



CITY COUNCIL STAFF REPORT

DATE: March 27, 2017

TO: Honorable Mayor and City Council

FROM: Darren Greenwood, Public Works Director
Paul Spence, Community Development Director

SUBJECT: Discussion and Direction regarding the Asset Management Program for Walls

RECOMMENDED ACTION

Staff recommends the City Council approve a new risk based prioritization approach for wall repair, rehabilitation, and replacement in the development of the Asset Management Program.

SUMMARY

The City is currently responsible for approximately 35 miles of walls valued at \$113 million that are primarily funded by the General Fund. Staff currently prioritizes the repair, rehabilitation, and replacement of walls in a primarily reactive manner. Staff is recommending that the City use an asset-risk-based prioritization method for these assets as part of the development of an overall Asset Management Program.

BACKGROUND

The central goal of an Asset Management Program is to develop a sustainable practice for repair, rehabilitation and replacement of assets that meets the required level of service at the lowest life-cycle cost and asset risk. To achieve this goal, the City needs to create a prioritization system that moves towards proactive management of the City's various assets.

On February 9, 2015, Council directed staff to develop an Asset Management Program (AMP). Over the course of that year, staff completed the Request for Proposal process, and recommended executing a contract with Kayuga Solution (Kayuga). On September 28, 2015, Council approved the contract. The AMP will evaluate the current status of the City's non-enterprise assets as well as develop recommended financial and operational

policy options. On January 11, 2016, Kayuga and staff presented a work plan for the development of the program to Council. On March 28, 2016, Council took action on the program development by directing staff to include information regarding the balance of funds being dedicated to asset expansion and enhancement versus rehabilitation and replacement costs in future capital improvement programs. The City Council appointed the Community Asset Management Program Committee on June 13, 2016, which is comprised of nine residents to provide feedback on the Asset Management Program and potential policy options. Staff then presented a proposed risk-based methodology and initial model results for the pavement management program to Council on June 27, 2016. At that meeting, Council directed staff to utilize a risk-based prioritization method for spending road rehabilitation funds, and asked staff to continue to refine the model and methodology of the AMP. Staff returned to the City Council on November 28, 2016 to present the initial findings on buildings. After the presentation, Council adopted a risk management strategy for the building facilities which included prioritization criteria for building replacement.

DISCUSSION

The City of Livermore maintains a variety of walls totaling approximately 35 miles in length. Most of these walls are located alongside arterial roads and behind residences. Some of these walls are funded through the City’s General Fund and others are funded through Landscape Maintenance Districts (LMDs). The segments within the LMDs use LMD funds for basic maintenance. However, the LMDs are not collecting sufficient funds for periodic replacement. Periodic replacement of these LMD wall segments will require either increased assessments or an ongoing subsidy from the General Fund. The public benefit of these walls is primarily aesthetic, whereas the private benefits include security, privacy, and in some cases, sound attenuation for residents.

Staff proposes to prioritize the repair, rehabilitation, and replacement of walls based on asset risk. The risk score assigned to each asset is comprised of a consequence of failure score (when an asset fails, how bad will it be?) and a probability of failure score (based on either condition or calculated life span, is the asset likely to fail soon?). Together, these create a risk matrix which will be sorted into high, medium, and low risk assets.

Staff proposes that the consequence of failure be determined by the visibility of the wall using the following factors: (1 is lowest consequence, 5 is highest consequence):

Consequence Rating	Factors
5	Gateway Areas, Adjacent to High Pedestrian Area, Retaining Walls
4	Adjacent to Arterial Streets
3	Adjacent to Collector Streets
2	Adjacent to Local Streets

1	Walls which do not meet any of the above criteria
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The probability of failure is determined by the physical condition of the wall and the calculated lifespan. The asset risk score then becomes the product of the Probability of Failure and the Consequence of Failure. The category of “high risk assets” will be defined as the walls that have both a high probability of failure and a high consequence of failure. Because the probability of failure is dictated by the physical conditions and calculated lifespan of the wall, staff is primarily seeking Council input and concurrence on the proposed consequence of failure rating factors.

The preferred level of service is to maintain and replace walls on a pre-determined schedule, coupled with periodic evaluations. The cost of this preferred level of service would total an average of \$2.1 million per year for General Fund walls, and an additional \$1.2 million per year for LMD walls.

Staff is proposing that the minimum recommended level of service is to prevent walls from reaching the high asset risk category. Under this scenario, only walls with a Consequence of Failure score of 4 or 5 that are nearing failure would receive funding for rehabilitation or replacement. In order to minimize the neglect of low consequence rated walls, a potential option for this level of service could be to dedicate a small amount of funding on an annual basis to address lower consequence walls. The cost of this minimum recommended level of service would average \$1.9 million per year for General Fund walls and \$900,000 per year for LMD walls. However, the final decision regarding the amount of funding dedicated to walls versus other asset classes will be made after all of the asset classes have been reviewed and presented to Council.

In general, the majority of walls are currently in a good or acceptable condition. However, the assets currently within the “high risk” category require \$7.9 million to repair, rehabilitate, or replace. This represents the current backlog of work.

One particular area of current concern is the wall on the east side of Holmes Street, south of Concannon Boulevard. In this area, several wall sections have failed and others are near failure. Based on an asset risk assessment, this segment of wall would be in the “high asset risk” category. Unfortunately, before the City can make repairs, the property owners must take corrective action to remove additional soil that is creating additional force on these non-retaining walls, and remove trees that are damaging the wall. Staff has notified the abutting property owners of these requirements and will continue to work towards obtaining their cooperation.

In recent years, City staff has evaluated the standard practices for requiring new walls as well as owning and funding their maintenance and repair. New walls are now required to be fully funded, including both repair and replacement, by the property owner through either an LMD or Home Owner’s Association. In addition, staff is considering wall replacement materials that are more durable and less costly to install and maintain.

The City may have several different policy options when addressing how to balance the City's resources for the repair, rehabilitation, and replacement of walls with the actual costs to maintain this infrastructure at an acceptable level of service. These options may include, but are not limited to:

- Divestment – Transfer all or a portion of responsibility for walls to the abutting property owners.
- Cost Sharing – Split the cost of maintenance and responsibility with abutting property owners.
- Removal – The City may choose to remove walls when they fail or are near failure.
- Retain Responsibility – The City may choose to retain responsibility for all or a portion of the walls. This policy option would require substantial additional funding.
- Parcel Tax or Assessment District – The City may choose to retain responsibility for all or a portion of the walls and fund the activity through a parcel tax or assessment district. This policy option would require a majority vote of the affected property owners.

Staff has presented this information to the Community Asset Management Program (CAMP) Committee.

FISCAL AND ADMINISTRATIVE IMPACTS

Depending on the level of service selected and the policy options chosen, the need for funding the walls could range from \$1.9 to \$2.0 million per year, in addition to the current practice of spending up to \$100,000 per year on wall repair and maintenance. Elimination of the existing backlog would require an additional \$7.9 million either up front, or over a short period of time.

The table below summarizes the initial findings of the asset management program to date including current, recommended minimum, and preferred budget scenarios. Again, final funding strategies and decisions will be made after all of the asset classes have been presented to Council.

Asset Class	Current Average Annual Budget	Recommended Minimum Average Annual Budget	Preferred Average Annual Budget
Pavement	\$4.3 million	\$5.5 million	\$7.1 million
Buildings	\$2.6 million	\$4.0 million	\$6.75 million
Walls	\$100,000	\$2.8 million	\$3.3 million
Total	\$7.0 million	\$12.3 million	\$17.15 million

ATTACHMENTS

None.

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