversion (<300 W Cobrahead style) and the associated poles, and do not represent the overall streetlight bill for the entity.
Figures are estimated based on current tariff pricing and wattage conversion from HPS to LED lights. Actuals may vary based on field conditions, customer light level selection, and other factors. Savings reflect savings related to subset of poles included in offer.

Options Chosen by Municipalities

Option 1: Poles Sold to PGE

- Clackamas County Service District
- Gladstone
- Estacada
- Aurora
- Hubbard
- North Plains
- Turner
- Government Camp
- Johnson City
- East Salem Service District
- Oregon City Schools

Option 2: Light Fixtures Transferred to PGE

- Oregon City
- West Linn
- Milwaukie
- Keizer
- Woodburn

Thank You

Wendy Buck
Government Affairs

Andrew Schafer
Key Customer Manager

Tracy Aguilar
Lighting Service and Design
Project Manager

THIS PAGE INTENTIONALLY LEFT BLANK