T&E AGENDA: 05-21-07
ITEM: 8

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: TRANSPORTATION & ENVIRONMENT COMMITTEE

FROM: Ed Shikada

SUBJECT: SEE BELOW

DATE: 05/08/07

Approved Date 5/14/07

SUBJECT: STRATEGIES TO REDUCE DEFERRED MAINTENANCE AND INFRASTRUCTURE BACKLOG

RECOMMENDATION

Accept this staff report and work plan for strategies to reduce deferred maintenance and infrastructure backlog for City facilities.

OUTCOME

Acceptance of this staff report and accompanying work plan will allow staff to continue with the development and implementation of strategies to address the City's infrastructure backlog. Given the range of infrastructure maintained by the City, ranging from streets and wastewater treatment to cultural and community centers, this work plan proposes a consistent framework for all programs, while recognizing that implementation timelines will vary to reflect the varying stages of infrastructure and maintenance management strategies for individual programs.

BACKGROUND

The City's facilities consist of numerous buildings, parks, trails, pools, streets, water, sewer and storm systems as well as an International Airport and a large Water Pollution Control Plant. In addition to fixed or stationary assets, the City also owns major equipment such as fleet vehicles and computers. Some of these assets are approaching the end of their life cycle and the need to replace, rehabilitate and upgrade them is becoming critical. Even in the case of facilities that have been recently upgraded or constructed, regular maintenance is essential to ensure the facilities and their major components meet life cycle expectancies.

The Mayor's March Budget Message for fiscal year 07-08 was approved by Council on March 20, 2007. The Budget Message identifies reduction of the City's deferred maintenance and infrastructure backlog as a top priority. This was based on the results from the community outreach process as well as the Council priority setting session. Staff has been directed to create a Two-Year Infrastructure Work Plan to identify prioritized needs and potential funding

mechanisms and present it to the Transportation and Environment (T&E) Committee in May 2007. Staff has also been directed to propose infrastructure condition standards, along with the needs assessment and potential funding mechanisms, and present them to the T& E Committee in August 2007.

Given the variety of assets that can be considered "infrastructure," staff has begun its analysis of these and immediately determined that it is critical that this workplan establish a clear and achievable objective. This memorandum proposes definitions and a recommended approach to achieving its objective.

ANALYSIS

The City's current attention to deferred maintenance and its infrastructure backlog is the result of several years of diminishing resources. While the City has been successful and continues implementation of General Obligation bond programs for construction of parks, libraries, and public safety facilities, operating funds for maintenance of these and existing facilities has been increasingly strained. This includes five successive years of budget reductions for overall City operations, and an intentional strategy of preserving current services as a priority over both short-term immediate maintenance needs and long-term preventative infrastructure maintenance.

The necessity for short term service priorities has generated or exacerbated numerous infrastructure deficiencies, such as:

- Street resurfacing has been reduced from an average of 40 miles per year (from 1997 to 2003) to only 5 miles per year for the past 4 years, resulting in a current average pavement condition index of 62 and a percentage of streets in acceptable or better condition drop from 93% to 78%.
- DOT previously provided tree trimming of 20,000 trees per year but due to decreased budgets this has declined to approximately 3,000 per year. Structural street tree trimming has effectively been eliminated.
- Parks maintenance continues at a reduced level of service and 2006-07 is the second year in which regional parks are no longer maintained seven days a week. Neighborhood parks continue to receive two fewer days of maintenance per week as compared to 2004-2005 service levels. This means neighborhood parks are being visited by maintenance staff anywhere from two to five days a week depending on the level of use of the neighborhood park (high, medium or low) while restrooms in all parks, with a few exceptions, continue to be available for public use seven days a week.
- A recent review of the Water Pollution Control Plant concluded that significant capital and maintenance investments are urgently needed as the age and the harsh environment under which these systems operate have resulted in system-wide vulnerabilities and high risk conditions for possible failures that could result in sanitary sewer overflows and regulatory permit violations. Lack of sufficient funding, for example, has required the deferral of several critical projects including rehabilitation of the electrical distribution systems and replacement of digester gas mains at the Plant and rehabilitation of 34,000

feet of trunk sewers and rehabilitation of nine sewer pump stations that are currently in degraded condition. In addition, outdated sewer maintenance equipment is resulting in insufficient cleaning and maintenance of several miles of sewers, mostly in residential areas, heightening concerns about potential sanitary sewer overflows. .

- The sanitary sewer and storm drain collection systems have never had a comprehensive condition assessment. With limited funding, only localized condition studies have been conducted in advance of specific projects. The primary inspection tool for underground pipelines is remote video inspection immediately following a high-pressure cleaning of the line. Since wastewater flows continuously in medium and large diameter sanitary pipelines, video inspection must be supplemented with other methods to evaluate the condition of submerged pipes and joints. Storm and sanitary pumping stations and storm drain outfalls can be evaluated through more conventional inspection techniques.
- Community facilities such as libraries and community centers have faced custodial service reduction from daily service, 5-7 days per week, to an average of 4 days per week. Additionally, the quality of maintenance has been reduced from full service for both public and staff area to spot cleaning public spaces, and infrequently servicing staff areas as time permits. Programmed funding for floor care and window washing has been eliminated. Preventive maintenance for large mechanical equipment has been also reduced from an 80% to 30% completion rate over the past 4 years. The lack of programmed funding for building system replacements like air conditioning and heating equipment, roofs, lighting and paint has also affected facility reliability.
- Public safety facilities have also taken similar reductions. Police facilities have reduced custodial services from 15.0 to 11.5 Custodial FTE's. This impacts not only the overall appearance of the facility but also the longevity of flooring and other infrastructure. Preventive maintenance for public safety facilities have also been reduced from an 80% to 30% completion rate over the past 4 years. The lack of programmed funding for building system replacements has impacted facility reliability.

In order to address these challenges, the City is undertaking several initiatives to evaluate and implement infrastructure improvements in a sustainable manner. These include ongoing efforts related to streets and water pollution control facilities, as well as initiatives to advance public-private partnerships to leverage private and community contributions to infrastructure improvements.

Within the context of these ongoing efforts, staff believes that a comprehensive perspective on infrastructure needs is critical in order for the City Council, and the community overall, to weigh proposed infrastructure funding strategies in one area against needs in other areas. Ultimately, it will be necessary for the City to set priorities among infrastructure systems given that resources, including the opportunities for new resources, are limited. This work plan would therefore serve as a framework for monitoring progress toward infrastructure maintenance and Capital replacements with various programs, as well as highlight the citywide context and potential opportunity costs involved with advancing funding proposals.

Staff is proposing to group the City's infrastructure into the following programs. Though some of the programs align with the CIP, others have been grouped based on current facility

management strategy. Thus, Building Facilities includes elements from the Library, Park and Community, City Hall, Public Safety and Municipal Improvements CIPs. City facilities operated by non-City entities have also been included as a separate program.

Programs:

- Airport
- Building Facilities
- Convention Center and other Cultural Facilities (operated by Team San Jose)
- City Facilities operated by community organizations
- Fleet
- Parks, Open Space and Pools (including trails and landfills)
- Technology (including cabling, communications, and facilities services)
- Transportation Infrastructure (including streets, sidewalks, landscaping, public parking)
- Sanitary Sewer System
- Service Yards
- Storm Sewer System
- Water Pollution Control
- Water Utility System

At this time all of the programs, and the components within the programs, are at varying stages in efforts to analyze and implement maintenance and infrastructure upgrades. The proposed categorization into programs and components will allow staff and the Council to get a comprehensive picture of the condition assessments, funding and implementation strategy that is being or will need to be executed in order to reduce the City's deferred maintenance and infrastructure backlog, and also drill down for more detail.

Attachment A shows a two year implementation work plan for all programs. For each program, the recommended work plan has been organized into the following phases:

Phase 1: Inventory current assets, and review existing strategy to manage maintenance and infrastructure needs
Phase 2: Establish infrastructure condition standards, assess needs, and prioritize improvements needed to achieve condition standards
Phase 3: Evaluate existing and potential future funding options
Phase 4: Develop a recommended strategy to reduce deferred maintenance and infrastructure backlog
Phase 5: Implement strategy

Next Steps

Consistent with City Council direction in the Mayor's March Budget Message, staff is proceeding with determining the state of each of the categories within a particular program along with a two year implementation plan specific to each category. In August, staff will present the Transportation & Environment Committee with the compilation of existing condition assessments and recommendations for proceeding with strategy development.

COORDINATION

Preparation of this report and memorandum was coordinated with the assistance of the following Departments: General Services, Transportation, Airport, Parks, Recreation and Neighborhood Services, Library, Public Works, Environmental Services, Police, Fire and the City Attorney's Office.

FISCAL/POLICY ALIGNMENT

The staff report and proposed work plan is consistent with the Council approved Budget Strategy to reduce deferred maintenance and infrastructure backlog and to develop a strategy to improve the infrastructure.

COST AND BUDGET IMPLICATIONS

Implementation of this workplan will support the City Council's consideration of individual program funding recommendations throughout the upcoming year.

CEQA

Not a project.

ED SHIKADA
Deputy City Manager

For questions, contact Ashwini Kantak, CIP Action Team Leader, at (408) 535-8147.

Attachment

Attachment A – Work Plan

No.	Program	Current Status (May 2007)	Anticipated status by June 2009	Notes
1.	Airport	Varies, Phases 1-5	Phase 5	Infrastructure improvements for Runways, Taxiways and Aprons have been almost completed. Remaining major infrastructure improvements for the Roadways, Landscaping, Terminals and Parking are included in TAIP scope and will be implemented by 2010. September 2007 – Procurement of CMMS to be complete. June 2008 – Complete implementation and activation of CMMS. December 2009- Complete asset classification and establish performance metrics for all assets.
2.	Building Facilities	Varies, Phase 2-3	Phase 4	Currently there are ongoing measures for the infrastructure needs along with established priorities. Critical maintenance needs are programmed into the CIP. Milestone – December 2007 – Incorporation of all GS managed facilities into assessment plan and deferred maintenance identification list.
3.	Convention Center and Other Cultural Facilities	Phase 2	Phase 5	Team San Jose has completed a needs assessment for all of the facilities. Infrastructure improvements are being prioritized and will be implemented based on available funding. Team San Jose is also evaluating ways of establishing an ongoing maintenance fund.
4.	City Facilities operated by other community organizations	Phase 1	TBD	A compiled list of all of the facilities in this program will be brought forward in August 2007 along with recommended strategies.
5.	Fleet	Phase 3	Phase 4	Criteria for vehicle and equipment replacement for each category have been established. A prioritization method to identify the most critical replacement needs will be used to develop a recommended strategy by June 2009. Implementation will follow shortly, based on available funding.

No.	Program	Current Status (May 2007)	Anticipated status by June 2009	Notes
6.	Parks, Open Spaces and Pools	Varies, Phases 2-4	Phases 4&5	Condition assessment and prioritization for all the play lots is an on going effort. Funding options for addressing ongoing maintenance are being evaluated. Efforts are underway to engage consultant services to evaluate all of the irrigation systems. An Aquatics Master Plan is also underway and a funding strategy to rehabilitate all of the existing pools in underway. August 2007 – Completion of Aquatics Master Plan Fall 2007 – Expand irrigation system inventory listing to be component based Winter 2007/2008 – Purchase handheld devices to begin the inventory assessment December 2008- Complete database input
7.	Technology	Phase 5-Communications Phase 2 – Other	To continue on-going program for communications. Phases 3-5 for other components	Due to its connection to emergency services, communications infrastructure is maintained with no deferred maintenance needs. General Services will continue to evaluate the infrastructure on an annual basis to insure continued maintenance at this level. Efforts are underway to develop a strategy to evaluate cabling infrastructure and personnel technology needs. Preliminary strategy to be brought forward in August 2007. Cabling between and within City facilities is an ongoing responsibility. City Hall and the currently committed projects, such as the Central Service yard and the Public Safety Campus, provide the standards for expansion to other city facilities. The scope of this project includes services with life cycles exceeding seven years and could include cabling, conduit, and wireless services.

No.	Program	Current Status (May 2007)	Anticipated status by June 2009	Notes
8.	Transportation Infrastructure	Varies, Phases1-2	Phase 5 for all components except Public Parking Phase 2 – Public Parking	Public Outreach component of the Transportation Maintenance Master Plan is underway. June 2007 – Completion of Public Outreach and Research. Fall 2007 - Completion of Master Plan. November 2007- Decision regarding ballot measure. June or November 2008 – Possible ballot measure. If measure is approved, implementation can begin in 2009.
9.	Sanitary Sewer System	Phase 1	Phase 4 for some components	Phase 4 - Needs assessment for some of the critical components such as pump stations will be completed by June 2009. Implementation will be carried out based on priorities and available funding. Due to funding constraints, a complete needs assessment for the entire sanitary sewer system has never been undertaken. Staff will develop a work plan to determine appropriate cycles of condition assessment, rehabilitation and/or replacement for the network based on age and criticality.
10.	Service Yards	Phase 3	Phase 4	Ongoing measures for the infrastructure needs along with established priorities are in place. Critical maintenance needs are programmed into the CIP.
11.	Storm Sewer System	Varies – Phases 1-2	Phase 4 for some components	Needs assessment for some of the critical components such as pump stations and outfalls are underway. Implementation will be carried out based on priorities and available funding. Due to funding constraints, a complete needs assessment for the entire storm drain system has never been undertaken. Staff will develop a plan to determine appropriate cycles of condition assessment, rehabilitation and/or replacement for the network based on age and criticality.

No.	Program	Current Status (May 2007)	Anticipated status by June 2009	Notes
12.	Water Pollution Control System	Varies – Phases 1-5	Phase 5	Implementation is underway for critical components of the electrical system, and certain other elements such as sludge thickening and anaerobic digestion. Structural rehabilitation for all of the treatment components is programmed into the current CIP. A Master Planning effort for the entire system is underway, master plan will develop a recommended strategy for the remaining components. June 2007 – Consultant RFP for Master Plan. September 2007 – Procurement of CMMS to be complete. October 2007 – Start Master Plan (complete by 2010). December 2008 - Design of Electrical Master Plan to be completed. December 2008- Complete construction of digester rehabilitation.
13.	Water Utility System	Phase 5	To continue on-going program	A regular preventive maintenance and rehab/replacement program is already underway. Master Plan update is underway, it is expected to provide information on ways to optimize performance and efficiencies. December 2007 – Completion of an updated master plan.

Legend

Phase 1: Inventory current assets, and review existing strategy to manage maintenance and infrastructure needs
Phase 2: Establish infrastructure condition standards, assess needs, and prioritize improvements needed to achieve condition standards
Phase 3: Evaluate existing and potential future funding options
Phase 4: Develop a recommended strategy to reduce deferred maintenance and infrastructure backlog
Phase 5: Implement strategy