

Submitted by: Chair of the Assembly at the  
Request of the Mayor;  
Assemblymember Selkregg

Prepared by: Economic & Community  
Development

For reading: July 29, 2008

**CLERK'S OFFICE**

**APPROVED**

Date: 8/12/08

Anchorage, Alaska

AR 2008-164

1 A RESOLUTION OF THE MUNICIPALITY OF ANCHORAGE APPROPRIATING ONE  
2 MILLION SEVEN HUNDRED THOUSAND DOLLARS (\$1,700,000) AS AN INTER-FUND  
3 LOAN FROM THE PUBLIC FINANCE FUND (191) TO THE ANCHORAGE ROADS AND  
4 DRAINAGE SERVICE AREA FUND (141), AT A VARIABLE INTEREST RATE EQUAL TO  
5 THE GENERAL CASH POOL RATE PLUS ONE PERCENT, FOR THE PURCHASE AND  
6 INSTALLATION OF ENERGY-EFFICIENT ROADWAY LIGHT FIXTURES, TO BE REPAID  
7 OVER A TERM OF NOT MORE THAN SEVEN YEARS THROUGH ENERGY SAVINGS  
8 FROM REPLACEMENT OF EXISTING ROADWAY LIGHTING.

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10  
11 WHEREAS, in March, 2008, the Municipality installed test street lighting fixtures and verified  
12 cost savings through energy use reduction; and

13  
14 WHEREAS, test results and financial models indicate that replacement of about one quarter  
15 of Anchorage's street lights with energy-efficient LED white lights will yield energy savings of  
16 approximately \$360,000 annually; and

17  
18 WHEREAS, \$500,000 has been secured by State legislative grant towards the total of \$2.2  
19 million needed for replacement of the light fixtures; and

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21 WHEREAS, the lifespan of the new fixtures allows at least nine years of continued energy  
22 savings after repayment of installation costs, and this longer lifespan will also reduce  
23 Municipal street maintenance costs; and

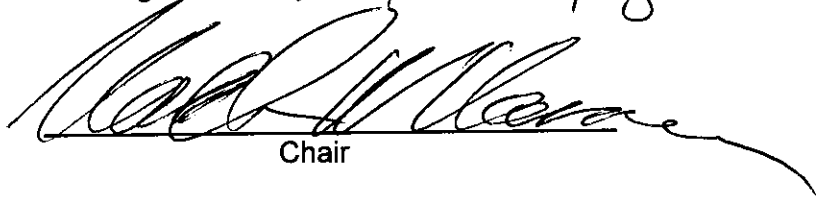
24  
25 WHEREAS, Anchorage residents surveyed overwhelmingly approved the white light test  
26 fixtures and responded favorably to perceived improvements in safety and visibility due to the  
27 lighting; now, therefore,

28  
29 **THE ANCHORAGE ASSEMBLY RESOLVES:**

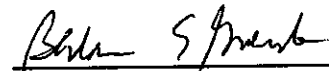
30  
31 **Section 1:** That an inter-fund loan in the amount of One Million Seven Hundred Thousand  
32 Dollars (\$1,700,000) from the Public Finance Fund (191) to the Anchorage Roads and  
33 Drainage Service Area Fund (141), at a variable interest rate equal to the general cash pool  
34 rate plus one percent, for the purchase and installation of energy-efficient roadway light  
35 fixtures, to be repaid in full over a term of not longer than seven years through energy savings  
36 from replacement of existing roadway lighting, is authorized and the loan proceeds are  
37 appropriated.  
38

**Section 2:** That this Resolution shall become effective immediately upon passage and approval by the Anchorage Assembly.

PASSED AND APPROVED by the Anchorage Assembly this 12<sup>th</sup> day of August, 2008.

  
Chair

ATTEST:



Municipal Clerk

**Department Appropriation:**

Maintenance & Operations    \$1,700,000



# MUNICIPALITY OF ANCHORAGE

## ASSEMBLY MEMORANDUM

AM No. 507-2008

Meeting Date: July 29, 2008

**From:** Mayor

**Subject:** A RESOLUTION OF THE MUNICIPALITY OF ANCHORAGE APPROPRIATING ONE MILLION SEVEN HUNDRED THOUSAND DOLLARS (\$1,700,000) AS AN INTER-FUND LOAN FROM THE PUBLIC FINANCE FUND (191) TO THE ANCHORAGE ROADS AND DRAINAGE SERVICE AREA FUND (141), AT A VARIABLE INTEREST RATE EQUAL TO THE GENERAL CASH POOL RATE PLUS ONE PERCENT, FOR THE PURCHASE AND INSTALLATION OF ENERGY-EFFICIENT ROADWAY LIGHT FIXTURES, TO BE REPAID OVER A TERM OF NOT MORE THAN SEVEN YEARS THROUGH ENERGY SAVINGS FROM REPLACEMENT OF EXISTING ROADWAY LIGHTING.

In order to reduce energy costs for roadway lighting, while at the same time improving quality of light, visibility and safety of Anchorage's streets at night and significantly reducing street light maintenance cost, the Municipality plans to replace all 16,500 its roadway lights with LED lighting technology.

This will be accomplished in a two-phase project:

- Phase 1 will convert nearly one quarter of the total lights in Anchorage roadways to energy-efficient fixtures.
- Phase 2 will convert the remaining three quarters of the city as well as the city's parking garages.

The loan authorized here completes needed funding to allow the first phase to proceed.

Over the past year, the Municipality studied two white light technologies for roadways: induction and LED roadway lighting. Of the two potential white light technologies, six different manufacturers were tested in a controlled study commissioned by the Mayor's Office in March of 2008. As a result of this research, the expected cost savings and lighting improvements have been verified and LED technology has been selected. Converting today's high pressure sodium fixtures to LED simply requires taking the old fixture off the light pole's arm and slipping the new LED fixture into place, with no additional infrastructure changes required.

The total cost of Phase 1 is approximately \$2.2 million dollars. Five hundred thousand dollars is currently in hand from a State legislative grant. The \$1.7 million dollar loan authorized here will provide the balance required for the Phase 1 light fixture conversion cost. The loan will be repaid through the annual energy savings from the LED lighting replacements, with an expected payback period of no more than 7 years.

As a result of Phase 1 implementation, the Municipality expects to realize approximate annual energy savings of \$360,000. Calculations are based on pre- and post-installation wattage, actual installed tests, and financial modeling projections. The payback period computation includes consideration of average replacement rate and interest

payments on the loan. Because the new fixtures last an expected minimum 16 years (lifespan is likely even longer at lower temperatures), energy cost savings for the Municipality will continue for at least nine years after the installation cost has been recovered. Street maintenance costs associated with bulb replacement will also be reduced due to the long lifespan.

In addition to the financial benefits for the Municipality, the new fixtures will significantly reduce sky glow and light trespass, and will improve the color rendering of roadway lighting by 200%-300%. The lighting quality was overwhelmingly endorsed by Anchorage residents who participated in the March survey during the test installation.

Other cities in America are investigating similar lighting objectives, but none has yet combined the scale, best lighting practices, and resident approval that Anchorage has fostered. The planned energy-efficiency lighting conversion to be funded by this loan not only pays for itself, it places Anchorage as a model for responsible street lighting nationwide.

The Expense detail follows:

**EXPENDITURES:**

<u>Account Number</u>	<u>Account Name</u>	<u>Amount</u>
141.7470.2201.BP2008	Operating Supplies	\$1,700,000

THE ADMINISTRATION RECOMMENDS APPROVAL OF THE RESOLUTION APPROPRIATING ONE MILLION SEVEN HUNDRED THOUSAND DOLLARS (\$1,700,000) AS AN INTER-FUND LOAN FROM THE PUBLIC FINANCE FUND (191) TO THE ANCHORAGE ROADS AND DRAINAGE SERVICE AREA FUND (141), AT A VARIABLE INTEREST RATE EQUAL TO THE GENERAL CASH POOL RATE PLUS ONE PERCENT, FOR THE PURCHASE AND INSTALLATION OF ENERGY-EFFICIENT ROADWAY LIGHT FIXTURES, TO BE REPAID OVER A TERM OF NOT MORE THAN SEVEN YEARS THROUGH ENERGY SAVINGS FROM REPLACEMENT OF EXISTING ROADWAY LIGHTING.

Prepared by: Jennifer Allen, Office of Economic & Community Development  
Concur: Alan Czajkowski, Director, Maintenance & Operations  
Concur: Mary Jane Michael, Executive Director, OECD

Fund Certification: Sharon Weddleton, CFO  
191.0740 1,700,000 Fund Balance

Concur: Michael K. Abbott, Municipal Manager  
Respectfully submitted: Mark Begich, Mayor

**Content ID:** 006637**Type:** AR\_FundsApprop - Funds Approp Resolution

A RESOLUTION OF THE MUNICIPALITY OF ANCHORAGE APPROPRIATING ONE MILLION SEVEN HUNDRED THOUSAND DOLLARS (\$1,700,000) AS AN INTER-FUND LOAN FROM THE PUBLIC FINANCE FUND (191) TO THE ANCHORAGE ROADS AND DRAINAGE SERVICE AREA FUND (141), AT A

**Title:** VARIABLE INTEREST RATE EQUAL TO THE GENERAL CASH POOL RATE PLUS ONE PERCENT, FOR THE PURCHASE AND INSTALLATION OF ENERGY-EFFICIENT ROADWAY LIGHT FIXTURES, TO BE REPAID OVER A TERM OF NOT MORE THAN SEVEN YEARS THROUGH ENERGY SAVINGS FROM REPLACEMENT OF EXISTING ROADWAY LIGHTING.

**Author:** allenjr**Initiating Dept:** ECD**Review Depts:** StreetMaint**Date Prepared:** 7/24/08 3:12 PM**Assembly Meeting Date:** 7/29/08**Public Hearing Date:** 8/12/08

2008 JUL 25 PM 3:04  
ANCHORAGE  
MUNICIPALITY

<u>Workflow Name</u>	<u>Action Date</u>	<u>Action</u>	<u>User</u>	<u>Security Group</u>	<u>Content ID</u>
Clerk_Admin_SubWorkflow	7/25/08 12:10 PM	Exit	Joy Maglaqui	Public	006637
MuniMgrCoord_SubWorkflow	7/25/08 12:10 PM	Approve	Joy Maglaqui	Public	006637
MuniManager_SubWorkflow	7/25/08 12:03 PM	Approve	Michael Abbott	Public	006637
Finance_SubWorkflow	7/25/08 11:49 AM	Approve	Wanda Phillips	Public	006637
OMB_SubWorkflow	7/25/08 10:45 AM	Approve	Wanda Phillips	Public	006637
StreetMaint_SubWorkflow	7/24/08 3:52 PM	Approve	Bea Johnson	Public	006637
ECD_SubWorkflow	7/24/08 3:42 PM	Approve	Jennifer Allen	Public	006637
FundsAppropWorkflow	7/24/08 3:41 PM	Checkin	Jennifer Allen	Public	006637
ECD_SubWorkflow	7/24/08 3:28 PM	Reject	Jennifer Allen	Public	006637
FundsAppropWorkflow	7/24/08 3:24 PM	Checkin	Jennifer Allen	Public	006637

Adendum ———  
 CONSENT AGENDA - INTRODUCTION