CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: TRANSPORTATION AND ENVIRONMENT COMMITTEE

FROM: Matt Loesch

SUBJECT: **STATUS REPORT ON DEFERRED MAINTENANCE AND INFRASTRUCTURE BACKLOG**

DATE: 3/18/24

Approved		Date	**3/25/24**

BACKGROUND

In October 2007, the first comprehensive report on the City's Deferred Maintenance and Infrastructure backlog was presented to the Transportation and Environment Committee and then to the full City Council in a special Study Session. This report analyzed the unfunded infrastructure and ongoing maintenance needs over a 5-year period for 14 discrete programs in the City. The 2007 report identified a one-time unfunded need of $915,000,000 and an ongoing unfunded need of $45,000,000. The report has been updated annually since that time.

This staff report provides an update on the City's Deferred Maintenance and Infrastructure Backlog (DMIB) and discusses near-term strategies being employed to minimize further increases to the backlog.

Overall, the DMIB totals roughly $1.7 billion in unfunded costs, with an additional $129.07 million needed annually to maintain the City's infrastructure.

ANALYSIS

Staff has updated the DMIB estimates last provided in 2022 to reflect more recent work and funds anticipated for inclusion into the 2025-2029 Proposed Capital Improvement Program (CIP), which will be released in late April. The current backlog of deferred needs is estimated at $1.7 billion, with an additional $129.07 million needed annually.

Based on these updates, the following table summarizes the current state of the City's Deferred Maintenance and Infrastructure backlog. The costs in the chart below represent staff's best

estimate based upon available data. Further analysis and refinement of these estimates would be required before funding is requested to address specific unfunded needs.

Infrastructure Backlog (numbers in millions)

Program	One Time Backlog			Annual Ongoing Unfunded Needs		
	2022	2024	Change	2022	2024	Change
Airport	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
City Operated Buildings [1]	$246.50	$293.80	$47.30	$20.10	$33.07	$12.97
Cultural Facilities Operated by Others (OCA)	$13.80	$38.74	$24.94	$6.80	$10.00	$3.20
Sports Facilities Operated by Others	TBD	$26.87	TBD	TBD	$7.90	TBD
Convention Facilities (TSJ)	$73.50	$75.00	$1.50	TBD	TBD	TBD
Fleet	$7.70	$17.40	$9.70	$1.40	$1.20	($0.20)
Parks, Pools and Open Space [2]	$284.90	$339.80	$54.90	$36.50	$38.80	$2.30
Sanitary Sewer	$50.00	$65.00	$15.00	$0.90	$0.30	($0.60)
Service Yards	$14.10	$14.10	$0.00	$0.70	$5.80	$5.10
Storm Sewer [3]	$180.00	$180.00	$0.00	$5.00	$13.20	$8.20
Information Technology [4]	$47.50	$45.80	($1.70)	$5.70	$3.30	($2.40)
Radio Communications [5]	$3.80	$7.70	$3.90	$0.40	$3.50	$3.10
Transportation Infrastructure [3]	$736.90	$552.20	($184.70)	$14.00	$12.00	($2.00)
Regional Wastewater Facility	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Water Utility	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total	**$1,658.70**	**$1,656.41**	**($29.16)**	**$91.50**	**$129.07**	**$29.67**

(1) For PRNS Parks Buildings Annual Ongoing is $22.6M and $10.47M for other facilities. Note that in the 2022 report, the annual ongoing number was only for Parks Buildings only; other facilities annual ongoing number was not included.
(2) The one-time backlog number for parks and open space may significantly increase in future years as a result of the aging system as described further later on in this report.
(3) Measure T investments include over $38M in the Storm Sewer, $30M in Transportation Infrastructure's streetlights and bridges, and $300M in on-going pavement annualized over 10 years.
(4) Technology needs within departments not managed by the IT Department are not included. Those departments present their technology needs within their program costs and plans.
(5) The one time backlog cost is to replace only the radios that will be no longer supported. The annual ongoing need is based on replacing all SVRCS radios in a long term contract with Motorola to receive the highest discount.

The One-Time Backlog of deferred needs column is the unfunded cost to restore a given asset to a satisfactory and serviceable condition rating. The Annual Ongoing Unfunded Needs column describes the additional funding needed to maintain the asset in satisfactory and serviceable condition or to establish a sinking fund for strategic asset maintenance or rehabilitation.

Attachment A is a summary of the department's operations, description of assets, funding, status and key changes from the prior reports in each asset category. Included is information on the status of near-term actions that the City has taken or could take to reduce the Deferred Maintenance and Infrastructure Backlog, along with any discussion of future opportunities relating to the asset category.

Some programs, funded either through enterprise funds or other funding mechanisms, while still facing sizable deferred maintenance and infrastructure backlogs, are sustainable and have confirmed no budget shortfall.

The Airport Department continues to monitor and identify vertical and horizontal deferred maintenance backlog needs. The Airport Department funded several one-time projects and completed additional deferred maintenance items within the Airport's 5-year Capital Improvement Program (CIP).

Similar to the 2022 report, with funding collected from tributary agencies and revenue from ratepayers, the Regional Wastewater Facility and Water Utility programs reported no unfunded needs.

Transportation Infrastructure continues to have the largest unfunded need. This area, focusing on the City's street network, roadway lighting, and right-of-way landscaping assets, has successfully leveraged Federal, State, and Regional funding to partially address the needs of the assets. Although the one-time backlog associated with street maintenance has stabilized and will continue to decrease in the coming years, conditions will likely start to deteriorate when funding is exhausted in the Public Safety and Infrastructure Bond Fund (Measure T).

City-operated buildings reported increases in one-time unfunded needs based on recently completed life cycle cost analysis reports.

The Parks, Recreation, and Neighborhood Services Department (PRNS) continues to evaluate infrastructure backlog against baseline conditions established in 2013-2014 and recognizes the need to advance a new city-wide analysis to provide a new benchmark of cost data.

The City's storm sewer program faces a significant reduction in funding transfer in the next few years. The need to rehabilitate the existing storm sewer infrastructure has become more crucial as these systems are deteriorating, causing them to be inundated while dealing with the effects of climate change. Lastly, additional funding is necessary to stay in compliance with the Consent Decree and the latest Municipal Regional Permit 3.0, which has been evaluated and will be included in this year's report. In the next few years, the City must develop and implement a new sustainable funding strategy to support the Storm and GSI programs. The City Manager's Office and Public Works, Transportation, and Environmental Services departments will be working with consultant firms and meeting with other jurisdictions and public agencies to discuss sustainable funding mechanisms to support similar programs.

Additionally, Attachment B provides the breakdown of DIMB by General Fund and Capital Funds on a one-time and ongoing basis.

COORDINATION

This memorandum was coordinated with the following Departments: Airport, Environmental Services, Information Technology, Libraries, Parks, Recreation and Neighborhood Services, Transportation, and the City Manager's Budget Office.

/s/
MATT LOESCH
Director of Public Works

For questions, please contact Mathew Nguyen, Deputy Director for the Department of Public Works at (408) 535-8300.

ATTACHEMENTS:

Attachment A - Program Details
Attachment B - General Fund vs. Capital Fund

ATTACHMENT A
PROGRAM DETAILS

AIRPORT

The Airport is an enterprise fund that is required to be self-sufficient. The Airport is able to maintain self-sufficiency by relying on a combination of funding sources that may either be used for capital improvements or repayment of debt service for capital improvements: Federal Grants (FAA), Passenger Facility Charges (PFC), Customer Facility Charges (CFC), and General Airport Revenue.

The Airport currently has no infrastructure backlog during this reporting period.

The Facilities & Engineering and Planning & Development Divisions of the Airport Department are responsible for maintaining buildings and pavement. These facilities include:

- 2 Runways, 4 parallel taxiways, 14 cross taxiways, aprons and service roads (Airport Operations Area);
- 1 Fire Department building (ARFF);
- 1 Police Department building (SJPD Airport Division);
- 7 Terminal Area Buildings (A-Plus, Terminals A and B, Interim Gates Facility, FIS, T/A Baggage Claim, Central Plant);
- Miscellaneous support buildings;
- Smaller support buildings for maintaining building structure only;
- 3 Public Parking Garages;
- 4 Surface Parking Lots; and
- Several miscellaneous buildings used to support the maintenance of Airport structures.

The Airport tracks physical assets, horizontal and vertical, utilizing two computer-based systems as well as specialized studies. For the pavement assets (horizontal), the Airport utilizes "PAVER" computer software for condition assessment and prioritization and Hexagon EAM is utilized for building condition assessments (vertical). Special studies and consultants are used to supplement these two programs as well as in-house resources.

The last major upgrade and improvement to the Airport campus was completed in June 2010 and six temporary gates were added in 2019 — these assets are requiring additional maintenance to continue operating at the established efficiency levels. Maintenance items are categorized, prioritized, and addressed within the Airport's 5-year CIP as funding permits. The Airport currently has no infrastructure backlog.

Additional structures outside the terminal zone are primarily used in support of aviation functions, such as parts storage and tenant maintenance activities. The Airport Master Plan Amendment including a new CEQA Environmental Impact Report (EIR) was approved by the

City Council on April 28, 2020, and identified existing facilities requiring replacement to maximize the land use and allow the construction of modernized terminal facilities.

Critical pavement areas that are maintained by the Airport include taxiways, runways, and aircraft parking areas within the Air Operations Area (AOA) and the public right-of-way surfaces. The Airport maintains a Pavement Maintenance and Management Program to prioritize, plan and track maintenance activities for the Air Operations Area (AOA). This program is an industry-accepted, best management practice for identifying pavement life and cost estimates for planning purposes. Typically, airports that serve commercial aircraft traffic have used various "cut-off" points, a critical Pavement Condition Index (PCI) value, at which a pavement section requires rehabilitation. Generally, a Critical PCI of 70 for runways, 60 for taxiways and aprons, and 55 for shoulders and roadways is accepted throughout the industry. Preventive maintenance activities such as crack and joint sealing and patching are recommended for pavements that have a PCI greater than the critical PCI identified.

Overall, the pavement network at the Airport had an area weighted PCI value of 80 (on a scale of 0-100, 100 being zero maintenance required) based upon the last study conducted in 2021.

BUILDING FACILITIES

The Facility Management Division of Public Works Department supports maintenance, operations, oversight, and capital improvements at over 400 City buildings and structures, comprising more than 5 million square feet. These buildings are broken up into four different categories in this report as follows:

- City Operated Buildings
  - 37 Fire Department Buildings;
  - 3 Police Buildings;
  - 23 Libraries;
  - 47 Community Centers;
  - 251 Park Facility Buildings;
  - 3 City Hall Buildings;
  - 2 ESD Buildings
  - 1 Animal Care & Services Center (ACS)

- Cultural Facilities Operated by Others
  - 6 Cultural Facilities;
- Convention Facilities
  - 6 Facilities Operated by Team San Jose (TSJ);
- Sports Facilities Operated by Others
  - 3 Sports Facilities

Buildings and their systems and equipment have expected useful life. Building systems like the building envelope, HVAC, plumbing, electrical, and interior finishes have industry prescribed expected useful life. Some systems like HVAC and roofs have a 20-25 years expected useful life,

while others like plumbing and electrical may serve a 30-50 years useful life. Many of the City's building systems are nearing their useful life and some systems are already serving beyond their expected useful life.

There are a few factors worth noting that are impactful to the useful life of building systems. The high use of systems is one contributing factor. City owned facilities usage is high with many buildings operating 7 days a week and some systems running 24/7, 365 days a year. Another significant contributing factor is the lack of a robust preventative maintenance program in place to proactively service systems and equipment to maximize their useful life. The City has challenges to adequately fund a preventative maintenance program. With the technological advancements in building systems over the years, more components and items were added to the routine maintenance need list, and those needs cannot always be met.

The higher demand for preventative maintenance has been challenging to meet due to previous budget deficits and shortfalls from sources generally used to fund capital maintenance activities. Forced reductions have left insufficient resources to meet the maintenance needs of the facilities. Even as a portion of this funding has been restored, the deferred work continues to increase. This in turn can lead to building system premature failures and not achieving industry prescribed expected useful life. Another strain on facilities maintenance is bringing in new building inventory, either through new construction or the acquisition of new building facilities. These combined factors with continued staffing deficiencies and funding shortages have added to the challenge of properly and promptly making needed corrective and preventative maintenance repairs and/or system replacements.

The Facilities Management Division of Public Works Department, when resourced, continues to conduct facility condition assessments to determine the current status of building systems, projected end of life of systems, and cost estimates for repair and replacement. These assessments have historically been performed through consultants. Until such assessments can be further funded, resourced, scheduled, and analyzed, this report will use building assessments and estimates completed to date.

City Operated Buildings

The current backlog for deferred maintenance in building facilities is estimated at $293.8 million**,** which includes approximately $215 million for Parks Buildings. Additionally, many significant City owned facilities are in need of re-assessment due to the data being approximately a decade old. It is likely that current backlog is higher but will need to be further evaluated when resources are available. The remainder of the backlog needsis derived from a combination of consultant building assessment work completed to date by in-house staff and a small number of third-party building assessments. City Hall has been experiencing water intrusion into the basement recently, and consulting assessment and testing are scheduled in the next few weeks. The preliminary rough cost for design and repair is in the range of $15 million. Additionally, a facility condition assessment was performed at the three City Hall buildings by a consulting firm in the last week of January 2024. A report with the estimated repair/maintenance costs is expected to be available by April 2024, and those numbers will be incorporated in the next DMIB update.

The preventative maintenance program is very important and provides proper maintenance of building systems in order to prolong the useful life of building systems. The focus of the program has been 1) the completion of work items that address life safety needs, and 2) the preservation of assets. However, recognizing the need for cost saving measures, the funding allocation for preventive maintenance activities in the Facilities Management Division has been reduced over the years. Although not an ideal situation, cost savings were achieved through the increase of cycle times for maintenance activities related to the preservation of assets. In the short term, these reductions will result in a slightly higher rate of building system failures needing corrective action. Over the long term, the result of these reductions will shorten building systems' useful life and accelerate the need for full equipment replacement requiring capital funding.

Facilities Operated by the City	Backlog
Parks Buildings	$214,500,000
City Hall	$35,320,000
Police	$8,480,000
Animal Care and Services	$2,500,000
Fire Stations	$9,000,000
Libraries	$24,000,000
Total Backlog	**$293,800,000**

Cultural Facilities Operated by Others

These facilities, totaling over 900,000 square feet, include those listed in the following table.

Cultural Facilities	Estimated Five-Year Rehabilitation Need
Children's Discovery Museum	$4,950,000
Tech Interactive Museum	$8,755,000
History San Jose Facilities	$6,280,000
Museum of Art	$3,350,000
Hammer Theatre	$14,191,000
Mexican Heritage Plaza	$1,218,000
Total Budget Need	**$38,744,000**
Cultural Facilities Capital Maintenance Reserve	$0
Remaining Unfunded Need	**$38,744,000**

The current estimated rehabilitation needs through FY 2028-29 have been recently updated to approximately $38.7 million. Within this overall estimate, multiple facilities' funding needs have increased significantly. Hammer Theater's aging equipment and building components and worn-out roof need replacement. The Tech Interactive Museum's escalators and elevators had a long history of downtime and complaints and require replacement. The History San Jose Park has

major rehabilitation work identified for the Firehouse building, as well as roofing, painting, electrical, and repairs needed on various buildings onsite.

The operators at the Mexican Heritage Plaza, the Tech Interactive Museum, Hammer Theatre, and the Children's Discovery Museum are participating in a capital maintenance funding program. This program shifts a portion of their annual City subsidy into a separate account to specifically address minor capital funding needs. Note that the Cultural Facilities Capital Maintenance Reserve has been liquidated.

Sports Facilities Operated by Others

There are three sports facilities that are operated by others. They are the SAP center which is the home of the national hockey league San Jose sharks, TechCU Arena/Shark Ice which is the home of the American hockey league San Jose Barracuda, and Excite Ballpark which is the home of the San Jose Giants. TechCU Arena/Shark Ice just completed its expansion in 2022 which added two rink centers to the existing facility under the 2020B bonds funding. SAP center which opened in 1993 has a deferred repair and upgrades list of around $21 million including site ADA upgrades, AV system upgrades, Flooring repairs and upgrades, etc. A table below shows the estimated five year rehabilitation needs for these three sports facilities.

Sport Facilities	Estimated Five-Year Rehabilitation Need
Excite Ballpark	$750,000
TechCU Arena/Shark Ice	$4,357,000
SAP Center	$21,765,000

Convention Facilities Operated by Team San Jose

These facilities are operated by Team San Jose on the City's behalf and total approximately 1.4 million square feet, including the new areas added with the recent expansion of the Convention Center.

Facilities Operated by Team San Jose	Backlog
California Theater	$1,900,000
Center for Performing Arts	$44,000,000
Civic Auditorium	$4,100,000
Montgomery Theater	$1,500,000
San Jose Convention Center	$21,000,000
South Hall	$2,500,000
Total Backlog	**$75,000,000**

Center for the Performing Arts (CPA) is in need of major rehabilitation throughout the entire building including elevator upgrades, structural seismic retrofit, seating rearrangement, ADA upgrades, etc. A $7.6 million chiller, cooling tower and boiler replacement project for CPA is

scheduled for construction in 2025. Convention Center's air handler system and HVAC control system both have reached their service life of 30 years and need to be replaced. The initial Convention Center Restroom Upgrades project was completed in December 2019 at a cost of $2.3 million. The remaining restrooms needs to be upgrades as well at an estimated cost of $3 million.

FLEET

The City's Fleet Management Program provides preventive maintenance, repairs, statutory inspections, acquisition, disposal and fueling services for a fleet inventory consisting of 2,763 vehicles and equipment that support public safety, public health, and general government operations citywide.

These vehicles and equipment are categorized as follows:

Category	Qty.
Police Patrol	456
Fire Front Line	111
General Fleet	1,407
Off Road Fleet	266
Other Equipment	523
Total	**2,763**

This year's vehicle and equipment inventory decreased by 107 assets or 4% from last year's total of 2,870. The decreases occurred primarily in the General Fleet category and were comprised of general fleet light duty vehicles. The City's fleet assets inventory will continue to "right-size" as the organization's overall service delivery systems adjust to the current and future budget reality of the City. As this "right-sizing" occurs, vehicles that are no longer needed for one program will be shifted to another to ensure the City is replacing the vehicles that are the oldest or no longer meet the City's current sustainability goals. This strategy helps extend the useful life of the entire vehicle and equipment inventory.

To assist in the overall management of the City's fleet asset inventory, Public Works utilizes an asset management software application called AssetWorks to monitor equipment utilization, maintenance and repair programs, and fuel management operations. AssetWorks provides the information and reporting to assist staff in maximizing the lifecycle of the City's investment in vehicle and equipment assets.

The current backlog for the entire Fleet Management Program is $17.4 million. Vehicles that provide support for General Funded activities have a current backlog of approximately $7.4 million. The current vehicle replacement funding in the General Fund for the General Fleet of $5.6 million leaves an additional ongoing need of $1.2 million each year to replace eligible vehicles if the annual funding is consistent. This has been a challenge for Fleet Management as the vehicle replacement funds are not consistent each fiscal year. In addition to the General Fund-only portion of the backlog, a backlog exists for vehicles that are not funded in the General

Fund. This year's backlog includes $9.9 million for vehicle replacements in Special and Capital funds. This includes equipment at the Regional Wastewater Facility, vehicles supporting fee programs, and vehicles supporting capital programs. Public Safety vehicle funding has remained fully funded to ensure service. The replacement projections are calculated with vehicles reaching both age and mileage thresholds. There are a significant number of vehicles reaching age only that are not included in the backlog. It is important to consider, older vehicles cost significantly more to maintain. Replacing older vehicles regardless of miles results in lower operating costs, higher availability, cleaner emissions, greater safety features, and better fuel economy. In addition, the previous City Administration prompted a review of the eligibility age and milage for vehicles to be considered for replacement in order to expedite the conversion of the City's fleet to become more hybrid or electric only, thus requiring more replacement funding due to such earlier vehicle retirements.

PARKS, RECREATION AND NEIGHBORHOOD SERVICES

The Department of Parks, Recreation and Neighborhood Services (PRNS) manages parks, trails, community centers and various properties throughout the city. The Capital Program within PRNS is part of the Neighborhood Services CSA and is responsible for the development of new facilities and the renovation of existing facilities. The main funding sources for the program are generated from Construction and Conveyance Taxes and fees paid through residential developments under the Parkland Dedication Ordinance (PDO) and Park Impact Ordinance (PIO), collectively called Park Trust Funds. Other episodic funding sources include grants, donations, partnerships, and bonds. The five-year capital budget for 2024-2028 is $384.8M.

The annual funding needs of the program fluctuate based on expiring life cycles of existing facilities and the funding required to develop new facilities to meet General Plan goals which aim to provide 3.5 acres of neighborhood parkland for every 1,000 residents, 7.5 acres of regional parkland per 1,000 residents, 500 SF of community center space for every 1,000 residents, and a 100-mile trail network. In addition to these General Plan goals, the City also strives to provide a park to every resident within a 10-minute walk.

Funding strategies focus on prioritizing spending on replacing aging infrastructure, reducing costs through efficient means of project delivery, and supplementing funds through external sources such as grants, earmarks, and partnerships.

The Capital Park Condition Assessment program was launched in 2020 as a means to gather data on the condition of capital infrastructure. Staff has used this data to identify amenities that are beyond their useful life in order to prioritize funding for the most critical replacements. Of the categories assessed since 2020:

- 2 dog parks have been renovated.
- 21 playgrounds (10 youth lots, 10 tot lots, and 1 all ages lot), have been replaced or renovated; Additionally, 15 playgrounds are funded and are in various stages of

renovation from planning, design, and bidding (11 tot lots and 4 - 5-12 playgrounds are in process)
- 14 basketball courts have been renovated; 3 are in process
- 8 tennis courts have been renovated; 1 in process
- 7 pickleball courts have been renovated;
- 1 futsal court has been renovated;
- 21 pieces of exercise equipment have been renovated;
- 20.1 miles of trails have been renovated;
- 5 parking lots have been resurfaced; and
- 3 Park restrooms are in process of being renovated.

The park assessments continue to grow in scope and quality with new categories added to capture other assets such as shade structures and synthetic turf sports fields.

While a main strategy of PRNS is stewardship, "taking care of what we already have", we also acknowledge the growing demands of the City and continue to fill gaps in the amenity inventory by installing new parks, trails, and adding new features to existing parks. As an example, 19 new pickleball courts have been added since 2020, 9 new parks have been constructed, 2 new community gardens have been constructed and 7.84 miles of trail have been opened. While it is critical to construct new facilities to meet the demand of the growing population, it also increases the future funding needs as new amenities age out and require replacements over time.

Project delivery methods also offer the opportunity to increase efficiency and reduce costs, thereby reducing the total infrastructure backlog costs. Recent effort has been made to secure purchase orders (POs) that allow minor replacements to be made at a lower delivery cost. An example of this approach is the recent PO for synthetic turf for dog parks that allowed turf to be replaced at an existing dog park, cutting the cost to one quarter of the original estimate. A similar approach is in progress to secure a PO for synthetic sports field turf.

External funding sources have advanced a number of projects across the PRNS inventory including trail development, all-inclusive playground construction, and new park construction. A few recent examples include the Open Space Authority (OSA) Grant that advanced the construction of Mariposa Park, the Affordable Housing and Sustainable Communities (AHSC) Grant which supported trail development of Coyote Creek from Phelan to Tully, and the Emma Prusch all-inclusive playground that benefited from the Santa Clara County All-Inclusive Playground Program. Staff continues to seek out new grant programs, inventory opportunities for future grants, and develop a system that provides grant fronting funds. The greatest limitation in seeking grants is the requirement to pay for all costs up front and receive the grant funds after work is completed through reimbursements. This requires all projects to have 100% of funding fully appropriated at the time of the award contract, which creates the largest obstacle in meeting equity goals.

Partnerships and earmarks provide an opportunity to secure funds that may not require fronting. While this type of funding is the most sought after, they are also hard to secure. Lake Cunningham was granted a $1.5 million earmark for a pilot project to improve water quality with the support of elected officials. Other partnerships are found with non-profit organizations or

conservancies such as the Happy Hollow Foundation and the Guadalupe River Park Conservancy. These organizations offer strong partnership opportunities but are challenged to raise the larger investments needed for major capital projects.

Bonds may offer the greatest solution to neutralize all immediate facility needs and reduce the infrastructure backlog. The last Measure P Bond in 2000 provided plentiful resources to build community centers, construct playgrounds, and expand the PRNS inventory. However, new amenities were improved in the same time period causing bond improvements to age out in bulk, requiring greater funding needs for replacements. We are now witnessing a wave of replacement needs that our standard funding sources cannot absorb. A more sustainable approach would be to consider a mechanism to repeat a bond at 20-year intervals.

Funding needs should also consider funding for maintenance of park and trail facilities. When maintenance is not fully funded, it leads to greater deferred maintenance. Over time, this lack of preventive maintenance leads to premature decay of infrastructure. One strategy to ensure longevity of capital infrastructure is to fund maintenance at a higher level so there is capacity to perform annual preventative maintenance. For example, sealing and painting wooden shade structures can greatly increase the life span of the structure, thereby reducing the frequency of replacement needs and reducing the long-term funding burden.

In the future, PRNS may seek consulting services to provide an updated infrastructure backlog study, when funding becomes available, a new infrastructure backlog study would assess the entirety of the PRNS inventory and provide an updated cost. Current estimates are based on a 2014 study by Kitchell CEM with numbers adjusted annually based upon asset lifecycles and unfunded liabilities. While this provides a benchmark of data to measure against, it does not fully capture the granular data of current conditions.

Table PRNS-1 below shows the updated backlog costs per category.

TABLE PRNS-1
PRNS Asset Backlog Estimates

Park Component	Estimated Backlog
Park Grounds[1]	$147,116,412
Park Yards	$9,974,318
Trails	$20,586,149
Regional Facilities	$162,128,193
Park Component SubTotal	*$ 339,805,000*
Community Buildings[2]	$94,378,915
Other Buildings [2]	$115,932,022
Restrooms[2]	$4,202,916
Building Component SubTotal	*$ 214,514,000*
Total 2024 PRNS Backlog	**$ 554,319,000**

1. Value is estimated from 2013-2014 data and extrapolated to reflect increases due to inflation and decreases due to work completed.
2. These figures are included in the Building Facilities backlog section of this report.

SERVICE YARDS

The four City service yards include 325,000 square feet of building space and over 1,800,000 square feet of property. The estimated backlog in each yard is included below:

Service Yard Facilities	Backlog
Central Service Yard	$ 3,125,000
Mabury Yard	$ 1,550,000
South Yard	$ 6,150,000
West Yard	$ 3,250,000
Total Budget Need	**$14,075,000**

Improvements at the service yards are funded through the Construction and Conveyance taxes allocated to the Service Yards Capital Program, as well as transfers from the General Fund. The Service Yards program is currently underfunded. Capital improvement needs are warranted at these facilities on an annual basis, including, paving, mechanical, plumbing, HVAC, roofing and various modernization projects. The current funding levels will fall short in meeting the long-term deferred maintenance needs and the Administration has refinanced the Central Service Yard bond, reducing the overall funding request by $7.6 M, to assist in major rehabilitation of existing infrastructure and addition of new equipment, including a new water main line, pavement replacement, HVAC system upgrade, new generator, perimeter security measures, and a fueling island for the facility.

SANITARY SEWER

The sanitary sewer collection system includes:

- 2,030 Miles of Sanitary Sewer Mains (6 inches to 90 inches in diameter)
- 10 Miles of Force Mains;
- 17 Pump Stations;
- 2 Filtration Stations;
- 1 Odor Control Dosing Station
- 39,469 Manholes; and
- 202,000 Lateral Connections.

Approximately 85% of the City sewer collection system is roughly 50 years old. The Department of Public Works (DPW) is leading the implementation of a comprehensive Condition Assessment programs with the Department of Transportation's (DOT) assistance to determine the infrastructure improvement needs of the aging system. Data gathered from the Condition Assessment program will be utilized by both departments to determine the capital projects necessary to maintain the service life of the system as well as operations and maintenance programs to ensure uninterrupted conveyance of sewage to the treatment plant.

In order to meet the more stringent regulatory requirements of the State Sanitary Sewer Systems-Waste Discharge Requirements, DOT has made significant investments for additional

equipment, personnel, and contractual resources in the implementation of several critical Sanitary Sewer Overflow (SSO) reduction strategies over the past nine years. These strategies include increased sewer line cleaning productivity, proactive cleaning of problematic sewer lines, implementation of an SSO first responder program, chemical treatment or mechanical cleaning of sewer lines identified as having heavy root intrusion and growth, and continued collaboration with the Environmental Services Department (ESD) to address commercial areas that have evidence of excessive fats, oils, and grease (FOG) in their sewer mains.

Since beginning the implementation of the SSO reduction strategies in 2011, DOT has recorded a consistent reduction in SSO occurrences.

Fiscal Year	**FY 2012 -13**	**FY 2013 -14**	**FY 2014 -15**	**FY 2015 -16**	**FY 2016 -17**	**FY 2017 -18**	**FY 2018 -19**	**FY 2019-20**	**FY 2020 -21**	**FY 2021 -22**	**FY 2022 -23**
Number of SSOs	155	101	97	55	58	22	42	31	35	35	40

The 40 SSOs are equivalent to approximately 2 SSOs per 100 miles of sewer main per year. The significant reduction in SSOs since FY2012-13 is attributed to the improvements made by DOT in the maintenance of the existing sewer system in conjunction with the DPW repair and rehabilitation projects identified through the Condition Assessment program and Sanitary Sewer Capital Improvement Projects. DOT continues to proactively enhance its maintenance program and will continue to evaluate the program's performance as it works towards keeping the SSO rate at fewer than 3 SSO events per 100 miles of sewer main annually.

A. STRATEGIC PLANNING

Three main components critical to the optimal performance of the sanitary sewer system include:

1. Adequate sewer conveyance and treatment capacity that would meet the needs of the City's Envision San José 2040 General Plan;
2. Replacement/Rehabilitation program that would extend the useful life of the City's sewer assets;
3. Operations and Maintenance program that aligns with the City's core services while enhancing the SSO Reduction Program.

1. Capacity Needs

Since 2002, to manage sanitary pipe system capacity needs, DPW staff has developed a comprehensive sanitary system Master Plan based on the InfoWorks ICM (Integrated Catchment Modeling) hydraulic model. Phase II of this Master Plan, which was completed in 2013, included sewers of 10 inches or larger in diameter. Phase III of the Master Plan, which was completed in 2023, includes all public sewer mains throughout the City to ensure a thorough picture and analysis of the capacity needs of the current system.

In development of the model, staff used a systematic process that incorporates population data, land use development and planning information, and water use and flow monitoring data to estimate sewer flows. The model is used to assess system performance for existing, near-term (5- to 10-year horizon) and long-term (through 2040) under dry and wet weather flow scenarios, identify system improvement needs, and recommend capacity improvement projects.

The Phase II Master Plan had identified over 100 sewer capacity improvement projects totaling approximately $190 million (2013), of which about 75% of the projects, or $150 million, were to address existing capacity improvement needs. Between the completion of the Phase II and Phase III Master Plans, several of the identified projects were completed and several others were determined to be unnecessary through flow monitoring and model recalibration. The Phase III Master Plan has replaced 12 projects from the Phase II program as well as added 58 newly identified and recommended capacity improvement projects. The Master Plan, less any previously completed projects, includes projects with existing capacity improvement needs that would cost approximately $65 million, which equates to $6.5 million annually over the next ten years. Staff plans on continuing to use flow monitoring data collected through the ongoing flow monitoring program for master plan project validation.

2. Rehabilitation and Condition Assessment Needs

DPW staff currently manages sewer video inspection data and coding standards utilizing InfoMaster to analyze and prioritize repair and/or rehabilitation work. DPW staff is currently managing several contracts to perform pipeline inspection utilizing closed circuit television (CCTV). Likewise, DOT had made investments for additional equipment and personnel in conjunction with its operations and maintenance program to assist the condition assessment program. Coupled with defect coding analysis and sewer repairs, almost 100% of the City's neighborhood sewer collection system (6 to 10 inches diameter sewer pipes) has been inspected. The program has also started video inspection and condition assessment of the medium sized diameter sewer pipes (12 to 30 inches diameter) and will continue to video inspect the condition of larger pipes (32 inches and larger). This progress is in alignment with the recommendations from the Pilot Sanitary Sewer Condition Assessment Program (SSCA) completed in 2011. Utilizing a risk-based analysis of statistic samples of the sewer system revealed the need to invest in frequent monitoring of the high-risk pipelines. On an annual basis, $3.9 million should be spent on condition assessments to ensure a sufficient amount of infrastructure is evaluated.

The SSCA recommended an annual investment of $28 million (approximately $29.4 million at 2024 costs) for system rehabilitations in order to prevent the system from further deterioration. The SSCA had completed the recommended 10-year video inspection and analysis program for the collection system which equates to 10% annually. As the SSCA program continues, it is anticipated that additional funding may be needed to design and construct sewer infrastructure repair and rehabilitation projects identified in the SSCA program. Completion of these projects reduces the potential risk of SSOs due to structural deficiencies in the system and may augment the Operations and Maintenance program. Approximately 145 miles of sewer mains have been identified for repair and rehabilitation with the cost estimated to be $103.0 million as of 2022-2023, with over 80% of the condition assessment completed in the ten year period. As more information is collected through the CCTV program, the number of defective pipes and repair

needs may increase, and the recommended annual investment will be re-evaluated and reported in future years.

In 2016, an Exfiltration Abatement Program was developed and implemented by DPW staff to identify sewer mains with high risk of sewage exfiltration (leaking out) potentially causing contamination of the storm drain system. DPW aims to repair/rehabilitate these sewer mains at a rate of 6.5 miles annually. Staff has revised its work plan to integrate the Exfiltration Abatement Program into the SSCA program to identify high-risk pipe in the system using video inspection.

A new Sanitary Sewer Interceptor Management Program was developed in FY2021-2022 for the interceptor system. The interceptor system consists of a series of parallel, large diameter pipelines that extend from 7th and Empire Street, north along 7th, 5th, and 4th Streets to Highway 101, and across Highway 101 along Zanker Road to the Regional Wastewater Facility located north of Highway 237. The Interceptor Management Program will include a condition assessment program which would evaluate the structural integrity of the interceptors including junction structures, remove accumulated debris, and identify/prioritize the portions of pipe that may require rehabilitation and/or repair. The program will also include the evaluation and rehabilitation of the City's soil bed filters that assist with removing odors and corrosive sewer gases from the interceptors. The soil bed filters are located at Canoas Garden and at Structure B on Zanker Road. Currently the facilities are outdated, inoperable,andin need of replacement or upgrading utilizing newer filter technology. The total cost related to the repair or rehabilitation of the interceptors and pertinent facilities is under development.

3. Operations and Maintenance

DOT staff has been implementing several elements of their SSO Reduction Program outlined in the Sewer System Management Plan (SSMP) that was developed to address the results of the 2010 EPA / San Francisco Regional Water Quality Control Board (SFRWQCB) audit. Currently, DOT staff has transitioned from an in-house developed, GIS-capable CMMS software to a new GIS-capable SalesForce-based Unity system which tracks maintenance history, work orders, inspections, and work performance efficiency. Recommendations after extensive analysis of available data have been incorporated into the planning and scheduling of O&M activities. This effort, in conjunction with procurement of additional O&M maintenance vehicles and equipment, has resulted in the steady decline in the repair backlog and in the number of SSOs. Last fiscal year, DOT staff cleaned over 704 miles of sewer lines. In order to continue the implementation of the strategies, it is anticipated that additional funding may be necessary to further reduce the number of SSOs within the City.

B. FUNDING – EXPENDITURE VS NEEDS

The Sanitary Sewer CIP is primarily funded by a transfer from the Sewer Service and Use Charge Fund andJoint Participation revenues from other jurisdictions served by this sytem, Connection Fee revenues, and interest revenues.

The Sanitary Sewer Capital Program annual funding need is calculated based upon the results of the 2011 Sewer Condition Assessment Pilot, the projected cost of performing the condition

assessment and system improvements, and an analysis of capacity improvement projects needed to address existing capacity improvement needs in the system.

The implementation of the Exfiltration Abatement Program has been carefully crafted into the CIP; however, construction escalation has stretched the current budget that was allocated to this program. Staff will continue to monitor all expenditures for this program and adjustments will be brought forward in an upcoming budget process, as needed.

The annual operating and maintenance costs (managed by DOT, currently at $29.6 million) will likely also require future increases to enable DOT to continue implementing various strategies aimed at decreasing SSOs and response times. The cost to purchase replacement vehicles has greatly increased and the purchase of additional equipment and resources to implement technology solutions that will enable better system monitoring and more efficient maintenance operations are some of the future investments under consideration. As the pavement maintenance program increases production as a result of new funding streams, the number of sanitary sewer miles investigated via CCTV has increased to proactively identify sewer defects with the goal of repairing them prior to paving. Current CCTV and sewer repair capacity has been increased temporarily to meet this expansion. DPW and DOT are working together to evaluate existing capabilities and determine if more resources need to be considered through the budget process.

An idealized annual investment for both the Capital Improvement needs (for rehabilitation and capacity expansion) and O&M of the system would total approximately $67.9 million per year for the next 10 to 20 years as shown in the following table:

Annual Need for Maintenance and Infrastructure	
Rehabilitation	$29,400,000
Condition Assessment	$3,900,000
Capacity Projects (existing users)	$6,500,000
Total Capital Need	**$39,800,000**
O&M (DOT)	$27,100,000
Total Capital and Operating Need	**$66,900,000**
2023-2024 Adopted Budget Funding	$66,620,000
Total Annual Unfunded Need	**($280,000)**

After taking into account DOT operating costs ($27.1 million) programmed in the FY 2023-24 Adopted Operating Budget and the transfer from the Sewer Service and Use Charge Fund and the Sanitary Sewer Joint Participation revenues in the FY 2023-24 Adopted Capital Budget ($37.0 million), which excludes fund balance primarily used for completing or continuing projects and Sanitary Sewer Joint Participation projects, the remaining annual unfunded need is approximately $280,000. This need will be evaluated on an annual basis to determine if any funding increases are needed. Any future funding modifications will be the result of a collaboration between ESD, DOT and DPW that considers the needs at both the Regional Wastewater Facility and the sanitary sewer collection system, as well as long-term rate payer impacts.

ESD, DOT and DPW are currently working together to identify the annual funding needs of all the programs that are funded from the SSUC Fund (Wastewater Treatment Plant Operating and Capital, Collection System Capital, and Operating and Maintenance). The final result of this interdepartmental collaboration will be a 10-year rate strategy to advance all three programs.

STORM SEWER

The storm sewer collection system includes:

- 1,100 Miles of Storm Sewer Pipe
- 35,500 Storm Drain Inlets
- 4,500 Miles of Curb and Gutter
- 1,712 Storm Outfalls
- 31 Pump Stations
- 32 Large Trash Capture Devices

The preliminary citywide storm drain system's dynamic hydrologic and hydraulic (H&H) model was developed and prepared prior to the February 2017 flood event. The InfoWorks ICM (Integrated Catchment Model) computer model included pipes of 24 inches and larger in diameter using the City's GIS datasets, as-built plans, and survey data, and incorporated boundary information from Valley Water's HEC-RAS model files and was calibrated using 2013-2014 and 2015-2016 flow data of the storm drain and creek/river channel systems. At the end of this phase of modeling effort, a preliminary list of 22 high priority capacity improvement projects were identified, with estimated approximately $215 million in total capital cost. The Phase I Study reviewed the storm drain system's hydraulic performance for the 10-year 24-hour design storm event and identified 22 high priority projects that would address known historical flooding and predicted flooding during a 3-year event. These high-priority projects include the Charcot area improvement project which is funded by a Measure T allocation of over $38 million. The capital cost for the remaining high-priority projects for flood protection purposes is estimated to be $180 million or $18 million annually over a ten year period.

The City is updating and refining the preliminary model based on the collected high-water mark and channel flow/stage data collected by Valley Water for Coyote Creek during the February 2017 flood event and for Guadalupe River during the January 2019 large storm events. The post-2017 Phase 2 Master Plan Study is updating the model with Valley Water's HEC-RAS riverine models updated after the February 2017 Flood and will evaluate project alternatives for predicted deficiencies The updated modeling analysis is anticipated to be completed in June 2024 with a revised list of high priority projects.

2023-2024 Adopted CIP provided improvements to the storm sewer collection system in the Charcot area of North San Jose and other critical areas, and outfall rehabilitation, and minor storm sewer improvement projects, as well as installation of additional large trash capture devices in compliance with the Municipal Regional Stormwater Permit. It has been identified that over 335 outfalls have deteriorated and require rehabilitation. The estimated cost to fix the 335 outfall is approximately $85M. In addition, any improvements within the riparian corridor of City-owned creeks require mandatory environmental mitigation, monitoring and reporting to

the regulatory agencies for a minimum of 10 years. The current annual funding to rehabilitate these outfalls is approximately $3M for the next 5 years, which is only sufficient to address only a limited number of high-priority locations per year. Approximately$8.5M is needed annually to rehabilitate or replace these deteriorated outfalls.

The flood event in February 2017 also shed light on the maintenance of waterways within City-owned properties. The City currently doesn't have funding to maintain the waterways, and while the Santa Clara Valley Water has been collecting funding for this purpose, they don't have encroachment permits or rights of entry to do work in and on City-owned property and City rights of way. City staff will work with Valley Water to understand the processes necessary for this to occur and subsequently can coordinate in this effort to clean the creeks. In addition to the maintenance of waterways, it was found that within the City's collection systems, flap gates can be used at certain strategic locations to prevent creek water from backflowing and inundating the system during large storms. The cost for this is not confirmed at this time and will be understood once the Phase 2 Master Plan Study is complete.

During these notable storms and other major storm events, DOT staff also observed severe flooding/ponding along the Taylor Street, Stockton Avenue, Cinnabar Street, and West Santa Clara Street storm systems, particularly at the Pershing Avenue, and Taylor Street underpass and West Santa Clara Street underpass. DPW staff has identified approximately 13,900 feet of pipeline projects to improve the capacity of these systems, and the costs are estimated at roughly $14 million. Storm CIP staff are waiting to prioritize the Capacity Improvement Program projects once Storm Master Plans Phase 2 Master Plan Study is complete.

Impacts of Measure T

Over $38 million was allocated for the Storm System Conveyance & Flood Prevention Project. This funding will be utilized for high priority projects identified in the Deferred Maintenance and Infrastructure Backlog. The highest priority project is the design and construction of the Charcot Storm Drain Improvements Pkg I which will improve the drainage in the Charcot area north of San Jose. This project scope includes the diversion of storm runoff from Coyote Creek into Guadalupe River and upsizing multiple storm sewers on Charcot Avenue.

A total of $25 million was allocated by Measure T to install multi-benefit green stormwater infrastructure (GSI) projects. ESD, PRNS, DOT and PW continued to collaborate and identify several potential regional GSI and green street locations. The River Oaks Detention Basin, one of the six identified locations in the GSI Plan, is currently under construction as one the first regional projects in the City of San Jose. Other regional and green street projects will follow after the City completes the further feasibility studies of other identified potential GSI sites. Based on the result of the first feasibility study, one of these sites – City Land South of Phelan (Kelley Park Horse Stables) – was selected for a more in-depth preliminary design before proceeding with the final design. After the preliminary design was completed, the project proved to have significant issues including additional costs for a new pump facility and related long-term O&M costs. City staff are recommending implementing a regional stormwater capture facility near the Kelley Park Parking Lot which is a gravity-based solution that doesn't have high long-term O&M costs and is able to be constructed with a lesser portion of the remaining Clean

Water Measure T funds. With the amount of Measure T funds remaining, this allows the design and construction of smaller regional stormwater capture facilities identified in the previous feasibility studies. This $25 million investment aligns with the need to invest in green stormwater infrastructure to further the environmental goals of the City.

Additionally, ESD and PW staff worked collaboratively and applied for Proposition 1 Integrated Regional Water Management (IRWMP) Grant Program funding for the design and construction of the River Oaks Stormwater Capture Project. The application was approved, and the City has negotiated and executed a Local Project Sponsor Agreement with the Association of Bay Area Governments to effectuate a $3,203,550 grant with City matching funds of 65% for the total project cost relating to the River Oaks Stormwater Capture Project. The 65% matching funds would come from the Measure T Program – Clean Water and Green Infrastructure Projects.

Funding

Funding for the Storm Sewer Capital Improvement Program is primarily derived from a transfer of funds from the Storm Sewer Operating Fund, which is funded through Storm Sewer Service Charge fees. These charges are assessed annually on properties and collected with real property taxes. The transfer level in the 2024-2028 Adopted CIP is $6M in 2023-2024 and 2024-2025, and will be reduced to $1.5M annually for the remaining 5-year CIP. Staff has been utilizing Caltrans grant funding to construct Large Trash Capture devices, the latest Coop Agreement signed in early 2024 allows for the reimbursement of up to $10.125M.

The Storm Sewer Capital Improvement Program annual funding need is calculated based upon the results of the on-going regulatory requirements from the Consent Decree and Municipal Regional Permit, the projected cost of system repair and rehabilitation, and the master planning and hydraulic analysis of capacity improvement projects needed to address existing and future deficiencies in the system. Santa Clara Valley Urban Runoff Pollution Prevention Program (SVURPPP) identified 32 trash hot spot locations in San Jose within the Trash Hot Spot Selection Final Report, 2010. Capturing trash in these locations will greatly improve San Jose's trash load reduction targets set in the Municipal Regional Stormwater Permit. A total of$9M annually would provide enough funds for the City of San Jose to meet trash load reduction targets, greened acres targets and goals set in the GSI Plan, 2019. Construction escalation has stretched the current budget that was allocated to this program and adjustments will be brought forward in an upcoming budget process, as needed.

The Storm Sewer Operating and Maintenance Program, managed by DOT, will also require future increases to enable DOT to continue implementing various strategies aimed at maintaining regional stormwater capture facilities and a significant number of full trash capture devices.

Additionally, the purchase of replacement vehicles and equipment and resources to implement technology solutions that will enable better system monitoring and more efficient maintenance operations are some of the anticipated future investments under consideration. As the pavement maintenance program increases production as a result of new funding streams, a program will need to be developed to begin investigating storm sewer miles via CCTV to proactively identify sewer defects with the goal of repairing them prior to paving to reduce the potential for sinkholes

and structural failures appearing in new pavement. Current CCTV and sewer repair capacity has been dedicated to Sanitary Sewer condition assessment and will need to increase to meet this expansion into condition assessment of Storm Sewers. DPW and DOT have been working together to evaluate existing capabilities and determine if more resources need to be considered through the budget process.

An idealized annual investment for both the Capital Improvement needs (for rehabilitation and capacity expansion) and O&M of the system would total approximately $42.5 million per year for the next 10 to 20 years as shown in the following table:

Annual Need for Maintenance and Infrastructure	
Regulatory Compliance	$9,000,000
Rehabilitation	$8,500,000
Capacity Projects (existing users)	$18,000,000
Total Capital Need	**$35,500,000**
O&M (DOT)	$7,000,000
Total Capital and Operating Need	**$42,500,000**
2023-2024 Adopted Budget Funding	$29,300,000
Total Annual Unfunded Need	**$13,200,000**

ESD, DOT and DPW are currently working together to identify the annual funding needs of all the programs funded in the Storm Sewer Operating Fund. The final result of this interdepartmental collaboration will be a 10-year rate strategy to advance all three programs.

INFORMATION TECHNOLOGY

The Information Technology Department (ITD) provides, maintains, and upgrades Citywide information and communications technologies that support municipal services. ITD is responsible for the City's technology infrastructure, business applications, cybersecurity, customer support, data administration, data/voice/video communications, and productivity and collaboration systems. This includes the City's budget, financial management, human resources management, payroll, talent management, and land and permitting management systems, as well as other critical technology solutions.

ITD maintains central technology asset data to catalog and prioritize unfunded server, storage, software, cybersecurity/resilience, and other liabilities presented in this report. Funding requests are submitted via the annual budget process.

Since FY2017-2018, the City invested in its foundational enterprise information and communications technologies to address technology deficits. These initiatives resolved major deferred items in areas of cybersecurity, business systems used by departments, server and storage infrastructure, employee computers, and Enterprise Resource Management applications programs. Over$11 million has been allocated of an estimated total replacement cost of $45.8 million, toward a Technology Replacement Fund over the past seven budget cycles to continue

accruing necessary funding to replace the City's multi-decade-old financials, human resources, and payroll systems.

Citywide Technology Portfolio

ITD organizes the City's Deferred Maintenance Infrastructure Backlog along service portfolios:

- **Business Resilience**: Cybersecurity risk detection/prevention, policies and compliance, perimeter defense systems, deskside and endpoint protection, incident response/management, data equity and privacy, and education/training resources.
- **Business Solutions:** Budget, financial management, human resources management, payroll, talent management, utility billing, treasury, revenue, enterprise content management, land and permitting management systems, and other enterprise software systems and platforms.
- budget, financial management, human resources management, payroll,
- **Data/Voice/Video Communications**—Core Municipal Area Network@, internal wireless network for major City facilities, telephony, internet connectivity, load balancing, remote access, network segmentation, and monitoring/alerting.
- **Public Wi-Fi Network:** Private and public wireless network connecting San Jose International Airport, and the Downtown core for City operations, special events and downtown activation.
- **Technology Infrastructure and Operations:** Server compute, data storage, virtualization, asset and image management, and Customer Support/Help Desk services supporting ~7,200 users and over 562 enterprise servers.
- **User Computing Environment:** Approximately 8,000 computers, 9,700 network telephones, and 4,500 City mobile and FirstNet endpoint devices.

Continuing to resolve deferred technology needs is essential to meeting City Roadmap initiatives, the City Manager's Enterprise Priorities, City Council's Focus Areas, and meeting service levels and maintaining operational excellence.

Since the last DMIB report in 2022, the City invested $300,000 to refresh the City's budgeting application with a new Cloud solution along with a re-design of the City's human capital planning process, $195,000 to upgrade the human resources and payroll system to a current release, and $140,000 to replace the City's talent management application. Of special note, the city invested approximately $469,000 to the city's server compute/storage/virtualization infrastructure to increase resilience and redundancy by expanding to a second data center at the PD Substation and the new Emergency Operations Center to provide prioritized emergency services in the event of a disaster; approximately $2,900,000 for the city's user computing environment to upgrade legacy deskside equipment needed to meet the Windows 11 operating system requirements, which will be spread over 2 fiscal years to maintain a sustainable 5 year lifecycle; approximately $556,000 to the city's data/voice/video communications to pilot a new Information Technology Service Management platform to test and replace the legacy ticketing system and asset management system and WIFI equipment upgrades to city facilities such as the SJ Airport, SJPD, the Regional Wastewater Facility and the new Emergency Operations Center.

New Priorities are Reshaping Deferred Infrastructure Costs

The City's overall technology-related deferred maintenance infrastructure backlog increased from a $47.5 million infrastructure backlog in 2022 to $45.8 million in 2024. The $1.7 million decrease is attributed to recognition of infrastructure and software replacement cost since 2021-2022.

- The Financial Management System is 30+ years old and reached the end of its lifecycle long ago with a deferred maintenance one-time cost of $18 million as of January 2024. The City has accrued $11 million in the technology sinking fund with $8.3 million of that total designated towards this replacement.
- The Human Capital Management (HCM) system, which provides human resources, benefits, and payroll, has been utilized for the past 25+ years and is due for a refresh. This item carries a one-time replacement cost of $15 million as of January 2024. The City has accrued $11 million in the technology sinking fund with $8.3 million of that total designated towards this replacement.
- The Business Tax System (BTS) is used to manage the City's Business Tax, Business Improvement District Fee, and a small number of Regulatory Permit programs. This legacy application was designated End-of-Life in 2014, is no longer supported by the vendor and cannot be upgraded due to hardware and licensing limitations. This item carries a deferred maintenance one-time cost of $4.25 million as of January 2024. There is no ongoing additional deferred maintenance and $4.1 million is allocated for replacement of this system.
- Oracle Database Appliances (ODA) are used to provide highly-availability database services for City applications. The ODAs carry a five-year engineered life cycle and reach replacement age starting in 2025-2026 with a deferred maintenance cost of $500,000.
- The Sales Tax application is used to review and audit sales tax data received from businesses reported to the State of California. This application has reached the end of its life cycle with a deferred maintenance of $220,000 in one-time cost as of January 2024.
- The City's Perimeter Security Firewalls manages the interface of the City network with the Internet. It has a replacement cost of approximately $1 million as of the current fiscal year.
- All the desk phones are 5-10 years old and reached End-of-Life. Replacing all desk phones will require a one-time cost $375,000.
- The City's current Windows 10 operating system (OS) will be end of life in October 2025. A total of 2,521 devices will be replaced with one-time funding of $2,900,000 to address the compatibility issues with the new Windows 11 OS, which will need to be refreshed in 5 years, and 2,195 devices have already reached their 5-year lifecycle and will need to be refreshed by 2024-2025. The City's virtual desktop infrastructure, which provides software-based desktops for remote and hybrid workers, will reach its 5-year lifecycle in October 2024. The hardware providing the service are already end of life. This replacement cost is approximately $240,000. ITD is pursuing cloud-based solutions as a replacement strategy.
- The City FirstNet phones have a three-year life cycle and the phones purchased in 2021 or earlier have fully deprecated. The cost to replace 1,287 phones and tablets is about

$929,000. Other FirstNet devices are in their second year of the life cycle, incurring a total cost of $1.1 million to deferred maintenance.

- Enterprise servers/storage have reached their 5-year lifecycle and require a one-time cost of $22,000.
- 35 Enterprise switches are end of life in 2025, requiring a one-time cost or approximately $150,000. All other network devices are beyond their replacement lifecycle but are covered under lifetime warranty. 188 Enterprise wireless access points at city facilities have reached end of life and 66 more approaching their replacement lifecycle by 2025, requiring a cost of approximately $230,000.
- City ITD maintains standalone Uninterruptible Power Supply (UPS) appliances at Fire Stations and city facilities that do not have built in UPS systems. These devices are at the end of their 5-year lifecycle, requiring a one-time replacement cost of approximately $96,000.

Technology Deferred Maintenance Infrastructure Backlog Summary Status

Technology Infrastructure Backlog		
Service Area	**One-Time**	**Annual Replacement Accrual**
Servers/Storage	$2,200,000	$100,000
Data and Voice Communications	$2,200,000	$300,000
Deskside and Mobile Technologies	$1,900,000	$1,700,000
Business Software Applications/ Platforms	$34,600,000	$100,000
Cybersecurity	$800,000	$200,000
Emergency Communications (FirstNet)	$1,600,000	$500,000
Utility Billing System	$2,500,000	$400,000
Total	**$45,800,000**	**$3,300,000**

The total deferred maintenance and infrastructure backlog for ITD is $45.8 million in one-time costs with additional accrued deferral of $3.3 million per year. The $3.3 million annual replacement accrual represents the annual funding that should be set aside in a sinking fund to replace the technology in the future.

The City continues to make considerable progress resolving the oldest and most at-risk technology assets. Deferred maintenance exists in two categories:

1. Critical enterprise legacy systems that continue to age, and
2. Investments in newer enterprise or large technology without maintenance and replacement funds (allocated according to engineered life cycle principles).

Addressing the City's deferred technology infrastructure needs—including upgrading equipment and systems to current industry standards—is essential for fulfilling projects and activities associated with Council's Focus Areas, the City Manager's Enterprise Priorities, and City

Roadmap initiatives—and is especially important to minimize cybersecurity threats the City constantly faces.

ITD will be pursuing cloud-based solutions as its infrastructure and systems replacement strategy.

RADIO COMMUNICATIONS PROGRAM

The City's infrastructure assets under this category include:

- 29 Citywide Public Safety and Non-Public Safety Radio Channels
- 11 Citywide Public Safety and Non-Public Safety Conventional Simulcast Radio Channels
- 27 Radio Sites – 18 City Owned and 9 Non-City Owned
- Enterprise Radio Systems – Regional Wastewater Facility, Airport, and Convention Center
- Fixed equipment distributed at the above sites to operate the various radio systems:
    - Voting Receivers – 154
    - Base Station Transceivers – 90
    - Voting Comparators – 38
- Public Safety Answering Point (PSAP) – 34 Radio Consoles at Main Dispatch PSAP and 14 Radio Consoles at Alternate PSAP
- Airport Operations Center - 3 Radio Consoles
- Subscriber Units (Mobile and Portable Radio Devices) – Approximately 5,280 Units (3,540 are already configured to use with SVRCS)
- Inventory for Support & Maintenance – Approximately 1,000 Units
- Test Equipment – 52 Units

The Silicon Valley Regional Interoperability Authority (SVRIA) is a joint powers authority consisting of 16 voting (including the City of San José) and 7 non-voting member agencies whose mission is to identify, coordinate, and implement communication interoperability solutions to its member agencies by integrating voice and data communications between law enforcement, fire and rescue services, emergency medical services, and emergency management for routine operations, critical incidents and disaster response and recovery. The Silicon Valley Regional Communications System (SVRCS), a multistage project coordinated by SVRIA, replaced the existing public safety radio systems currently in use in Santa Clara County with a system that uses the 700/800MHz spectrum, which allows for enhanced data transmissions, additional capacity for mutual aid scenarios, and the ability to record transmissions for training purposes.

The 2023-2024 and 2024-2028 Adopted Capital Improvement Program allocated $8.6 million to the Silicon Valley Regional Communications System in order to initiate the radio replacement project. In the past, radio purchases from the Capital Improvement Program have been replacing the previous models of VHF and UHF single-band radios. The replacement of all the old models was completed in FY 2019-20. The City's radio vendor, Motorola, announced all APX 7000 and APX 7500 models were out- of-support as of May 2023. The City entered into a 10-year contract

with Motorola totaling $11.5 million, which ends in FY 2030-31. In November 2021, 809 radios were purchased with the one-time funding of $5.25 million solely allocated to replace the unsupported models. The agreement schedule planned to ship approximately 89 radios every year starting in August 2022 until the contract ends in FY 2030-31.

In FY 2022-23, another one-time funding of $3.4M was allocated to this program and used to purchase 386 radios along with the scheduled 89 units for a total of 475 radios. The Radio Shop has been working closely with Motorola to formulate the radio replacement schedule. The table below represents the 10-year contract the City entered with Motorola and includes the 386 radios that were purchased with the one-time funding of $3.4M based on the number of radios in 2021.

10 Year Contract Agreement with Motorola				
	2021 Radio Count	Purchased	Remaining	# Radios Needed
PD Portables	866	676	0	0
Fire Portables	392	202	0	0
PD Mobiles	606	126	474	0
Fire Mobiles	166	32	134	0
*OOS: Out of Support	Total Radio Count:	Total radios purchased in contract:		OOS* radios remain:
	2030	**2030**		**0**

The table below shows the annual ongoing need to complete the current 10-year contract with Motorola which is to only replace the radios that have been unsupported as of December 2022 and is based on the number of radios in 2021.

Out of Support SVRCS Radios		**Average 38% discount**	
Year to Replace	# of Radios	Average cost per radio	Average Cost to replace
2021-22	809	$6,740	$5,250,840
2022-23	475	$6,740	$3,456,060
2023-24	88	$6,740	$1,700,000
2024-25	88	$6,740	$1,700,000
2025-26	95	$6,740	$1,700,000
2026-27	95	$6,740	$1,700,000
2027-28	95	$6,740	$1,700,000
2028-29	95	$6,740	$1,700,000
2029-30	95	$6,740	$1,700,000
2030-31	95	$6,740	$1,700,000
10-year Motorola contract	**2030**	**10-year Total**	**$22,306,900**

It is noted that for the next 5-year CIP period to assist with the remaining existing replacement cycle, an annual allocation of $1.7M is allocated in the CIP for the continued procurement of

new radios, equating to $8.5M total over that period. If this level continues, this should be sufficient to replace the $22.3M backlog of radios.

It is important to note that before the 10-year contract with Motorola ends in FY 2030-31, a separate new radio replacement cycle will be needed to ensure technical support availability for the APX 8000, APX 8500, and APX 900 public safety radios, which will start aging out in 2026. For FY 2026-2027, there will be 3,000 active radios on the SVRCS that would fit into a new 10-year radio replacement contract to accommodate the growth of radio volume since FY 2020-21. With the average current pricing of $9,000 per radio, and as the City does not have price protection for the next cycle, a total of $27M would be required to accommodate inflation over the next 10-year period from FY 2030-31 – FY 2040-41.

There are approximately 1,000 radios on the legacy radio system used by all non-public safety departments in the City that are out of support and need to be replaced. At the average cost of $2,500 each, $2.5M is needed to replace the radios which would occur over a three year period.

Thelegacy radio system is nearing the end of its useful life. This is the system that all non-SVRCS city radios use to communicate. There are approximately 2,000 radios that communicate on this system. This is also the system the Fire Department uses for interoperability with agencies not on SVRCS and that Fire and Police would use as a backup. The FY 2020-2021 Adopted Budget allocated $200,000 for consultant services to review the existing legacy system and develop a scope of work to replace the outdated system.
In coordination with all City stakeholder, a complete system replacement for $7.3M is recommended. This would include the following needs:

- Priority Need: Replace Non-Public Safety radio system.
- Transition FD to the new system for interoperability and backup.
- Transition PD to the new system for backup.

A phased approach can be considered though with increased costs due to the loss of economies of scale and inflation.

Complete System	Deploy system for enhanced coverage	**$7,300,000**
	or	
Phase 1	Deploy system for basic coverage	$6,400,000
Phase 2	Deploy additional sites	$1,300,000
	Total	**$7,700,000**

TRANSPORTATION INFRASTRUCTURE

The City's infrastructure assets under this category include:

- Street Pavement – 2,519 miles
- Traffic Signals – 964 signalized intersections
- Roadway Signs – 115,000 traffic control signs; 2,935 intersection street name signs; 26,509 residential street name signs
- Roadway Markings – 6,200,000 square feet of markings; 519,572 raised pavement markers (RPMs)
- Streetlights – 65,600 streetlights and poles
- Landscaping – 290 acres of landscaped properties for general benefit
- Stormwater Treatment Control Measures (TCMs) – 23 total sites: 249 biotreatment cells, 2 detention basins, 2 bioretention basins, 46K sq ft riparian mitigation landscaping, 2 pump stations, 104K sq ft landscaping, 9,800 sq ft of subsurface infiltration systems and 24 tree well filters
- Street Trees – 253,572 street trees (19,750 City-maintained) and 77,583 vacant street tree sites (2,478 on City parcels)
- ADA Compliant Curb Ramps – 29,657 locations (2,867 locations with no ramps; 11,576 locations with ramps that are not fully compliant and need modification or replacement; 15,214 locations currently in compliance)
- Bridges –137 National Bridge Inventory (NBI) vehicular bridges (20 feet or greater in length); 99 vehicular bridges less than 20 feet in length; 10 pedestrian bridges

Street Pavement

The City's most significant transportation asset is the street network consisting of 2,519 miles of pavement. The condition of San José streets has continued to improve, resulting in the second consecutive year of an overall "Good" rating and the current average Pavement Condition Index (PCI) is 73 on a 100-point scale. After years of increasing, the one-time deferred maintenance backlog has decreased to $369 million in 2024, from the $407 million in 2023, and $509.5 million reported in 2022. Based on current data, $61.8 million is needed annually over a 10-year period to improve overall pavement conditions to a rating of "Good" (PCI 70 or higher). Reliable funding levels in future years will continue to reduce the maintenance backlog and improve street conditions citywide.

The combined revenues from Senate Bill 1 and VTA 2016 Measure B will account for an average of $38.8 million annually for street pavement maintenance over the next 10 years. Measure T will provide an additional $37.5 million each year through FY 27-28. These funding sources bring the average annual funding level for pavement maintenance over the next 10 years to approximately $71.8 million, $9.4 million lower than reported in 2022, and an increase of $21.7 million from the 2018 report in which the 10-year funding estimate was $50.1 million. This number has decreased due to depletion of Measure T allocations in Fiscal Year 2027-2028. In 2024, DOT will deliver the fifth year of Measure T Street resurfacing, which, in combination with annual allocations from VTA 2016 Measure B, is expected to provide maintenance to all residential streets in the City by the end of 2028.

There is no maintenance shortfall during this period. The current average funding levels allows for a significant reduction of the backlog and has fundamentally changed the situation from previous years. However, it is important to note that Measure T funds will be exhausted in fiscal year 2027-2028 and the annual paving budget will decrease to $54.8 million at that time and through FY 2032-33.

Bridges

DOT is responsible for the maintenance of 137 National Bridge Inventory (NBI) bridges throughout the City, each of which exceeds 20 feet in length. There are an additional 99 vehicular/railroad bridges that are less than 20 feet in length and a further 10 pedestrian bridges for which DOT receives periodic service requests to repair. NBI bridges are regularly inspected by Caltrans, and DOT utilizes the reports generated from those inspections to determine the costs associated with maintaining and rehabilitating these bridges.

Currently, there is a one-time backlog of approximately $36 million to potentially replace or rehabilitate two bridges that have been identified by Caltrans to be structurally deficient, and to provide, needed but not urgent, corrective, and preventive maintenance to 137 NBI and 109 non-NBI bridges. Additionally, the City's consultant identified two non-NBI bridges for potential rehabilitation or replacement as part of the one-time backlog. This overall backlog will benefit from the receipt of $20 million in Measure T funds which can be further leveraged to receive grant funding at the state and federal level. Bridge conditions and work recommendations will continue to vary based on provided Caltrans inspection reports, and the FHWA Highway Bridge Program's grant application priority determination continues to be re-evaluated due to the high influx of applications.

If all rehabilitation and replacement work were accomplished, DOT estimates that it would require approximately $350,000 annually to perform routine inspection, cyclic preventative maintenance, and condition-based corrective maintenance on its NBI and non-NBI bridges based on programmatic cost analysis. The City currently allocates $150,000 for bridge maintenance. Aside from City dollars, the Federal Highway Bridge Preventative Maintenance Program (BPMP) has served as a potential funding source for grant applicable projects. DOT staff will continue to pursue grant funds to address the current backlog of bridge preventative maintenance and rehabilitation projects.

In 2024, DOT established a 5-year plan to maintain 39 NBI bridges with an estimate of $14.8 million. Preservation maintenance work include deck overlays, joint replacements, superstructure replacement, and substructure preservation. A consultant is in the process of evaluating the City's bridge network to help develop a long-term maintenance strategy to include both NBI and non-NBI bridges and will work with both DOT and PW staff to develop a plan for grant-eligible replacement and rehabilitation of bridges. In 2023, DOT delivered maintenance on 3 bridges and will additionally be delivering maintenance projects on approximately 13 bridges in 2024.

Americans with Disabilities Act Ramps

The City's current Americans with Disabilities Act (ADA) Sidewalk Transition Plan includes a collection of programs, administrative procedures, and design standards that support the implementation of accessible public sidewalks for people with disabilities. In recent years, the City has spent an average of $13 million annually to construct ADA compliant curb ramps especially along corridors where paving projects occur, as required by the ADA.

In 2017 and 2018, DOT worked with a consultant to provide a detailed analysis of the City's ADA ramp inventory to determine where ramps were missing or not in full compliance with the most recent ADA standards. The collected data provided DOT with the most comprehensive ADA ramp inventory to date, identifying 29,657 locations where ADA curb ramps should exist. Since 2018, the City has built an over 2,000 ADA ramps per year. Of the 29,657 locations and accounting for recent construction, 15,214 currently have compliant ADA ramps. Of the remaining 14,443 locations, 2,867 ramps are missing, 7,857 ramps exist but have significant barriers to mobility as defined by the ADA and must be replaced and 3,719 require retrofit or replacement but are a lower priority because they provide fewer barriers to mobility. It is estimated that a total of $98.2 million is required to install missing ramps and to bring existing ramps to current standards, a reduction of $30.7 million from the prior report.
The City's ADA Transition Plan will bring all ADA ramps up to the most recent standards by 2040 through existing and newly acquired funding streams. The backlog will decrease as work is performed each year and there is no expected annual shortfall.

Sidewalks/Curb & Gutter

The City Council's approval of the Mayor's March Budget Message for Fiscal Year 2023-2024 included direction to staff to outline the cost of assuming the responsibility for maintenance of sidewalks and street trees in a Manager's Budget Addendum. The DOT pavement maintenance team utilizes consultants to assess the condition of street pavement every year, resulting in an updated Pavement Condition Index score. In 2022 the consultant offered to assess several additional assets on the street network. Prior to the Manager's Budget Addendum, DOT requested that the consultant provide a high-level condition estimate of sidewalks throughout the City including gaps or areas that should have sidewalks but do not. Conditions were determined by analyzing the right-of-way images captured by the consultant's automatic road analyzer vehicle and utilizing their in-house developed surveyor software. The data shows that there are approximately 3,400 miles of sidewalk in various widths from 5 feet to 13.5 feet. Based on assumptions and criteria for varying sidewalk conditions (good, fair, poor, missing), approximately 1,485 miles of sidewalk are in good condition, 1,588 miles are in fair condition, and 2.65 miles are in poor condition, initial analysis reveals that repairing the fair and poor condition sidewalks including curb & gutter could cost approximately $360 million when factoring condition variability. Although most of these costs are currently the responsibility of the respective property owners, the DOT engineering and sidewalk inspection teams are collaborating to determine potential costs and options for a partial or fully scaled maintenance program to offset resident expenses.

Data also reveals that approximately 278 miles of sidewalk/curb and gutter, are missing throughout the City, though this number is being refined due to specific and unique site conditions that could prevent the installation of a sidewalk. Typical improvements that would accompany the installation of new sidewalk include storm sewers, street lighting, curb and gutter, water meter valve boxes, sewer cleanouts, and street trees. Additionally, some of sidewalk installations would require land acquisition which add significant costs to any estimate.

Street Trees

In February of 2022, the City Council unanimously approved the City's first Community Forest Management Plan which helped raise awareness regarding the benefits of trees as well as many of the challenges leading to the loss of tree canopy. The Community Forest Management Plan identified an estimated cost of $20-24 million annually for the City to take maintenance responsibility for street trees. In FY 22-23, DOT added five positions and non-personal funding in the General Fund to begin implementation of the Community Forest Management Plan. The ongoing funding of $2.2 million provides for pruning of public street trees on a 12-year cycle and City-led planting of 1,000 trees city-wide on an annual basis, as well as funding for the staff positions. As a result, there is no ongoing maintenance backlog for City street trees.
In FY 23-24, DOT applied for and received a $5.6 million grant from the United States Forest Service to perform needed tree assessment and inventory work, identified and prescribed maintenance, and replace missing and unhealthy trees in San José's most disadvantaged communities. Staff will use the data and collection methods to scale out a more refined estimate than was presented in the Community Forest Management Plan and provide options to partner with residents to help offset the costs of tree planting and maintenance.

Traffic Safety Devices

Traffic Signals
The traffic signal maintenance team maintains 964 signals at intersections. The intersections contain a variety of complex equipment such as traffic signal controllers and cabinets, video detection systems, flashing safety beacons, sophisticated communications systems, traffic conflict monitors, cameras, 207 miles of fiber, and 109 miles of interconnect cable throughout the City. DOT also maintains speed radar feedback signs (187) and Dynamic Message Signs (9). Due to past budget reductions that reduced preventive maintenance activities for much of this equipment below recommended levels and continued hiring challenges which resulted in increased vacancy rates for electricians, currently only the most critical components that monitor the operation of the intersections are proactively maintained. Remaining resources are focused on responding to service requests in a timely manner. Fortunately, the department has reduced the electrician vacancy rate considerably in FY 2023-24.

There is a one-time rehabilitation cost of $620,000 for existing equipment. Additionally, there is an ongoing annual shortfall of $4.4 million, which includes amortized replacement costs and maintenance costs for new equipment, as well as the cost to provide all preventive maintenance activities for all existing signalized intersections and anticipated system expansion.

Roadway Markings

The roadway markings inventory includes roadway striping, crosswalks, stop bars and messages on street surfaces, and Raised Pavement Markers (RPMs). The purpose of these markings is to regulate and guide motorists, pedestrians, and cyclists to increase roadway safety, particularly during low-visibility conditions. Currently, there are 6.2 million square feet of roadway markings throughout the City. To have 100% of markings in good condition, major roadway striping should be repainted every three years if thermoplastic has been applied; arterial legends and curb painting should be repainted on a two-year cycle; and residential areas should be repainted on a three-year cycle. As a result of the deferred maintenance, approximately 2.2 million square feet (36%) are currently in good condition, which leaves 4 million square feet (64%) that need to be painted to achieve 100% of markings in good condition.

To achieve 100% of the total roadway markings inventory (6.2 million square feet of paint and all RPMs) in good or better condition, one-time funding of $17 million is needed to complete an additional 4 million square feet of roadway markings (using paint, $11M for thermoplastic) and install 449,613 RPMs, refresh lane messages/legends and repair bollards. If all citywide markings and devices are upgraded, there is an ongoing maintenance need of $5.6 million to maintain assets within required parameters. With a current funding level of $800,000, the ongoing funding shortfall is $4.8 million.

Right-of-Way Street Lighting

The City of San José owns and maintains 65,600 streetlights based on an inventory that was completed as part of the LED streetlight conversion project. There are an estimated streetlight network includes 32,050 painted octa flute poles and 32,350 remaining lights are either on galvanized poles, decorative poles, or are decorative up lights.

Painted octa flute streetlight poles have varying degrees of paint conditions on their surface. The City previously allocated funding to refurbish old painted octa flute streetlight poles with poor paint conditions (e.g. peeling paint, exposed metal) into galvanized poles which have significantly longer life expectancies. This funding was discontinued due to budget shortfalls more than a decade ago. DOT needs time to update its inventory to get an accurate count of painted octa flute poles and update the cost to refurbish. Refurbishing all the painted streetlight poles with galvanized surfaces was previously estimated to require a total one-time rehabilitation investment cost of $34.2 million.

The combination of Measure T and the PG&E conversion program has eliminated any one-time backlog associated with the conversion of Low-Pressure Sodium lamps to LED lighting. On June 25, 2019, the City Council authorized the City Manager to negotiate and execute agreements with PG&E for the financing and installation of up to 27,000 LED streetlights. PG&E began the conversion work in December 2020 and anticipates completed the conversions in 2022.

Streetscapes

Right-of-Way Street Landscaping

There are 290 acres of street landscape including roadside and median islands. In 2001, staff prepared an assessment of the median island landscape throughout the City, which identified several locations where median island landscape would be appropriate. Those locations total approximately 50 acres of new landscaping. To date, approximately 30 of those acres have been installed, leaving 20 acres still to be completed. Some of the median islands are constructed but do not have landscaping; others require the island to be constructed. There is no current funding identified for installing the remaining landscaping projects, which are estimated to total approximately $12 million. When combined with the additional staff and vehicles ($2 million) the total one-time need in Street Landscaping is $12 million.

DOT has determined 7.5 acres per worker as the desired baseline staffing that is needed to maintain Type 1 landscape in good condition, and 5 acres per worker for Type 2 landscape. This represents an ongoing annual staffing shortfall of approximately $1.9 million. The other components of the ongoing shortfall in the Landscape Maintenance Program include an estimated annual need of $587,000 to renovate 7.5 acres per year of landscape (replacing dead or damaged trees and shrubs and irrigation systems), and $98,201 for weed abatement spraying for concrete islands. A $2.65 million ongoing annual shortfall is an accurate projection of future needs.

Stormwater Treatment Control Measures (TCMs)

To comply with the Municipal Regional Permit (MRP) as issued by the State Water Resources Control Board, the City requires the design and construction of stormwater treatment control measures (TCMs) on every new development and redevelopment project that creates or replaces 5,000 square feet or more of impervious surface. TCMs generally can include bioretention basins, proprietary and tree well filters, subsurface infiltration systems, detention basins, and pervious pavement.

To date, DOT has accepted 31 public stormwater assets located throughout the City. These assets include a total of 249 biotreatment cells (105,000 square feet); one detention basins, encompassing pre-treatment and treatment (approximately 13,350 square feet); 4 bioretention basins (17,466 square feet) also known as rain gardens; 46,000 square feet of riparian mitigation landscaping; four pump stations, 111,280 square feet of general landscaping; 9,800 square feet of subsurface infiltration systems; and 24 tree-well filters. DOT initially received funds in the FY 2017-18 and in the subsequent years, base budget adjustments were used to account for increased maintenance costs, repairs and ongoing maintenance of new facilities, and as a result the program is currently fully funded and there is no deferred maintenance or ongoing shortfall to report, but as more infrastructure of this nature is installed staff will take steps to define and properly resource ongoing maintenance needs.

TRANSPORTATION INFRASTRUCTURE SUMMARY

A one-time investment is needed in every major transportation asset category in order to bring the assets into good condition; most have ongoing shortfalls creating further backlogs and declining asset conditions. However, timely and substantial investments have delivered results by improving infrastructure conditions and lowering the one-time backlog,

The table below summarizes the various assets that comprise the total estimated one-time deferred maintenance and ongoing infrastructure backlog for Transportation Infrastructure elements that are the City's responsibility to maintain.

Transportation Infrastructure Needs (in Millions)		
Transportation Asset	**One-Time Funding Need**	**Annual On-Going Shortfall**
Pavement	$369	$0[(1)]
Traffic Signals	$0.62	$4.4
Roadway Markings	$17	$4.8
Streetlights	$34.2 [(1)]	$0
ADA Curb Ramps	$98.2	$0
Trees	TBD [(2)]	$0
Landscaping	$12	$2.6
Bridges	$21.2[(1)]	$0.2
Total	**$552.22**	**$12.0**

1. Include Measure T investments of $300M for pavement over 10 years and $20M for bridges and streetlight conversions through Measure T and PG&E program.
2. Inventory to be updated using funds from US Forest Service grant executed in FY 24-25

SAN JOSE-SANTA CLARA REGIONAL WASTEWATER FACILITY

Facility Description

The San José-Santa Clara Regional Wastewater Facility (RWF) is a regional wastewater treatment plant RWF serving eight South Bay cities (some as members of a district) and two unincorporated districts:

- City of San José
- City of Santa Clara
- City of Milpitas
- Cupertino Sanitary District
- County Sanitation District 2-3 (unincorporated)
- Burbank Sanitary District (unincorporated)
- West Valley Sanitation District (Campbell, Los Gatos, Monte Sereno, and Saratoga)

The RWF is jointly owned by the cities of San José and Santa Clara pursuant to an agreement executed in 1959, and is administered and operated by San José, through the Environmental

Services Department (ESD). ESD is also responsible for planning, designing, and constructing capital improvements at the RWF. The service area includes a population of about 1.4 million, including a diverse commercial and business sector with more than 17,000 sewer main connections.

The RWF was originally constructed in 1956 and continued to be expanded over several decades in response to a growing population/service area and to comply with increased state and federal regulations requiring higher treatment standards. The current wastewater treatment processes include screening and grit removal, primary sedimentation, secondary treatment by the activated sludge process, secondary clarification, filtration, disinfection, and dechlorination.

The RWF has an average dry weather flow design capacity of 167 million gallons per day (mgd), and a peak wet weather flow design capacity of 271 mgd. For 2022, the Average Dry Weather Influent Flow (ADWIF) and Average Dry Weather Effluent Flow (ADWEF) were 92 mgd and 61 mgd, respectively.

In addition to the original construction and subsequent treatment process expansions, several significant infrastructure investments have been made at the RWF over the past decade. These include: Digester Gas Storage Replacement (2016); Digester Gas Compressor Upgrades (2017); Emergency Diesel Generators (2017), Iron Salt Feed Station (2018), Cogeneration Facility (2020), Digester and Thickener Facilities Upgrade (2022), and Headworks (2023). However, these improvements do not fully represent the comprehensive rehabilitation needs at the RWF based on its current age and condition.

RWF Ten-Year Capital Improvement Program

Most of the RWF's infrastructure is now more than 50 years old and in need of significant rehabilitation and/or replacement. A 2007 Infrastructure Condition Assessment report (ICA) identified nearly one billion dollars in recommended improvements to address aging electrical, mechanical, and structural assets after decades of deferred maintenance and minimal capital reinvestments. As a follow on to the ICA, a comprehensive master planning process was completed between 2007 and 2010 resulting in the RWF Master Plan (PMP) Preferred Alternative that recommended comprehensive technical improvements and a land use plan for the RWF. The technical component of the PMP recommended over 100 capital improvement projects to be implemented at an estimated cost of $2.2 billion dollars over a 30-year planning period.

The PMP Preferred Alternative was adopted, and the environmental impact report was approved by the San José and Santa Clara City Councils in November and December 2013, respectively. In February 2014, the City of San José completed a project validation process to update and prioritize the recommended projects into 33 construction packages which in turn served as the basis for the RWF Ten-Year Capital Improvement Program (CIP) estimated at $1.4 billion. The Adopted 2024-2028 CIP includes $639.2 million for construction projects at the RWF. Currently, there are 13 projects in feasibility or design and 9 projects under construction.

Funding Strategy for Capital Improvements at the RWF

Historically, the transfer from the Sewer Service and Use Charge (SSUC) Fund and contributions from the City of Santa Clara and Tributary Agencies have served as the primary revenue sources for the RWF capital improvement program. In addition, long-term bonds and State Revolving Fund (SRF) loans have also been used to finance various capital improvements at the treatment plant in the past. The San José-Santa Clara Clean Water Financing Authority (CWFA) 2009A Bonds were fully paid off in November of 2020.

With adoption of the PMP and completion of the project validation process in 2013-2014, it was recognized that a long-term funding strategy would be needed to provide sustained funding for the ten-year, $1.4 billion CIP. In June 2015, the City Council approved a Ten-Year Funding Strategy for the RWF CIP which included a combination of cash and debt financing, along with seeking low-cost State Revolving Fund (SRF) loans to the maximum extent possible. In July 2017, staff was informed by the State Water Resources Control Board that SRF funding would not be available for several RWF CIP projects due to higher-than-expected demand for SRF loans across the state. Significant changes would also have to be made to the loan agreement terms currently proposed by the State Water Resources Control Board (SWRCB) to allow the City to enter into any SRF agreements.

Going forward, the funding strategy for the City-only portion of the 10-year CIP primarily includes: (1) funding from the SSUC revenues, and (2) proceeds from debt issuance. Staff will also continue to monitor SRF loan opportunities but is not actively seeking SRF loans at this time.

In October 2017, staff obtained City Council approval of an Interim Financing Program to finance capital improvements at the RWF. The interim financing program contemplates the use of a bank line of credit and issuance of long-term bonds in the future to supplement and/or refinance notes issued under the line of credit program. Council approved establishment of an interim financing program (Wastewater Revenue Notes) under a three-year contract to enable borrowing of up to a maximum of $300 million (outstanding at any one time) to fund San José's portion of the RWF CIP. Council approved an extension to the interim financing program in October 2020. In November 2022, City Council approved the issuance and sale of up to $300 million in Wastewater Revenue Bonds to refund the outstanding Wastewater Revenue Notes, which allowed the City to establish a second interim financing facility for San José's portion of RWF capital costs.

Currently, there are no unfunded needs for the RWF CIP. Staff will continue to develop and refine project scopes, schedules, and budgets on an annual basis to continually inform and update both near-term and long-term funding needs. In addition, certain factors may impact estimated project and program delivery costs such as cost escalation, bidding climate, external regulatory requirements/permitting approvals, unknown site conditions, operational/construction constraints, staffing availability, etc. Staff will continue to monitor and implement mitigation measures to the extent possible to minimize cost impacts to the projects and program.

WATER UTILITY SYSTEM

The San José Municipal Water System (Muni Water) includes:

• 344 Miles of Water Mains Ranging from 6-inches to 24-inches in diameter;
• 17 Reservoirs;
• 15 Pump Stations;
• 14 Wells; and
• Other Appurtenances including Meters, Laterals, Hydrants, Air Release Valves, and Sample Stations.

Currently, there are no unfunded capital needs at Muni Water. The annual reinvestment into the system (approximately $6.7 million) funds water well rehabilitation and construction projects, replacement of aging steel water mains, and other infrastructure improvements. Per the Municipal Code, the water utility maintains a Reserve for System Rehabilitation and Replacement ($4.7 million) for any unanticipated capital needs. Overall, the assets are well maintained in good to excellent condition.

ATTACHMENT B
GENERAL FUND VS. CAPITAL FUND

GENERAL FUND		
	Current Backlog of Deferred Needs	Annual Ongoing Unfunded Needs
BUILDING FACILITIES (Police, Communications, City Hall, Animal Care and Services)	$ 46,300,000	$ 3,870,000
TECHNOLOGY (Infrastructure & Software Upgrades)	$ 42,800,000	$ 2,550,000
FLEET REPLACEMENT	$ 10,440,000	$ 720,000
SPORTS FACILITIES OPERATED BY OTHERS	$ 22,513,000	$ 7,900,000
TRANSPORTATION INFRASTRUCTURE	$ 29,000,000	$ 11,800,000
TOTAL GENERAL FUND UNMET/DEFERRED INFRASTRUCTURE AND MAINTENANCE NEEDS	**$ 151,053,000**	**$ 26,840,000**

SPECIAL FUNDS/CAPITAL FUNDS		
	Current Backlog of Deferred Needs	Annual Ongoing Unfunded Needs
AIRPORT	$ -	$ -
BUILDING FACILITIES (Fire, Library, PRNS)	$ 247,500,000	$ 29,200,000
SPORTS FACILITIES OPERATED BY OTHERS	$ 4,357,000	
CONVENTION FACILITIES (TSJ) AND CULTURAL FACILITIES OPERATED BY OTHERS	$ 113,740,000	$ 10,000,000
FLEET REPLACEMENT	$ 6,960,000	$ 480,000
PARKS, POOLS & OPEN SPACE	$ 339,800,000	$ 38,800,000
SANITARY SEWER SYSTEM	$ 65,000,000	$ 300,000
SERVICE YARDS	$ 14,100,000	$ 5,800,000
STORM SEWER SYSTEM	$ 180,000,000	$ 13,200,000
RADIO COMMUNICATIONS	$ 7,700,000	$ 3,500,000
TECHNOLOGY (Infrastructure & Software Upgrades)	$ 3,000,000	$ 750,000
TRANSPORTATION INFRASTRUCTURE	$ 523,200,000	$ 200,000
WATER POLLUTION CONTROL PLANT	$ -	$ -
WATER UTILITY SYSTEM	$ -	$ -
TOTAL POTENTIAL OTHER FUND UNMET/DEFERRED INFRASTRUCTURE AND MAINTENANCE NEEDS	**$ 1,505,357,000**	**$ 102,230,000**
TOTAL UNMET/DEFERRED INFRASTRUCTURE AND MAINTENANCE NEEDS	**$ 1,656,410,000**	**$ 129,070,000**