COUNCIL AGENDA ITEM **L-2**
COUNCIL MEETING OF **09/18/12**

REQUEST FOR COUNCIL ACTION

SUBJECT: **CONSIDERATION OF RESOLUTION NO. 7219 PAVEMENT ACCELERATED REPAIR IMPLEMENTATION STRATEGY (PARIS) PAVEMENT RESURFACING PROGRAM FOR THE CITY OF REDLANDS**

MOTION:

I move that the City Council adopt Resolution No. 7219.

STAFF RECOMMENDATION:

Staff recommends City Council adopt Resolution No. 7219 and direct staff to proceed according to the objectives outlined in the PARIS report.

DISCUSSION:

Approximately three years ago, the City Manager requested staff identify all available methods to rehabilitate City streets. This assignment was given as citizen complaints related to the condition of City streets outpaced all others. Because of this, the City Manager has identified the rehabilitation and improvement of the City streets as a priority. In-line with this given assignment, staff has worked to find solutions to remove barriers that may exist and to give the community significant improvements to its street condition.

On July 18, 2012, staff presented to Council the Pavement Accelerated Repair Implementation Strategy (PARIS) report. The PARIS report identifies specific plans to address the poor condition of the city streets in the most efficient manner. Additionally, the report outlines the strategies necessary to upgrade nearly 2/3 of all City streets (440 lane miles) within the next five years. To accomplish this effort, it is recommended all available sources of funding that are currently utilized for pavement related programs be pooled into a single fund to effectively finance the plan. Additionally, it is recommended $21.5 million of debt be issued to accelerate paving activities in order to minimize further deterioration of the City's street infrastructure as well as take full advantage of current interest rates and the existing low cost of construction .

BACKGROUND

In February 2012 staff completed a comprehensive Pavement Management Program (PMP) which provided a condition assessment of all City streets and guidelines for prioritization of street maintenance work. This report was presented to and adopted by City Council on March 6, 2012. In developing the PMP, the physical condition of City streets was evaluated, rated, and the remaining projected life cycle determined. The

PMP further identifies a schedule for maintenance and reconstruction of City streets at specified time intervals in order to extend the overall life-expectancy of all City streets in the most efficient and economical manner possible. In addition, the PMP establishes a comprehensive process to prioritize the rehabilitation of City streets and is a powerful tool to aid in the decision making process in order to best utilize financial resources.

As part of the PMP staff utilized eRoad Pavement technology, or simply “eRoad”, as an automated pavement evaluation system to create a database of the current inventory of City street conditions, treatment options, and cost estimates for each treatment available. Using this system, it has been confirmed that due to the lack of a comprehensive and systematic maintenance program, the City’s average Pavement Condition Index (PCI) has dropped to 53 on a scale of 0-100, 0 being a street needing full reconstruction and 100 being a new street. An average PCI of 53 is considered poor according to industry standard and in comparison to surrounding cities.

Various rehabilitation and resurfacing methods are available to maintain a road surface, each with their own benefits and expected service life. To maximize the City’s resources, the appropriate treatment must be selected for each road, many of which are described in the PMP report. New pavement deteriorates slowly at first, then at a continually increasing rate as time passes. This deterioration can be significantly reduced by use of systematic preventive maintenance starting in the early stages of the pavement’s lifecycle.

Finally, the PMP identifies two specific methodologies to prioritize streets for resurfacing and maintenance: the matrix method and the vehicle miles traveled (VMT) method. The recommended treatment for every street has also been determined by the eRoad system. The decision to utilize either of the referenced methodologies or a hybrid of the two for prioritizing resurfacing is directly related to the existing physical condition of each street and availability of financial resources.

The matrix method factors in a variety of criteria impacting the general use of streets. These factors are PCI, average daily traffic (ADT), truck routes, vicinity to schools and population density, etc. This methodology takes advantage of an in-depth analysis provided by the eRoad system and use of advanced GIS technologies. The result is a “big-picture” approach that graphically shows streets that warrant treatment based on function, location, and the condition of the street surface.

The second method, VMT, uses ADT as well as cost of street rehabilitation to queue streets for maintenance. Using traffic volumes as a guide for selecting streets for maintenance leads to a cost effective approach in terms of cost per mile traveled on a section of road on a daily basis. Ideally, the objective is to use the most cost effective method to achieve the highest street condition that provides the public with a street grid system that is in good condition and well maintained.

PARIS

The PARIS report is the final part of the critical comprehensive pavement management plan as it identifies methodologies to implement the PMP and finance the program. Within the PARIS report, pavement lifecycles, deterioration rates, opportunity costs, contributors to pavement deterioration, and potential funding sources are all identified. Also included is a method for identifying, quantifying, and recovering costs associated with the damage caused by the major contributor to pavement deterioration, i.e. City operated utility vehicles. Additionally, the PARIS report illustrates how the City's current limited funding for maintenance will result in the street degradation rate accelerating significantly over time. Finally, a strategy that will increase the City's PCI to approximately 80 in five years through use of various funding sources is given.

As part of the PARIS report, in May 2012 the City commissioned a report to quantify the impact to City streets caused by its own operations including solid waste, water, and wastewater vehicles. The report, completed by TKE Engineering, Inc., concluded these damages are significant and have an annual cost of $3.62 million, $102,770, and $16,730, for solid waste, water, and wastewater, respectively, excluding engineering and administrative expenses. The TKE report also allocated the damage to streets based on street type, vehicle type, and miles of each type of street. On average the solid waste trucks cause 38.3 percent, water trucks cause 1 percent, and wastewater trucks cause 0.2 percent of the damage to the City street grid. Based on this analysis, it is recommended each utility annually fund the cost to repair their proportional share of impact to City streets.

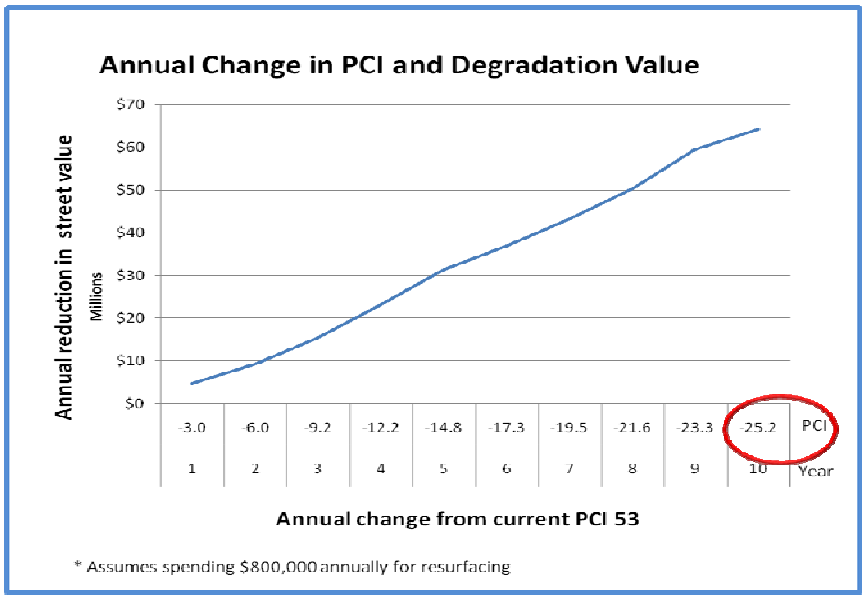
To minimize the annual pavement degradation, the PARIS report assumes $21.5 million in debt must be issued. By front-loading the repairs and maintenance, streets will receive a less expensive pavement treatment, thereby reducing the overall cost to repair the City's street grid. This approach allows for a significant savings over the life of the citywide pavement program. This debt is to be paid off in 10 years and will be structured in two forms, certificates of participation (COPs) and an I-Bank loan, both of which are described in more detail below. To make the necessary debt service payments, the amount owed by solid waste, $3.62 million annually, will be used. Based on information provided by the City's financial advisor and rate consultant, the City will need to increase solid waste rates 11.0%, 11.5%, and 11.5% over the next three years. This rate adjustment will generate approximately $4.5 million annually, which will include the $3.62 million necessary for the repair of the street damages caused by solid waste vehicles, in addition to the cost of engineering, inspection, and administrative expenses.

According to the City's financial advisor, the amount of debt that can be issued is proportional to the amount of additional revenues generated. Additionally, there must be enough revenues to make the required debt service payment plus an additional one half of the debt service payment. This requirement for one and one half times the required debt service payment is due to bonding covenants and bond ratings. With that

said, the $3.62 million generated annually will allow the City to receive approximately $21.5 million.

PAVEMENT DEGRADATION

The primary reason the PARIS report recommends resurfacing a significant portion of City streets in the initial five year term is to stop the rapid degradation rates of streets. As mentioned above, by front-loading repairs and maintenance, streets will receive pavement treatments at a less expensive rate, thereby reducing the overall cost to repair the City's street grid. This fact is further illustrated in the following graph. As time passes, the condition, or PCI, of City streets declines; and by the end of a ten year term the average PCI of City streets is reduced by 25 PCI points. Additionally, the value of the City's assets, its street network, is reduced by nearly $65 million. This graph clearly illustrates the direct correlation between time, lost street value, and reduction in street condition.



PAST UTILITY PATCHES

TKE was also asked to determine the value of water and sewer patches caused by these operations that have not been permanently repaired. Based on staff's findings, for years utility patches made to complete leak repairs have not been properly repaired. This was discovered in 2005 and measures were made at that time to correct this ongoing practice; however thousands of temporary patches made in prior years have not been permanently repaired. Because of this practice, the condition of City streets has further declined. Based on a comprehensive analysis utilizing data partially based on eRoad analysis it was determined the value of these patches equates to $6.24 million, of which 81.4 percent is attributable to water and 18.6 percent is attributable to wastewater. To remedy this, the PARIS report applies the value of the past patches not

properly repaired to the overall comprehensive PMP program. Additionally, to prevent future damage, all future patches are being permanently repaired pursuant to the City standards.

DEBT OPTIONS

To finance the PARIS recommendations staff identified two sources of funding, a 10 year I-Bank loan and 10 year COPs. The California Infrastructure and Economic Development Bank (I-Bank) is a State-run financing authority which was created in 1994 to promote economic revitalization, enable future development, and encourage a healthy climate for jobs in California. The I-Bank loan would be for the first $10 million, which is the maximum the State will lend.

COPs for all practical proposes are similar to bonds. Within the PARIS report, the remaining debt amount of $11.5 million will be funded through COPs. Revenues to cover the debt service payment will come from the solid waste fund at a rate proportional to the Solid Waste Department's specific operational impacts to the streets as identified above. This debt is to be paid off in 10 years.

As mentioned above, the City will need to increase solid waste rates 11.0%, 11.5%, and 11.5% over the next three years. This adjustment was established by R3 Consulting Group, Inc. A phased three year adjustment is recommended as it allows for a reduced impact to solid waste customers.

MEASURE I

In addition to utilizing the funding identified above, the City receives funding from the Measure I initiative. In November 1989, San Bernardino County voters approved passage of Measure "I", which imposed a one-half of one percent retail transactions and use tax applicable in the incorporated and unincorporated territory of the County of San Bernardino. When approved in 1989, the Measure "I" tax was scheduled to be in place through 2010. San Bernardino County voters approved the renewal of the Measure "I" tax in November 2004 for a period of thirty additional years from 2010 – 2040.

Measure "I" revenue estimates for Redlands for 2012-2017 is $4,983,410. The reauthorized Measure "I" 2010-2040 revenue forecast indicates an anticipated annual revenue stream to the City from Measure "I" of approximately $950,000 for local transportation investments. These funds will be fully utilized and incorporated into the PARIS program.

TOTAL PARIS FUNDING

In total, it is anticipated the PARIS program will utilize $45 million in five years and resurface 2/3 of all City streets bringing the City's average PCI up to approximately 80. This will be achieved by utilizing the funding described above. To better understand how these funds will be utilized and in which year, the following chart is provided.

As shown in the following chart, Measure I funding consists of approximately $950,000 annually. The chart shows the funds in blue are for all years. Additionally, there is a small contribution titled Utility Coordination. These funds are associated with the coordination of water and sewer pipeline replacements and street resurfacing. Assumptions were made as to the amount of additional paving that would be completed. It is important to note that there will be no actual fund transfers associated with this item.

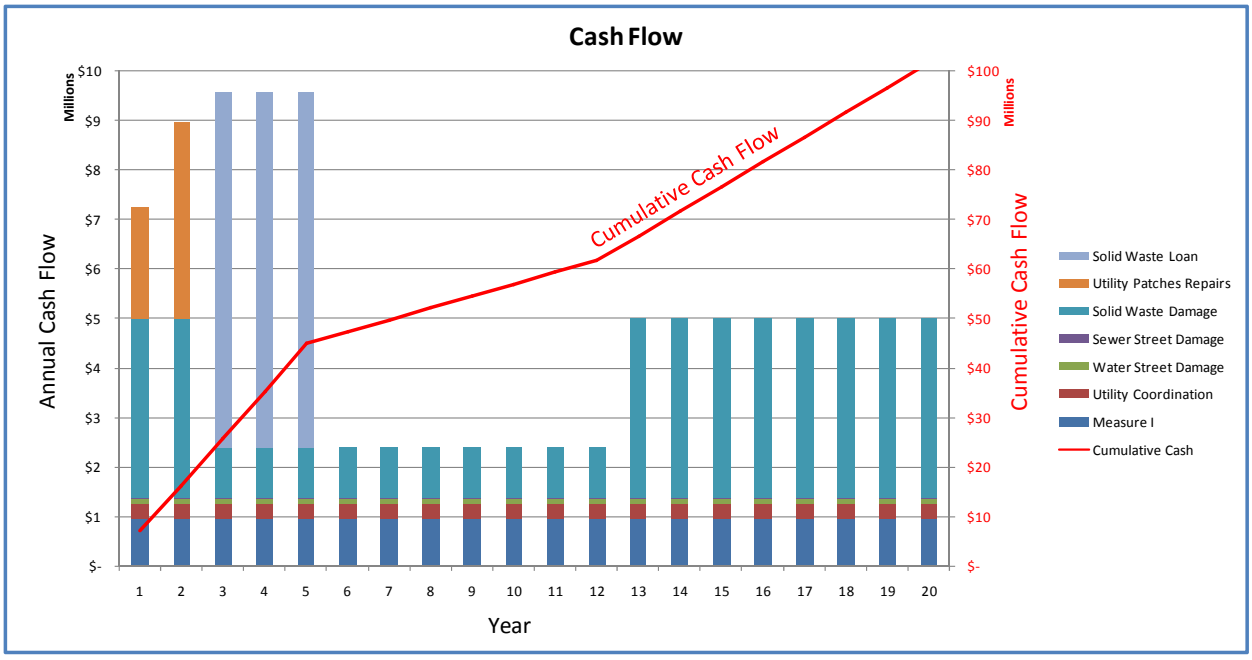
The orange bars in years 1 and 2 consist of funds for the past utility patch repairs. As described above these funds are to cover the past paving patches made by water and wastewater. Of the $6.24 million, $2.25 million and $3.99 million will be used in years 1 and two, respectively.

The green and purple bars (the purple bar is very small and possibly not visible) are for damages to streets associated with water and wastewater operations. These amounts remain consistent throughout the timeframe of the chart. These charges were described in greater detail above.

The red bars area associated with paving for water and wastewater pipeline replacement projects. As a result of these projects there are opportunities for the utilities to fund the PARIS program in an equivalent portion to the paving that is required for the pipeline project. By doing so there is the opportunity to take advantage of economies of scale and have the pipeline trenches incorporated into a major paving project. Exact funding for this item are not known, and will change based on the amount of pipe that is in need of replacement annually. However, for the purposes of this report $300,000 is assumed.

Finally, the aqua and grey bars represent the solid waste contribution associated with the damage caused by solid waste vehicles. Funding for years 1 and 2 is to come from the existing solid waste fund balance. Each of the first two years consists of $3.62 million.

The grey bars represent the $21.5 million received through the I-Bank loan and COPs mentioned earlier and will be repaid by the solid waste fund. Revenues to make the debt service payments will come from the solid waste rate adjustment, and because of this, the aqua bars have been reduced to account for these payments. At the same time the grey bars have been added to years 3-5 to account for the $21.5 million of revenue to the paving program.



Finally, a cumulative cash flow is included in the chart. This line, which corresponds to the Y axis on the right, adds all cash flows each year. As seen on the chart, the total PARIS paving program equals nearly $45 million dollars in the first five years. The second five year period is reduced by nearly $7.1 million annually as the $21.5 million borrowed is fully exhausted in years 3-5. Finally, in years 13-20 there is an increase in funding as the debt service payments are completed in year 12, leaving the entire solid waste rate adjustment revenues to be applied to the PARIS paving program to make necessary repairs.

CONCLUSION

At this juncture staff is seeking Council's approval of:

1. The findings identified in the PARIS report, and authorization to implement its findings and recommendations;
2. Transferring and utilizing water and wastewater funds totaling $6.24 million to the PARIS paving program as this amount totals the value of outstanding paving patches caused by the water and wastewater departments;
3. Transferring and utilizing solid waste funds totaling $3.62 million annually, starting in FY 2012-2013, to the PARIS paving program as a TKE report has identified damages to City streets caused by solid waste vehicles;
4. Transferring and utilizing water funds totaling $102,770 annually, starting in FY 2012-2013, to the PARIS paving program as a TKE report has identified damages to City streets caused by water vehicles total $102,770 annually;

5. Transferring and utilizing wastewater funds totaling $16,730 annually, starting in FY 2012-2013, to the PARIS paving program as a TKE report has identified damages to City streets caused by sewer vehicles total $16,730 annually;
6. Issuing the required Proposition 218 notice for a public hearing for the solid waste rates adjustments set forth in the R3 rate report necessary to recover the costs associated with the damages from the solid waste vehicles.

If approved, staff will issue the required Proposition 218 notices for the necessary utility rate adjustments. Forty Five (45) days after the mailing notification, staff will again present the item in a public hearing and seek adoption of the proposed rates.

If Council adopts the proposed rate adjustments, staff will seek the services of the appropriate bond counsel and an underwriter to complete the necessary efforts to issue the COPs. Staff will also seek the necessary approvals and documents from the state for a maximum $10 million I Bank loan.

Working concurrently with the funding efforts, staff will start the engineering effort to design and deliver the recommendations and findings within the citywide pavement maintenance program. Based on preliminary research, staff has determined approximately 65 percent of all City streets will receive treatments in accordance with "Pavement Management Program" report.

COMMISSION RECOMMENDATION:
On August 13, 2012, and September 3, 2012, the Municipal Utilities and Public Works Commission reviewed the PARIS report and its findings. After much deliberation the committee passed a motion to support the findings of the PARIS report and made the following motions:

> *The Commission recommends to Council to proceed with the citywide street maintenance program as recommended by staff in the PARIS report.* (Motion passed six to one)

A second motion was made and passed:

> *The Commission recommends that all revenue generated for a street maintenance and paving program, as a result of a solid waste rate increase for a street maintenance and paving program, be placed in a dedicated fund only to be used for the street maintenance program.* (Motion passed unanimously)

FISCAL IMPACT:

Described in the PARIS report is the impact to both the City and its solid waste customers. The three proposed rate increases will increase the average residential customer's solid waste monthly bill by $7.89.

The PARIS report also identified the impact to two commercial solid waste customer classes. These two classes were selected because they have the highest volume of customers. The customer classes selected have 2 and 3 cubic yard bins serviced weekly. The impact to these customers is $31.51 per month for the 2 cubic yard bin and $44.48 per month for the 3 cubic yard bin.

All other customer fiscal impacts are identified in the attached draft Prop. 218 notice, or is explained in this report.

All other funding sources are described in detail in this report.

ALTERNATIVES:
There are a couple alternatives available. First a decision can be made to perform the street rehabilitation activities at their current rate. However, this will allow for the City's streets to continue decline and reducein the City's average PCI. This practice is what has lead to the City's streets being in such poor condition. In both the PMP and PARIS report it has been documented that the deterioration rate of streets increases as time passes, and not performing proper maintenance leads to the need for far more costly maintenance treatments in future years.

Another alternative is to perform the maintenance activities on a pay-as-you-go method. This alternative was explored at length and it was determined that the rate of degradation far out paces the funding available without a catch-up period. By funding an extensive paving program as delineated in the PARIS report, the City is able to prevent the continued erosion of the City's assets. Additionally, after the catch-up period additional resources will be available to continue an increased maintenance program, thereby minimizing further degradation of the City's street assets.

ATTACHMENTS:

A. Resolution No. 7219
B. PARIS Presentation Report
C. R3 Consulting Group, Inc.'s Rate ARoad Impact Fee Analysis for Road Impact
D. TKE report titled "Pavement Deterioration Analysis Report"
E. TKE report titled "Utility Repair Pavement Restoration Report"
F. Draft 218 Notice
G. Pavement Management Program Report
H. Comments from Mayor Pro Tem Foster

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~~Director~~Chief Public Information Officer

DAVID HEXEM
~~Innovation and Technology~~