

FISCAL YEAR 2019

Adopted Capital Budget





CITY OF
**PALO
ALTO**

Fiscal Year 2019 Adopted Capital Budget

City Council

Liz Kniss, Mayor

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Kiely Nose, Budget Director, Office of Management and Budget

David Ramberg, Assistant Director of Administrative Services

Paul Harper, Budget Manager, Office of Management and Budget

Gregory Scharff, Finance Committee Chair

CITY OF PALO ALTO

The government of the City of Palo Alto exists to promote and sustain a superior quality of life in Palo Alto. In partnership with our community, our goal is to deliver cost-effective services in a personal, responsive and innovative manner.

Our Values



Quality

Superior delivery of services

Courtesy

Providing service with respect and concern

Efficiency

Productive, effective use of resources

Integrity

Straight-forward, honest and fair relations

Innovation

Excellence in creative thought and implementation

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**PALO
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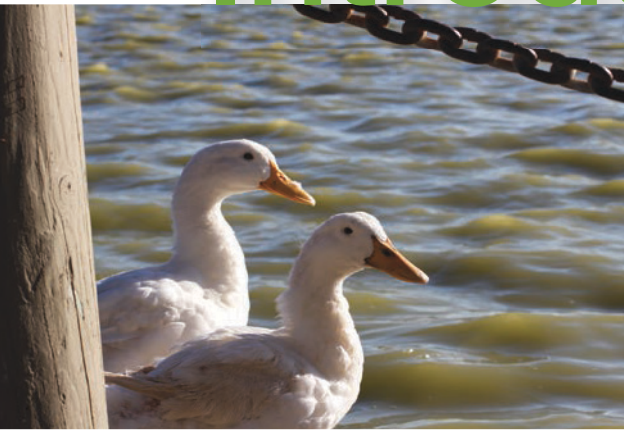
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Introduction





CITY OF
**PALO
ALTO**

TRANSMITTAL LETTER

August 20, 2018

To the Honorable Mayor and City Council:
2019 Fiscal Year Capital Budget Transmittal

Dear Mayor and Council Members:

I am pleased to present the FY 2019 Adopted Capital Budget along with the 2019-2023 Capital Improvement Program (CIP) Plan for the City of Palo Alto. This document guides the City in the planning and scheduling of infrastructure improvement projects over the next five years and it was developed in coordination with all City departments responsible for capital projects. As required by the City Municipal Code, the Planning and Transportation Commission (PTC) reviewed the 2019-2023 CIP on May 22, 2018 to evaluate the program's compliance with the Updated Comprehensive Plan which was adopted by City Council in November 2017.

The FY 2019 Adopted Capital Budget, which includes the Capital Improvement Funds, Enterprise Funds, and Internal Service Funds, is \$221.2 million, an increase of \$48.3 million or 27.9%, compared to the FY 2018 Adopted Capital Budget of \$172.9 million. The overall 2019-2023 CIP is \$747.0 million, an increase of \$143.5 million or 23.8% compared to the 2018-2022 CIP of \$603.5 million. It should be noted that the City Council only approves the budget for the first year of any five year CIP, and the remaining four years are to be used for forecasting and planning. Therefore, if one compares the Adopted Capital Budget for FY 2019 to what was previously planned for FY 2019, the comparison shows that this significant uptick in CIP investments was anticipated.

When comparing the FY 2019 Adopted Capital Budget to what was previously planned for FY 2019, the adopted \$221.2 million reflects only an increase of \$38.1 million or 20.8%. This increase from the previous plan for FY 2019, as outlined in the 2018-2022 CIP, is driven directly by \$47.7 million in recommended reappropriations of anticipated unspent funds from FY 2018 to FY 2019 for projects that were not able to be completed prior to June 30, 2018 and will continue into FY 2019. This increase is partially offset by moving some projects previously planned to be completed in FY 2019 to the outer years of the five-year CIP.

When comparing the overall 2019-2023 CIP to the previous five year plan, the reappropriation of funds accounts for part of the increase as well as the addition of 19 new projects recommended to be added to the five-year CIP, increases to the Infrastructure Plan (IP) projects (dis-

cussed in Attachment A), and the FY 2023 portion of ongoing capital projects being added to the five year plan.

The Enterprise Funds comprise the largest portion of the five-year CIP both in the number of projects (108) and budgeted project costs (\$380.0 million). The Capital Improvement Funds make up the second largest section of the CIP with 94 projects at a cost of \$337.3 million, and lastly the Internal Service Funds have 16 projects for \$29.7 million.

City Council Priorities

At the start of the City's budget process, the City Council determines its main priorities for the upcoming budget period to guide both budget development and department priority-setting. The priorities for 2018 are:

- Transportation
- Housing
- Budget and Finance
- Grade Separation

Within the capital budget, the top priority is to fund and complete the nine 2014 Council Infrastructure Plan (IP) projects approved by the City Council in June 2014. This priority aligns with the Council's Budget and Finance priority, because a specific goal of this priority is to create an infrastructure funding plan.

Grade separation, with a specific goal of choosing a preferred alternative by the end of 2018, is another City Council priority that falls squarely in the capital budget. Funding grade separation upgrades along the CalTrain corridor appears to be the single largest infrastructure project in terms of potential cost facing the City in the near future. In order to facilitate the selection of a preferred alternative and begin work on initial design and planning, I recommended that \$1.0 million of the approximate \$1.3 million Measure B funding the City is anticipated to receive, be programmed in the Railroad Grade Separation project (PL-17001) annually. The remaining \$0.3 million of Measure B funding is recommended to be programmed in the Traffic Signal and Intelligent Transportation System Upgrades project (PL-05030) to address the Transportation priority. Similarly, SB1 funding of approximately \$1.2 million annually is recommended to partially fund the Charleston/Arastradero Corridor Infrastructure Plan project (PE-13011) in FY 2019 and general Street Maintenance (PE-86070) in the remaining five-year CIP.

Thinking about the City's infrastructure as a whole as well as within specific capital funds, there are several major capital initiatives across the City that will need to be managed in a balanced and strategic manner.

- 2014 Council Infrastructure Plan Projects: This set of nine projects was approved by the Council in 2014 as the highest priority projects within the Capital Improvement Fund. All nine projects are scheduled to be complete within the 2019-2023 CIP. FY 2019 is anticipated to be an important year for the IP as six of the projects are anticipated to be awarded or complete. The Fire Station #3 Replacement project (PE-15003) was awarded for construction in FY 2018 and is anticipated to be complete in Spring 2019. The first major phase of the Bicycle and Pedestrian Plan Implementation should be finished within the fiscal

year, and construction contracts for phases 1 and 2 of the Charleston/Arastradero Corridor were awarded at the end of FY 2018 with substantial completion in FY 2019. In addition, construction contracts for the Highway 101 Pedestrian/Bicycle Overpass and both the California Avenue and Downtown Garage projects are all anticipated to be awarded for construction in FY 2019. Due to a number of factors, costs for the IP have increased significantly since approval. In the 2018-2022 CIP the costs were estimated to be \$196.0 million, and those estimates are up to \$249.9 million in this document. Further discussion of the IP and strategies to fund the cost increases are addressed in Attachment A.

- Water Quality Control Plant: Management of the Plant's infrastructure is programmed in the Wastewater Treatment (WWT) Fund and costs are recovered from the City and the five partner agencies serviced by the Plant. Many of the Plant's major systems are reaching the end of their useful life and new technology for systems such as advanced water treatment and secondary treatment upgrades are available and need to be integrated into the Plant while older systems are phased out. This overhaul of the Plant will require major investment of \$120.5 million over the five-year CIP from the City and the partner agencies. Staff is currently exploring funding options for low interest state revolving loan funds or revenue bonds for these large infrastructure investments.
- Storm Water Management: In April 2017 the Storm Water Management Fee ballot measure was approved to fund future improvements to the City's storm water system. There were 13 specific projects outlined in the ballot measure to be completed over 15 years, and four of these projects are programmed to be complete within the 2019-2023 CIP as well as a recurring project for general rehabilitation and maintenance of the system.
- Airport Apron Reconstruction: During the development of the 2019-2023 CIP, the Federal Aviation Administration (FAA) determined that finishing reconstruction of the apron, the area of the airport where aircraft are parked and refueled, was the highest priority need at the airport. As a result, the FAA redirected all grant funding over the five-year CIP from other projects at the airport to the Airport Apron Reconstruction Project (AP-16000) with the goal of finishing the multi phased project in FY 2023. Since the FAA provides grant funding for 90% of project costs, this required that all other capital projects at the airport be pushed out beyond the five-year CIP, with the exception of the Airport Layout Plan (AP-21000), which is projected to be funded in FY 2023. City management of the Airport is still relatively new, so it is taking time to generate the revenue needed to self-sustain the operating and capital needs at the Airport. Funding the City's 10% portion of the apron reconstruction will need to be carefully supervised in order to limit the need for additional funding from the General Fund for Airport services.

Funding Challenges

Throughout the development of the 2019-2023 CIP, I stressed the importance of examining workload capacity, existing resources, and the priorities of each capital fund to ensure that the capital projects already underway, or programmed in a previous five year CIP, were still priorities and could be completed before requesting to fund new projects. This emphasis reiterated the recommendations of the Infrastructure Blue Ribbon Commission (IBRC) to focus on “catch-up” and “keep-up” projects to maintain the City’s existing infrastructure and make sure it’s in good working order to provide high quality services to the residents. As a result of these efforts, there are relatively few new projects recommended to be added to the 2019-2023 CIP and a number of projects were reprioritized and moved into outer years of the five year period to better align projects with staff’s capacity as well as funding availability. Overall there were 19 new projects added to the CIP: six in the Capital Improvement Funds, eleven in the Enterprise Funds, and two in the Internal Service Funds. These projects are discussed further in Attachment A as well as in the respective fund sections of this document.

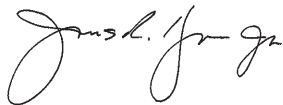
Although the fund balances across the five-year CIP remain positive for all funds, challenges remain to be addressed. The Infrastructure Plan, currently estimated at \$249.9 million in costs, could continue to increase as design work progresses and as more projects are awarded for construction. In addition, the Capital Improvement Fund, as currently recommended, lacks flexibility for the City to respond to unforeseen, urgent capital needs or address known but unfunded community asset projects (i.e. Junior Museum and Zoo Phase II, Animal Shelter Reconstruction, Parks Master Plan Projects) over the next five years. In addition, execution of the five-year CIP assumes projects remain within budgeted levels and that there are no new capital projects added to the CIP. As mentioned above, generating enough revenue at the Airport to maintain and upgrade the Airport facilities without help from the General Fund continues to be a challenge, especially if the cost of apron reconstruction continues to increase. Staff will continue to work with the FAA to complete the project as quickly as possible while being mindful of the limited resources available to fund the City’s portion of the project costs. It is important that staff and the City Council continue to work together to revise and update funding plans to address these and other issues that may come up to keep critical capital and infrastructure improvements on track around Palo Alto.

The projects recommended in my tenth and final Adopted FY 2019 Capital Budget in the amount of \$221.2 million and the associated 2019-2023 CIP programmed for \$747.0 million were selected after a thorough review of priorities, anticipated future needs, and available resources. Addressing the City’s infrastructure backlog continues to be a major focus for the community, the City Council, and staff, who all recognize not only the practical need of these investments but the symbolic significance of delivering on these priorities that will serve future generations.

Acknowledgments

I would like to thank our dedicated City Council for its leadership and our Executive Leadership Team and the entire staff for providing outstanding services to our community. Special thanks to Lalo Perez, Administrative Services Director, who is also presenting his final Capital Budget and five-year CIP; Kiely Nose, Budget Director, and the entire Office of Management and Budget team - Jessie Deschamps, Steve Guagliardo, Paul Harper, Alexandra Harris, Chaitali Paliwal, Jamie Perez, Kayla Shapiro, and Chris Yi; Brad Eggleston, Assistant Director of Public Works, and his team throughout the Public Works Department; and finally department staff throughout the City who contributed to this budget and worked countless hours during evenings and on weekends to develop this document.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "James Keene". The signature is fluid and cursive, with the first name "James" and last name "Keene" clearly distinguishable.

James Keene

City Manager

ATTACHMENT A: CAPITAL IMPROVEMENT FUNDS

The Capital Improvement Fund category includes two funds, the Capital Improvement Fund and the Cubberley Property Infrastructure Fund, which make up the second largest section of the 2019-2023 CIP with 94 projects at a cost of \$337.3 million. Capital projects that do not directly benefit the Enterprise Funds, support technology improvements, or vehicle maintenance and replacement are funded in the Capital Improvement Fund and account for repairs to the City's roads, parks and open space, and most City facilities. The Cubberley Property Infrastructure Fund supports repair and renovation of facilities at the Cubberley Community Center.

Sources of Funding

The Capital Improvement Fund has been supported primarily through a transfer from the General Fund split into two classifications, a base amount and dedicated funding from Transient Occupancy Tax (TOT) revenue. Since FY 2013, the base transfer level has increased annually by an amount equal to the consumer price index, bringing the FY 2019 base transfer to \$15.0 million. In addition to this base level of General Fund support, the City Council earmarked revenues from a voter approved 2 percent TOT increase plus revenue from new hotels built after that date to fund the Infrastructure Plan beginning in January 2015. The FY 2019 General Fund transfer to infrastructure includes \$8.2 million in TOT revenues; therefore, the total transfer to the Capital Improvement Fund is \$24.2 million, which includes \$1.0 million of estimated interest earnings in addition to the base and TOT amounts.

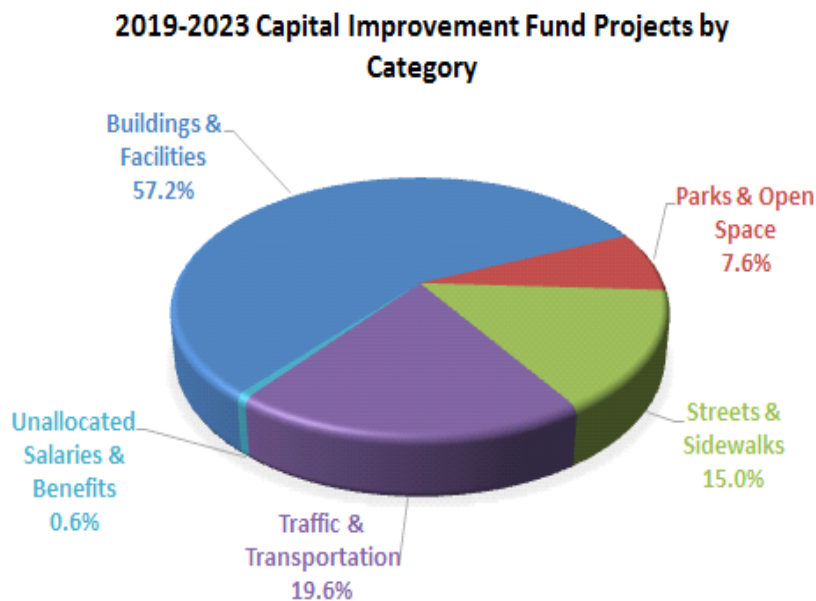
It should be noted that subsequent to the adoption of the FY 2019 Capital Budget, the City Council approved a resolution to place a measure on the November 6, 2018 General Election Balance to increase the City's TOT by 1.5 percentage points. Any additional TOT revenue from this ballot measure was not anticipated as part of the development of the FY 2019 Capital Budget or the FY 2019-2023 CIP; however, if the measure passes this funding will be appropriated as part of the development of the FY 2020 Capital Budget and FY 2020-2024 CIP according to City Council direction.

Other major sources of funding for the Capital Improvement Fund include Certificates of Participation (COP) funding, grants from Federal, State, and other local agencies, and transfers from the Stanford University Medical Center Development Agreement, the Gas Tax Fund, and various Impact Fee Funds and Parking District Funds. Further discussion of these revenue sources can be found in the Summary of CIP Program Revenue section of this document.

The Cubberley Property Infrastructure Fund is funded solely through a transfer from the General Fund based on the November 2014 change to the lease with the Palo Alto Unified School District. The revised lease reallocated an ongoing annual \$1.8 million "Covenant Not to Develop" payment that previously went to the school district to establish the Cubberley Property Infrastructure Fund and support infrastructure repair and renovation for the Cubberley Community Center.

Expenditures

The 2019-2023 CIP for the Capital Improvement Fund includes 89 projects at a cost of \$331.8 million, of which 69 projects have funding in FY 2019 at an estimated cost of \$133.2 million, with \$25.2 million recommended to be reappropriated from FY 2018 for projects continuing into FY 2019. The Capital Improvement Fund budget is divided into five categories: Buildings and Facilities, Parks and Open Space, Streets and Sidewalks, Traffic and Transportation, and Unallocated Salaries and Benefits. Additional details on each of these categories can be found in the Capital Project Fund Overview section for each of the categories.



Infrastructure Management System and Status of the “Catch-Up” Backlog

A key recommendation of the IBRC report was the establishment of an Infrastructure Management System (IMS) that will maintain an inventory of the City’s infrastructure and track and budget for “catch-up” and “keep-up” needs. The IMS has been implemented utilizing two software applications, Maintenance Connection which is the repository for the infrastructure asset inventory information, and Questica, the City’s budget system, which is used for long term capital planning. The combined use of both applications will allow the City to plan and report on long term capital funding needs and deferred maintenance, or “catch-up” balances for both operating and capital maintenance. The initial asset inventory and capital planning information has been transferred to the IMS, and reporting from the IMS is anticipated to begin in FY 2019.

TRANSMITTAL LETTER

The December 2011 IBRC Report identified a backlog of “catch-up” projects totaling \$41.2 million. The 2019-2023 CIP includes a total of \$23.5 million in catch-up projects, reducing the backlog amount to \$17.7 million at the end of the five year period as outlined in the table below.

IBRC “Catch-Up” Backlog Status

IBRC “CATCH-UP” CATEGORY	IBRC FINAL REPORT “CATCH-UP” BACKLOG	“CATCH-UP” AMOUNT FUNDED TO DATE OR INCLUDED IN THE ADOPTED CIP	FISCAL YEAR 2019-2023 BACKLOG
Buildings	\$5.0 million	\$2.2 million	\$2.8 million
Cubberley Community Center	\$6.9 million	\$0.9 million	\$6.0 million
Parks	\$14.4 million	\$8.1 million	\$6.3 million
Surface	\$14.9 million	\$12.3 million	\$2.6 million
TOTAL	\$41.2 million	\$23.5 million	\$17.7 million

The 2019-2023 Capital Improvement Program continues significant investments in traffic and transportation initiatives. In November 2016, Santa Clara County passed Measure B, a 30-year half-cent county wide sales tax to enhance transit, highways, expressways and active transportation (bicycles, pedestrians and complete streets). Measure B revenue for Palo Alto is anticipated to be \$1.3 million annually and has been recommended to be split, with \$1.0 million for the Railroad Grade Separation project (PL-17001) and \$0.3 million for Traffic Signal and Intelligent Transportation System Upgrades project (PL-05030). Similarly, SB1 funding of approximately \$1.2 million annually is recommended to partially fund the Charleston/Arastradero Corridor Infrastructure Plan project (PE-13011) in FY 2019 and general Street Maintenance (PE-86070) in the remaining five-year CIP. It should be noted, in future years the addition of this funding to the City’s street maintenance program, could potentially allow some funds to be reallocated to other capital projects with City Council approval.

City Council Infrastructure Plan

In 2013 the City Council established the Council Infrastructure Committee and tasked the Committee with identifying a funding plan for infrastructure projects requiring funding above and beyond the base annual General Fund transfer to the Capital Improvement Fund. After meeting regularly for more than a year, the Committee arrived at a list of nine recommended projects and an associated funding plan, which was approved by the City Council in June 2014. At the time the plan was adopted, the total cost of Infrastructure Plan projects was estimated at \$125.8 million. It is important to note that project costs for two of the projects only included the amounts that were unfunded in June 2014. For comparison to current Council Infrastructure Plan costs, the apples-to-apples figure is \$136.6 million (rather than \$125.8 million). Additionally, the project costs did not include staff salaries and benefits. Beginning in FY 2016, staff began budgeting the cost of staff salaries and benefits within the individual capital projects to more accurately plan and account for the total cost of projects. These costs had previously been budgeted in a single capital project that accounted for the salaries and benefits of all staff that work

on capital projects and are budgeted in the capital fund. The inclusion of staff salaries and benefits in individual project budgets can appear to increase the overall cost of the projects. In reality, the apparent increase is simply a shift of budget allocation from the single “salaries and benefits” capital project to the individual projects. The primary reasons for increased project costs are the significant construction cost escalation that has occurred in recent years and additions to the scope of certain projects.

Based on known estimates, the total cost of the Infrastructure Plan is currently \$249.9 million, detailed by project below:

- A new Public Safety Building (potential \$92.2 million)
- Replacement of Fire Station #3 (\$9.9 million)
- Replacement of Fire Station #4 (\$8.2 million)
- A new California Avenue area parking garage (\$47.9 million)
- A new Downtown parking garage (\$29.1 million)
- Bicycle Pedestrian Transportation Plan (\$20.8 million)
- Highway 101 Bicycle/Pedestrian Bridge (\$18.5 million)
- Charleston/Arastradero Corridor Improvements (\$19.7 million)
- Byxbee Park Completion (\$3.6 million)

The plan relies upon a variety of funding sources:

- Certificates of Participation (COP) supported by a two percentage point TOT increase and the construction of new hotels within Palo Alto (\$128.6 million)
- Transfers from the Stanford University Medical Center Development Agreement Fund (\$34.5 million)
- Grant funding from other local agencies (\$12.0 million)
- Downtown Parking In-Lieu Fees (\$6.8 million)
- Parks Dedication Fees (\$2.8 million)
- SB1 Gas Tax Funding (\$1.2 million)
- Charleston/Arastradero Impact Fees (\$0.8 million)

The IP also relies on the 2 percent TOT increase plus revenue from new hotels built after January 2015 for Infrastructure Plan projects and debt service. The 2019-2023 CIP assumes the opening of new Marriott hotels in FY 2020. Based on this, an additional \$3.6 million of annual TOT funding as well as one time COP issuance of \$35.2 million is estimated to cover the cost of the IP projects. Once the Certificates of Participation are issued, TOT revenues will be allocated to pay for the debt service, which is estimated to be \$2.8 million in FY 2020 and increase to \$9.2 million annually in FY 2022.

The Fire Station #3 Replacement project was awarded for construction in Fiscal Year 2018 and is anticipated to be complete in Spring 2019. The next project anticipated to be approved for construction is the New California Avenue Garage project, for which the \$30.0 million Infra-

TRANSMITTAL LETTER

structure Plan Contingency Reserve, set aside in the 2017-2021 CIP to fund cost increases in the IP, is recommended to be allocated in Fiscal Year 2019. Four other IP projects are anticipated to be awarded or complete in FY 2019. The first major phase of the Bicycle and Pedestrian Plan Implementation should be finished within the fiscal year, and construction contracts for phases 1 and 2 of the Charleston/Arastradero Corridor project were awarded at the end of FY 2018 with substantial completion in FY 2019. In addition, construction contracts for the Highway 101 Pedestrian/Bicycle Overpass and the Downtown Garage projects are anticipated to be awarded in FY 2019.

In addition to the Council Infrastructure Plan, there are a number of other significant potential capital projects that have been identified as needs that do not have funding identified. While successful completion of the Council Infrastructure Plan has been identified as the highest infrastructure priority, the following are some other potential competing community asset projects:

- Junior Museum and Zoo rebuild (Phase II)
- Animal Shelter replacement or renovation
- Parks Master Plan implementation

In order to allow for more flexibility in the five-year CIP and beyond, and provide funding for unfunded community asset projects and other unforeseen capital needs, the Finance Committee began discussing the possibility of a ballot measure in November 2018 to be used to generate additional revenue to support infrastructure. Starting on February 6, 2018 and continuing over a series of meetings, the Finance Committee discussed the Infrastructure Plan and the overall funding strategy to ensure the projects will be completed within the 2019-2023 CIP. This includes funding from a potential ballot measure as well as funding that is anticipated, but has not been previously recognized or appropriated, like the potential TOT funding from the new Marriott hotels mentioned above. Subsequent to the adoption of the FY 2019 Capital Budget, the City Council approved a resolution to place a measure on the November 6, 2018 General Election Ballot to increase the City's TOT by 1.5 percentage points, from 14 percent to 15.5 percent. Staff estimates collecting an additional \$2.55 million annually with this increase, and similar to the current dedicated TOT revenue, any additional revenue for infrastructure could be leveraged for additional COP funding.

It should be noted, any additional TOT revenue from this ballot measure was not anticipated as part of the development of the FY 2019 Capital Budget or the FY 2019-2023 CIP; however, if the measure passes this funding will be appropriated as part of the development of the FY 2020 Capital Budget and FY 2020-2024 CIP according to City Council direction.

New Projects

There are five new projects in the Capital Improvement Fund for the 2019-2023 CIP and they are all funded in FY 2019. Three of the projects fall under the category of Facility Upgrades and include:

- Animal Shelter Renovation (FY 2019: \$0.8 million; 2019-2023 CIP: \$0.8 million)
- City Hall Space Planning (FY 2019: \$0.1 million; 2019-2023 CIP: \$0.1 million)

- Water, Gas Wastewater Office Remodel (FY 2019: \$0.1 million; 2019-2023 CIP: \$0.8 million)

The other two projects are related to Enhanced Public Safety:

- Emergency Vehicle Traffic Signal Preemption System Pilot (FY 2019: \$0.6 million; 2019-2023 CIP: \$0.6 million)
- Fire and Utilities Trench Training Facility (FY 2019: \$0.1 million; 2019-2023 CIP: \$0.1 million)

More information about these projects can be found on their respective project pages under the Capital Improvement Fund section in this document.

Infrastructure Reserve

The ending fund balance in the Capital Improvement Fund is referred to as the Infrastructure Reserve (IR). The IR is used to provide cash flow for reimbursable grants, address unanticipated cost increases, and provide funding for urgent and unanticipated projects. As seen in the Source and Use chart in the Capital Improvement Fund section of this document, the projected IR balance at the end of Fiscal Year 2019 is estimated to be \$1.7 million. This five year CIP assumes keeping the Infrastructure Plan COP funding at a debt to revenue ratio of approximately 70%, which is similar to the FY 2018-2022 CIP. Due to the estimated increase of TOT funding from the opening of the new Marriott hotels in FY 2020, along with the anticipated COP funding that can be leveraged, the IR is estimated to remain positive through all five years of the 2019-2023 CIP. This strategy has some risk and uncertainties due to the timing of the opening of the hotels and it assumes that current projects remain within budgeted levels, no new projects are added to the CIP, and no large unforeseen urgent capital needs happen. This is the impetus for City Council to approve a ballot measure to increase funding for infrastructure and create more flexibility within the Capital Improvement Fund. It is important to note that City Council only approves the FY 2019 portion of the five year CIP, so these assumptions and risks will continue to be evaluated throughout FY 2019 and considered as part of the development of the 2020-2024 CIP.

Cubberley Property Infrastructure Fund

The 2019-2023 CIP includes funding for infrastructure improvements at the Cubberley Community Center in accordance with the November 2014 change to the lease with the Palo Alto Unified School District, which reallocated an annual \$1.8 million “Covenant Not to Develop” payment benefiting the school district to infrastructure repair and renovation for the Cubberley Community Center. The 2019-2023 Capital Improvement Program includes expenditures of \$5.7 million in this fund, with \$2.2 million allocated in FY 2019. One new project is recommended in this fund in FY 2019 for replacement of the Building Management Systems for \$0.4 million in FY 2019.

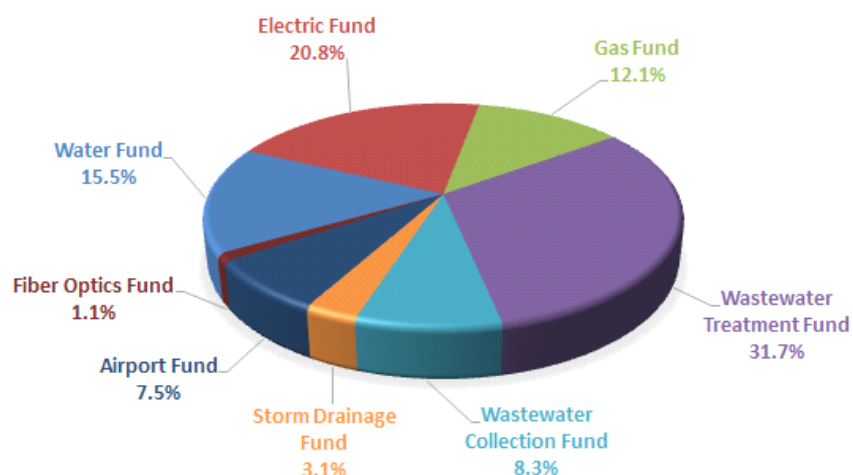
Attachment B:

Enterprise and Internal Service Funds

Enterprise Fund Capital Improvement Projects

Enterprise Funds account for financial activities that are associated with a broad range of municipal services. Each year a significant investment is made from the City's Enterprise Funds (Airport, Electric, Fiber Optics, Gas, Storm Drainage, Wastewater Collection, Wastewater Treatment, and Water). In FY 2019, a total of \$75.8 million will be allocated towards the capital program for the Enterprise Funds, with \$380.0 million allocated over the five year period of the CIP, representing 50.9 percent of CIP expenditures for all funds. Of the \$75.8 million allocated in FY 2019, \$17.3 million is for projects previously approved by the City Council that will be carried over from FY 2018 through the adoption of the budget. The Utilities Department manages the Electric, Water, Gas, Fiber Optics, and Wastewater Collection Funds, while the Public Works Department manages the Airport, Storm Drainage, and Wastewater Treatment Funds. Following is a brief discussion of the City's largest Enterprise Fund capital improvement programs. Additional information on all of these funds can be found in the fund summary sections of this document.

2019-2023 Enterprise CIP Projects by Fund



Airport Fund

The Airport receives a majority of its funding through grants from the Federal Aviation Administration (FAA) and the City is required to match ten percent of the award. A total of \$28.6 million is allocated towards capital infrastructure over the 2019-2023 CIP, with \$10.8 million allocated in FY 2019. The FAA prioritized the Airport Apron Reconstruction project (\$10.8 million in FY 2019) and construction for Phase II is anticipated to begin in FY 2019. Airport projects over the

five year CIP will upgrade and modernize the facilities, with an emphasis on critical planning tools.

Electric Fund

The Electric Fund capital program funds improvements such as upgrades to substations, transmission lines, and underground districts. A total of \$79.0 million is allocated towards capital infrastructure over the 2019-2023 CIP, with \$21.4 million allocated in FY 2019. Four ongoing system improvement related projects comprise approximately 50 percent of the Electric Fund capital program: Electric Customer Connections (\$12.0 million), Electric System Improvements (\$7.7 million), Smart Grid Technology Installation (\$14.3 million), and Wood Pole Replacement (\$7.5 million). There are five new projects in the Electric Fund for the 2019-2023 CIP and four of them have funding in FY 2019. All of the projects fall under the category of System Improvements and include:

- Colorado Power Station Equipment Upgrade (FY 2019: \$0.9 million; 2019-2023 CIP: \$0.9 million)
- Colorado Substation Improvements (FY 2019: \$0.1 million; 2019-2023 CIP: \$0.5 million)
- Hopkins Substation 4/12kV Conversion (FY 2019: \$0.0 million; 2019-2023 CIP: \$5.8 million)
- Rebuild Underground District 30 (FY 2019: \$0.1 million; 2019-2023 CIP: \$1.3 million)
- Wood Pole Replacement (FY 2019: \$1.5 million; 2019-2023 CIP: \$7.5 million)

Storm Drainage Fund

The Storm Water Management Fee ballot measure was approved by voters in April 2017, providing funding for the Storm Drain Blue Ribbon Committee's recommendations for capital projects related to maintenance and upgrades to the City's storm water management system. The 2019-2023 Capital Improvement Program includes expenditures of \$11.7 million, with \$4.1 million allocated in FY 2019. With the passage of the 2017 Storm Water Management Fee ballot measure, 13 drainage improvement projects will be recommended over the next 14 years, four of which have been programmed in the 2019-2023 CIP, and the first estimated to be completed in FY 2020. There are two new projects in the Storm Drainage Fund for the 2019-2023 CIP; both fall under the category of Capacity Improvements and include:

- Corporation Way System Upgrades and Pump Station (FY 2019: \$0.1 million; 2019-2023 CIP: \$3.1 million)
- Loma Verde Avenue Trunk Line Improvements (FY 2019: \$2.4 million; 2019-2023 CIP: \$2.5 million)

Wastewater Treatment Fund

The Wastewater Treatment Fund accounts for activities related to the replacement and rehabilitation of the City's Wastewater Treatment Plant infrastructure. The 2019-2023 Capital Improvement Program includes expenditures of \$120.5 million, with \$9.8 million allocated in FY

2019. Approximately 64 percent of expenditures within this fund are reimbursed by five contributing partner agencies (Cities of Mountain View and Los Altos, Town of Los Altos Hills, Stanford University, and East Palo Alto Sanitary District). Major projects for FY 2019-2023 include the Secondary Treatment Upgrades (\$30.6 million), Advanced Water Purification Facility (\$23.3 million), and a new Laboratory and Environmental Services Building (\$18.8 million). Staff is researching funding, such as state revolving loans for major projects. There are three new projects in the Wastewater Treatment Fund for the 2019-2023 CIP and all of them have funding in FY 2019. All of the projects fall under the category of System Improvements and include:

- Advanced Water Purification Facility (FY 2019: \$1.0 million; 2019-2023 CIP: \$23.3 million)
- Plant Repair, Retrofit, and Equipment Replacement (FY 2019: \$4.0 million; 2019-2023 CIP: \$17.3 million)
- Secondary Treatment Upgrades (FY 2019: \$1.5 million; 2019-2023 CIP: \$30.6 million)

Internal Service Fund Capital Improvement Projects

Internal Service Funds account for activity that provides goods or services to other funds, departments, or agencies within the City. Of the City's three Internal Service Funds (the Technology Fund and Vehicle Replacement and Maintenance Fund), two have capital projects budgeted throughout the FY 2019-2023 Capital Improvement Program. The Technology Fund has a total FY 2019-2023 budget of \$6.9 million (\$2.7 million in FY 2019), and the Vehicle Replacement Fund has a total FY 2019-2023 budget of \$22.8 million (\$7.7 million in FY 2019).

Technology Fund

Technology Fund projects enhance service delivery to the community and to City staff through efficient and effective implementation of information technology solutions. The major project for FY 2019-2023 is the Enterprise Resource Planning Upgrade: Reserve (\$5.0 million), which is being funded as a reserve to start the planning process for awarding the project.

Vehicle Replacement Fund

Vehicle Replacement and Maintenance Projects provide funding for maintaining and replacing City vehicles and heavy equipment to ensure safe, reliable, and efficient use of resources. Of the \$7.7 million in funding for FY 2019, \$3.8 million was approved by the City Council to be reappropriated from FY 2018 through the adoption of the budget. To maintain a regular replacement schedule efficiently, staff has been standardizing the process for determining the replacement value and timing.

Budget Acknowledgments

Department Budget Coordinators

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Capital Improvement Fund Review Process

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Edward Shikada	Josh Mello
Brad Eggleston	Mike Sartor
Rob De Geus	

CIP ORGANIZATIONAL CHART



The annual capital budget and five-year Capital Improvement Plan (CIP) is a spending plan for the City's infrastructure needs, which is based on the City Council priorities listed below. The City Council approved multi-year funding plans, such as the infrastructure keep-up and catch-up plan recommended by the Infrastructure Blue Ribbon Commission (December 2011), as well as the Infrastructure Plan (June 2014).

The review of the capital budget and five-year CIP is structured around public hearings by the Planning and Transportation Commission (PTC) and the Finance Committee. The PTC is tasked with ensuring compliance of the capital budget and five-year capital improvement plan with the City Council approved Comprehensive Plan. The Finance Committee reviews all aspects of the capital budget to ensure compliance with previous City Council direction, and further incorporates community input into the process, before recommending approval to the City Council.

City Council Top 4 Priorities

At the start of the City's budget process, the City Council determines its main priorities for the upcoming budget period. The priorities guide both budget development and department priority-setting. The public has the opportunity to provide input into this process as well as during the budget review by the Finance Committee. The following are the City Council's Top Priorities for 2018:

- Transportation
- Housing
- Budget and Finance
- Grade Separation

Budget Preparation

The City's annual budget process begins in September with the development of the base budget and concludes in August with the release of the adopted budget. The operating and capital budgets are developed on behalf of the City Manager, in consultation with senior management and the Director of Administrative Services, by the Administrative Services Department's Office of Management and Budget (OMB), utilizing six main sources of information:

- Community input (e.g.: Infrastructure Blue Ribbon Commission)
- City Council approved Infrastructure Plan
- City Council's Top Priorities and other City Council direction
- The Budget Development Status and Guidelines
- Service level and infrastructure needs prioritization
- Comprehensive Plan, which contains the City's official policies on land use and community design, transportation, housing, natural environment, business and economics, and community services

Capital Budget Calendar

SEPTEMBER

The capital budget process begins with the preparation of the capital budget guidelines and calendar by the Administrative Services Department - Office of Management and Budget. The budget guidelines are then distributed to all departments.

OCTOBER/NOVEMBER

Departments review the prior year five-year CIP. Based on the previously outlined information sources, changes to the prior year budgets are developed by the respective departments managing the City's infrastructure assets: Utilities, Information Technology, Community Services, Public Works, Planning and Community Environment, and Administrative Services. Changes to the CIP might include: addition of new projects, deletion of planned projects, reprioritization of planned projects, alternative funding strategies, and revision of project costs or timelines. Revisions of project costs reflect a review of potential costs variables such as but not limited to revised construction estimates, annual CPI increases, and known contractual increased costs.

DECEMBER/JANUARY

Departments submit capital infrastructure funding requests to the Office of Management and Budget. For General Fund funded project requests, OMB, in conjunction with Public Works, prepares an initial prioritization of requests based on the previously outlined information sources for consideration by the General Fund CIP Committee. The General Fund CIP Committee consists of senior managers in the Public Works, Community Services, Administrative Services, and Planning and Community Environment departments.

JANUARY/FEBRUARY

The General Fund CIP Committee reviews the General Fund capital budget submissions to ensure that the proposed projects align with the City Council's Top Priorities and other City Council directives, can be funded with available resources, and are aligned in the five-year plan to maximize City resources.

MARCH

The City Manager reviews and makes final decisions on the proposed capital budget and five-year Capital Improvement Program.

APRIL/MAY

Staff solicits input from the Planning and Transportation Commission on the proposed CIP, which reviews the CIP as it relates to the Comprehensive Plan. Comments from the PTC and staff response to comments from the PTC are reported to the Finance Committee during the public budget hearing.

MAY/JUNE

The City Manager formally presents the proposed CIP to the City Council, and subsequently to the Finance Committee, which conducts a series of public hearings. The Finance Committee presents its recommendation to the City Council. Final adoption occurs at a public hearing in

June. All changes made during the public process are incorporated into the adopted budget document, which is distributed to City libraries and posted on the City's website.

Capital Project Criteria

The following are criteria for qualification as a capital project:

- Must have a minimum cost of \$50,000 for each stand-alone unit or combined project.
- Must have a useful life of at least five to seven years (the purchase or project will still be functioning and not be obsolete at least five to seven years after implementation).
- Must extend the life of an existing asset or provide a new functional use for an existing asset for at least five years, for example extensive roof rehabilitations. These improvements are distinguished from ongoing maintenance work that may extend the life of the asset but is done on a routine basis.

Project Prioritization Selection Criteria

As part of developing the capital budget, staff must prioritize how to allocate limited resources over a variety of competing needs and demands. Projects and funding levels are prioritized utilizing several criteria, including:

- City Council priorities;
- Alignment with the City's Infrastructure Blue Ribbon Commission (IBRC) report and Infrastructure Plan;
- Health and safety implications;
- Historical spending levels; and
- Certainty over the feasibility, scope, and level of resources required.

Discussions on the prioritization of the five-year Capital Improvement Fund projects are included in the Transmittal Letter of this document as well as in the Fund Narrative section for the Capital Improvement Fund.

The prioritization of Enterprise Fund CIP projects are established by the department that manages the Enterprise Fund. The prioritization of CIP projects is dictated by several factors such as the department's operational needs, funding availability, CIP strategic plan, oversight committee, and/or specific City Council direction.

Continuing Projects

A change to the mechanism for previously approved projects that are continuing into the new fiscal year was approved during Fiscal Year 2015. Previously, unspent funding for capital projects carried forward automatically from one year to the next as long as funds were spent within a two-year period. In September 2014, the City Council approved an amendment to Municipal Code Section 2.28.090, eliminating the provision allowing for the "reappropriations." Continuing with this process that became effective with the 2016 Capital Budget, City Council authorization is required for funds to be carried forward from one fiscal year to the next.

There are several opportunities for departments to request funds to be carried over from one fiscal year to the next. First, departments have the opportunity to request funds to be carried over from one year to the next through the budget process. By estimating lower than budgeted

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expenditures in the current year, funds not anticipated to be spent in the current year but still required for the completion of the project are reflected in the first year of the five-year CIP. The Fund Narrative for each fund indicates the total amount of reappropriations included in this budget. Additionally, as part of the year-end closing actions, anticipated to be brought forward for City Council approval in the Fall, all projects will be reviewed to determine if additional adjustments to reappropriations are required.

Operating Budget Impact

The City uses the life cycle costing principle in planning for capital projects. All costs associated with a capital project, including operations and maintenance, will be included in the operating budget at the time of release of the applicable annual operating budget. Where applicable, the CIP budget document identifies the amount of operating expense associated with the project.

Changes to the Adopted Budget

Administrative policies and the Palo Alto Municipal Code provide guidelines on budget transfers, the authorization necessary to implement transfers, and appropriations after the budget is adopted.

Budget Amendment

This is an adjustment to the total project appropriated amount which was not included in the original adopted budget. These supplemental appropriations are presented to City Council in an agenda report and must be approved by the City Council.

Reasons for initiating a Budget Amendment include:

- Recognizing unanticipated revenue, which was not projected in the budget, and appropriating related expenditure in the year received (requires 2/3 City Council approval)
- Changes in scope of work
- Higher than estimated costs
- Adding new projects to the budget due to an urgent need or City Council direction

Budgetary Basis

The budget is prepared in accordance with Generally Accepted Accounting Principles. The budget for governmental funds has been prepared on a modified accrual basis. The modified accrual basis recognizes expenditures when the related fund liability is incurred. Revenues are recognized when they become both measurable and available. “Measurable” means the amount of the transaction can be determined and “available” means collectible within the current period or soon enough thereafter to be used to pay liabilities of the current period.

Fund Structure and Accounting Basis

The accounts of the City are made up of funds that help organize and account for restricted resources. A fund is defined as a fiscal and accounting entity with a self-balancing set of accounts (comprised of assets, liabilities, fund equity, revenues, and expenditures), which are segregated for the purpose of carrying out specific activities or attaining certain objectives in accordance with regulatory requirements.

The City has the following fund type categories:

Governmental Fund Types

The Governmental Funds include the General, Special Revenue, Debt Service, and Capital Project Funds. Governmental Funds are reported using the current financial resources measurement focus and the modified accrual basis of accounting.

Proprietary Fund Types

The Proprietary Funds, which include the Enterprise and Internal Service Funds, are used to account for the City's business-type activities. Proprietary funds are reported using the economic resources measurement focus and the full accrual basis of accounting. Revenues are recorded when earned, and expenses are recorded at the time liabilities are incurred, regardless of when the related cash flows take place.

Fiduciary Fund Types

The Fiduciary Funds account for assets held by the City in trust or as an agent for various assessment and community facilities districts. The City budget process does not include fiduciary funds.

Agency Fund Types

The Agency Funds are custodial in nature and do not involve measurement of results of operations. The City maintains three agency funds. The City budget process does not include agency funds.

Document Layout

The Capital Budget document provides readers with cost estimates, methods of financing, and project schedules for the City of Palo Alto's CIP for the next five years as well as estimates for current year activity. The document is organized by fund with each fund section containing the following elements:

Capital Projects Fund Overview: A multi-page narrative for every fund is included in this document, which includes historical expenditure levels, budget comparisons to prior years, a summary of the infrastructure related to that particular fund, and a discussion of major capital projects grouped by category. Additionally, this section includes statistical information regarding the program such as miles of gas mains or number of vehicles in the City fleet.

Project Detail Pages: After each fund summary, the reader finds information for each capital project, both recurring and non-recurring projects. The project pages include information regarding the project completion schedules (initial and revised), descriptions, justifications, a summary of significant changes to the cost or schedule of a project, revenue and expense information by fiscal year, and operating budget impacts for each project. This allows for the total cost of a project to be detailed. The information in the project detail pages is discussed in more detail below.

Project Maps: For the Capital Improvement Fund and the various Enterprise Funds, a map is included which shows the location of projects, for projects that have a singular defined location. At the end of the document, the reader will find a Glossary which defines frequently used terms.

Understanding the Details

Project Numbering Sequence

The project number contains seven characters. The first two are letters related to the managing department or fund. The next two digits relate to the fiscal year in which the project first received funding or was identified. The final three numbers are system-generated. For example, with project PE-17006, the “PE” denotes Public Works Engineering, the “17” indicates Fiscal Year 2017 funding, and the “006” is the sequential project number. The “Managing Department or Fund” table can be used as a reference for the two-character alpha portion of the project number.

Project Information

The project detail pages include the following information:

Fund – the fund where the project is budgeted.

Category – describes the type of activity that the project aligns to within the fund. A table at the end of this section provides a summary of the categories assigned to the various funds.

Project Location – describes the location or area that will be improved as a result of the project.

Managing Department – the department that is responsible for the delivery of the project.

IBRC Reference – refers to nomenclature devised by the Infrastructure Blue Ribbon Commission (IBRC) for certain General Fund projects; “keep-up” refers to projects which address the annual maintenance of existing infrastructure; “catch-up” refers to projects which address deferred maintenance needs; “new” refers to projects which address needs not identified by “keep-up” or “catch-up.” This category only applies to General Fund projects after the release of the Final IBRC report in 2011.

Initial/Revised Project Start/Completion – indicates what the initial schedule for the project was, as well as any subsequent changes.

Project Description – provides the scope of work for the project.

Project Justification – outlines the reasons why funding is required.

PROJECT CODE	MANAGING DEPARTMENT OR FUND
AC	Arts & Culture
AP	Airport Fund
AS	Administrative Services
CB	Cubberley Fund
EL	Electric Fund
FD	Fire Department
FO	Fiber Optics Fund
GS	Gas Fund
LB	Library
OS	Open Space
PD	Police Department
PE	Public Works Engineering
PF	Public Works Facilities
PG	Parks & Golf Course
PL	Planning
PO	Public Works Operations
RF	Refuse Fund
SD	Storm Drain Fund
TE	Technology Fund
VR	Vehicle Fund
WC	Wastewater Collection Fund
WQ	Wastewater Treatment Fund
WS	Water Fund

Supplemental Information – provides additional information that may enhance the project description and justification.

Significant Changes – provides an explanation of the changes to the initial schedule or budget for a project.

Funding Sources Schedule – outlines the sources of funding for the project by fiscal year. Generally projects are not funded by a particular grant, fee, or transfer, but in instances where they are, these sources are indicated. In most cases, this section indicates the amount that the fund where the project is budgeted will contribute towards the project. This table also includes prior year revenues, a current year estimate, anticipated revenue beyond the five years of the CIP, and total revenue for the project.

Expenditure Schedule – outlines the projected costs, by year for each project. Costs are broken into phases, such as design and construction, to indicate how the funds will be spent each year. Where applicable, salary and benefit estimates are included in the individual phases for a project, rather than reflected separately as in prior years. Salary and benefit costs are estimated for all five years of the CIP. In prior years, salary and benefit costs were reflected within the project for the first year of the CIP only. This table also includes prior year expenditures, a current year estimate, anticipated expenditures beyond the five years of the CIP, and the total cost of the project.

Operating Impacts – describes estimated annual maintenance and operating costs associated with the project. Efforts have been made to include the operating cost impacts wherever possible. Maintenance costs include utilities, equipment maintenance or service, facilities maintenance or service, grounds/landscape maintenance or service, custodial maintenance and others.

Relationship to Comprehensive Plan – indicates how the project furthers the implementation of the Comprehensive Plan, citing specific Comprehensive Plan policies and programs. In instances where a secondary relationship to the Comprehensive Plan exists, this is notated as well.

Potential Board/Commission Review – City Council-appointed advisory board, commission or ad hoc committee that has oversight responsibility on a project. A project may be reviewed by more than one board or commission. This body (bodies) provides the City Council input as to the merits of a project.

Environmental Impact Analysis – indicates the California Environmental Quality Act (CEQA) status of the project and LEED status, if applicable.

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CAPITAL FUNDS	
Capital Improvement Fund <ul style="list-style-type: none"> • Buildings and Facilities • Department Technology Upgrades • Parks and Open Space • Streets and Sidewalks • Traffic and Transportation • Unallocated (Salaries and Benefits) 	Cubberley Property Infrastructure Fund <ul style="list-style-type: none"> • Buildings and Facilities • Parks and Open Space
ENTERPRISE FUNDS	
Airport Fund <ul style="list-style-type: none"> • Airport Apron, Runways, and Taxiways • Airport Facilities Electric Fund <ul style="list-style-type: none"> • Customer Connections • System Improvements • Undergrounding Projects Fiber Optics Fund <ul style="list-style-type: none"> • Capacity Improvements • Customer Connections Gas Fund <ul style="list-style-type: none"> • Customer Connections • Gas Main Replacements • System Improvements 	Refuse Fund <ul style="list-style-type: none"> • Buildings and Facilities • Landfill Post-Closure Maintenance Storm Drainage Fund <ul style="list-style-type: none"> • Capacity Improvements • System Rehabilitation Wastewater Collection Fund <ul style="list-style-type: none"> • Customer Connections • System Improvements Wastewater Treatment Fund <ul style="list-style-type: none"> • Buildings and Facilities • System Improvements Water Fund <ul style="list-style-type: none"> • Customer Connections • System Improvements • Water Main Replacements
INTERNAL SERVICE FUNDS	
Technology Fund <ul style="list-style-type: none"> • Citywide Technology Upgrades and Improvements • Department Technology Upgrades and Improvements 	Vehicle Replacement Fund <ul style="list-style-type: none"> • Fleet Infrastructure Improvements • Vehicle and Equipment Replacement



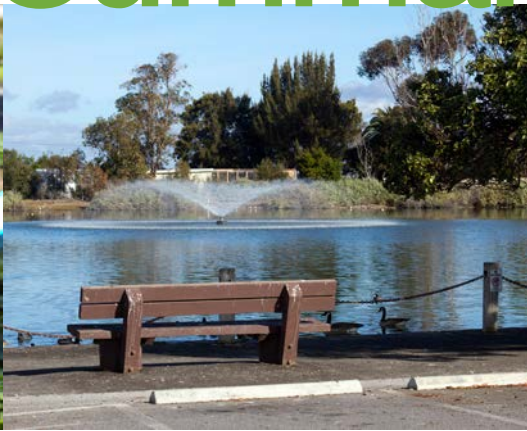


CITY OF
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Financial Summary



A close-up photograph of a colorful, abstract sculpture made of geometric shapes like rings and blocks in orange, yellow, green, and blue.





CITY OF
**PALO
ALTO**

SUMMARY OF CIP PROGRAM REVENUE

Revenue Source (\$000's)	Fiscal Year 2019	Fiscal Year 2020	Fiscal Year 2021	Fiscal Year 2022	Fiscal Year 2023	Total CIP 2019-2023
Capital Improvement Funds						
Transfer from General Fund	\$ 25,012	\$ 27,395	\$ 29,803	\$ 30,433	\$ 31,083	\$ 143,727
Gas Tax	2,541	2,570	2,570	2,570	2,570	12,821
Debt Financing	39,487	89,109	-	-	-	128,596
Impact Fees/In-Lieu Fees	5,282	3,205	950	545	350	10,332
Stanford University Medical Center	10,283	2,950	1,494	-	-	14,727
Federal/State & Local Agencies	13,922	9,203	5,188	1,721	1,721	31,756
Interest Income	1,000	1,000	1,000	1,000	1,000	5,000
Transfer from Parking Funds	8,271	1,461	43	43	-	9,817
Transfer from Other Funds	2,034	654	-	408	-	3,096
TOTAL CAPITAL IMPROVEMENT FUNDS	\$ 107,833	\$ 137,547	\$ 41,048	\$ 36,720	\$ 36,724	\$ 359,872
Enterprise Funds						
Utility Fees & Charges	\$ 6,656	\$ 6,729	\$ 6,804	\$ 7,331	\$ 7,096	\$ 34,617
Transfers from Other Funds	765	304	1,723	5,023	2,682	10,498
Federal/State & Local Agencies	15,150	34,732	55,979	7,929	12,357	126,146
TOTAL ENTERPRISE FUNDS	\$ 22,571	\$ 41,765	\$ 64,506	\$ 20,283	\$ 22,136	\$ 171,261
Internal Services Funds						
Transfer from General Fund	\$ 2,138	\$ 2,138	\$ 2,138	\$ 2,138	\$ 2,138	\$ 10,690
Transfer from Other Funds	1,605	1,430	1,430	1,430	1,430	7,325
Other Agencies	16	16	16	16	16	80
TOTAL INTERNAL SERVICE FUNDS	\$ 3,759	\$ 3,584	\$ 3,584	\$ 3,584	\$ 3,584	\$ 18,095
TOTAL CAPITAL IMPROVEMENT PROGRAM	\$ 134,163	\$ 182,896	\$ 109,138	\$ 60,586	\$ 62,444	\$ 549,228

Transfer From General Fund

Capital projects that do not directly benefit the Enterprise Funds are funded in the Capital Improvement Fund (CIP). This fund is primarily supported by an annual transfer from the General Fund, and accounts for capital repairs to the City's roads, parks and open space, and General Fund facilities. In the 2019-2023 CIP, this transfer ranges between \$23.1 million and \$29.2 million. This figure includes the base General Fund transfer to the Capital Improvement Fund, ranging from \$15.0 million in Fiscal Year 2019 to \$16.5 million in Fiscal Year 2023. In addition to the base transfer amount, the additional 2 percent Transient Occupancy Tax (TOT) revenue plus new hotels ranges between \$8.2 million to \$12.7 million. This includes additional TOT revenue from new Marriott hotels that are anticipated to open in Fiscal Year 2020 (\$1.8 million in the first year and \$3.6 million ongoing). The additional TOT revenue will support budgeted Infrastructure Plan projects as well as the debt service costs beginning in Fiscal Year 2020 as a result of expected debt financing to fund several of the Infrastructure Plan projects. Finally, this

SUMMARY OF CIP PROGRAM REVENUE

amount includes the annual transfer to the Cubberley Property Infrastructure Fund of \$1.8 million approved in the Cubberley Lease Agreement by the City Council in 2015.

Subsequent to the adoption of the FY 2019 Capital Budget, the Council approved a resolution to place a measure on the November 6, 2018 General Election Balance to increase the City's TOT by 1.5 percentage points, from 14 percent to 15.5 percent. Staff estimates collecting an additional \$2.55 million annually with this increase, and similar to the current dedicated TOT revenue, any additional revenue for infrastructure could be leveraged for additional COP funding.

It should be noted, any additional TOT revenue from this ballot measure was not anticipated as part of the development of the FY 2019 Capital Budget or the FY 2019-2023 CIP; however, if the measure passes this funding will be appropriated as part of the development of the FY 2020 Capital Budget and FY 2020-2024 CIP according to Council direction.

Transfers From Enterprise Funds

The City of Palo Alto has nine Enterprise Funds (Airport Fund, Refuse Fund, Storm Drainage Fund, Wastewater Treatment Fund, Electric Fund, Fiber Optics Fund, Gas Fund, Water Fund, and Wastewater Collection Fund). The Airport Fund, Refuse Fund, Storm Drainage Fund, and Wastewater Treatment Fund are sometimes collectively referred to as the "Public Works Funds," while the Electric Fund, Fiber Optics Fund, Gas Fund, Water Fund, and Wastewater Collection Fund are sometimes collectively referred to as the "Utility Funds." In instances where the Enterprise Funds would benefit from a General Fund project, the Enterprise Funds are charged for their proportional share. Several examples are included in the Fiscal Year 2019-2023 CIP; including the Municipal Services Center Building A, B, and C Roofing Rehabilitation; Water, Gas, Wastewater Office Remodel; and City Facility Parking Lot Maintenance projects. The cost of these projects will be split with the various Enterprise Funds according to the current usage of the space.

Certificates of Participation

The Infrastructure Plan (IP), as approved by the City Council in June 2014 (Staff Report #4889), relied upon a borrowing mechanism known as Certificates of Participation (COPs) to fund a portion of the improvements outlined in the plan (\$63.3 million). By pledging future City revenues generated by a voter-approved (November 2014) two percentage point transient occupancy tax (TOT) increase and additional transient occupancy tax proceeds resulting from new hotels within Palo Alto, the City can borrow funds to go towards the cost of construction of IP projects such as the new Public Safety Building (PE-15001), a new parking Garage in the California Avenue area (PE-18000), and rebuilding Fire Station Number #4 (PE-18004). As part of the 2017-2021 CIP, \$30.0 million in additional COP funding was approved as a contingency for increasing costs of the IP projects. New Marriott hotels are anticipated to open in Fiscal Year 2020, so the amount of COP funding for the IP projects is recommended to be increased by an additional \$35.3 million for a total of \$128.6 million.

Gas Tax Fund

The Gas Tax Fund accounts for revenues received from the State gas tax and Federal and State grants earmarked for street improvements. Use of this fund is restricted to maintenance of the road network system of the City, including sidewalks. Transfers from the Gas Tax Fund supports the following CIP Projects: Street Maintenance (PE-86070) and Safe Routes to School (PL-00026). With the 2019 goal of achieving a citywide Pavement Condition Index of 85 approaching, the annual Street Maintenance project budget will be reassessed to be funded at a level sufficient to maintain the new street conditions. The recent passage of S.B. 1 for Road Maintenance and Rehabilitation is estimated to provide an additional \$1.2 million annually beginning Fiscal Year 2019. This funding will be used in Fiscal Year 2019 for the Charleston/Arastradero Corridor Project (PE-13011). In future years, this funding could supplement and enhance the City's street maintenance program, possibly allowing some funds to be reallocated to other capital projects with City Council approval.

Development Impact Fees

Development impact fees are collected from developers and provide funding for the City's infrastructure related to community centers, libraries, parks, public facilities, and transportation. The City Attorney provides guidance on whether a project qualifies for funding. In the 2019-2023 CIP, three projects are supported by Parks Impact Fees: Baylands Athletic Center 10.5 Acre Expansion Plan (PG-19001), Dog Park Installation and Renovation (PG-18001), and Park Restroom Installation (PG-19000). The Byxbee Park Completion project (PE-18006) and the utilization of \$2.4 million of Park Dedication Fees in Fiscal Year 2019 was included in the City Council approved Infrastructure Plan. The remaining projects align with the Parks Master Plan and use Park Impact Fees to upgrade and enhance parks citywide. Community Center Impact Fees are recommended to be used to complete Phase I of the JMZ Renovation (AC-18001) and Riconada Park Improvements (PE-08001).

Federal, State, & Local Agencies

The City partners with local agencies to provide support to certain capital projects. This revenue is typically provided as reimbursement grants or direct transfer payments. In Fiscal Year 2019 the City is expected to receive approximately \$13.9 million from other agencies in support of CIP projects some of which are: \$7.0 million from Santa Clara County and a One Bay Area Grant (OBAG) for the Highway 101 Pedestrian/Bicycle Overpass project (PE-11011); \$2.5 million from Caltrans for the Newell Road/San Francisquito Creek Bridge project (PE-12011); and \$1.6 million from the VTA and State of California for the Charleston/Arastradero Corridor Project (PE-13011). In the remaining years of the Capital Improvement Program (Fiscal Years 2020 through 2023) it is anticipated that the City will receive an additional \$17.8 million in funds from other agencies for capital projects programmed in the Capital Improvement Fund.

Stanford University Medical Center Development Agreement

In 2011, a development agreement was established between the City of Palo Alto and the Stanford University Medical Center Parties. The funds received by the City as a result of this Development Agreement represent a significant portion of the funding for the Infrastructure Plan. Over the course of the 2019-2023 CIP, transfers to the Capital Improvement Fund totaling \$10.3 million are anticipated. This funding will support a variety of projects including the Bicycle and Pedestrian Transportation Plan (PL-04010), the New Public Safety Building (PE-15011), the reconstruction of Fire Station #4 (PE-18004), and the New Downtown Garage (PE-15007). For additional information about the development agreement, please refer to the Special Revenue Funds section of the Fiscal Year 2019 Operating Budget document.

Parking Funds
Over the 2019-2023 CIP, \$9.8 million is expected to be transferred from the City's parking funds for major capital projects that include \$2.7 million for various Downtown parking projects: Downtown Automated Parking Guidance Systems (PL-15002), Downtown Parking Management and System Implementation (PL-16002), and Downtown Parking Wayfinding (PL-15004). It should be noted that the funding for Downtown Parking Automation and Management projects in FY 2020 and beyond is contingent upon rate increases for parking permits within the respective parking districts. Additionally, transfers from the Downtown Parking In-Lieu Fund to the Capital Improvement Fund, totaling \$5.5 million are anticipated in FY 2019 consistent with the City Council approved Infrastructure Plan and will support a portion of the costs associated with the construction of a New Downtown Parking Garage (PE-15007).

Enterprise Funds Utility Rate Charges

Enterprise Funds operate on a full cost recovery basis. Accordingly, all costs related to operations and capital projects are recovered through utility rate charges. The Fiscal Year 2019 Operating Budget document contains a detailed discussion regarding the Fiscal Year 2019 utility rate increases.

Transfers within Enterprise Funds

CIP projects that benefit multiple enterprise funds are funded by the beneficiary funds. One project is the application of the Geographic Information System (GIS) (WS-02014) that benefits the Water, Gas and Wastewater Collection Funds. The Water Fund hosts the GIS project, and the Gas and Wastewater Collection Funds reimburse the Water Fund for their share of the project cost. A second example is Smart Grid Technology upgrades (EL-11014) that is hosted in the Electric Fund and benefits the Electric, Gas, and Water Funds.

Storm Water Management Fee

In April 2005, property owners approved an increase in the Storm Drainage Fee through a mail ballot process conducted in accordance with Proposition 218. Under the provisions of the 2005 ballot measure, the base rate of \$13.05 was scheduled to sunset on June 1, 2017, reverting to the pre-election rate of \$4.25. In an effort to reauthorize the fee through another ballot measure, staff worked with a City Manager-appointed Blue Ribbon Committee to generate a recommendation for storm water management funding beyond Fiscal Year 2017 and a joint committee/staff funding recommendation was presented to City Council in Spring 2016. In April 2017 the Storm Water Management Fee was approved by a majority of property owners via a ballot-by-mail process, establishing a base rate of \$13.65 per Equivalent Residential Unit (ERU) per month along with a provision that the City Council could increase the rate on an annual basis by the local inflation rate (as measured by the Consumer Price Index) or 6 percent, whichever is less. Under the provisions of the ballot measure, the fee is recommended to increase by 2.9% to \$14.05 per ERU for Fiscal Year 2019.

Enterprise Fund	Project Name	User Fee	2019-2023 CIP Plan Revenues	Description
Electric Fund	Electric Customer Connections (EL-89028)	Connection Fees	\$8,500,000	Cover services for installation, transformers, meters for new customers, upgrading of existing customers and temporary service connection. For a list of other services refer to Utility Rate Schedule E-15.
Fiber Optics Fund	Fiber Optic Customer Connections (FO-10000)	Fiber Optic License Fees	\$1,000,000	Cover installation of fiber optic infrastructure for new service connections. For a list of other services refer to Utility Rate Schedule EDF-1.
Gas Fund	Gas System, Customer Connections (GS-80017)	Connection Fees	\$5,713,861	Cover services for distribution system extension, service connection, meter charges and relocation. For a list of other services refer to Utility Rate Schedule G-5.
Water Fund	Water System, Customer Connections (WS-80013)	Connection Fees	\$4,934,036	Cover services for distribution system extension, service connection, meter charges, capacity fees and fire hydrants. For a list of other services refer to Utility Rate Schedule W-5.
Wastewater Collection Fund	Sewer System, Customer Connections (WC-80020)	Connection Fees	\$2,219,190	Cover services for collection system extension, service connection, relocation of facilities and manholes. For a list of other services refer to Utility Rate Schedule S-5.

User Fees and Charges

Certain CIP projects in the Enterprise Funds are supported by user fees. Included in this category are certain charges to telecommunication and cable television companies pertaining to undergrounding projects. The list of projects funded by user fees and the description of each user fee are summarized in the table above.

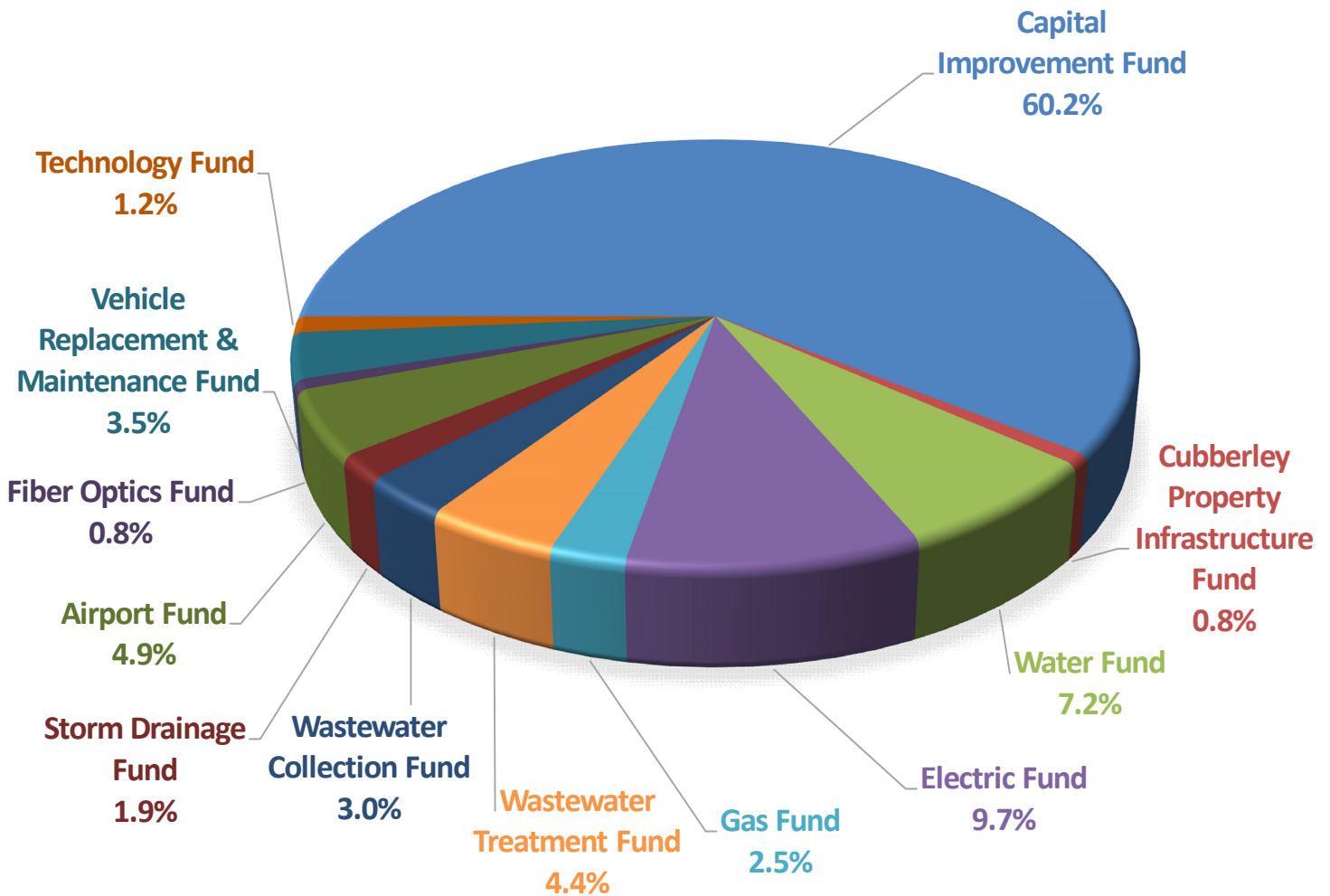
SUMMARY OF CIP PROGRAM REVENUE

Partner Agencies

The Cities of Palo Alto, Mountain View, and Los Altos, along with the Town of Los Altos Hills, Stanford University, and the East Palo Alto Sanitary District (the partners) participate jointly in the cost of maintaining and operating the City of Palo Alto Regional Water Quality Control Plant. The City of Palo Alto is the owner and the administrator of the Plant, and the partners reimburse the City for their share of the cost of CIP projects.

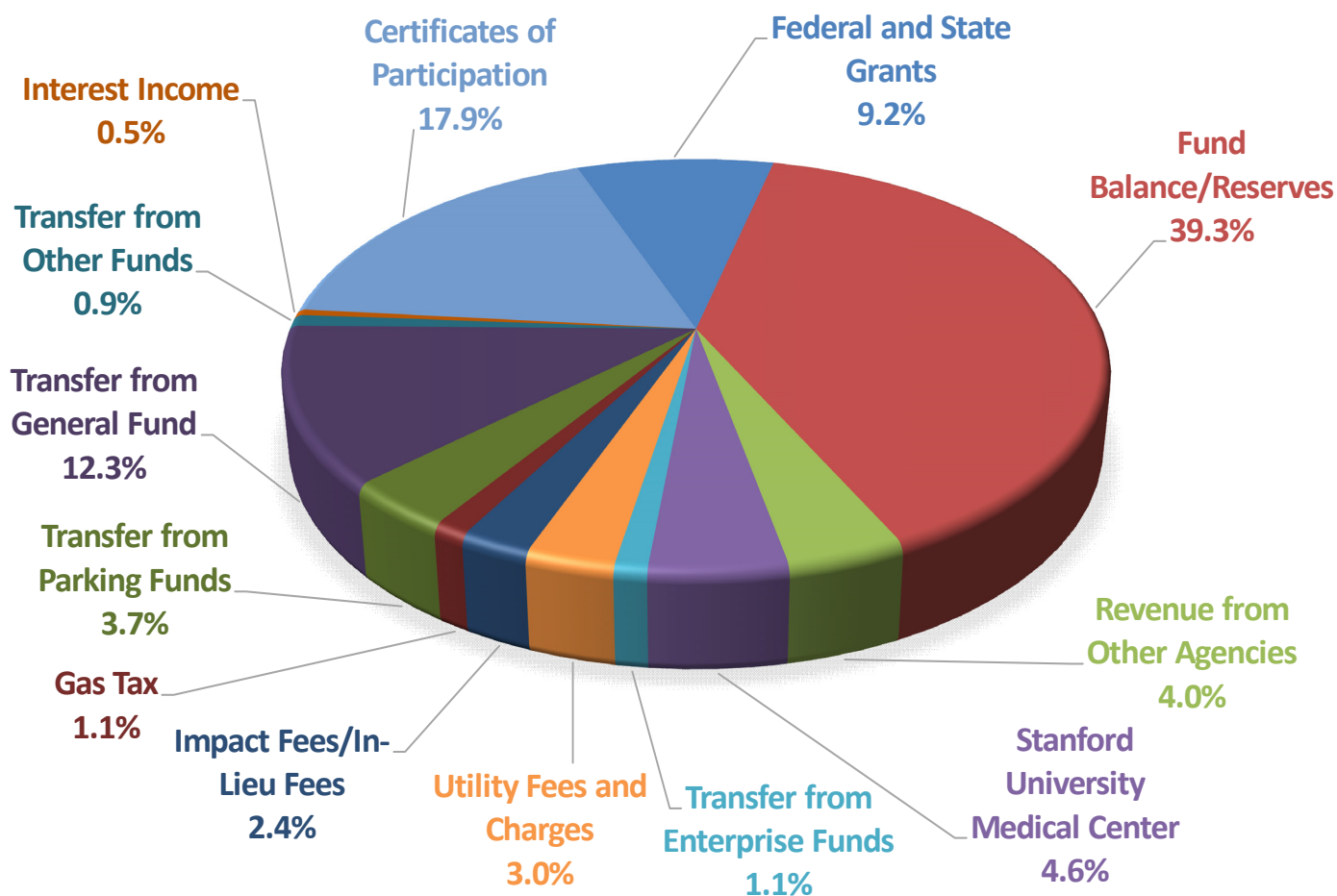
Internal Service Funds

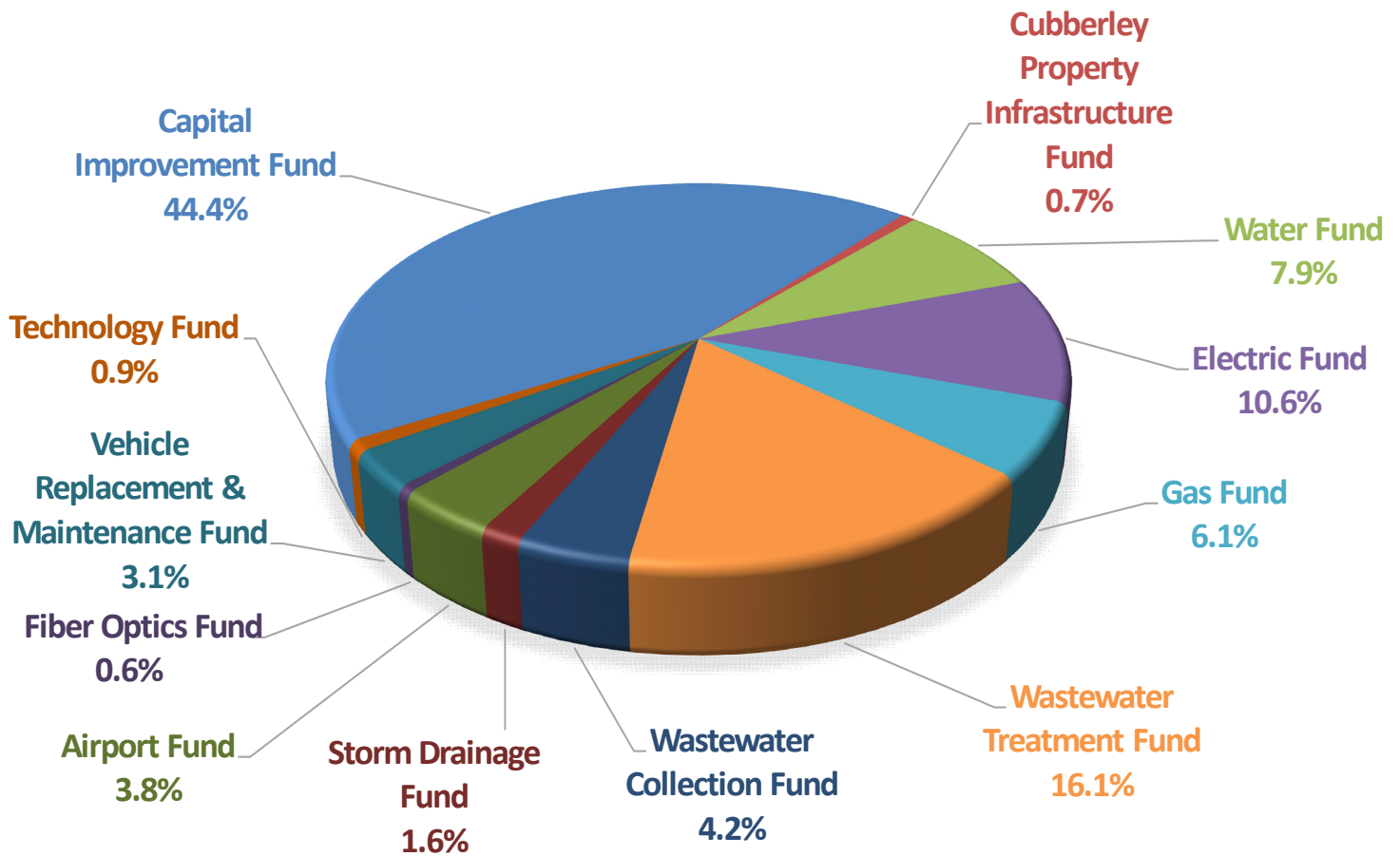
The Technology Fund has six CIP projects in Fiscal Year 2019 in the total amount of \$2.7 million, and the Vehicle Replacement Fund has six CIP projects in Fiscal Year 2019 for \$7.7 million. The General Fund, Capital Projects Fund and Enterprise Funds provide funding for their share of CIP Projects in the Internal Service Funds (ISF) through a cost allocation mechanism.

2019 Capital Budget Expenditures by Fund - \$221.2 Million

SUMMARY INFORMATION

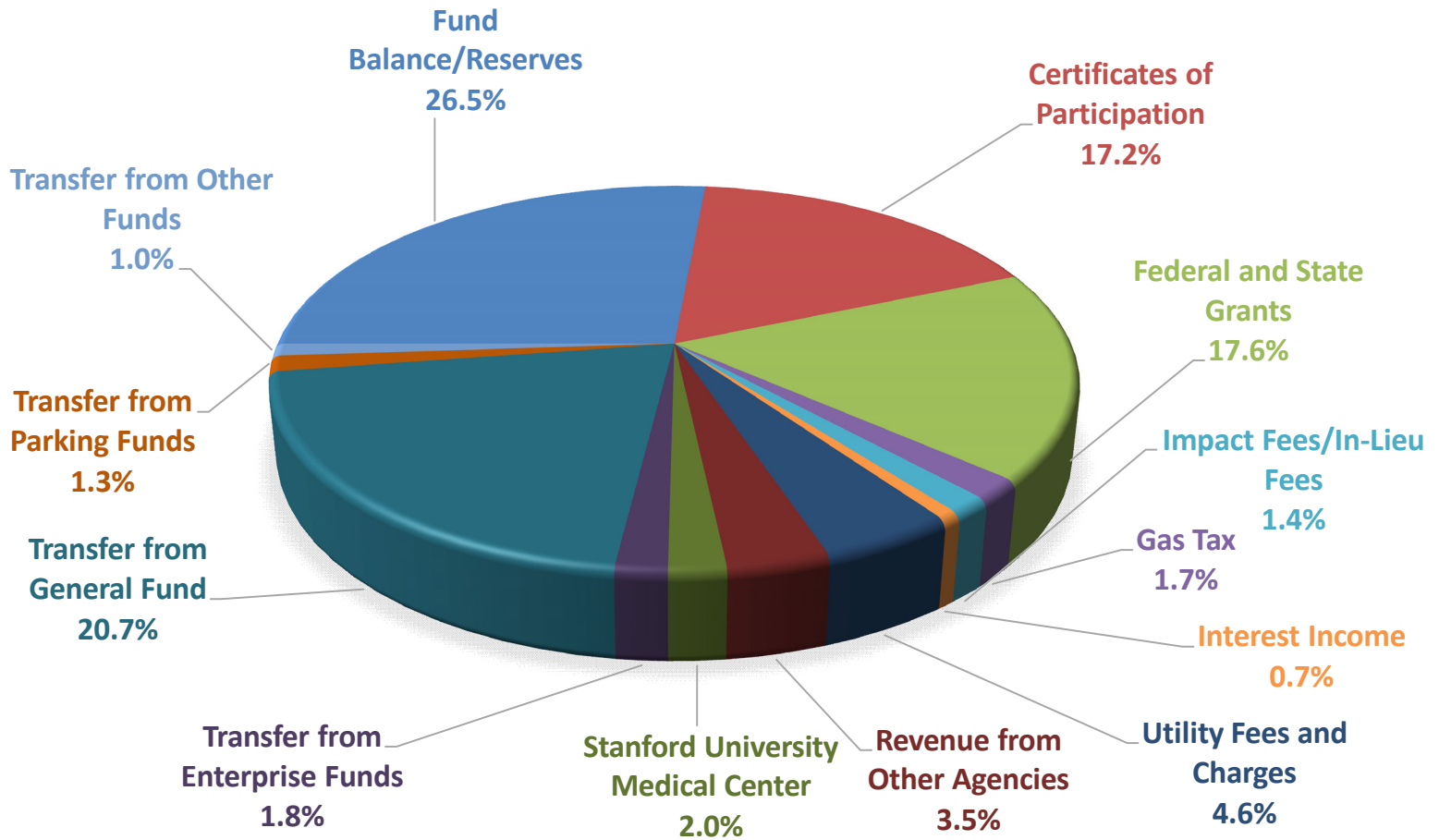
2019 Capital Budget Revenues by Source - \$221.2 Million



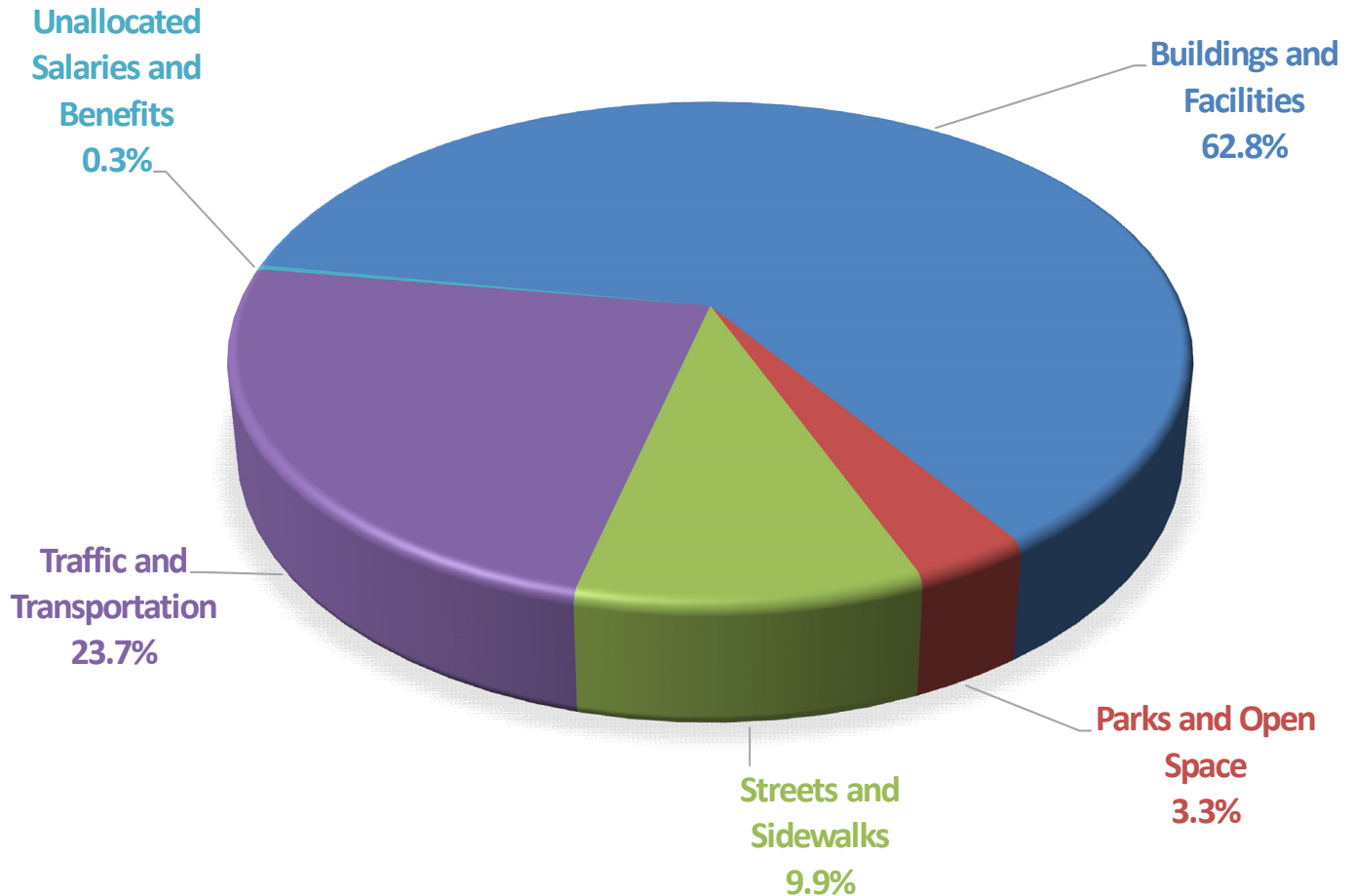
2019-2023 Capital Budget Expenditures by Fund - \$747.0 Million

SUMMARY INFORMATION

2019-2023 Capital Budget Revenues by Source - \$747.0 Million

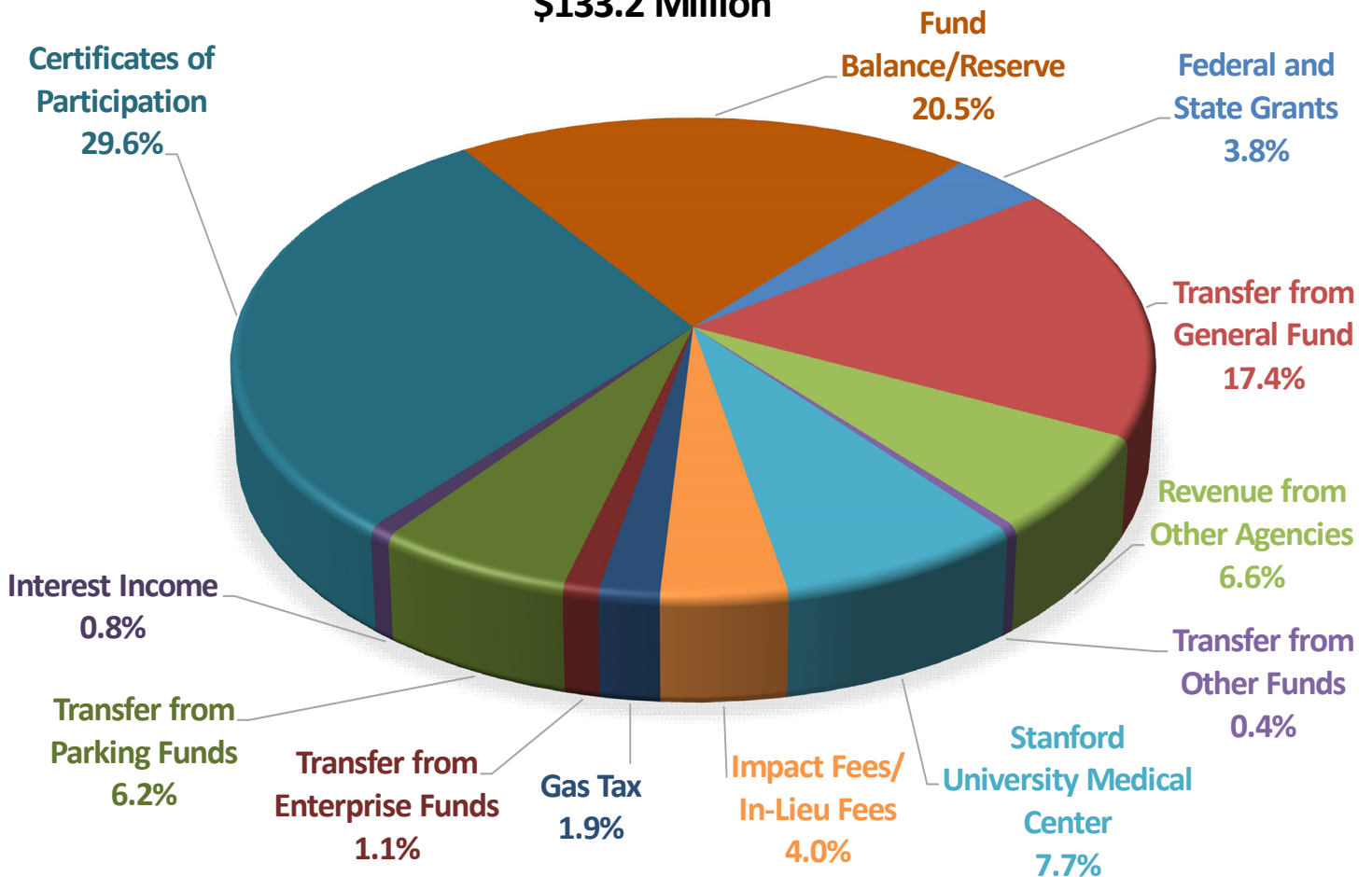


**2019 Capital Improvement Fund Expenditures by Category -
\$133.2 Million**

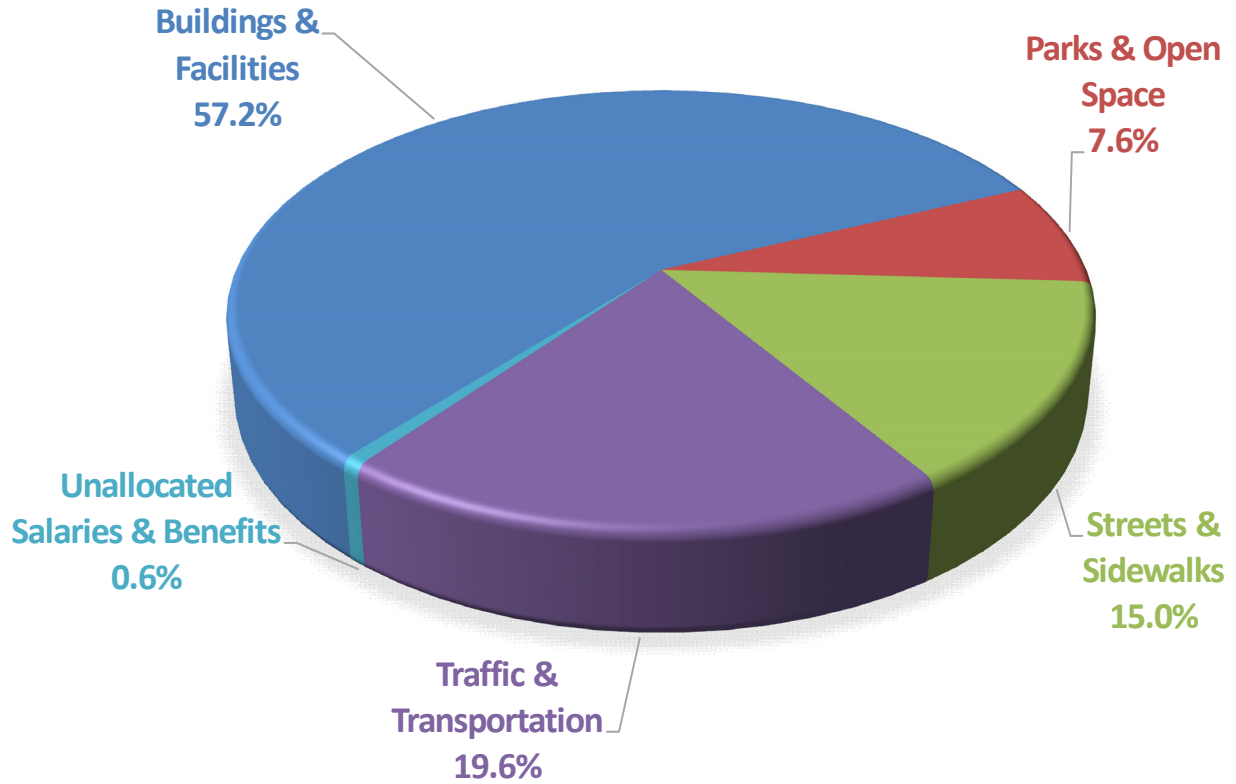


SUMMARY INFORMATION

2019 Capital Improvement Fund Revenues by Source - \$133.2 Million

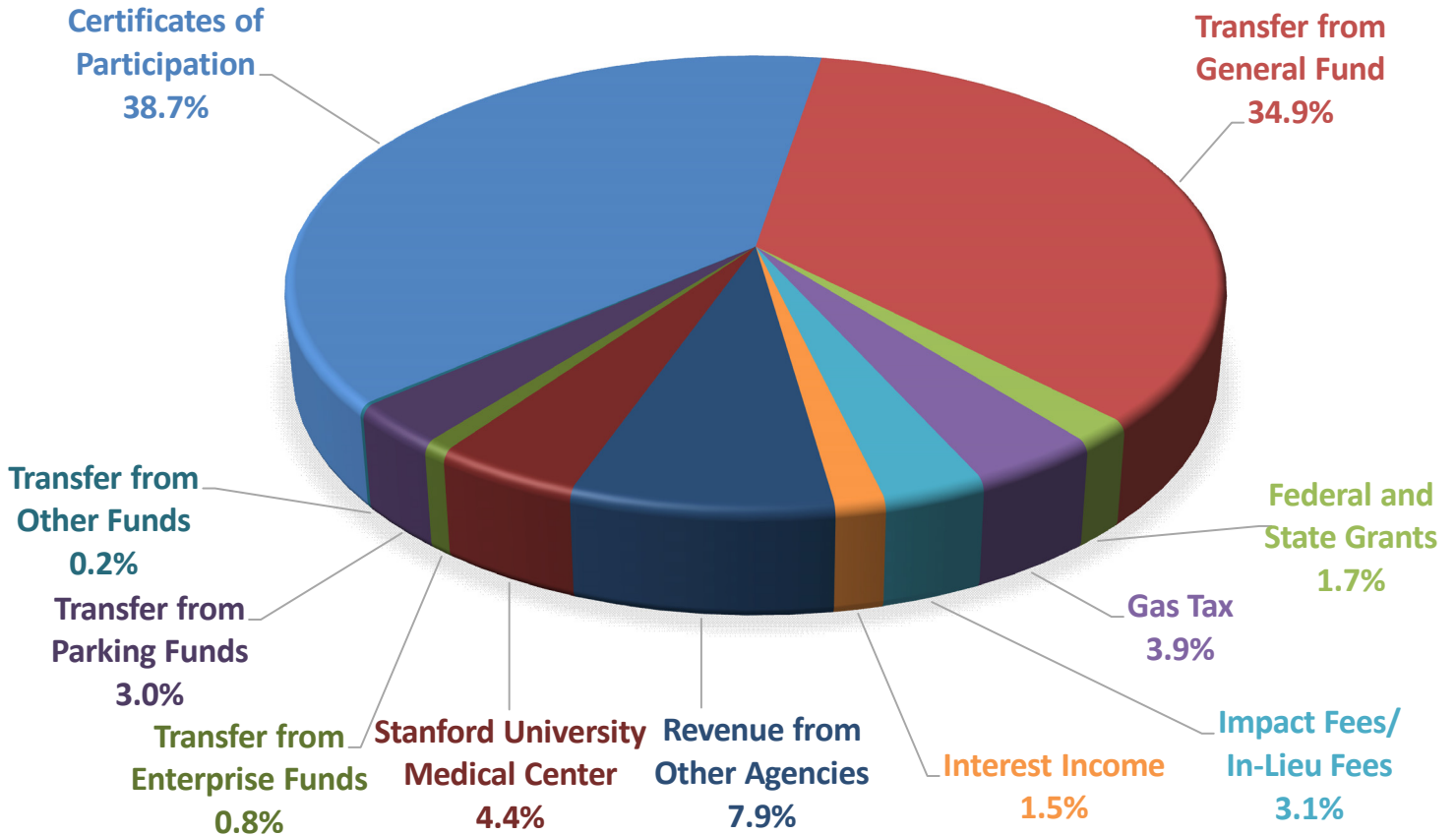


**2019-2023 Capital Improvement Fund Expenditures by Category-
\$331.8 Million**



SUMMARY INFORMATION

2019-2023 Capital Improvement Fund Revenues by Source - \$331.8 Million



Debt Policy and Obligations

The City of Palo Alto recognizes the need for spending a prudent amount every year for ongoing capital replacement and rehabilitation needs. An ongoing capital improvement plan is vital to ensuring the future viability of services. To achieve this priority, the City funds its regular and ongoing capital needs primarily on a “pay-as-you-go” basis. There are, however, special or extraordinary capital improvement projects, refinancing of existing debt, and purchase of major and multiple pieces of equipment in which it is appropriate to consider debt financing. The City’s updated Debt Policy establishes the guidelines to support the decision-making process for issuing debt.

	Original Issue Amount	Balance June 30, 2017	Additions	Retirements	Balance June 30, 2018	Current Portion
Governmental Activity Debt:						
<i>General Long Term Obligations:</i>						
2002B Downtown Parking Improvements						
Certificates of Participation						
4.55-6.00%, due 03/01/2022	\$ 3,555	\$ 975		\$ 975	\$ -	\$ -
2010A General Obligation Bonds						
2.00-5.00%, due 08/01/2040	55,305	46,980		1,170	45,810	1,225
2013A General Obligation Bonds						
2.00-5.00%, due 08/01/2043	20,695	16,730		400	16,330	415
2011 Golf Course Master Lease-Purchase Agreement						
2.49%, due 09/01/2018	3,222	842		416	426	426
2018A Golf Course (Green) Certificates of Participation						
2.20-4.22%, due 11/01/2047	8,375	-	8,375	-	8,375	35
2018B Refinancing Downtown Parking Improvements						
Certificates of Participation						
2.65-3.12%, due 11/01/2022	595	-	595	-	595	-
Add: unamortized premium		3,768		158	3,610	158
Total Governmental Activity Debt	\$91,747	\$69,295	\$8,970	\$3,119	\$75,146	\$2,259
Business-type Activity Debt:						
<i>Enterprise Long Term Obligations:</i>						
Utility Revenue Bonds,						
1995 Series A, 5.00-6.25%, due 06/01/2020	\$ 8,640	\$ 1,820		\$ 570	\$ 1,250	\$ 605
1999 Refunding, 3.25-5.25%, due 06/01/2024	17,735	8,980		735	8,245	775
2009 Series A, 1.80 - 4.65%, due 06/02/2035	35,015	28,755		1,035	27,720	1,080
2011 Series A, 3.00-4.00%, due 06/01/2026	17,225	11,270		1,085	10,185	1,125
Add: Unamortized Premium		700		70	630	-
Energy Tax Credit Bonds						
2007 Series A, 0%, due 12/15/2021	1,500	500		100	400	100
Less: Unamortized Premium		(27)		(5)	(22)	
State Water Resources Loan						
2007, 0%, due 6/30/2029	9,000	5,400		450	4,950	450
2009, 2.6%, due 11/30/2030	8,500	6,453		388	6,065	398
2017, 1.8%, due 3/30/2049	29,684	3,181	7,515	-	10,696	-
Total Business-type Activity Debt	\$127,299	\$67,032	\$7,515	\$4,428	\$70,119	\$4,533

Debt Policy Guidelines

The City's Debt Policy provides guidelines for refinancing existing debt; detailing the responsibilities of City staff engaged in issuing debt; delineating the debt instruments or vehicles (e.g. General Obligation Bonds or Certificates of Participation) the City can utilize; and describing situations in which tax-exempt and taxable debt can be used. The depth and breadth of the policy serve to guide current and future staff. Below are highlights of the Debt Policy guidelines for the use of debt and other financing.

A. Debt may be judiciously used when some or all of the following conditions exist:

- Estimated future revenue is sufficient to ensure the payment of annual debt service.
- Other financing options have been explored and are not viable for the timely or economic acquisition or completion of a capital project.
- A capital project is mandated by federal or state authorities with no other viable funding option available.
- The capital project or asset lends itself to debt financing rather than pay-as-you-go funding based on the expected useful life of the project.
- Debt will not be used to fund ongoing operating expenses of the City except for situations in which cash flow problems arise and the City may need to issue short-term Tax or Revenue Anticipation Notes.
- Annual debt service shall not exceed 10 percent of annual operating expenses for the General Fund unless an exception is approved by Council. For all other City funds annual debt service shall not exceed 15 percent of annual operating expenses unless an exception is approved by Council.

B. Minimize borrowing costs by:

- Maximizing the use of existing resources for capital projects and equipment needs.
- Issuing tax-exempt debt except in instances where IRS regulations require taxable bonds.
- Striving to obtain the highest credit ratings possible.
- Maintaining a competitive bid process on bond sales except for situations in which negotiated or private placement sales meet City objectives. In negotiated or private placement sales, City staff will work with its Municipal Advisor (aka Financial Advisor) to review proposed interest rates and proposed fees.
- Ensuring that the type of debt and debt structure developed ensure advantageous marketing of each issue.

C. Linking debt to appropriate revenue sources and project users:

- When possible, tie project financing directly to users of a specific facility or use. Examples include renovation of the Golf Course where user fees can offset debt service or replacing gas mains where gas rates can be increased to cover debt expense.
- Debt financing in the Enterprise Funds so as to avoid significant spikes in user rates by smoothing out costs over time.

In addition to capital projects, the City can finance essential equipment and vehicles. These assets range from public safety vehicles to utility equipment. The underlying asset must have a

minimum useful life of three years. Short-term financings, including loans and capital lease purchase agreements, are executed to meet such needs. It has been the City's practice to fund these purchases with existing resources; however, debt financing flexibility for future needs remains an option.

Also, the Chief Financial Officer or Director of Administrative Services, supported by the Treasury Division, will periodically evaluate existing debt and execute refinancing when economically beneficial. A refinancing may include the issuance of bonds to refund existing bonds or the issuance of bonds in order to refund other obligations. A net present value analysis, both in dollar and percentage terms, will be conducted to determine whether a refinancing is optimal. As a "rule of thumb," a minimum 3 percent net present value savings will be used as a basis to begin refinancing efforts. As with new debt, all refinancing must be approved by Council.

In September 2016, the state legislature adopted Senate Bill (SB) 1029 (Hertzberg), amending Government Code section 8855 to place additional reporting obligations on issuers of public debt, effective January 1, 2017. The amendments require an issuer to certify that they have adopted a debt policy concerning the use of debt and that the proposed debt issuance is consistent with that Policy. Though the City's Debt Policy prior to this legislation and practice substantially complied with the new requirements, minor updates to the Debt Policy were approved by the City Council in April 2017 to explicitly comply with SB 1029 requirements. This statute also added additional reporting requirement to the California Debt and Investment Advisory Commission (CDIAC) such as the submission of an annual report for any issue of debt.

Legal Debt Limit

Based upon the assessed valuation of \$32.0 billion for the fiscal year ending June 30, 2017, the City is limited to general obligation indebtedness of \$1.13 billion. As of June 30, 2017, the amount of debt applicable to the debt limit was \$63.7 million, well below the City's legal debt limit. The debt amount is related to the voter approved general obligation bonds to renovate and build out the City's libraries including the Mitchell Park Library and Community Center.

Debt Obligations

Summaries of the City of Palo Alto's debt activity for Fiscal Year 2018 are provided in the following section.

Debt Obligation Descriptions

2002B Downtown Parking Improvement Project Certificates of Participation (COPs)

On January 16, 2002, the City issued \$3.6 million of COPs to finance the construction of certain improvements to the non-parking area contained in the City's Bryant/Florence Garage complex. Due to lower construction costs, \$0.9 million in par bonds were paid off early in January 2005. Principal payments are due annually on March 1 and interest payments semi-annually on March 1 and September 1, and are payable from lease revenues received by the Corporation from the City's available funds.

As of June 30, 2018, these bonds were refinanced with the issuance of the AA+ rated 2018 (Golf Course Renovation) Green COP bonds. The present value savings of \$0.3 million included \$0.2 million in reserve funds, and highly rated bonds no longer require a reserve fund, so the existing reserve funds were used to reduce the principal amount that was refinanced to \$0.6 million with \$0.1 million in interest. The final payment on this bond will be in November 2022.

2010A and 2013A General Obligation (GO) Bonds

On June 30, 2010, the City issued the first series of \$55.3 million and on June 26, 2013 the second series of \$20.6 million of GO bonds to finance costs for constructing a new Mitchell Park Library and Community Center, as well as substantial improvements to the Main Library and the Downtown Library. Principal payments are due annually on August 1 and interest payments semi-annually on February 1 and August 1 from 2 percent to 5 percent, and are payable from property tax revenues.

As of June 30, 2018, for the above 2010 and 2013 bonds, \$45.8 million and \$16.3 million principal and \$28.5 million and \$9.1 million interest are the remaining debt service on the bonds with final payment occurring in Fiscal Year 2041 and Fiscal Year 2042, respectively.

2011 Golf Course Master Lease-Purchase Agreement

On August 2, 2011, the City entered into a master lease-purchase agreement with JP Morgan Chase Bank, N.A. to finance redemption of the 1998 Golf Course COPs. The lease is secured by a first priority security interest in twelve Fire Department emergency vehicles. Lease proceeds were \$3.2 million. Principal payments are due annually on September 1 and interest payments are due semi-annually on September 1 and March 1 at a rate of 2.5 percent, payable from General Fund revenues.

As of June 30, 2018, there will be \$0.4 million in principal and \$5,302 in interest as the remaining debt service on the bonds with final payment occurring in September 2018.

1995 Utility Revenue Bonds, Series A

The City issued Utility Revenue Bonds on February 1, 1995 to finance certain extensions and improvements to the City's Storm Drainage and Surface Water System. The Bonds are special obligations of the City payable solely from and secured by a pledge of and lien upon the revenues derived by the City from the funds, services and facilities of all Enterprise Funds except the Refuse Fund and the Fiber Optics Fund. Principal payments are payable annually on June 1, and interest payments semi-annually on June 1 and December 1. A \$2.9 million 6.3 percent term bond is due June 1, 2020. In lieu of a reserve fund, the Bonds are secured by a Surety Bond issued by AMBAC Indemnity Corporation.

The pledge of future Net Revenues for the above funds ends upon repayment of the \$1.3 million principal and \$0.1 million interest as the remaining debt service on the bonds with final payment occurring in Fiscal Year 2020.

1999 Utility Revenue and Refunding Bonds, Series A

The City issued Utility Revenue Bonds on June 1, 1999 to refund the 1990 Utility Revenue Refunding Bonds, Series A and the 1992 Utility Revenue Bonds, Series A, and to finance rehabilitation of the Wastewater Treatment System's two sludge incinerators. The 1990 Utility Revenue Refunding Bonds, Series A and the 1992 Utility Revenue Bonds, Series A, were subsequently retired. The 1999 Bonds are special obligations of the City payable solely from and secured by a pledge of and lien upon certain net revenues derived by the City's Sewer System and its storm and surface water system, the "Storm Drain System". As of June 30, 2001, the 1999 Bonds had been allocated to and were repayable from net revenues of the following Enterprise Funds: Wastewater Collection (10.2 percent), Wastewater Treatment (64.6 percent) and Storm Drain (25.2 percent). Principal payments are payable annually on June 1, and interest payments semi-annually on June 1 and December 1. In lieu of a reserve fund, the Bonds are secured by a Surety Bond issued by AMBAC Indemnity Corporation.

The pledge of future Net Revenues for the above funds ends upon repayment of the \$8.3 million principal and \$1.7 million interest as the remaining debt service on the bonds as of June 30, 2018, with final payment occurring in Fiscal Year 2024.

2007 Electric System Clean Renewable Energy Tax Credit Bonds

On November 1, 2007 the City issued \$1.5 million of Electric Utility Clean Renewable Energy Tax Credit Bonds (CREBS), 2007 Series A, to finance the City's photovoltaic solar panel project. The bonds do not bear interest. In lieu of receiving periodic interest payments, bondholders are allowed federal income tax credit in an amount equal to a credit rate for such CREBS multiplied by the outstanding principal amount of the CREBS owned by the bondholders. The Bonds are payable solely from and secured solely by a pledge of the Net Revenues of the Electric system and other funds pledged therefore under the Indenture.

The pledge of future Electric Fund Net Revenues ends upon repayment of the \$0.4 million as the remaining debt service on the bonds as of June 30, 2018 with final payment occurring in Fiscal Year 2022.

2009 Water Revenue Bonds, Series A

On October 6, 2009, the City issued Water Revenue Bonds in the amount of \$35.5 million to finance certain improvements to the City's water utility system. Principal payments are due annually on June 1, and interest payments are due semi-annually on June 1 and December 1, from 1.8 percent to 6.0 percent. The final debt service payment will be made in Fiscal Year 2035. When these bonds were issued they were designated as "Direct Payment Build America Bonds" under the provisions of the American Recovery and Reinvestment Act of 2009 ("Build America Bonds"). The City expected to receive a cash subsidy payment from the United States Treasury equal to 35 percent of the interest payable on the 2009 bonds, however, due to the United States federal government budget (sequestration) cuts, in calendar year 2013, the receipts range from mid to high 32 percent of interest payable. The lien on the 1995 Bonds on the Net Revenues is senior to the lien on Net Revenues securing the 2009 Bonds and the 2002 Bonds. The City received subsidy payments amounting to \$0.5 million, which represents 33 percent of the two interest payments due on June 1, 2016 and December 1, 2016.

The pledge of future Net Revenues of the above funds ends upon repayment of the \$27.7 million principal and \$15.9 million interest as the remaining debt service on the bonds as of June 30, 2018 with final payment occurring in Fiscal Year 2035.

2007 State Water Resources Loan

In October 2007, the City approved the \$9.0 million loan agreement with State Water Resources Control Board (SWRCB) to finance the City's Mountain View/Moffett Area reclaimed water pipeline project. Under the terms of the contract, the City agreed to repay \$9.0 million to the State in exchange for receiving \$7.5 million in proceeds to be used to fund the Project. The difference between the repayment obligation and proceeds amounts to \$1.5 million and represents in-substance interest on the outstanding balance. Loan proceeds are drawn down as the project progresses and debt service payments commence on June 30, 2010. Concurrently with the loan, the City entered into various other agreements including a cost sharing arrangement with the City of Mountain View. Pursuant to that agreement, the City of Mountain View agreed to finance a portion of the project with a \$5 million loan repayable to the City. This loan has been recorded as "Due from other government agencies" in the financial statements.

The pledge of future Net Revenues of the above funds ends upon repayment of the \$4.1 million principal and \$0.8 million in-substance interest as the remaining debt service on the bonds as of June 30, 2018 with final payment occurring in Fiscal Year 2029.

2009 State Water Resources Loan

In October 2009, the City approved an \$8.5 million loan agreement with the State Water Resources Control Board (SWRCB) to finance the City's Ultraviolet Disinfection project. As of June 30, 2011, the full loan in the amount of \$8.5 million was drawn down and became outstanding. Interest in the amount of \$96,000 was accrued and added to the outstanding balance.

The pledge of future Net Revenues of the above funds ends upon repayment of the \$6.1 million principal and \$1.2 million interest as the remaining debt service on the bonds as of June 30, 2018 with final payment occurring in Fiscal Year 2031.

2011 Utility Revenue Bonds, Series A

On September 22, 2011 the City issued Utility Revenue Bonds to refinance the 2002 Utility Revenue Bonds which was issued for certain improvements to the City's water and natural gas utility system. The refinancing resulted in net present value savings of 16.9 percent and cash savings over 15 years of \$4.0 million. Principal payments are due annually on June 1, and interest payments are due semi-annually on June 1 and December 1 from 3 percent to 4 percent. The Revenue Bonds are secured by net revenues generated by the Water Services and Gas Services Funds.

The pledge of future Net Revenues of the above funds ends upon repayment of the \$10.2 million principal and \$1.5 million interest as the remaining debt service on the bonds as of June 30, 2018 with final payment occurring in Fiscal Year 2026.

2018 Golf Course (Green) Certificates of Participation (COPs)

On June 5, 2018, the City issued \$8.2 million of COPs to reimburse the Capital Infrastructure Fund for the City's complete reconfiguration of the municipal golf course (aka Baylands Golf Links). The lease is secured by the City's Fire Station 1, with proceeds of \$8.4 million; the additional proceeds cover the cost of issuance of the bonds. Principal payments will be due on November 1 and interest payments are due semi-annually on November 1 and May 1. Standard and Poor's (S&P) gave an AA+ rating and the bond's true interest costs is 4.3 percent, payable from the General Fund.

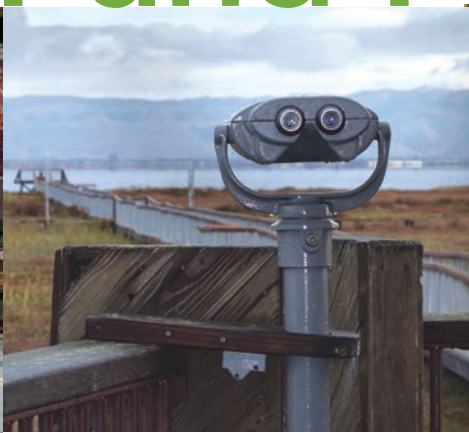
Credit Rating Agencies

Credit rating a critical component of strong municipal management. According to Moody's Investors Service, reserves are an important factor in the analysis of a municipality's fiscal health and, therefore, a jurisdiction's fiscal policies should include a plan for maintaining reserves. Rating agencies view sound reserves favorably, thus improving a municipality's rating and its ability to obtain low-cost financing for important projects. The City is proud to report that both Moody's and Standard and Poor's (S&P) awarded their highest credit ratings, Triple A, to the City's General Obligation Bonds for library and community center capital improvements in 2010 and it was most recently reaffirmed in 2013. These ratings demonstrate that Palo Alto's prudent financial management and fiscal strength are viewed most favorably by credit agencies. The four Utility bonds (1995, 1999, 2009, & 2011) that are rated also received, by S&P, their highest credit rating of Triple A. Moody's has rated these Utility bonds with their second highest (Aa1) or third highest (Aa2) ratings.



CITY OF
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Capital Fund Projects





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CAPITAL IMPROVEMENT FUND

Overview

Capital improvement projects that are not funded by the Enterprise/Internal Service Funds are supported by the General Fund as well as through grants and reimbursements from other agencies. Examples of projects accounted for within the Capital Improvement Fund include street maintenance, traffic signal and sidewalk modifications, park renovations, and improvements to libraries, community centers, and public safety facilities. For the entire Capital Improvement Fund, 89 projects are programmed over the 2019-2023 CIP, with a cumulative total cost of \$331.8 million. Of this amount, \$133.2 million is approved for Fiscal Year 2019, which includes \$25.2 million for the continuation of projects approved by the City Council in prior fiscal years. The budget for the Capital Improvement Fund is divided into four categories: Buildings and Facilities, Parks and Open Space, Streets and Sidewalks, and Traffic and Transportation. The primary funding source for the Capital Improvement Fund is the annual transfer from the General Fund. In Fiscal Year 2019, this transfer will be \$23.2 million, which includes the annual base transfer of \$15.0 million and the City Council approved Transient Occupancy Tax transfer of \$8.2 million to support the City Council approved Infrastructure Plan.

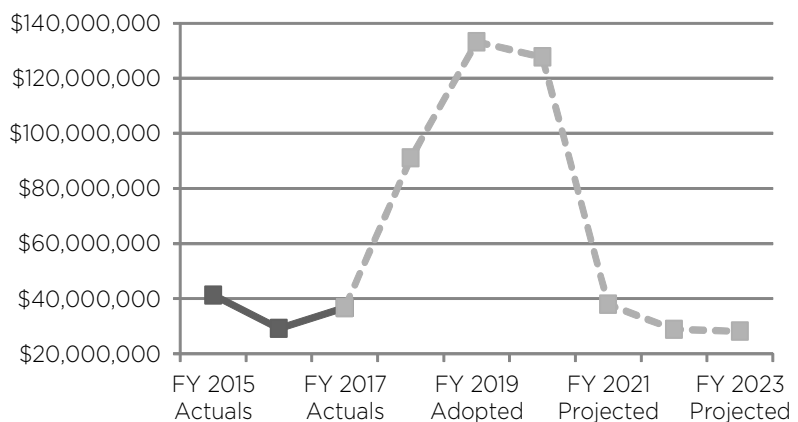
The Infrastructure Plan (IP), which consists of nine top priority capital projects recommended by the City Council Infrastructure Committee and approved by the Council in June 2014 is accounted for within the Capital Improvement Fund. In the 2018-2022 CIP, the Infrastructure Plan was estimated at \$196.0 million; however, it is important to note that the cost estimates used to develop the original plan did not include funding for public art at these

project sites, as well as salaries and benefits for City staff to design and manage the projects. In addition costs for construction have increased since the initial plan was approved. New cost estimates on some of the IP projects have increased the total cost of the IP to approximately \$249.9 million, with \$198.4 million programmed over the 2019-2023 CIP.

The Infrastructure Plan includes the following projects:

- a new public safety building
- two fire station replacements
- the Charleston/Arastradero Corridor Improvements
- the Bicycle and Pedestrian Transportation Plan
- the Highway 101 Pedestrian Bicycle Bridge

Capital Improvement Fund Expenditures



- a new parking garage in the downtown area
- a new garage in the California Avenue area
- the completion of Byxbee Park

The Fire Station #3 Replacement project was the first of the nine IP projects awarded for construction in Fiscal Year 2018 and is anticipated to be complete in Spring 2019. The next project anticipated to be approved for construction is the New California Avenue Garage project, for which the \$30 million Infrastructure Plan Contingency Reserve, set aside in the 2017-2021 CIP to fund cost increases in the IP, is recommended to be allocated to this project in Fiscal Year 2019. Further information on the Infrastructure Plan and the overall funding strategy has been discussed by the Finance Committee over a series of meetings starting on February 6, 2018. Subsequent to the adoption of the FY 2019 Capital Budget, the City Council approved a resolution to place a measure on the November 6, 2018 General Election Ballot to increase the City's TOT by 1.5 percentage points, from 14 percent to 15.5 percent. It should be noted, any additional TOT revenue from this ballot measure was not anticipated as part of the development of this document.

Buildings and Facilities

The Buildings and Facilities category includes projects to maintain the City's existing buildings and facilities as well as projects that provide funding for new facilities. Buildings and facilities include City Hall, other City staff office locations, community centers, libraries, theaters, fire stations, park restrooms, parking garages, and City-owned facilities leased to private parties. Projects to improve the Cubberley Community Center are included separately within the Cubberley Property Infrastructure Fund and discussed elsewhere in this document. The 2019-2023 CIP includes projects totaling \$189.8 million in this category, with \$83.7 million allocated in Fiscal Year 2019. Of this amount, \$12.2 million is for the continuation of projects approved by the City Council in prior fiscal years. The Buildings and Facilities category includes the following Council Infrastructure Plan projects: Public Safety Building, Fire Station #3 Replacement, Fire Station #4 Replacement, Downtown Parking Garage, and California Avenue Area Parking Garage. These projects account for \$187.3 million or 75 percent of the total Infrastructure Plan. The total funding amount of \$189.8 million for Building and Facilities over the 2019-2023 CIP represents approximately 57 percent of the total Capital Improvement Fund CIP Plan.

Infrastructure Inventory - Summary of Buildings & Facilities

CLASSIFICATION	QUANTITY	SQUARE FOOTAGE
Civic Center & Municipal Services Center	2	157,593
Community Centers	3	68,752
Libraries	5	91,916
Fire Stations	6	25,847
Parking Garages	8	982,966

CAPITAL IMPROVEMENT FUND

Recent Accomplishments

- Began construction of the Fire Station #3 Replacement project with completion anticipated in early 2019.
- Completion of design and environmental review of the California Avenue Parking Garage.
- Completion of the Zero Waste Office remodel within Building C at the Municipal Service Center (MSC).
- Completion of the City Hall third floor remodel.
- Began construction of the Ventura Buildings Improvements project.
- Began construction of the MSC Electrical and Mechanical upgrades.

2019-2023 Capital Improvement Program

Recurring Projects

There are six recurring projects in the Buildings and Facilities category:

- Americans With Disabilities Act Compliance (Fiscal Year 2019: \$0.6 million, 2019-2023 CIP: \$1.2 million)
- Building Systems Improvements (Fiscal Year 2019: \$0.2 million, 2019-2023 CIP: \$1.1 million)
- City Facility Parking Lot Maintenance (Fiscal Year 2019: \$0.3 million, 2019-2023 CIP: \$2.7 million)
- Facility Interior Finishes Replacement (Fiscal Year 2019: \$1.0 million, 2019-2023 CIP: \$2.1 million)
- Roofing Replacement (Fiscal Year 2019: \$0.4 million, 2019-2023 CIP: \$2.3 million)
- University Avenue Parking Improvements (Fiscal Year 2019: \$0.4 million, 2019-2023 CIP: \$0.4 million)

Activities planned for Fiscal Year 2019 under these projects include parking lot resurfacing at Fire Station #1, the Arastradero Preserve, and University Avenue area Lot C (Ramona/Lytton) in coordination with the Avenidas project. Other work includes LED lighting conversion for the Rinconada and Mitchell Park tennis courts, re-roofing of the Baylands Athletic Center restroom, and interior finishes improvements at Lucie Stern Community Center. Finally, the Americans With Disabilities Act Compliance project will complete the update to the City's 20-year old ADA Transition Plan, identifying and planning for upcoming accessibility improvement needs.

Non-Recurring Projects

Design work on the Public Safety Building and Downtown Parking Garage projects will be a high priority in Fiscal Year 2019, and construction of the California Avenue Parking Garage project will begin in late 2018. Other significant activities planned for Fiscal Year 2019 include completion of the Ventura Buildings Improvements project and the MSC Electrical and Mechanical Upgrade project. Additional funding provided in Fiscal Year 2019 (\$0.8 million) will allow the construction of the full scope for the MSC Mechanical and Electrical Upgrades project.

New projects in Fiscal Year 2019 include the Animal Shelter Renovation project (\$0.8 million) that will expand and remodel the medical suite in anticipation of an outside contractor taking over management of the Animal Shelter in Fiscal Year 2019. Additionally, the Water, Gas, Waste-

water Office Remodel project (\$0.8 million) will reconfigure the Utilities Water, Gas, and Waste-water group's office space at the MSC to meet the current operational needs of the group while replacing aging furniture and finishes such as carpet, paint, and lighting. The Fire and Utilities Trench Training Facility project (\$0.1 million) will provide a facility at the MSC for expanded training and safety programs for use by the Fire and Utilities Departments. Lastly the City Hall Space Planning project (\$0.1 million) was established to begin planning for future workgroup space needs in City Hall once other facilities, such as the public safety building, are complete.

Parks and Open Space

Maintenance, repair, and replacement of parks and open space amenities are managed jointly by the Community Services and Public Works Departments. Generally, Community Services oversees smaller projects as well as recurring projects with Public Works Engineering Services facilitating major one-time projects. The 2019-2023 CIP includes funding totaling \$25.0 million in this category, with \$4.4 million allocated in Fiscal Year 2019. Of this amount, \$1.2 million is for the continuation of projects approved by the City Council in prior fiscal years. The Parks and Open Space category includes the Council Infrastructure Plan project for Byxbee Park Completion. This project accounts for \$3.6 million or one percent of the total Infrastructure Plan. The total funding amount of \$25.0 million for Parks and Open Space over the 2019-2023 CIP represents approximately eight percent of the total Capital Improvement Fund CIP Plan.

Infrastructure Inventory - Summary of Parks & Open Space

CLASSIFICATION	QUANTITY
Parks	33
City Open Space/Conservation Lands	4
Parks, Preserves, and Open Space Acreage	4,385
Picnic Areas	39
Athletic Fields	33

Recent Accomplishments

- Renovation and transformation of Municipal Golf Course to Baylands Golf Links
- Renovation of landscape surrounding golf course clubhouse
- Installation of dog park at Peers Park

2019-2023 Capital Improvement Program

Recurring Projects

There are seven recurring projects in the Parks and Open Space category:

- Art in Public Spaces (Fiscal Year 2019: \$1.1 million, 2019-2023 CIP: \$2.6 million)
- Benches, Signage, Fencing, Walkways, and Perimeter Landscaping (Fiscal Year 2019: \$0.3 million, 2019-2023 CIP: \$0.9 million)

CAPITAL IMPROVEMENT FUND

- Off Road Pathway Resurfacing and Repair (Fiscal Year 2019: \$0.3 million, 2019-2023 CIP: \$0.7 million)
- Open Space Lakes and Ponds (Fiscal Year 2019: \$0.05 million, 2019-2023 CIP: \$0.2 million)
- Open Space Trails and Amenities (Fiscal Year 2019: \$0.2 million, 2019-2023 CIP: \$1.0 million)
- Parks and Open Space Emergency Repairs (Fiscal Year 2019: \$0.1 million, 2019-2023 CIP: \$0.7 million)
- Tennis and Basketball Court Resurfacing (Fiscal Year 2019: \$0.4 million, 2019-2023 CIP: \$1.4 million)

Non-Recurring Projects

Significant projects in this category during the 2019-2023 CIP include improvements at various parks (Boulware, Cameron, Hoover, Johnson, Mitchell, Peers, Ramos, Rinconada, and Robles). Other investments in open space areas are also included in the CIP plan, such as Golf Course Driving Range Net and Artificial Turf Replacement, a Baylands Comprehensive Conservation Plan, and a Byxbee Park Completion project. The Baylands Comprehensive Conservation Plan will examine native vegetation, wildlife habitat resources, and wildlife-appropriate public access for the entire Baylands, including Byxbee Park. The preparation of this plan will provide needed information on the best areas to maintain as wildlife habitat and appropriate areas to develop trails or other recreation amenities. The project now also includes design for interpretive messaging and design for placement of public art. Funding in the CIP plan includes \$3.4 million for a Byxbee Park Completion project, which is part of the Infrastructure Plan and mostly offset with funds from park dedication impact fees, to complete improvements to Byxbee Park since the landfill capping work is finished.

Streets and Sidewalks

The Streets and Sidewalks category includes projects to maintain and repair the City's streets, sidewalks, bridges, streetlights, and other related infrastructure such as curb and gutter, medians, and thermoplastic lane markings. This category has seen significant funding increases in recent years in response to City Council goals and recommendations of the Infrastructure Blue Ribbon Commission (IBRC). The 2019-2023 CIP includes funding totaling \$49.7 million in this category, with \$13.2 million allocated in Fiscal Year 2019. Of this amount, \$4.0 million is for the continuation of projects approved by the City Council in prior fiscal years. In 2011, the City Council increased funding for the Street Maintenance program and set a goal of raising the city-wide average Pavement Condition Index (PCI) score from 72 to 85 by 2021. A PCI score of 85 represents "very good" to "excellent" pavement conditions, and the citywide average PCI goal is expected to be reached in 2019, two years earlier than the initial goal. The funding level for Sidewalk Repairs was also increased to allow the Sidewalks program to eliminate its accumulation of deferred maintenance or "catch-up" work and to achieve its 1986 goal of completing work in all 23 sidewalk "districts" by 2016. An assessment study for sidewalk repairs will be completed in Summer 2018 and will offer suggestions for establishing goals and priorities for the sidewalk repair project moving forward. The total funding amount of \$49.7 million for Streets and Sidewalks represents approximately 15 percent of the total Capital Improvement Fund CIP.

Infrastructure Inventory - Summary of Streets and Sidewalks

CLASSIFICATION	QUANTITY
Streets maintained	471 lane miles
Sidewalks maintained	7.5 million square feet
Streetlights maintained	6,500
Bridges maintained	74

Recent Accomplishments

- Increased the citywide average Pavement Condition Index score to 84 at the end of calendar year 2017.
- Completed installation of the Caltrain Corridor Video Management System at Palo Alto's four at-grade crossings along the Caltrain Corridor.

2019-2023 Capital Improvement Program

Recurring Projects

There are six recurring projects in the Streets and Sidewalks category:

- Curb and Gutter Repairs (2019: \$0.4 million, 2019-2023 CIP: \$1.0 million)
- Sidewalk Repairs (2019: \$1.6 million, 2019-2023 CIP: \$8.5 million)
- Sign Reflectivity Upgrade (2019: \$0.2 million, 2019-2023 CIP: \$0.5 million)
- Street Lights Improvements (2019: \$0.3 million, 2019-2023 CIP: \$1.1 million)
- Street Maintenance (2019: \$7.6 million, 2019-2023 CIP: \$34.2 million)
- Thermoplastic Lane Marking and Striping (2019: \$0.1 million, 2019-2023 CIP: \$0.6 million)

Activities for Fiscal Year 2019 under these projects consist of ongoing planned repair activities, as well as providing funding for unplanned needs that may arise. The Street Maintenance project will continue to implement its five-year plan in close coordination with Utilities and Transportation projects. With the 2019 goal of achieving a citywide Pavement Condition Index of 85 approaching, the annual Street Maintenance project budget will be reassessed to be funded at a level sufficient to maintain the new street conditions. The recent passage of SB1 for Road Maintenance and Rehabilitation is estimated to provide an additional \$1.2 million annually starting in Fiscal Year 2019. This funding could supplement and enhance the City's street maintenance program, possibly allowing some funds to be reallocated to other capital projects with City Council approval.

Non-Recurring Projects

While most Streets and Sidewalks work is completed through recurring projects, there are a few non-recurring projects with activities planned for Fiscal Year 2019. Completion of the Environmental Impact Report for the Newell Road/San Francisquito Creek Bridge Replacement project will result in selection of a preferred option, and the permitting process for the project will be initiated. The Street Lights Condition Assessment project will include compiling an inventory of

the City's entire lighting system and determining the best approach to prolong the life of the system.

Traffic and Transportation

Projects in this category support the development and implementation of a sustainable transportation system, including walking, biking, ridesharing, public transit, and other methods of non-single occupancy vehicle (SOV) transit. Planning, design, and construction of Traffic and Transportation projects are managed jointly by the Transportation Division of the Planning and Community Environment Department and the Public Works Department. The 2019-2023 CIP includes funding totaling \$65.1 million in this category, with \$33.3 million allocated in Fiscal Year 2019. The Traffic and Transportation category includes the following Council Infrastructure Plan projects: Bicycle and Pedestrian Transportation Plan Implementation, Charleston/Arastradero Corridor, and Highway 101 Pedestrian/Bicycle Overpass. These projects account for \$58.9 million or 24 percent of the total Infrastructure Plan. The overall funding level of \$65.1 million for programmed projects represents 20% of the total Capital Improvement Fund CIP.

Recent Accomplishments

- Installed new traffic signal at the intersection of Embarcadero Road and Middlefield Road
- Initiated traffic safety pilot project on Middlefield Road between Menlo Park city limits and Lytton Avenue
- Installed 53 countdown pedestrian traffic signal heads throughout Downtown
- Implemented a new residential preferential parking program in Southgate
- Repaired and programmed 15 existing speed feedback signs and installed two new signs
- Installed new flashing pedestrian beacons at existing crosswalk at 3305 Hillview Avenue
- Began installation of Downtown Parking Wayfinding signs

2019-2023 Capital Improvement Program

Recurring Projects

There are four recurring projects within the Traffic and Transportation category.

- Bicycle and Pedestrian Transportation Plan (2019: \$4.3 million, 2019-2023 CIP: \$6.8 million).
- Safe Routes to Schools (2019: \$0.2 million, 2019-2023 CIP: \$1.9 million)
- Traffic Signal and Intelligent Transportation Systems (2019: \$1.3 million, 2019-2023 CIP: \$4.3 million)
- Transportation and Parking Improvements (2019: \$0.3 million, 2019-2023 CIP: \$1.8 million)

Together, these projects improve transportation and safety and implement the Palo Alto Bicycle and Pedestrian Plan, which represents the majority of funding within this category. This project provides funding for the design and construction of bicycle boulevards, enhanced bikeways, shared-use paths, bicycle parking and a citywide bicycle sharing system. This project is part of the Infrastructure Plan, and partially funded through transfers from the Stanford University Medical Center Development Agreement Fund.

Non-Recurring Projects

Non-Recurring projects within this category include parking, intersection, and street projects. These projects are for discrete activities such as parking signage, parking wayfinding, intersection improvements, railroad grade separation, or projects not included within the Bicycle and Pedestrian Transportation Plan. There is one new project in Fiscal Year 2019 in this category, the Emergency Vehicle Traffic Signal Preemption System Pilot project, which will install and test the effectiveness of the coordination between emergency response times and traffic signal operations. In addition, there are several significant projects that fall within this category:

- Charleston/Arastradero Corridor Improvements (2019: \$0.4 million, 2019-2023 CIP: \$6.7 million)
- Downtown Automated Parking Guidance Systems (2019: \$1.3 million, 2019-2023 CIP: \$2.7 million)
- Downtown Parking Management and System Implementation (2019: \$1.1 million, 2019-2023 CIP: \$1.3 million)
- El Camino Real Pedestrian Safety and Streetscape (2019: \$0.2 million, 2019-2023 CIP: \$5.8 million)
- Embarcadero Road at El Camino Improvements (2019: \$5.7 million, 2019-2023 CIP: \$5.7 million)
- Highway 101 Pedestrian/Bicycle Overpass (2019: \$13.8 million, 2019-2023 CIP: \$14.0 million)
- Quarry Road Improvements and Transit Center Access (2019: \$0.1 million, 2019-2023 CIP: \$2.0 million)
- Railroad Grade Separation (2019: \$1.1 million, 2019-2023 \$10.1 million)

Summary of Capital Activity

CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Source of Funds									
Beginning Fund Balance									
	Infrastructure Reserve - Beginning Fund Balance	58,089,476	47,479,120	28,935,701	1,659,630	9,657,344	10,900,721	16,908,886	28,935,701
	Reserve: Infrastructure Plan	10,191,963	24,125,281	0	0	0	0	0	0
	Reserve: Library Bond Proceeds	711,000	0	0	0	0	0	0	0
	Reserve: Roth Building & Sea Scout Building TDRs	4,609,386	4,680,258	4,680,258	4,680,258	4,680,258	4,680,258	4,680,258	4,680,258
	Total Beginning Fund Balance	73,601,825	76,284,659	33,615,959	6,339,888	14,337,602	15,580,979	21,589,144	33,615,959
General Fund Contributions									
	Annual General Fund Capital Transfer	13,051,849	14,602,321	14,958,000	15,323,000	15,697,000	16,081,000	16,473,000	78,532,000
	Transfer from General Fund - 2014 TOT increase of 2%	7,743,258	7,985,000	8,190,000	10,208,000	12,242,000	12,488,000	12,746,000	55,874,000

CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
	Interest Income	1,093,024	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
PG-06003	Benches, Signage, Walkways, Perimeter Landscaping	0	94,200	0	0	0	0	0	0
PL-12000	Transportation and Parking Improvements	200,000	0	0	0	0	0	0	0
	Total General Fund Contributions	22,088,131	23,681,521	24,148,000	26,531,000	28,939,000	29,569,000	30,219,000	139,406,000
Project Reimbursements & Fund Transfers									
Transfer from California Avenue Parking District Fund									
PE-17004	California Avenue District Gateway Signs	0	150,000	0	0	0	0	0	0
PL-16002	Downtown Parking Management and System Implementation	0	0	138,000	0	0	0	0	138,000
	Total Transfer	0	150,000	138,000	0	0	0	0	138,000
Transfer from Charleston/Arastradero Fund (Fund 213)									
PE-13011	Charleston/Arastradero Corridor Project	0	12,000	0	0	0	0	0	0
	Total Transfer	0	12,000	0	0	0	0	0	0
Transfer from Communitiy Center Impact Fee Fund									
AC-18001	JMZ Renovation	0	0	1,025,717	671,860	125,498	0	0	1,823,075
PE-08001	Rinconada Park Improvements	0	0	0	1,999,529	75,000	0	0	2,074,529
	Total Transfer	0	0	1,025,717	2,671,389	200,498	0	0	3,897,604
Transfer from Downtown PC Zone									
PE-15007	New Downtown Parking Garage	0	0	5,541,000	0	0	0	0	5,541,000
	Total Transfer	0	0	5,541,000	0	0	0	0	5,541,000
Transfer from Fiber Optics Fund									
AC-86017	Art in Public Spaces	0	5,700	0	0	0	0	0	0
	Total Transfer	0	5,700	0	0	0	0	0	0
Transfer from Gas Fund									
AC-86017	Art in Public Spaces	0	5,700	0	0	0	0	0	0
	Total Transfer	0	5,700	0	0	0	0	0	0
Transfer from Gas Tax Fund									
PE-13011	Charleston/Arastradero Corridor Project	0	0	1,140,686	0	0	0	0	1,140,686
PL-00026	Safe Routes To School	100,000	100,000	100,000	100,000	100,000	100,000	100,000	500,000
PE-86070	Street Maintenance	1,300,000	1,300,000	1,300,000	2,470,000	2,470,000	2,470,000	2,470,000	11,180,000
	Total Transfer	1,400,000	1,400,000	2,540,686	2,570,000	2,570,000	2,570,000	2,570,000	12,820,686

CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Transfer from Parks Dedication Fee Fund									
PE-18006	Byxbee Park Completion	0	400,000	2,400,000	0	0	0	0	2,400,000
	Total Transfer	0	400,000	2,400,000	0	0	0	0	2,400,000
Transfer from Parks Development Impact Fee Fund									
PG-19001	Baylands Athletic Center 10.5 Acre Expansion Plan	0	0	100,000	0	0	0	0	100,000
PG-18001	Dog Park Installation and Renovation	0	150,000	0	150,000	0	150,000	0	300,000
PG-19000	Park Restroom Installation	0	0	350,000	0	350,000	0	350,000	1,050,000
PG-18002	Turf Management Plan	0	100,000	0	0	0	0	0	0
	Total Transfer	0	250,000	450,000	150,000	350,000	150,000	350,000	1,450,000
Transfer from Refuse Fund									
PF-17000	Municipal Service Center A, B, & C Roof Replacement	0	0	19,000	0	0	0	0	19,000
PF-16006	Municipal Service Center Lighting, Mechanical, and Electrical Improvements	0	0	8,000	0	0	0	0	8,000
	Total Transfer	0	0	27,000	0	0	0	0	27,000
Transfer from Residential Parking Permits Program Fund									
PL-16002	Downtown Parking Management and System Implementation	0	0	255,000	0	0	0	0	255,000
	Total Transfer	0	0	255,000	0	0	0	0	255,000
Transfer from San Antonio/West Bayshore Fund									
PE-86070	Street Maintenance	0	0	900,000	0	0	0	0	900,000
	Total Transfer	0	0	900,000	0	0	0	0	900,000
Transfer from Stanford University Medical Center Development Agreement Fund									
PL-04010	Bicycle and Pedestrian Plan-Implementation Project	1,200,000	5,200,000	1,200,000	1,200,000	0	0	0	2,400,000
PE-13011	Charleston/Arastradero Corridor Project	1,550,000	0	0	0	0	0	0	0
PE-15003	Fire Station 3 Replacement	6,000,000	0	0	0	0	0	0	0
PE-18004	Fire Station 4 Replacement	0	0	0	750,000	0	0	0	750,000
PE-15007	New Downtown Parking Garage	0	0	9,072,000		0	0	0	9,072,000
PE-15001	New Public Safety Building	2,800,000	0	0	800,000	0	0	0	800,000
PL-16000	Quarry Road Improvements	800,000	550,000	0	200,000	1,493,513	0	0	1,693,513
PL-19000	Traffic Signal Emergency Vehicle Preemption	0	0	11,200	0	0	0	0	11,200
	Total Transfer	12,350,000	5,750,000	10,283,200	2,950,000	1,493,513	0	0	14,726,713

CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Transfer from Storm Drainage Fund									
PE-13011	Charleston/Arastradero Corridor Project	0	330,000	0	0	0	0	0	0
	Total Transfer	0	330,000	0	0	0	0	0	0
Transfer from Traffic Impact Fee Fund									
PL-14000	El Camino Real & Churchill Intersection Improvements-Design	0	1,000,000	0	0	0	0	0	0
PL-05030	Traffic Signal and Intelligent Transportation System Upgrades	432,050	378,361	506,475	383,362	400,000	395,000	0	1,684,837
	Total Transfer	432,050	1,378,361	506,475	383,362	400,000	395,000	0	1,684,837
Transfer from University Avenue Parking District Fund									
PL-15002	Downtown Automated Parking Guidance Systems, Access Controls, and Revenue Collection Equipment	0	0	1,100,000	1,300,000	0	0	0	2,400,000
PL-16002	Downtown Parking Management & System Implementation	0	0	607,000	140,000	20,000	20,000	0	787,000
PL-15004	Downtown Parking Wayfinding	600,000	61,325	280,015	21,081	22,521	22,524	0	346,141
PE-18002	High Street Parking Garage Waterproofing Study	0	50,000	300,000	0	0	0	0	300,000
PF-18000	Parking Lot J Elevator Modernization	0	700,000	50,000	0	0	0	0	50,000
PF-14003	University Avenue Parking Improvements	82,676	141,759	0	0	0	0	0	0
	Total Transfer	682,676	953,084	2,337,015	1,461,081	42,521	42,524	0	3,883,141
Transfer from Utilities Administration Fund									
PE-09003	City Facility Parking Lot Maintenance	0	0	0	0	0	300,000	0	300,000
FD-19000	Fire and Utilities Trench Training Facility	0	0	55,000	0	0	0	0	55,000
PF-02022	Facility Interior Finishes Replacement	0	0	370,000	0	0	107,762	0	477,762
PF-17000	Municipal Service Center A, B, & C Roof Replacement	0	0	684,000	0	0	0	0	684,000
PF-16006	Municipal Service Center Lighting, Mechanical, and Electrical Improvements	409,909	0	288,000	0	0	0	0	288,000
PE-19001	Water, Gas, Wastewater Office Remodel	0	0	70,000	654,000	0	0	0	724,000
	Total Transfer	409,909	0	1,467,000	654,000	0	407,762	0	2,528,762
Transfer from Vehicle Maintenance Fund									
PF-17000	Municipal Service Center A, B, & C Roof Replacement	0	0	380,000	0	0	0	0	380,000
PF-16006	Municipal Service Center Lighting, Mechanical, and Electrical Improvements	263,198	0	160,000	0	0	0	0	160,000
	Total Transfer	263,198	0	540,000	0	0	0	0	540,000
Transfer from Water Fund									
AC-86017	Art in Public Spaces	0	5,700	0	0	0	0	0	0
	Total Transfer	0	5,700	0	0	0	0	0	0

CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Grants/Other Revenue									
AC-86017	Art in Public Spaces: Federal Grant and Private Donations	30,000	30,000	0	0	0	0	0	0
PL-04010	Bicycle and Pedestrian Plan-Implementation Project: VTA Grant	203,463	0	0	0	0	0	0	0
PE-13011	Charleston/Arastradero Corridor Project: VTA Grant	0	250,604	1,575,300	0	0	0	0	1,575,300
PE-17010	Civic Center Electrical Upgrade & EV Charger Installation: BAAQMD Grant	0	220,000	0	40,000	0	0	0	40,000
PL-18000	El Camino Real Pedestrian Safety and Streetscape Project: VTA Grant	0	0	0	1,647,500	3,007,500	0	0	4,655,000
PL-15001	Embarcadero Rd at El Camino Improvements	102,151	0	0	0	0	0	0	0
PE-18004	Fire Station 4 Replacement: Certificates of Participation	0	0	0	1,579,000	0	0	0	1,579,000
PG-13003	Golf Reconfiguration & Baylands Athletic Center Improvements: SF Creek Joint Powers and Certificates of Participation	0	11,166,053	0	0	0	0	0	0
PE-11011	Highway 101 Pedestrian/Bicycle Overpass Project	0	333,000	7,017,000	2,000,000	0	0	0	9,017,000
AC-18001	JMZ Renovation: IMLS Grant	0	270,124	0	0	0	0	0	0
PE-18000	New California Avenue Area Parking Garage: Certificates of Participation	0	0	39,487,000	0	0	0	0	39,487,000
PE-15001	New Public Safety Building: Certificates of Participation	0	0	0	52,250,000	0	0	0	52,250,000
PE-12011	Newell Road/San Francisquito Creek Bridge Replacement: Caltrans & Silicon Valley Water	95,628	0	2,500,000	0	0	0	0	2,500,000
PF-16003	Parking Lot Q Elevator Modernization: Homeowners Association Reimbursement	0	25,591	0	0	0	0	0	0
PL-17001	Railroad Grade Separation: Measure B	0	0	1,000,000	4,335,000	1,000,000	1,000,000	1,000,000	8,335,000
PL-00026	Safe Routes To School: VTA Grant	0	0	0	459,677	459,677	0	0	919,354
PE-86070	Street Maintenance: State Grant	1,417,756	1,765,516	1,430,000	421,000	421,000	421,000	421,000	3,114,000
PL-05030	Traffic Signal and Intelligent Transportation System Upgrades: Measure B	20,181	0	400,000	300,000	300,000	300,000	300,000	1,600,000
Various	Infrastructure Plan Funding: Certificates of Participation	0	0	0	35,280,000	0	0	0	35,280,000
	Total Grants/Other Revenue	1,869,179	14,060,888	53,409,300	98,312,177	5,188,177	1,721,000	1,721,000	160,351,654
	Total Revenue	39,495,143	48,382,954	105,968,393	135,683,009	39,183,709	34,855,286	34,860,000	350,550,397
	Total Sources	113,096,968	124,667,613	139,584,352	142,022,897	53,521,311	50,436,265	56,449,144	384,166,356

CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Use of Funds									
Buildings & Facilities									
PF-93009	Americans With Disabilities Act Compliance	177,666	107,895	607,774	110,220	136,546	166,996	174,157	1,195,693
PE-19002	Animal Shelter Renovation	0	0	831,279	0	0	0	0	831,279
AC-14000	Art Center Auditorium Audio, Visual, And Furnishings	9,647	0	0	0	0	0	0	0
PE-14018	Baylands Boardwalk Improvements	187,054	346,353	1,039,099	0	0	0	0	1,039,099
PE-17006	Baylands Flood Protection Levee Improvements	0	0	1,039,099	0	0	0	0	1,039,099
AC-14001	Baylands Nature Interpretive Center Exhibit Improvements	22,500	33,500	0	0	0	0	0	0
PE-15029	Baylands Nature Interpretive Center Facility Improvements	871,463	3,019	0	0	0	0	0	0
PF-01003	Building Systems Improvements	155,602	401,786	215,805	132,264	223,485	238,566	248,795	1,058,915
PF-14004	California Avenue Parking District Parking Improvements	200,288	225,465	0	0	0	0	0	0
PE-09003	City Facility Parking Lot Maintenance	55,952	706,217	286,148	606,209	195,065	834,980	787,851	2,710,253
PE-12017	City Hall First Floor Renovations	152,028	232,985	0	0	0	0	0	0
PE-17002	City Hall Floor 3 Remodel	282,798	228,944	0	0	0	0	0	0
PE-17008	City Hall Floor 4 Remodel	19,818	30,000	445,000	0	0	0	0	445,000
PE-17009	City Hall Floor 5 Remodel	24,284	525,000	0	0	0	0	0	0
PE-19000	City Hall Space Planning	0	0	77,932	0	0	0	0	77,932
PE-17010	Civic Center Electrical Upgrade & EV Charger Installation	33,856	399,802	230,125	0	0	0	0	230,125
PE-18016	Civic Center Fire Life Safety and Electrical Upgrades	0	142,884	597,482	0	0	0	0	597,482
PE-15020	Civic Center Waterproofing Study and Repairs	29,440	22,048	455,000	0	0	0	0	455,000
PE-09005	Downtown Library Improvements	0	36,803	0	0	0	0	0	0
PF-15005	Emergency Facilities Improvement	64,630	15,500	0	0	0	0	0	0
PF-02022	Facility Interior Finishes Replacement	177,633	132,928	1,036,509	82,665	500,302	278,136	199,036	2,096,648
FD-14002	Fire Ringdown System Replacement	0	400,000	0	0	0	0	0	0
FD-19000	Fire and Utilities Trench Training Facility	0	0	110,000	0	0	0	0	110,000
PF-14002	Fire Station 1 Improvements	8,606	101,600	0	0	0	0	0	0
PE-15003	Fire Station 3 Replacement	518,475	8,446,920	430,000	235,000	0	0	0	665,000
PE-18004	Fire Station 4 Replacement	0	0	0	850,000	7,350,000	0	0	8,200,000
FD-13000	Foothills Fire Cameras	0	0	0	0	0	0	0	0
LB-11000	Furniture & Technology For Library Projects	146,130	0	0	0	0	0	0	0
PE-18002	High Street Parking Garage Waterproofing Study	0	50,000	311,730	0	0	0	0	311,730
PD-14000	Internal Alarm System Replacement	0	43,500	34,500	0	0	0	0	34,500
AC-18001	JMZ Renovation	0	1,658,124	1,077,331	716,236	137,261	0	0	1,930,828
PE-14015	Lucie Stern Buildings Mechanical and Electrical Upgrades	2,734,483	3,291,756	0	0	0	0	0	0
PE-09006	Mitchell Park Library and Community Center	64,330	100,000	0	0	0	0	0	0
PF-16006	Municipal Service Center Lighting, Mechanical, and Electrical Improvements	143,874	1,321,240	831,279	0	0	0	0	831,279

CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
PF-17000	Municipal Service Center A, B, & C Roof Replacement	0	0	1,974,289	0	0	0	0	1,974,289
PE-18000	New California Avenue Area Parking Garage	337,124	1,601,168	44,903,537	800,000	260,000	0	0	45,963,537
PE-15007	New Downtown Parking Garage	296,518	2,150,000	26,075,000	500,000	100,000	0	0	26,675,000
PE-15001	New Public Safety Building	938,804	3,389,854	100,000	83,700,000	3,850,000	0	0	87,650,000
PF-18000	Parking Lot J Elevator Modernization	0	700,000	79,324	0	0	0	0	79,324
PF-16003	Parking Lot Q Elevator Modernization	152,730	16,970	0	0	0	0	0	0
AC-18000	Performing Arts Venue Seat Replacement	0	0	78,774	0	0	0	0	78,774
AC-17000	Performing Arts Venues Soft Goods Replacement	0	41,912	0	0	0	0	0	0
PE-11000	Rinconada Library New Construction and Improvements	130,635	25,000	0	0	0	0	0	0
PF-00006	Roofing Replacement	300,757	1,075,487	373,739	396,791	578,867	149,487	815,178	2,314,062
PF-07011	Roth Building Maintenance	2,780	2,000	41,640	0	0	0	0	41,640
PE-13012	Structural Assessment of City Bridges	13,153	43,179	0	0	0	0	0	0
PF-14003	University Avenue Parking Improvements	93,035	158,109	357,263	0	0	0	0	357,263
PE-15011	Ventura Buildings Improvements	147,628	647,986	0	0	0	0	0	0
PE-19001	Water, Gas, Wastewater Office Remodel	0	0	72,737	720,837	0	0	0	793,574
	Total Building & Facilities	8,493,721	28,855,934	83,712,395	88,850,222	13,331,526	1,668,165	2,225,017	189,787,325
Department Technology Upgrades and Improvements									
FD-18000	Self-Contained Breathing Apparatus (SCBA) Replacement	0	800,000	0	0	0	0	0	0
	Total Department Technology Upgrades and Improvements	0	800,000	0	0	0	0	0	0
Parks & Open Space									
AC-86017	Art In Public Spaces	206,160	506,597	1,108,768	1,111,148	218,461	82,949	73,922	2,595,248
PG-19001	Baylands Athletic Center 10.5 Acre Expansion Plan	0	0	105,032	0	0	0	0	105,032
PG-17000	Baylands Comprehensive Conservation Plan	0	330,000	94,529	0	0	0	0	94,529
PE-15028	Baylands Levee Improvements Feasibility	0	157,500	0	0	0	0	0	0
PG-06003	Benches, Signage, Walkways, Perimeter Landscaping	159,893	294,200	260,588	159,907	164,060	171,390	169,947	925,892
PE-16000	Bol Park Improvements	0	0	0	231,461	0	0	0	231,461
PE-17005	Boulware Park Improvements	0	15,000	31,173	440,879	0	0	0	472,052
PE-13008	Bowden Park Improvements	301,288	25,980	0	0	0	0	0	0
PG-15000	Buckeye Creek Hydrology Study	106,614	68,122	0	0	0	0	0	0
PE-18006	Byxbee Park Completion	0	226,038	653,962	2,450,000	270,000	0	0	3,373,962
PE-13020	Byxbee Park Trails	249,692	12,797	0	0	0	0	0	0
PG-14002	Cameron Park Improvements	0	0	0	0	0	141,682	0	141,682
PE-13005	City Hall/King Plaza Landscape	10,204	0	0	0	0	0	0	0
PG-18001	Dog Park Installation and Renovation	0	150,000	0	159,907	0	171,390	0	331,297
PE-13016	El Camino Park Restoration	12,503	0	0	0	0	0	0	0

CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
OS-18000	Foothills Park Boronda Lake Dock Replacement	0	0	0	0	147,654	0	0	147,654
PE-20000	Foothills Park Dam Seepage Investigation & Repairs	0	0	0	33,066		0	0	33,066
PE-21000	Foothills Park Improvement Project	0	0	0	0	455,152	0	0	455,152
PG-17001	Foothills Park, Pearson Arastradero Preserve, and Esther Clark Park Comprehensive Conservation Plan	0	0	315,096	0	0	0	0	315,096
PG-18000	Golf Course Net and Artificial Turf Replacement	0	0	0	820,858	0	0	0	820,858
PG-13003	Golf Course Reconfiguration & Baylands Athletic Center Improvements	9,334,095	3,958,798	0	0	0	0	0	0
PG-21000	Heritage Park Site Amenities Replacement	0	0	0	0	9,844	103,976	0	113,820
PE-18012	Hoover Park Improvements	0	0	0	0	84,528	675,936	0	760,464
PE-21002	Johnson Park Renovation	0	0	0	0	110,537	1,351,872	0	1,462,409
PE-12013	Magical Bridge Playground	38,670	0	0	0	0	0	0	0
PE-17000	Mitchell Park Adobe Creek Bridge Replacement	14,524	250,001	0	0	0	0	0	0
PE-18010	Mitchell Park Improvements	0	0	0	0	0	318,087	1,877,905	2,195,992
OS-09001	Off-Road Pathway Resurfacing And Repair	12,716	183,334	291,753	106,605	109,373	114,260	113,298	735,289
OS-00002	Open Space Lakes And Pond Maintenance	37,618	72,000	48,095	47,972	49,218	51,417	50,984	247,686
OS-00001	Open Space Trails and Amenities	253,379	311,000	185,885	186,559	191,403	199,954	198,272	962,073
PE-15022	Palo Alto Community Gardens Irrigation System	96	0	0	0	0	0	0	0
PG-09002	Parks and Open Space Emergency Repairs	176,466	119,000	108,853	106,605	136,717	171,390	226,596	750,161
PG-19000	Park Restroom Installation	0	0	367,612	0	382,806	0	396,544	1,146,962
PE-13003	Parks, Trails, Open Space, & Recreation Master Plan	314,865	54,683	0	0	0	0	0	0
PE-21001	Pearson Arastradero Improvement Project	0	0	0	27,555	325,109	0	0	352,664
OS-18001	Pearson Arastradero Preserve Parking Lot Improvement	0	0	0	0	169,528	0	0	169,528
PG-14001	Peers Park Improvements	0	0	0	0	0	0	232,261	232,261
PG-14000	Ramos Park Improvements	0	0	0	244,125	0	0	0	244,125
PE-08001	Rinconada Park Improvements	18	1,629,000	330,434	2,203,876	97,533	0	0	2,631,843
PE-12003	Rinconada Park Master Plan and Design	99,083	117,392	0	0	0	0	0	0
PE-18015	Robles Park Improvements	0	0	0	0	104,035	946,310	0	1,050,345
PG-12004	Sarah Wallis Park Improvements	49,710	0	0	0	0	0	0	0
PG-14003	Seale Park Improvements	0	0	0	0	360,932	0	0	360,932
PG-13001	Stanford/Palo Alto Playing Fields Soccer Turf Replacement	867,256	0	0	0	0	0	0	0
PG-06001	Tennis and Basketball Court Resurfacing	177,218	363,734	415,704	229,201	235,152	245,658	243,591	1,369,306
PG-18002	Turf Management Plan	0	0	105,032	0	0	0	0	105,032
PG-22000	Werry Park Playground Improvements	0	0	0	0	0	114,260	0	114,260
	Total Parks & Open Space	12,422,068	8,845,176	4,422,516	8,559,724	3,622,042	4,860,531	3,583,320	25,048,133

CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Streets and Sidewalks									
PE-17004	California Ave District Gateway Signs	0	150,000	0	0	0	0	0	0
PE-18001	CalTrain Corridor Video Management System Installation	0	1,521,689	29,418	0	0	0	0	29,418
PO-12001	Curb and Gutter Repairs	42,212	592,364	454,864	110,220	130,043	159,044	165,863	1,020,034
PL-11001	Dinah Summerhill Pedestrian/Bicycle Path	114,199	0	0	0	0	0	0	0
PE-13017	El Camino Median Landscape Improvements	7,544	0	0	77,154	918,107	0	0	995,261
PE-12011	Newell Road/San Francisquito Creek Bridge Replacement	114,701	730,502	2,623,726	0	0	0	0	2,623,726
PO-89003	Sidewalk Repairs	1,889,538	1,974,377	1,628,027	1,333,659	1,573,525	1,924,429	2,006,946	8,466,587
PO-11000	Sign Reflectivity Upgrade	36,581	87,520	174,397	55,110	65,022	79,522	82,932	456,983
PE-13014	Street Lights Condition Assessment	0	0	228,683	0	0	0	0	228,683
PO-05054	Street Lights Improvements	220,808	28,958	259,775	165,330	195,065	238,566	248,795	1,107,531
PE-86070	Street Maintenance	7,475,426	11,610,769	7,625,552	6,983,524	5,638,683	6,853,195	7,140,417	34,241,371
PO-11001	Thermoplastic Lane Marking and Striping	74,965	63,250	154,287	82,665	97,533	119,283	124,398	578,166
PE-16002	Traffic Circle Improvements	13,101	0	0	0	0	0	0	0
	Total Streets and Sidewalks	9,989,075	16,759,429	13,178,729	8,807,662	8,617,978	9,374,039	9,769,351	49,747,760
Traffic and Transportation									
PL-04010	Bicycle and Pedestrian Plan-Implementation Project	1,754,058	11,159,979	4,261,921	2,233,234	300,000	0	0	6,795,155
PL-11002	California Avenue- Transit Hub Corridor Project	35,091	35,000	0	0	0	0	0	0
PE-13011	Charleston/Arastradero Corridor Project	795,828	11,162,937	400,000	5,945,200	400,000	0	0	6,745,200
PL-14000	Churchill Avenue Enhanced Bikeway	18,277	379,961	750,000	0	0	0	0	750,000
PL-15002	Downtown Automated Parking Guidance Systems, Access Controls, and Revenue Collection Equipment	50,920	44,571	1,291,734	1,413,105	0	0	0	2,704,839
PL-16001	Downtown Mobility and Safety Improvements	72,728	2,356,058	0	0	0	0	0	0
PL-16002	Downtown Parking Management & System Implementation	0	22,970	1,116,122	152,181	22,102	30,508	0	1,320,913
PL-15004	Downtown Parking Wayfinding	8,115	738,886	306,934	16,305	16,576	22,881	0	362,696
PL-18000	El Camino Real Pedestrian Safety and Streetscape Project	0	83,811	179,975	1,790,838	3,858,096	0	0	5,828,909
PL-15001	Embarcadero Road at El Camino Real Improvements	251,105	508,512	5,709,966	0	0	0	0	5,709,966
PL-19000	Emergency Vehicle Traffic Signal Preemption System Pilot	0	0	597,125	0	0	0	0	597,125
PE-11011	Highway 101 Pedestrian/Bicycle Overpass Project	922,596	1,838,391	13,750,000	220,000	0	0	0	13,970,000
PL-14001	Midtown Connector	28,766	53,120	0	0	0	0	0	0
PL-16000	Quarry Road Improvements	416,002	1,007,031	110,000	217,401	1,650,445	0	0	1,977,846
PL-17001	Railroad Grade Separation	315,878	1,485,915	1,116,122	4,712,161	1,105,076	1,525,395	1,678,311	10,137,065
PL-15003	Residential Preferential Parking	174,438	386,312	165,612	0	0	0	0	165,612
PL-00026	Safe Routes To School	115,208	458,298	249,354	608,371	657,163	205,928	226,572	1,947,388
PL-05030	Traffic Signal and Intelligent Transportation System	594,207	634,404	1,288,219	679,377	773,553	1,060,150	503,493	4,304,792

CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
PL-12000	Transportation and Parking Improvements	340,903	955,748	251,127	244,576	331,523	457,619	503,493	1,788,338
	Total Traffic and Transportation	5,894,120	33,311,904	31,544,211	18,232,749	9,114,534	3,302,481	2,911,869	65,105,844
Unallocated Salaries and Benefits									
AS-10000	Salaries and Benefits - Capital Improvement Fund CIP Projects	0	2,239,196	379,529	407,354	426,667	449,392	468,128	2,131,070
	Total Unallocated Salaries and Benefits	0	2,239,196	379,529	407,354	426,667	449,392	468,128	2,131,070
	Total Project Expenses	36,798,984	90,811,639	133,237,380	124,857,711	35,112,747	19,654,608	18,957,685	331,820,132
Transfers to Other Funds									
	General Fund	0	7,500	0	0	0	0	0	0
	General Benefits Funds	0	108,006	0	0	0	0	0	0
	Refuse Fund	13,325	0	0	0	0	0	0	0
	Total Transfers to Other Funds	13,325	115,506	0	0	0	0	0	0
Centrally Determined Charges									
	Management Development	0	9,910	0	0	0	0	0	0
	Printing Services	0	11,261	7,084	7,084	7,084	7,084	7,084	35,420
	Vehicle Maintenance	0	103,338	0	0	0	0	0	0
	Total Centrally Determined Charges	0	124,509	7,084	7,084	7,084	7,084	7,084	35,420
Debt Service									
	Certificates of Participation	0	0	0	2,820,500	2,820,500	9,185,429	9,185,429	24,011,858
	Total Debt Service	0	0	0	2,820,500	2,820,500	9,185,429	9,185,429	24,011,858
	Total Expenses	36,812,309	91,051,654	133,244,464	127,685,295	37,940,331	28,847,121	28,150,198	355,867,410
Reserves									
	Reserve: Infrastructure Plan	24,125,281	0	0	0	0	0	0	0
	Reserve: Roth Building & Sea Scout Building TDRs	4,680,258	4,680,258	4,680,258	4,680,258	4,680,258	4,680,258	4,680,258	4,680,258
	Total Debt Service	28,805,539	4,680,258	4,680,258	4,680,258	4,680,258	4,680,258	4,680,258	4,680,258
	Total Ending Fund Balance (Infrastructure Reserve)	47,479,120	28,935,701	1,659,630	9,657,344	10,900,721	16,908,886	23,618,688	23,618,688
	Total Uses	113,096,968	124,667,613	139,584,352	142,022,897	53,521,311	50,436,265	56,449,144	384,166,356

City of Palo Alto

2019-2023 Adopted Capital Improvement Program, General Fund

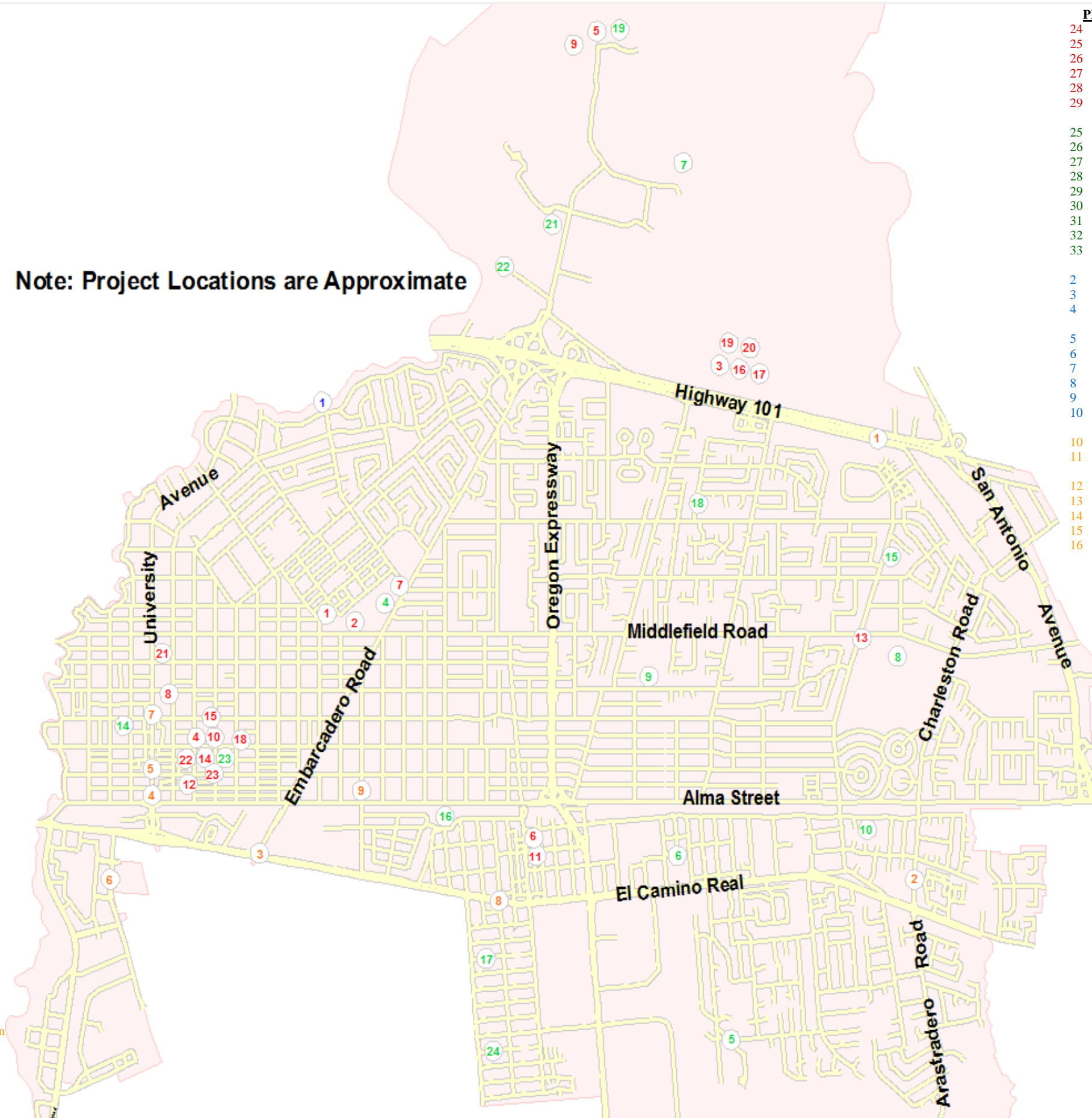
BUILDINGS AND FACILITIES		
1	AC-18000	Performing Arts Venues Seat Replacement
2	AC-18001	JMZ Renovation
3	FD-19000	Fire and Utilities Trench Training Facility
4	PD-14000	Internal Alarm System Replacement
5	PE-14018	Baylands Boardwalk Improvements
6	PE-15001	New Public Safety Building
7	PE-15003	Fire Station 3 Replacement
8	PE-15007	New Downtown Parking Garage
9	PE-17006	Baylands Flood Protection Levee Improvements
10	PE-17010	Civic Center Electrical Upgrade & EV Charger Installation
11	PE-18000	New California Avenue Area Parking Garage
12	PE-18002	High and Bryant Street Garages Waterproofing and Repairs
13	PE-18004	Fire Station 4 Replacement
14	PE-18016	Civic Center Fire Life Safety Upgrades
15	PE-19000	City Hall Space Planning
16	PE-19001	Water, Gas, Wastewater Office Remodel
17	PE-19002	Animal Shelter Renovation
18	PF-07011	Roth Building Maintenance
19	PF-16006	Municipal Service Center Lighting, Mechanical, and Electrical Improvements
20	PF-17000	Municipal Service Center A, B, & C Roof Replacement
21	PF-18000	Parking Lot J Elevator Modernization
22	PE-15020	Civic Center Waterproofing Study and Repairs
23	PE-17008	City Hall Floor 4 Remodel

PARKS AND OPEN SPACE		
1	OS-00002	Open Space Lakes And Pond Maintenance
2	OS-18000	Foothills Park Boronda Lake Dock Replacement
3	OS-18001	Pearson Arastradero Preserve Parking Lot Improvement
4	PE-08001	Rinconada Park Improvements
5	PE-16000	Bol Park Improvements
6	PE-17005	Boulevard Park Improvements
7	PE-18006	Byxbee Park Completion
8	PE-18010	Mitchell Park Improvements
9	PE-18012	Hoover Park Improvements
10	PE-18015	Robles Park Improvements
11	PE-20000	Foothills Park Dam Seepage Study
12	PE-21000	Foothills Park Improvement Project
13	PE-21001	Pearson Arastradero Improvement Project
14	PE-21002	Johnson Park Renovation
15	PG-14000	Ramos Park Improvements
16	PG-14001	Peers Park Improvements
17	PG-14002	Cameron Park Improvements
18	PG-14003	Seale Park Improvements
19	PG-17000	Baylands Comprehensive Conservation Plan
20	PG-17001	Foothills Park, Pearson Arastradero Preserve, and Esther Clark Park Conservation Plan
21	PG-18000	Golf Course Net and Artificial Turf Replacement
22	PG-19001	Baylands Athletic Center 10.5 Acre Expansion Plan
23	PG-21000	Heritage Park Site Amenities Replacement
24	PG-22000	Werry Park Playground Improvements

STREETS AND SIDEWALKS		
1	PE-12011	Newell Road/San Francisquito Creek Bridge Replacement

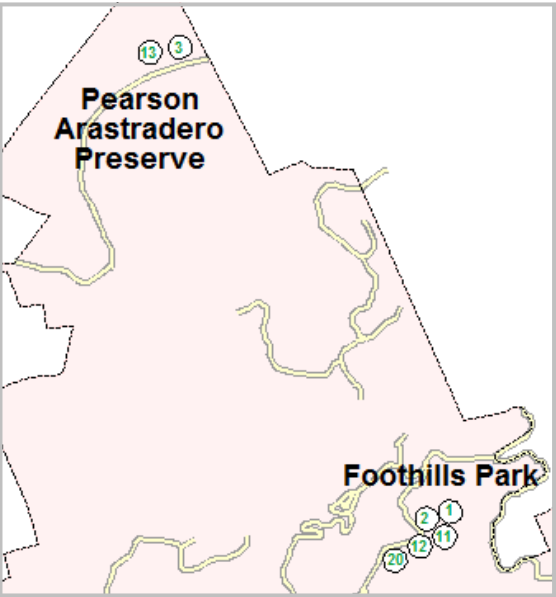
TRAFFIC AND TRANSPORTATION		
1	PE-11011	Highway 101 Pedestrian/Bicycle Overpass Project
2	PE-13011	Charleston/Arastradero Corridor Project
3	PL-15001	Embarcadero Rd at El Camino Improvements
4	PL-15002	Downtown Automated Parking Guidance Systems, Access Controls & Revenue Collection Equip.
5	PL-15004	Downtown Parking Wayfinding
6	PL-16000	Quarry Road Improvements and Transit Center Access
7	PL-16002	Downtown Parking Management and System Implementation
8	PL-18000	El Camino Real Pedestrian Safety and Streetscape Project
9	PL-14000	Churchill Avenue Enhanced Bikeway

Note: Project Locations are Approximate



PROJECTS IN VARIOUS LOCATIONS NOT SHOWN ON MAP

24	PE-09003	City Facility Parking Lot Maintenance
25	PF-00006	Roofing Replacement
26	PF-01003	Building Systems Improvements
27	PF-02022	Facility Interior Finishes Replacement
28	PF-14003	University Avenue Parking Improvements
29	PF-93009	Americans With Disabilities Act Compliance
25	AC-86017	Art In Public Spaces
26	OS-00001	Open Space Trails and Amenities
27	OS-09001	Off-Road Pathway Resurfacing And Repair
28	PG-06001	Tennis and Basketball Court Resurfacing
29	PG-06003	Benches, Signage, Walkways, Perimeter Landscaping
30	PG-09002	Park and Open Space Emergency Repairs
31	PG-18001	Dog Park Installation and Renovation
32	PG-18002	Turf Management Plan
33	PG-19000	Park Restroom Installation
2	PE-13014	Streetlights Condition Assessment
3	PE-13017	El Camino Median Landscape Improvements
4	PE-18001	CalTrain Corridor Video Management System Installation
5	PE-86070	Street Maintenance
6	PO-05054	Street Lights Improvements
7	PO-11000	Sign Reflectivity Upgrade
8	PO-11001	Thermoplastic Lane Marking and Striping
9	PO-12001	Curb and Gutter Repairs
10	PO-89003	Sidewalk Repairs
10	PL-00026	Safe Routes To School
11	PL-04010	Bicycle and Pedestrian Transportation Plan Implementation
12	PL-05030	Traffic Signal and Intelligent Transportation Systems
13	PL-12000	Transportation and Parking Improvements
14	PL-15003	Residential Preferential Parking
15	PL-17001	Railroad Grade Separation and Safety Improvements
16	PL-19000	Emergency Vehicle Traffic Signal Preemption System Pilot



Buildings and Facilities

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Various
Managing Department: Public Works
IBRC Reference: Keep-up
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: PF-93009

Palo Alto Airport Terminal, January 2015

Americans With Disabilities Act Compliance

Description

This project provides funding for accessibility upgrades to City facilities and equipment. It includes continued funding for improvements such as path of travel, restroom upgrades, drinking fountains, and counters. This funding will also be utilized for other CIP project design or construction phases where accessibility improvements are identified.

Justification

In order to comply with the Americans with Disabilities Act of 1990 and related regulations, the City prepared a Transition Plan and Self-Evaluation Final Study that identified physical obstacles and described improvements to make facilities, programs, and services accessible. Implementation of this program is ongoing.

Supplemental Information

Upon completion of the ADA Transition Plan update in early 2019, this project will fund accessibility upgrades to facilities per the established plan schedule.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	592,800	107,895	607,774	110,220	136,546	166,996	174,157	1,195,693	0	N/A
Total	N/A	592,800	107,895	607,774	110,220	136,546	166,996	174,157	1,195,693	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	568,831	107,895	607,774	110,220	136,546	166,996	174,157	1,195,693	0	N/A
Design	N/A	23,969	0	0	0	0	0	0	0	0	N/A
Total	N/A	592,800	107,895	607,774	110,220	136,546	166,996	174,157	1,195,693	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan**Primary Connection**

Element: Community Services & Facilities

Section: Efficient and Effective Service Delivery

Goal: C-1

Policy: C-1.8

Potential Board/Commission Review:

Architectural Review Board

Historic Resources Board

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 3281 East Bayshore Road
Managing Department: Public Works
IBRC Reference: New
Initial Project Start: Summer 2018
Initial Project Completion: Winter 2018
Revised Project Start:
Revised Project Completion:
Project Number: PE-19002

Animal Shelter Renovation

Description

This project provides funding for interim facility improvements to the Animal Shelter that are anticipated to accompany operation of the shelter by a contractor. The improvements include expanding and remodeling the medical suite and providing a new 900 square foot modular building for office space and educational programs for the public.

Justification

The Animal Shelter, built in 1972, is outdated and does not meet modern standards for medical care. Fundraising for construction of a new, modern animal shelter will be needed but interim improvements to the current shelter are needed for Pets In Need to successfully operate the facility.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	831,279	0	0	0	0	831,279	0	831,279
Total	0	0	0	831,279	0	0	0	0	831,279	0	831,279

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	831,279	0	0	0	0	831,279	0	831,279
Total	0	0	0	831,279	0	0	0	0	831,279	0	831,279

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Baylands Nature Interpretive Center (2775 Embarcadero Road)
Managing Department: Public Works
IBRC Reference: Catch-up
Initial Project Start: Spring 2015
Initial Project Completion: Fall 2015
Revised Project Start: Summer 2016
Revised Project Completion: Winter 2020
Project Number: PE-14018

Baylands Boardwalk, February 2015

Baylands Boardwalk Improvements

Description

This project provides funding for design and construction to replace the existing boardwalk at the Lucy Evans Baylands Nature Interpretive Center (Interpretive Center).

Justification

The Interpretive Center serves 80,000 visitors annually, approximately 2,900 of whom are elementary school students. The Interpretive Center Boardwalk provides a unique opportunity for visitors to view a pristine salt marsh habitat that is home to the endangered Ridgeway's Rail and Salt Marsh Harvest Mouse. In 2014, the boardwalk was closed due to safety concerns. A segment of the boardwalk was re-opened in 2015 after minor repair and structural improvements addressed safety issues. The replacement structure will be ADA accessible.

Supplemental Information

Before construction can begin, an environmental assessment and various regulatory permits are needed. The lead time for permit approval is significant. The permitting agencies include the San Francisco Bay Regional Water Quality Control Board, United States Fish and Wildlife Services, Army Corps of Engineers, and San Francisco Bay Conservation and Development Commission. The project design and construction bid documents are expected to be complete by Summer 2018. All applicable regulatory agencies permit applications have been submitted.

The cost estimate for this project will likely need to be adjusted to account for escalation, project delays, and the need for increased coordination with other agencies.

Significant Changes

2018-2022 CIP: Completion date extended to accommodate two construction phases and a lengthy permitting process. To avoid nesting birds in the baylands, the construction window is limited to five months from September 1 through January 31. The project schedule extension assumes approximately 18 months for environmental and permitting review and approval.

2017-2021 CIP: Project schedule revised to include design and construction phases. Design and construction budget added through Fiscal Year 2016 Council action included in project budget.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	353,413	346,353	346,353	1,039,099	0	0	0	0	1,039,099	0	1,738,865
Total	353,413	346,353	346,353	1,039,099	0	0	0	0	1,039,099	0	1,738,865

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	346,353	1,039,099	0	0	0	0	1,039,099	0	1,385,452
Design	353,409	346,353	0	0	0	0	0	0	0	0	353,409
Total	353,409	346,353	346,353	1,039,099	0	0	0	0	1,039,099	0	1,738,861

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Potential Board/Commission Review:

Architectural Review Board

Historic Resources Board

Parks and Recreation Commission

Environmental Impact Analysis:

This project requires a CEQA Environmental Impact Report



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Baylands Nature Preserve (2500 Embarcadero Road)
Managing Department: Public Works
IBRC Reference: New
Initial Project Start: Summer 2016
Initial Project Completion: Fall 2017
Revised Project Start: Fall 2017
Revised Project Completion: Fall 2019
Project Number: PE-17006

Baylands Levee, 2016

Baylands Flood Protection Levee Improvements

Description

This project provides funding for the design and environmental review of improvements to the existing network of flood protection levees in the Palo Alto Baylands between the San Francisco Creek and Mountain View. The project will be designed to provide one percent (100-year) protection from tidal flooding, including the impacts of 50 years of future sea level rise.

Justification

Approximately 2,700 properties in Palo Alto are subject to tidal flooding and are thereby required to purchase flood insurance and face restrictions on construction of new or remodeled buildings. Future construction of this project would provide flood protection, as well as relief to residents and businesses from flood insurance costs and building restrictions.

Supplemental Information

This project will be implemented as an element of the San Francisco Creek Joint Powers Authority (JPA) SAFER Bay Project, which is designing improvements to the Bayfront levees between Mountain View and Redwood City. The project will also be coordinated with the Santa Clara Valley Water District and the City of Mountain View, who are pursuing independent studies of potential levee improvements. Construction funding will likely be sought through a regional ballot measure for a special tax or assessment in the affected communities.

Significant Changes

2018-2022 CIP: The project start and completion dates have been extended due to staff workload constraints.

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	1,000,000	0	1,039,099	0	0	0	0	1,039,099	0	1,039,099
Total	0	1,000,000	0	1,039,099	0	0	0	0	1,039,099	0	1,039,099

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	1,000,000	0	0	0	0	1,000,000	0	1,000,000
Design	0	1,000,000	0	39,099	0	0	0	0	39,099	0	39,099
Total	0	1,000,000	0	1,039,099	0	0	0	0	1,039,099	0	1,039,099

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Safety

Section: Natural Hazards

Goal: S-2

Policy: S-2.12

Program: S2.12.2

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

San Francisquito Creek Joint Powers Authority

Environmental Impact Analysis:

This project will require an environmental assessment in accordance with CEQA guidelines.



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Various
Managing Department: Public Works
IBRC Reference: Keep-up
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: PF-01003

AC gas package unit Municipal Services Center Building C, January 2015

Building Systems Improvements

Description

This project provides funding for electrical, mechanical, plumbing, structural, and security upgrades as required at various City facilities. Upgrades may include main and emergency power sources, light fixtures, fire alarm systems, heating and ventilation equipment, Building Management System (BMS) controls, structural reinforcements or repair, security card access and camera systems.

Justification

This project provides funding for system upgrades in facilities with systems that are overloaded or are no longer efficient. Heating and air-conditioning units in many older buildings are at the end of their useful life and require replacement. BMS control systems in some facilities are outdated and have limited or no vendor support. Structural systems have become damaged or fatigued due to heavier equipment requirements or increased loading. Increased security requirements for facilities and IT network systems require the need for the installation of card access and camera systems. This project also provides funding for replacement of unforeseen equipment failures. While upgrading equipment, staff selects the most energy efficient equipment, including premium efficiency motors, and incorporates the use of energy saving technologies such as variable frequency drives whenever possible.

Supplemental Information

The Department of Public Works uses a computerized asset management tracking software to assist in identifying the maintenance and replacement needs addressed through this CIP. Projects identified for upcoming work include:

CAPITAL IMPROVEMENT FUND

Fiscal Year 2019: Convert Rinconada and Mitchell Park tennis court lights to LED. New lighting controls for Rinconada and Mitchell Park tennis courts.

Fiscal Year 2020: Replace electrical panels at Fire Station #5 and replace domestic water control system at City Hall.

Fiscal Year 2021: Install HVAC equipment in the Art Center basement. Replace BMS controls for the Lucie Stern Community Theater.

Fiscal Year 2022: Upgrade LED lighting in City parks. New Children's Pool boilers (4ea), roof top furnaces, exhaust fans, and dehumidifiers.

Fiscal Year 2023: Replace electrical panel at the Golf Club House and Café.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	489,471	401,786	215,805	132,264	223,485	238,566	248,795	1,058,915	0	N/A
Total	N/A	489,471	401,786	215,805	132,264	223,485	238,566	248,795	1,058,915	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	488,613	401,786	215,805	132,264	223,485	238,566	248,795	1,058,915	0	N/A
Design	N/A	858	0	0	0	0	0	0	0	0	N/A
Total	N/A	489,471	401,786	215,805	132,264	223,485	238,566	248,795	1,058,915	0	N/A

Operating Impact

This project may impact operating expenses in future years. As the scope of this project is better defined through the design process, operating impacts will be reviewed and adjustments may be brought forward as part of the annual budget process, as necessary.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund

Category: Buildings and Facilities

Project Location: Various

Managing Department: Public Works

IBRC Reference: Keep-up

Initial Project Start: Recurring

Initial Project Completion: Recurring

Project Number: PE-09003

Lucie Stern Parking Lot, February 2015

City Facility Parking Lot Maintenance

Description

This project provides funding for the repair, resurfacing, or reconstruction of parking lots and walkways at various City facilities, including restriping and signage.

Justification

Uneven paved surfaces are a safety hazard and shorten the useful life of walkways and parking lots. Repairing the paved walkways and parking lots at various City facilities will eliminate these safety hazards and extend useful life.

Supplemental Information

Work programmed for this project includes parking lot resurfacing for the following locations:

Fiscal Year 2019: Fire Station #1 and Arastradero Preserve Parking Lot

Fiscal Year 2020: Baylands Athletic Center

Fiscal Year 2021: Fire Station #8 and Foothills Park Parking Lot

Fiscal Year 2022: Municipal Services Center and Municipal Services Center North Employee Lot

Fiscal Year 2023: Hoover Park and Terman Park

Funding will be offset by \$0.3 million from the Utilities Enterprise Funds for the scope that includes the Municipal Service Center (MSC) in FY 2020.

Significant Changes

2018-2022 CIP: A \$215,000 increase in FY 2018 funding is for the Midtown Shopping Center.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	881,598	706,217	286,148	606,209	195,065	534,980	787,851	2,410,253	0	N/A
Transfer from Utilities Administration Fund	N/A	0	0	0	0	0	300,000	0	300,000	0	N/A
Total	N/A	881,598	706,217	286,148	606,209	195,065	834,980	787,851	2,710,253	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	870,934	691,229	282,985	594,961	183,368	834,980	787,851	2,684,145	0	N/A
Design	N/A	10,664	14,988	3,163	11,248	11,697	0	0	26,108	0	N/A
Total	N/A	881,598	706,217	286,148	606,209	195,065	834,980	787,851	2,710,253	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

Work performed under this project is typically categorically exempt from CEQA under Section 15301.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Palo Alto City Hall (250 Hamilton Avenue)
Managing Department: Public Works
IBRC Reference: New
Initial Project Start: Summer 2016
Initial Project Completion: Fall 2018
Revised Project Start: Spring 2017
Revised Project Completion: Winter 2018
Project Number: PE-17008

Civic Center - 4th Floor

City Hall Floor 4 Remodel

Description

This project provides funding for improvements to the Administrative Services Department (ASD) offices on the fourth floor of City Hall. The project will include items such as new carpet, wall reconfiguration, cabinets, paint, soundproofing, fixed office furniture, doors, and associated fire/life safety, mechanical, electrical, and plumbing code compliance requirements.

Justification

Office workspaces in City Hall are being reconfigured, upgraded and modernized for current business trends that use less paper, less storage, less compartmentalization, more openness, and more collaboration.

Significant Changes

2018-2022 CIP: Project budget was increased by \$125,000. Project schedule was adjusted to fit sequentially with other renovation work in City Hall.

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	19,818	475,000	30,000	445,000	0	0	0	0	445,000	0	494,818
Total	19,818	475,000	30,000	445,000	0	0	0	0	445,000	0	494,818

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	467,100	30,000	445,000	0	0	0	0	445,000	0	475,000
Design	19,817	7,900	0	0	0	0	0	0	0	0	19,817
Total	19,817	475,000	30,000	445,000	0	0	0	0	445,000	0	494,817

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan**Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Palo Alto City Hall (250 Hamilton Avenue)
Managing Department: Public Works
IBRC Reference: New
Initial Project Start: Fall 2018
Initial Project Completion: Fall 2019
Revised Project Start:
Revised Project Completion:
Project Number: PE-19000

City Hall A Level Lobby

City Hall Space Planning

Description

This project provides funding for space planning to determine future workgroup space needs and programming for the City Hall office building.

Justification

Upon completion of the new public safety building in 2021, the Police wing of City Hall and the Fire Administration group on the sixth floor will move into the new building. The departure of these workgroups provides an opportunity to plan for the best use of the newly available City Hall space, and to consider other potential improvements such as remodeling the A level cafeteria space. Additionally, a potential opportunity has been identified to reduce the size of the Information Technology Department's 2nd floor data center and make the space available for other uses.

Supplemental Information

The scope of this project is limited to initial space planning. Following completion of space planning, additional funding will be required to design and construct renovations to the affected areas.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	77,932	0	0	0	0	77,932	0	77,932
Total	0	0	0	77,932	0	0	0	0	77,932	0	77,932

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	0	0	77,932	0	0	0	0	77,932	0	77,932
Total	0	0	0	77,932	0	0	0	0	77,932	0	77,932

Operating Impact

Operating impacts of potential space uses will be assessed as part of the planning process.

Relationship to Comprehensive Plan**Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Palo Alto City Hall (250 Hamilton Avenue), Various
Managing Department: Public Works
IBRC Reference: Keep-up
Initial Project Start: Summer 2016
Initial Project Completion: Fall 2017
Revised Project Start: Spring 2017
Revised Project Completion: Summer 2018
Project Number: PE-17010

Electrical System Access Door at City Hall

Civic Center Electrical Upgrade & EV Charger Installation

Description

This project provides funding to replace the aging Civic Center electrical switchgear and motor control centers, and to purchase and install approximately 43 new Level 2 Electric Vehicle (EV) charging stations at City parking garages, including the Civic Center garage.

Justification

The main electrical switch gear is over 40 years old and must be replaced and upgraded to ensure the reliability of electrical power at City Hall. Other parts of the electrical system have been recently upgraded, leaving this as one of the last remaining items. With increased ownership of electric vehicles, additional public spaces with EV chargers are needed. Funding in this project allows the City to leverage grants that substantially cover the costs of EV charger purchases and installation on a reimbursement basis.

Supplemental Information

The funding for the electrical upgrade work (\$0.35 million) has been moved from PE-18016, Civic Center Fire Life Safety and Electrical Upgrades to this new project, while approximately 90 percent of the EV charger costs are expected to be reimbursed by Bay Area Air Quality Management District grants. A portion of the grant reimbursement is deferred for three years to allow demonstration of compliance with grant usage criteria.

Significant Changes

2019-2023 CIP: Anticipated project completion date adjusted to reflect delays due to staff workload and available options for scheduling a full shutdown of City Hall for construction work.

2018-2022 CIP: Project start was delayed due to staff workload. Staff plans to use Design-Build project delivery method for Civic Center switchgear and motor control center replacements.

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	33,855	401,268	179,802	230,125	(40,000)	0	0	0	190,125	0	403,782
Revenue from Other Agencies	0	220,000	220,000	0	40,000	0	0	0	40,000	0	260,000
Total	33,855	621,268	399,802	230,125	0	0	0	0	230,125	0	663,782

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	5,735	571,466	399,802	230,125	0	0	0	0	230,125	0	635,662
Design	28,118	49,802	0	0	0	0	0	0	0	0	28,118
Total	33,853	621,268	399,802	230,125	0	0	0	0	230,125	0	663,780

Operating Impact

This project is anticipated to impact operating expenses in the future. As these costs are quantified, adjustments will be brought forward in future budgets, as necessary.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-5.2

Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Palo Alto City Hall (250 Hamilton Avenue)
Managing Department: Public Works
IBRC Reference: Keep-up
Initial Project Start: Summer 2018
Initial Project Completion: Spring 2019
Revised Project Start: Fall 2018
Revised Project Completion: Summer 2019
Project Number: PE-18016

Civic Center Fire Life Safety and Electrical Upgrades

Civic Center Fire Life Safety Upgrades

Description

This project provides funding for an assessment and upgrade of the fire life safety systems in City Hall.

Justification

The fire life safety system is approaching the end of its useful life. The fire alarm panels and associated equipment are in need of upgrade in order to meet current code requirements. City Hall is a vital facility for all functions and departments.

Supplemental Information

The fire life safety system is approaching the end of its useful life. The fire alarm panels and associated equipment needed to meet current codes will be upgraded.

The cost estimate for this project will likely need to be reevaluated and adjusted to account for escalation.

Significant Changes

2019-2023 CIP: Project schedule and scope revised to reflect staff workload.

2017-2021 CIP: The scope and budget (\$0.35 million) for the City Hall electrical upgrade portion of this project have been moved to a new project, PE-17010, Civic Center Electrical Upgrade & EV Charger Installation.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	142,884	142,884	597,482	0	0	0	0	597,482	0	740,366
Total	0	142,884	142,884	597,482	0	0	0	0	597,482	0	740,366

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	522,482	0	0	0	0	522,482	0	522,482
Design	0	142,884	142,884	75,000	0	0	0	0	75,000	0	217,884
Total	0	142,884	142,884	597,482	0	0	0	0	597,482	0	740,366

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan**Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Palo Alto City Hall (250 Hamilton Avenue)
Managing Department: Public Works
IBRC Reference: New
Initial Project Start: Summer 2015
Initial Project Completion: Summer 2017
Revised Project Start: Summer 2016
Revised Project Completion: Summer 2019
Project Number: PE-15020

Civic Center Parking Garage, February 2015

Civic Center Waterproofing Study and Repairs

Description

This project provides funding to address the condition assessment of the Civic Center plaza deck waterproofing deficiencies. The completed assessment evaluated the main expansion joint waterproof seal on the plaza in front of the main City Hall entrance. The assessment report recommended repairs to the expansion joint that commenced in Fiscal Year 2018 and are anticipated to be completed in Summer 2019.

Justification

Previous studies concluded that the Civic Center Plaza deck waterproofing membrane underneath the red and white decorative concrete needs to be replaced due to the age of the material. However, investigations in 1999 revealed the membrane still possessed good elasticity. The plaza planter waterproofing was found to be in poor condition. The expansion joint requires immediate replacement.

Significant Changes

2019-2023 CIP: Anticipated completion date adjusted to reflect delays due to staff workload.

2018-2022 CIP: Additional funding added for implementation of the repairs.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	39,107	477,048	22,048	455,000	0	0	0	0	455,000	0	516,155
Total	39,107	477,048	22,048	455,000	0	0	0	0	455,000	0	516,155

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	2,684	464,048	9,048	455,000	0	0	0	0	455,000	0	466,732
Design	36,423	13,000	13,000	0	0	0	0	0	0	0	49,423
Total	39,107	477,048	22,048	455,000	0	0	0	0	455,000	0	516,155

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan
Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Various
Managing Department: Public Works
IBRC Reference: Keep-up
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: PF-02022

Lucie Stern Community Center Ballroom

Facility Interior Finishes Replacement

Description

This project provides funding for replacement or improvements to interior finishes such as flooring, walls, cabinets, paint, lighting, ceiling tiles, soundproofing, fixed office furniture, doors, windows, and associated fire/life safety, mechanical, electrical, and plumbing code compliance requirements at various City facilities.

Justification

Interior finishes throughout City facilities are designated for replacement as part of an ongoing capital maintenance plan. Finishes are typically coordinated and upgraded as other renovation projects are undertaken. This project provides resources for facilities that will not be renovated for several years.

Supplemental Information

Planned carpet replacement and other interior finishes projects include:

Fiscal Year 2019: Lucie Stern Community Center and Elwell Court

Fiscal Year 2020: Children's Library

Fiscal Year 2021: Golf Course Club House Restrooms

Fiscal Year 2022: Municipal Service Center Building C Lunchrooms and Hallways

Fiscal Year 2023: TBD

Significant Changes

2019-2023 CIP: Elwell Court has moved from FY 2022 to FY 2019, Children's Library will be added for FY 2020, and Municipal Services Center Building C will be moved to FY 2022.

2018-2022 CIP: Municipal Service Center Building. C Water-Gas-Wastewater, Lucie Stern Community Theatre will be replacing Municipal Services Center Building A, Parks Department and Stores in FY 2020.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	555,435	132,928	666,509	82,665	500,302	170,374	199,036	1,618,886	0	N/A
Transfer from Utilities Administration Fund	N/A	0	0	370,000	0	0	107,762	0	477,762	0	N/A
Total	N/A	555,435	132,928	1,036,509	82,665	500,302	278,136	199,036	2,096,648	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	555,435	132,928	1,036,509	82,665	500,302	278,136	199,036	2,096,648	0	N/A
Total	N/A	555,435	132,928	1,036,509	82,665	500,302	278,136	199,036	2,096,648	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 3201 East Bayshore Road
Managing Department: Fire
IBRC Reference: New
Initial Project Start: Fall 2018
Initial Project Completion: Summer 2019
Revised Project Start:
Revised Project Completion:
Project Number: FD-19000

Trench Training Facility Rendering

Fire and Utilities Trench Training Facility

Description

The Fire and Utilities Departments will collaborate on building a State Certified Trench and Confined Space Training Facility at the Municipal Services Center. The facility will be used by each Department to expand training and safety programs.

Justification

The project will include a “T” shape vault, approximately 10 feet deep with built-in utility pipes, and two cargo containers to house fire rescue equipment and supplies. The vault will be used by various employees for training: firefighting, rescue and extraction, vehicle and pump operations, Gas Operator Qualification (OQ) training, confined space entry, pipe installation and repair, welding, gas and water leak testing and other necessary skills training.

Currently, the training is done in the field under the supervision of a qualified trainer. The field training has the potential for exposing the public to unforeseen hazardous condition, such as purged gas during a test. The project will meet employees’ training needs under a safer and more controlled environment.

Supplemental Information

The Utilities Department Enterprise Fund will be used to cover half of the project cost, minimizing the impact on the general fund for this project. The Palo Alto Fire Department (PAFD) Training Division will also be able to offer neighboring jurisdictions the ability to attend PAFD led courses or use of the training facility.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	55,000	0	0	0	0	55,000	0	55,000
Transfer from Utilities Administration Fund	0	0	0	55,000	0	0	0	0	55,000	0	55,000
Total	0	0	0	110,000	0	0	0	0	110,000	0	110,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	100,000	0	0	0	0	100,000	0	100,000
Design	0	0	0	10,000	0	0	0	0	10,000	0	10,000
Total	0	0	0	110,000	0	0	0	0	110,000	0	110,000

Relationship to Comprehensive Plan

Primary Connection

Element: Safety
 Section: Natural Hazards
 Goal: S-2
 Policy: S-2.1
 Program: S2.13.1

Potential Board/Commission Review:

Architectural Review Board
 Planning and Transportation Commission
 Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 799 Embarcadero Road
Managing Department: Public Works
IBRC Reference: New
Initial Project Start: Spring 2015
Initial Project Completion: Spring 2018
Revised Project Start: Fall 2015
Revised Project Completion: Spring 2019
Project Number: PE-15003

New Fire Station #3 Rendering

Fire Station 3 Replacement

Description

This project provides funding to replace Fire Station #3 at the corner of Newell and Embarcadero Roads. The replacement facility will be based on the prior Replacement Study and Needs Assessment prepared in 2005.

Justification

The current Fire Station #3 facility is operationally and technologically deficient. This project will provide a new facility built to essential services standards with a high likelihood of being fully operational after a major disaster such as a significant earthquake.

Supplemental Information

The Fire Station #3 Replacement project is included in the Council Infrastructure Plan.

Significant Changes

2019-2023 CIP: Anticipated completion date adjusted to reflect delays experienced during design and bidding phases. Project increased by \$2.6 million to fund full project cost of \$9.9 million.

2018-2022 CIP: Timeline adjusted to reflect delayed start due to workloads and the Architectural Review Board (ARB) review and approval process.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	(5,212,466)	8,446,920	8,446,920	430,000	235,000	0	0	0	665,000	0	3,899,454
Transfer from Stanford University Medical Ctr Fund	6,000,000	0	0	0	0	0	0	0	0	0	6,000,000
Total	787,534	8,446,920	8,446,920	430,000	235,000	0	0	0	665,000	0	9,899,454

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	18,026	7,961,867	8,446,920	430,000	235,000	0	0	0	665,000	0	9,129,946
Design	769,501	485,053	0	0	0	0	0	0	0	0	769,501
Total	787,527	8,446,920	8,446,920	430,000	235,000	0	0	0	665,000	0	9,899,447

Anticipated Operating Budget Needs

Fund	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
General Fund-Operating	7,233	7,450	7,673	7,904	8,140

Operating Impact

This project is anticipated to impact operating expenses in the future. Maintenance is estimated to increase by \$7,233 in FY 2019 and by 3% annually thereafter.

Relationship to Comprehensive Plan**Primary Connection**

Element: Community Services & Facilities

Section: Planning for Parks and Community Facilities

Goal: C-4

Policy: C-4.2

Potential Board/Commission Review:

Architectural Review Board

Historic Resources Board

Environmental Impact Analysis:

This project is exempt from CEQA in accordance with Section 15302.



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 3600 Middlefield Road
Managing Department: Public Works
IBRC Reference: New
Initial Project Start: Summer 2017
Initial Project Completion: Winter 2020
Revised Project Start: Spring 2018
Revised Project Completion: Spring 2021
Project Number: PE-18004

Fire Station #4, April 2015

Fire Station 4 Replacement

Description

This project provides funding to replace Fire Station #4 at the corner of Middlefield Road and East Meadow Drive. The replacement facility will be based on the prior Replacement Study and Needs Assessment prepared in 2005.

Justification

The current Fire Station #4 facility is operationally and technologically deficient. This project will provide a new facility built to essential services standards with a high likelihood of being fully operational after a major disaster such as a significant earthquake.

Supplemental Information

The Fire Station #4 Replacement project is included in the Council Infrastructure Plan.

The cost estimate for this project will likely need to be adjusted from the amount derived during the Council Infrastructure Plan's development because older estimates were not escalated to the current year or to future years when construction would actually occur.

Significant Changes

2019-2023 CIP: Project increased by \$0.3 million and the timeline was pushed out to begin construction in FY 2021.

2018-2022 CIP: Timeline adjusted to reflect initial funding availability.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	(1,479,000)	7,350,000	0	0	5,871,000	0	5,871,000
Other	0	0	0	0	1,579,000	0	0	0	1,579,000	0	1,579,000
Transfer from Stanford University Medical Ctr Fund	0	0	0	0	750,000	0	0	0	750,000	0	750,000
Total	0	0	0	0	850,000	7,350,000	0	0	8,200,000	0	8,200,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	7,350,000	0	0	7,350,000	0	7,350,000
Design	0	0	0	0	850,000	0	0	0	850,000	0	850,000
Total	0	0	0	0	850,000	7,350,000	0	0	8,200,000	0	8,200,000

Anticipated Operating Budget Needs

Fund	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
General Fund-Operating	0	8,195	8,440	8,694	8,954

Operating Impact

This project is anticipated to impact operating expenses in the future. Maintenance is estimated to increase by \$8,195 in FY 2021 and by 3% annually thereafter.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Environmental Impact Analysis:

This project is exempt from CEQA in accordance with Section 15302.



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 528 High Street
Managing Department: Public Works
IBRC Reference: New
Initial Project Start: Fall 2017
Initial Project Completion: Spring 2019
Revised Project Start:
Revised Project Completion:
Project Number: PE-18002

High Street Parking Garage

High and Bryant Street Garages Waterproofing and Repairs

Description

This project provides funding to investigate and repair observed water damage along the southeast wall of the Lot R parking garage. In addition, this project will research waterproofing methods and, if feasible, implement waterproofing on the southeast wall to prevent further problems.

Justification

The Lot R parking garage was constructed in 2003. Recently, water has been observed dripping into the ground floor maintenance room. Spalling concrete was also observed above the ramps on each level over the maintenance room. The cause appears to be water intrusion along the southeast wall.

Significant Changes

2019-2023 CIP: FY 2018 Adopted Budget title was “High Street Garage Waterproofing Study and Repair.” The scope of work needed at the High Street garage is not as much as initially estimated. Adding scope for waterproofing and repairs at the Bryant Street garage.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	11,730	0	0	0	0	11,730	0	11,730
Transfer from University Ave. Parking Permit Fund	0	50,000	50,000	300,000	0	0	0	0	300,000	0	350,000
Total	0	50,000	50,000	311,730	0	0	0	0	311,730	0	361,730

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	50,000	311,730	0	0	0	0	311,730	0	361,730
Design	0	50,000	0	0	0	0	0	0	0	0	0
Total	0	50,000	50,000	311,730	0	0	0	0	311,730	0	361,730

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Architectural Review Board

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Palo Alto City Hall (250 Hamilton Avenue)
Managing Department: Police
IBRC Reference: New
Initial Project Start: Winter 2013
Initial Project Completion: Summer 2014
Revised Project Start: Spring 2018
Revised Project Completion: Summer 2018
Project Number: PD-14000

Current Internal Alarm System Control Panel

Internal Alarm System Replacement

Description

This project provides funding for the replacement of the citywide Internal Alarm System.

Justification

The City's current alarm system, which includes panic alarms from various departments and the City Council chambers is antiquated and replacement parts are no longer available. The system provides very limited information and is subject to failure at any time. This project would replace the outdated system with a modern, reliable alarm system.

Significant Changes

2018-2022 CIP: RFP and procurement process initiated in Spring 2017. Vendor selected March 2018. Project estimated completion Summer 2018.

2017-2021 CIP: Project schedule extended by one year due to staffing resources prioritization.

2016-2020 CIP: Project schedule revised to reflect delays resulting from resource allocation issues caused by other high priority public safety technology projects.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	78,000	43,500	34,500	0	0	0	0	34,500	0	78,000
Total	0	78,000	43,500	34,500	0	0	0	0	34,500	0	78,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	78,000	43,500	34,500	0	0	0	0	34,500	0	78,000
Total	0	78,000	43,500	34,500	0	0	0	0	34,500	0	78,000

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan**Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 1451 Middlefield Road
Managing Department: Community Services
IBRC Reference: N/A
Initial Project Start: Summer 2017
Initial Project Completion: Summer 2019
Revised Project Start: Summer 2018
Revised Project Completion: Summer 2021
Project Number: AC-18001

Junior Museum Exhibit, March 2017

JMZ Renovation

Description

This project provides funding to relocate the Palo Alto Junior Museum & Zoo (JMZ) for two years to the Cubberley Community Center to facilitate construction of a new JMZ at the current site. This project also includes funding for permit and inspection fees related to the JMZ rebuild project, new exhibitions (including temporary staffing to design and build prototypes), deck construction costs (partial), park signage (partial), furniture and equipment costs, payment and performance bonds, re-opening marketing, and outreach expenses.

Justification

The Cubberley campus provides a suitable temporary location for JMZ operations to remain open to the public. Classrooms will be used for programming, exhibits, education, and summer camps. The Auditorium provides space for staff, teachers, administration, collections, and indoor animals. The nearby parking lot would be converted to an animal compound to house outdoor animals unable to be placed at another zoo or facility.

Supplemental Information

An agreement between the City of Palo Alto and the Friends of the Palo Alto Junior Museum and Zoo to replace the existing JMZ with a new building and facilities requires City contributions.

Significant Changes

2019-2023 CIP: The budget for this project increased by \$2.8 million, with the majority of funding for new educational exhibits. Other costs associated with this increase include the tempo-

CAPITAL IMPROVEMENT FUND

rary relocation of the JMZ to the Cubberley Community Center, permit costs, and electrical and plumbing work.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	1,388,000	1,388,000	51,614	44,376	11,763	0	0	107,753	0	1,495,753
Revenue from the Federal Government	0	270,124	270,124	0	0	0	0	0	0	0	270,124
Total	0	1,658,124	1,658,124	1,077,331	716,236	137,261	0	0	1,930,828	0	3,588,952

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	1,628,124	1,628,124	1,077,331	716,236	137,261	0	0	1,930,828	0	3,558,952
Design	0	30,000	30,000	0	0	0	0	0	0	0	30,000
Total	0	1,658,124	1,658,124	1,077,331	716,236	137,261	0	0	1,930,828	0	3,588,952

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Architectural Review Board

Historic Resources Board

Parks and Recreation Commission

Planning and Transportation Commission

Environmental Impact Analysis:

Relocation portion of this project is CEQA Exempt under 15301 and 15303. A separate Initial Study/Mitigated Negative Declaration is being prepared for the renovation portion of this project.



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 3201 East Bayshore Road
Managing Department: Public Works
IBRC Reference: Keep-up
Initial Project Start: Summer 2016
Initial Project Completion: Spring 2017
Revised Project Start: Summer 2018
Revised Project Completion: Fall 2018
Project Number: PF-17000

Municipal Services Center Building C Roof, January 2015

Municipal Service Center A, B, & C Roof Replacement

Description

This project provides funding for a fluid, reinforced water proofing application over the existing roof. The existing asphalt and gravel roof is nearing the end of its useful life and needs to be rehabilitated. If the existing roof is allowed to deteriorate beyond a certain point, the fluid applied system cannot be used and a full replacement of the roofing system would be required. The application will meet current cool roofing codes to optimize energy efficiency.

Justification

This project provides the means to rehabilitate the existing roof to avoid further deterioration of the roofing system which would cause failure and structural damage to the building. Compared to rehabilitation costs, structural repairs and a full roof replacement would be more expensive.

Supplemental Information

Transfers from various funding sources will support this project. The various transfers were calculated based on the anticipated benefit to each fund, according to square footage.

The cost estimate for this project will likely need to be reevaluated and adjusted to account for escalation.

Significant Changes

2019-2023 CIP: Project start adjusted to reflect current schedule of MSC Mechanical and Electrical Improvements (PF-16006).

CAPITAL IMPROVEMENT FUND

2018-2022 CIP: Project start adjusted to immediately follow the "Municipal Service Center Lighting, Mechanical, and Electrical Improvements" project (PF-16006) so roof replacement will follow installation of new rooftop equipment.

2017-2021 CIP: Timeline extended to reflect direction from Finance Committee and City Council during budget approval process.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	891,289	0	0	0	0	891,289	0	891,289
Transfer from Refuse Fund	0	0	0	19,000	0	0	0	0	19,000	0	19,000
Transfer from Utilities Administration Fund	0	0	0	684,000	0	0	0	0	684,000	0	684,000
Transfer from Vehicle Replacement and Maintenance	0	0	0	380,000	0	0	0	0	380,000	0	380,000
Total	0	0	0	1,974,289	0	0	0	0	1,974,289	0	1,974,289

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	1,974,289	0	0	0	0	1,974,289	0	1,974,289
Total	0	0	0	1,974,289	0	0	0	0	1,974,289	0	1,974,289

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 3201 East Bayshore Road
Managing Department: Public Works
IBRC Reference: Keep-up
Initial Project Start: Summer 2016
Initial Project Completion: Spring 2018
Revised Project Start:
Revised Project Completion: Summer 2018
Project Number: PF-16006

Municipal Services Center Building C, March 2015

Municipal Service Center Lighting, Mechanical, and Electrical Improvements

Description

This project provides for the replacement of original mechanical and electrical systems and lighting installed in 1966 in the Municipal Service Center's (MSC) buildings A, B, and C. The project also includes the renovation of office space and shop areas in building C.

Justification

Lighting, mechanical, and electrical equipment at the MSC is outdated and inefficient. Various remodels have occurred in the administrative and shop areas adding load to the mechanical and electrical systems. The use of many areas has changed over the years without adequate upgrades to the building systems. The systems no longer support the current operation of this site.

Supplemental Information

The Refuse Fund, Vehicle Replacement Fund, and Utilities Fund will reimburse the Capital Improvement Fund for a portion of this project, as fund-related operations benefit from the building improvements.

Significant Changes

2019-2023 CIP: Project cost estimates indicate that mechanical and electrical work in Building B require additional funding of \$0.8 million as approved for FY 2019.

CAPITAL IMPROVEMENT FUND

2017-2021 CIP: Additional funding of \$400,000 added for Building C office space renovation.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	(671,558)	1,321,240	1,321,240	375,279	0	0	0	0	375,279	0	1,024,961
Transfer from Refuse Fund	28,070	0	0	8,000	0	0	0	0	8,000	0	36,070
Transfer from Utilities Administration Fund	530,835	0	0	288,000	0	0	0	0	288,000	0	818,835
Transfer from Vehicle Replacement and Maint Fund	294,909	0	0	0	0	0	0	0	0	0	294,909
Transfer from Vehicle Replacement and Maintenance	0	0	0	160,000	0	0	0	0	160,000	0	160,000
Total	182,256	1,321,240	1,321,240	831,279	0	0	0	0	831,279	0	2,334,775

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	15,440	923,988	1,321,240	831,279	0	0	0	0	831,279	0	2,167,959
Design	166,810	397,252	0	0	0	0	0	0	0	0	166,810
Total	182,250	1,321,240	1,321,240	831,279	0	0	0	0	831,279	0	2,334,769

Operating Impact

This project may impact operating expenses in future years. As the scope of this project is better defined through the design process, operating impacts will be reviewed and adjustments may be brought forward as part of the annual budget process, as necessary.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

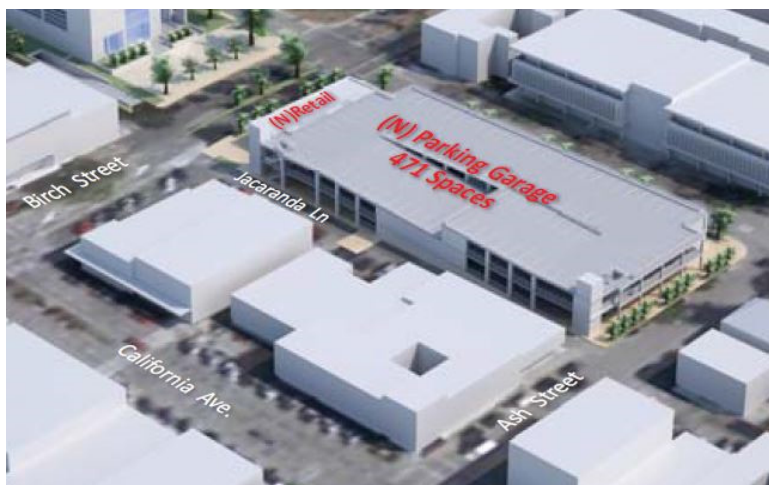
Policy: C-3.2

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 350 Sherman Avenue
Managing Department: Public Works
IBRC Reference: New
Initial Project Start: Summer 2017
Initial Project Completion: Fall 2020
Revised Project Start: Fall 2016
Revised Project Completion: Spring 2020
Project Number: PE-18000

New California Avenue Area Garage Design Option Rendering

New California Avenue Area Parking Garage

Description

This project provides funding for the design and construction of a new public parking garage on the existing Lot C-7 in the California Avenue commercial area. The project will include approximately 636 parking stalls, and will have two below-ground and four above-ground levels.

Justification

A new parking garage is needed in the California Avenue commercial area. A new garage will increase parking supply and reduce parking spillover into nearby residential neighborhoods. Additionally, the new garage will replace the parking spaces that will be lost when the new Public Safety Building is constructed on the adjacent Lot C-6. Construction of the new garage must be completed before construction of the Public Safety Building can begin.

Supplemental Information

The New California Avenue Area Parking Garage project is included in the Council Infrastructure Plan and is supported through planned debt financing.

Significant Changes

2019-2023 CIP: Budget increased to reflect total project cost estimate of \$47.9 million. Anticipated completion date adjusted due to design delays resulting from the Architectural Review Board (ARB) and Environmental Impact Report (EIR) processes.

2017-2021 CIP: Project schedule adjusted to begin and end earlier, reflecting need for phasing of garage and Public Safety Building projects.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	337,124	267,705	1,601,168	5,416,537	800,000	260,000	0	0	6,476,537	0	8,414,829
Other	0	9,487,000	0	39,487,000	0	0	0	0	39,487,000	0	39,487,000
Total	337,124	9,754,705	1,601,168	44,903,537	800,000	260,000	0	0	45,963,537	0	47,901,829

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	8,845,879	1,501,785	44,803,537	800,000	260,000	0	0	45,863,537	0	47,365,322
Design	337,122	908,826	99,383	100,000	0	0	0	0	100,000	0	536,505
Total	337,122	9,754,705	1,601,168	44,903,537	800,000	260,000	0	0	45,963,537	0	47,901,827

Anticipated Operating Budget Needs

Fund	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
California Avenue Parking Permits	0	110,000	113,300	116,699	120,200

Operating Impact

This project is anticipated to impact operating expenses in the future. Custodial and maintenance costs are estimated to be \$110,000 in FY 2020 and increase 3% annually thereafter.

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Parking

Goal: T-5

Policy: T-5.6

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation

Commission

Environmental Impact Analysis:

This project will require an environmental impact report, combined with the Public Safety Building Project, in accordance with CEQA guidelines.



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Parking Lot D (Hamilton Avenue/
Waverley Street)
Managing Department: Public Works
IBRC Reference: New
Initial Project Start: Spring 2015
Initial Project Completion: Fall 2018
Revised Project Start: Winter 2017
Revised Project Completion: Winter 2020
Project Number: PE-15007

Hamilton Avenue/Waverley Street, March 2015

New Downtown Parking Garage

Description

This project provides funding for a new public parking garage in the University Avenue commercial area at existing Parking Lot D at the corner of Hamilton Avenue and Waverley Street. The project will evaluate the feasibility of including retail and stacked parking as part of the new structure. Design and environmental consultant services will be needed, including the development of preliminary plans and cost estimates, and completion of the project's environmental review.

Justification

A new parking garage is part of a multi-prolonged strategy to address excessive spillover parking from the University Avenue commercial area into nearby residential neighborhoods.

Supplemental Information

The New Downtown Parking Garage project is included in the City Council Infrastructure Plan. In Fiscal Year 2019, a transfer of \$5.5 million from the University In-Lieu Parking Fund is scheduled to fund a portion of the construction of the new garage.

The cost estimate for this project will likely need to be adjusted from what was derived during the Council Infrastructure Plan's development because older estimates were not escalated to the current year or to future years when construction would actually occur.

Significant Changes

2019-2023 CIP: Budget increased to reflect total project cost estimate of \$29.1 million.

CAPITAL IMPROVEMENT FUND

2018-2022 CIP: In December 2016, a design contract was awarded to Watry Design, Inc. Funding was included in FY 2017 for Phase I of the design work, including environmental review and design through design development. Additional funding is required in FY 2018 to complete the design and construction documents and in FY 2019 for construction administration and project close out.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	(988,994)	1,610,748	2,150,000	11,462,000	500,000	100,000	0	0	12,062,000	0	13,223,006
Transfer from Downtown PC Zone Fund	1,300,000	0	0	5,541,000	0	0	0	0	5,541,000	0	6,841,000
Transfer from Stanford University Medical Ctr Fund	0	0	0	9,072,000	0	0	0	0	9,072,000	0	9,072,000
Total	311,006	1,610,748	2,150,000	26,075,000	500,000	100,000	0	0	26,675,000	0	29,136,006

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	91,174	0	0	26,075,000	500,000	100,000	0	0	26,675,000	0	26,766,174
Design	219,828	1,610,748	2,150,000	0	0	0	0	0	0	0	2,369,828
Total	311,002	1,610,748	2,150,000	26,075,000	500,000	100,000	0	0	26,675,000	0	29,136,002

Anticipated Operating Budget Needs

Fund	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
University Avenue Parking Permits	0	81,164	70,044	72,145	88,690

Operating Impact

This project is anticipated to impact operating expenses in the future. Custodial and maintenance costs are estimated to be \$81,164 in FY 2020 and increase 3% annually thereafter.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Planning for Parks and Community Facilities

Goal: C-4

Policy: C-4.2

Potential Board/Commission Review:

Architectural Review Board

Historic Resources Board

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to require a CEQA Environmental Impact Report.



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Parking Lot C-6 (250 Sherman Avenue)
Managing Department: Public Works
IBRC Reference: New
Initial Project Start: Spring 2015
Initial Project Completion: Fall 2020
Revised Project Start:
Revised Project Completion: Summer 2021
Project Number: PE-15001

New Public Safety Building Rendering

New Public Safety Building

Description

This project provides funding for the design and construction of a new Public Safety Building on Lot C-6 in the California Avenue commercial area. Design and environmental consultant services will be needed, including the development of preliminary plans, cost estimates and special studies as part of an Environmental Impact Report (EIR) and site evaluation for the approximately 44,500 square foot facility. The size and programming of the new facility was developed by the 2006 Blue Ribbon Task Force.

Justification

The current Police Department facility is structurally, operationally and technologically deficient. This project will provide a new facility for the Police Department, Office of Emergency Services, the Emergency Operations Center, emergency dispatch, and Fire Department Administration. It will be built to essential services standards with a high likelihood of being fully operational after a major disaster such as a significant earthquake.

Supplemental Information

The new Public Safety Building has been identified as the top priority project in the Council Infrastructure Plan. The majority of the expenses will be financed using Certificates of Participation with TOT (hotel tax revenues) to pay the debt service.

Significant Changes

2019-2023 CIP: Budget increased to reflect total project cost estimate of \$92.2 million. Construction funding and expenditures moved to FY 2020 due to design delays relating to the

CAPITAL IMPROVEMENT FUND

Architectural Review Board (ARB) and Environmental Impact Report (EIR) processes. Anticipated project completion was also revised to Summer 2021.

2018-2022 CIP: Timeline adjusted to reflect sequential construction to follow the California Avenue Area Parking Garage (CIP PE-18000).

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	(2,842,613)	3,389,854	3,389,854	100,000	30,650,000	3,850,000	0	0	34,600,000	0	35,147,241
Other	0	0	0	0	52,250,000	0	0	0	52,250,000	0	52,250,000
Transfer from Stanford University Medical Ctr Fund	4,000,000	0	0	0	800,000	0	0	0	800,000	0	4,800,000
Total	1,157,387	3,389,854	3,389,854	100,000	83,700,000	3,850,000	0	0	87,650,000	0	92,197,241

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	918,045	0	0	73,700,000	3,850,000	0	0	77,550,000	0	77,550,000
Design	1,157,382	2,471,809	3,389,854	100,000	0	0	0	0	100,000	0	4,647,236
Land Acquisition	0	0	0	0	10,000,000	0	0	0	10,000,000	0	10,000,000
Total	1,157,382	3,389,854	3,389,854	100,000	83,700,000	3,850,000	0	0	87,650,000	0	92,197,236

Anticipated Operating Budget Needs

Fund	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
General Fund-Operating	0	0	0	334,577	344,614

Operating Impact

This project is anticipated to impact operating expenses in the future. Custodial and maintenance costs are estimated to be \$334,577 in FY 2022 and increase by 3% annually thereafter.

Relationship to Comprehensive Plan

Primary Connection

Element: Safety

Section: Community Safety

Goal: S-1

Policy: S-1.7

Program: S1.7.2

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation

Commission

Environmental Impact Analysis:

This project will require an environmental impact report, combined with the California Avenue Area Parking Garage Project, in accordance with CEQA guidelines.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Cowper & Webster
Managing Department: Public Works
IBRC Reference: New
Initial Project Start: Spring 2018
Initial Project Completion: Summer 2018
Revised Project Start:
Revised Project Completion: Spring 2019
Project Number: PF-18000

Elevator Control, 2017

Parking Lot J Elevator Modernization

Description

This project provides funding to modernize the existing two elevators in Parking Lot J. The modernization consists of upgrading the interior of the elevators, elevator control interface, call buttons, and meeting current Americans with Disabilities Act (ADA) standards.

Justification

The Parking Lot J elevators are experiencing maintenance issues and do not conform to ADA standards.

Supplemental Information

It is anticipated that the cost of this project will be reimbursed by the Parking District and is consistent with the agreement between the City and the Parking District.

Significant Changes

2019-2023 CIP: Bids came in higher than expected resulting in an increase to the original amount by \$50,000.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	29,324	0	0	0	0	29,324	0	29,324
Transfer from University Ave. Parking Permit Fund	0	700,000	700,000	50,000	0	0	0	0	50,000	0	750,000
Total	0	700,000	700,000	79,324	0	0	0	0	79,324	0	779,324

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	700,000	700,000	79,324	0	0	0	0	79,324	0	779,324
Total	0	700,000	700,000	79,324	0	0	0	0	79,324	0	779,324

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan**Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Children's Theatre, Community Theatre, and Cubberley Theatre
Managing Department: Community Services
IBRC Reference: New
Initial Project Start: Summer 2017
Initial Project Completion: Summer 2018
Revised Project Start: Summer 2018
Revised Project Completion: Summer 2019
Project Number: AC-18000

Children's Theatre, January 2016

Performing Arts Venues Seat Replacement

Description

This project provides funding for the replacement of damaged or non-functioning seats at the City's three performing arts venues: Children's Theatre, Community Theatre, and Cubberley Theatre.

Justification

Damaged or non-functioning seats at the City's three theatre sites are due for replacement based on their age and/or condition.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	75,000	0	78,774	0	0	0	0	78,774	0	78,774
Total	0	75,000	0	78,774	0	0	0	0	78,774	0	78,774

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	75,000	0	78,774	0	0	0	0	78,774	0	78,774
Total	0	75,000	0	78,774	0	0	0	0	78,774	0	78,774

Relationship to Comprehensive Plan**Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Various
Managing Department: Public Works
IBRC Reference: Keep-up
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: PF-00006

Fire Station 2, January 2015

Roofing Replacement

Description

This project provides funding for ongoing roofing maintenance at various City facilities including major repairs, rehabilitation, replacement, roof deck, drainage systems, and sheet metal repair/replacement. Roofs scheduled for replacement are based on an annual evaluation of their condition.

Justification

The life expectancy of most roofs at City facilities is 20 to 25 years. There are facilities in the inventory with roof systems that are beyond or near their useful life.

Supplemental Information

Facilities scheduled for re-roofing are as follows:

Fiscal Year 2019: Mitchell Park Storage Pool Filter Facility, Arastradero Gate Way, and Baylands Athletic Center Restroom

Fiscal Year 2020: Lucie Stern Community Center

Fiscal Year 2021: Avenidas Senior Center

Fiscal Year 2022: Peers Park Club House

Fiscal Year 2023: Baylands Interpretive Center, PD Lower Roof

Significant Changes

2019-2023 CIP: Mitchell Park Storage Pool Filter Facility and Arastradero Gate Way will replace the animal shelter in FY 2019.

2018-2022 CIP: Funding for Ventura Unit 3 has been moved from FY 2021 to 2018 due to its condition and the scheduled work on other Ventura units. The Avenidas Senior Center has been added to FY 2021.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	1,314,943	1,075,487	373,739	396,791	578,867	149,487	815,178	2,314,062	0	N/A
Total	N/A	1,314,943	1,075,487	373,739	396,791	578,867	149,487	815,178	2,314,062	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	1,314,943	1,075,487	373,739	396,791	578,867	149,487	815,178	2,314,062	0	N/A
Total	N/A	1,314,943	1,075,487	373,739	396,791	578,867	149,487	815,178	2,314,062	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Architectural Review Board

Historic Resources Board

Parks and Recreation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301 except for historic buildings.



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 300 Homer
Managing Department: Public Works
IBRC Reference: N/A
Initial Project Start: Summer 2006
Initial Project Completion: Spring 2007
Revised Project Start:
Revised Project Completion: Spring 2019
Project Number: PF-07011

Roth Building, January 2015

Roth Building Maintenance

Description

This project provides for window repair, waterproofing of the building foundation walls, installation of electrical service to the building and a new ventilation system. In addition, roofing repairs will be done on an as needed basis until such time that the building is leased and occupied.

Justification

In Fiscal Year 2004 the City removed the non-historic wings and secured the building. Currently, the building is empty waiting for the Palo Alto History Museum to take possession of the building. Funding was provided on a one-time basis for roofing repair and the installation of downspouts. The building's roof will require on-going maintenance and repair to prevent further leaking. Water is also entering the building through the basement walls. In order to prevent mildew and further deterioration of the building, roof repair, waterproofing, perimeter drainage and installation of a ventilation/dehumidification system are necessary.

Supplemental Information

Funding was provided as a one-time addition and will be continued until all funding is used or Palo Alto History Museum takes possession. Small repairs are needed on a continual basis.

Significant Changes

2017-2021 CIP: Project completion extended to reflect continuing vacancy of the building.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	23,148	42,073	2,000	41,640	0	0	0	0	41,640	0	66,788
Total	23,148	42,073	2,000	41,640	0	0	0	0	41,640	0	66,788

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	23,148	42,073	2,000	41,640	0	0	0	0	41,640	0	66,788
Total	23,148	42,073	2,000	41,640	0	0	0	0	41,640	0	66,788

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Historic Resources Board

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Various
Managing Department: Public Works
IBRC Reference: N/A
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: PF-14003

Lot N, January 2015

University Avenue Parking Improvements

Description

This project provides funding for improvements in the University Avenue parking district including parking lot resurfacing; striping and signing; parking structure painting or staining; electrical system upgrades needed to support improved lighting; security systems and/or other systems.

Justification

This project is intended to maintain the existing parking lots and garages in the University Avenue parking district to extend the useful life of the pavement surfaces and buildings.

Supplemental Information

This project is dependent on the availability of funding in the University Avenue Parking Permit Fund.

Fiscal Year 2019: Resurface and restripe Lot C (Ramona/Lytton in coordination with Avenidas project).

Significant Changes

2019-2023 CIP: Parking Lot C resurfacing will be coordinated with the Avenidas project. With the exception of Lot C, all University Avenue parking district lots were resurfaced and no additional work is needed at this time.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	360,170	16,350	357,263	0	0	0	0	357,263	0	N/A
Transfer from University Ave. Parking Permit Fund	N/A	141,759	141,759	0	0	0	0	0	0	0	N/A
Total	N/A	501,929	158,109	357,263	0	0	0	0	357,263	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	501,929	158,109	357,263	0	0	0	0	357,263	0	N/A
Total	N/A	501,929	158,109	357,263	0	0	0	0	357,263	0	N/A

Operating Impact

This project is anticipated to impact operating expenses in the future. As these costs are quantified, adjustments will be brought forward in future budgets, as necessary.

Relationship to Comprehensive Plan**Primary Connection**

Element: Transportation

Section: Parking

Goal: T-5

Policy: T-5.9

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund

Category: Buildings and Facilities

Project Location: MSC Building C

Managing Department: Public Works

IBRC Reference: N/A

Initial Project Start: Fall 2018

Initial Project Completion: Fall 2019

Revised Project Start:

Revised Project Completion:

Project Number: PE-19001

Entryway to the Water, Gas, Wastewater Offices

Water, Gas, Wastewater Office Remodel

Description

This project provides funding for minor renovations to the Utilities Water Gas Wastewater (WGW) office space at the Municipal Service Center (MSC). The current space no longer meets the operational needs of the department. This project will reconfigure the space so it is more efficient for department operations and replace aging furniture and finishes such as cubicle furniture, carpet, paint, and lighting. Enclosed offices may be demolished and relocated. Additionally, electrical, mechanical (HVAC), and fire systems work will be required.

Justification

The current office space/configuration and furnishing have been in place for about 20 years. A space reconfiguration will place staff from the same work groups back together and allow them to be located next to their supervisors/managers. Additional space and offices are also needed for new staff. The WGW kitchen/lunchroom will be minimized to allow for more space. The project will also add a small reception/waiting area for visitors.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	2,737	66,837	0	0	0	69,574	0	69,574
Transfer from Utilities Administration Fund	0	0	0	70,000	654,000	0	0	0	724,000	0	724,000
Total	0	0	0	72,737	720,837	0	0	0	793,574	0	793,574

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	654,000	0	0	0	654,000	0	654,000
Design	0	0	0	72,737	66,837	0	0	0	139,574	0	139,574
Total	0	0	0	72,737	720,837	0	0	0	793,574	0	793,574

Relationship to Comprehensive Plan**Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Planning and Transportation Commission

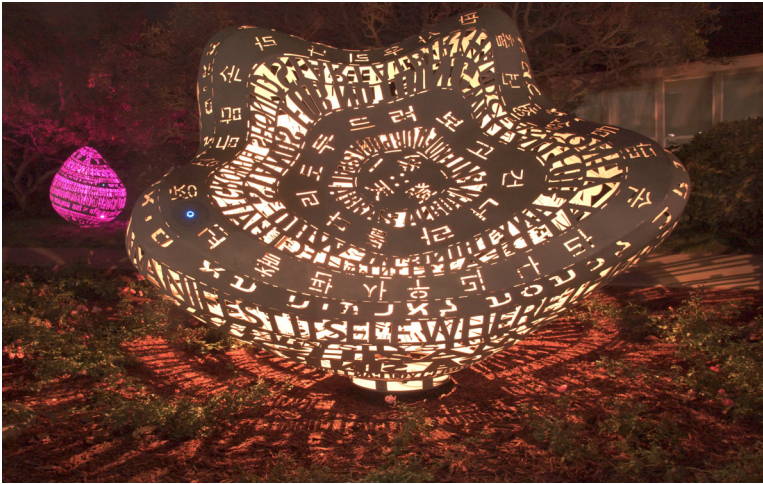
Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



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Parks and Open Space



Fund: Capital Improvement Fund

Category: Parks and Open Space

Project Location: Various

Managing Department: Community Services

IBRC Reference: Keep-up

Initial Project Start: Recurring

Initial Project Completion: Recurring

Project Number: AC-86017

Brilliance, by Joe O'Connell and Blessing Hancock

Art In Public Spaces

Description

This project provides funding for innovative public art for both interior and exterior public spaces in accordance with the City Council-approved Art in City Capital Improvement Projects ordinance.

Justification

This project places art in public buildings, plazas, gateways, parks, and other sites frequented by residents and visitors alike. It is expected that public art will enhance community pride and ownership in the City of Palo Alto. Public Art preserves the long-term viability of the built environment and helps set a standard for aesthetic variety and creativity in the community.

Supplemental Information

The Art in City Capital Improvement Projects ordinance states that the City will budget one percent of its CIP budget for public art, with certain exceptions. A base level of funding in the amount of \$50,000 is included each year.

Significant Changes

Prior to Fiscal Year 2015, one percent for public art was included in the budget for each applicable project. Beginning in Fiscal Year 2015, public art funding is accounted for within this project. This change provides a clearer picture of how much funding is available for public art, allows for the pooling of funds for more impactful projects, and ensures that the funds are preserved for public art.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	679,996	429,497	1,108,768	1,111,148	218,461	82,949	73,922	2,595,248	0	N/A
Revenue from Other Agencies	N/A	30,000	30,000	0	0	0	0	0	0	0	N/A
Revenue from the Federal Government	N/A	30,000	30,000	0	0	0	0	0	0	0	N/A
Transfer from Fiber Optics Fund	N/A	5,700	5,700	0	0	0	0	0	0	0	N/A
Transfer from Gas Fund	N/A	5,700	5,700	0	0	0	0	0	0	0	N/A
Transfer from Water Fund	N/A	5,700	5,700	0	0	0	0	0	0	0	N/A
Total	N/A	757,096	506,597	1,108,768	1,111,148	218,461	82,949	73,922	2,595,248	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	757,096	506,597	1,108,768	1,111,148	218,461	82,949	73,922	2,595,248	0	N/A
Total	N/A	757,096	506,597	1,108,768	1,111,148	218,461	82,949	73,922	2,595,248	0	N/A

Operating Impact

Annual funding in the amount of \$30,000 for public art maintenance is allocated to the Community Services Department in the General Fund.

Relationship to Comprehensive Plan

Primary Connection

Element: Land Use and Community Design

Section: Parks and Gathering Places

Goal: L-8

Policy: L-8-5

Relationship to Comprehensive Plan

Secondary Connection

Element: Land Use and Community Design

Section: Commercial Centers

Goal: L-4

Policy: L-4.4

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Adjacent to Baylands Athletic Center (1900 Geng Road)
Managing Department: Community Services
IBRC Reference: New
Initial Project Start: Summer 2018
Initial Project Completion: Summer 2019
Revised Project Start:
Revised Project Completion:
Project Number: PG-19001

Baylands, March 2017

Baylands Athletic Center 10.5 Acre Expansion Plan

Description

This project provides funding for conceptual plans and public outreach for future use of an additional 10.5 acre expansion of the Baylands Athletic Center from land previously a part of the golf course.

Justification

During the golf course reconstruction, 10.5 acres were set aside for future park use and incorporation into the adjacent Baylands Athletic Center. The Parks, Trails, Open Space, and Recreation Master Plan calls for evaluating optimal usage including open space for the 10.5 acre land bank.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	5,032	0	0	0	0	5,032	0	5,032
Transfer from Parks Development Impact Fee Fund	0	0	0	100,000	0	0	0	0	100,000	0	100,000
Total	0	0	0	105,032	0	0	0	0	105,032	0	105,032

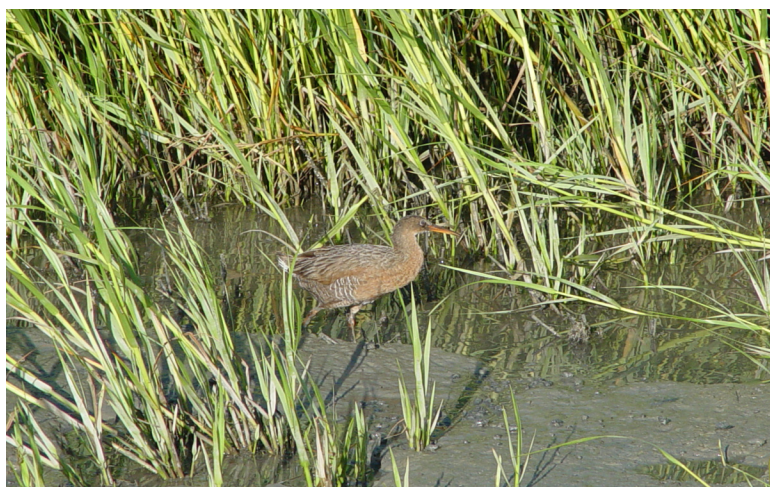
Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	0	0	105,032	0	0	0	0	105,032	0	105,032
Total	0	0	0	105,032	0	0	0	0	105,032	0	105,032

Operating Impact

This project for conceptual plans does not have an operating budget impact, but once a conceptual plan is adopted and built, there will be operating budget impact.

Relationship to Comprehensive Plan Primary Connection Element: Community Services & Facilities Section: Maintenance of Parks and Community Facilities Goal: C-3 Policy: C-3.3 Program: C3.3.1	Relationship to Comprehensive Plan Secondary Connection Element: Community Services & Facilities Section: Maintenance of Parks and Community Facilities Goal: C-3 Policy: C-3.2 Program: C3.2.1	Potential Board/Commission Review: Architectural Review Board Parks and Recreation Commission Planning and Transportation Commission
Environmental Impact Analysis: Environmental Review Required.		



Baylands, July 2014

Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Baylands Nature Preserve (2500 Embarcadero Road)
Managing Department: Community Services
IBRC Reference: Catch-up
Initial Project Start: Fall 2016
Initial Project Completion: Winter 2018
Revised Project Start:
Revised Project Completion: Winter 2019
Project Number: PG-17000

Baylands Comprehensive Conservation Plan

Description

This project provides funding for a conservation plan that will examine the native vegetation, wildlife habitat resources, and wildlife-appropriate public access for the entire Baylands, including Byxbee Park. This plan will provide needed information on best areas to maintain wildlife habitat and appropriate areas to develop trails or other recreation amenities; provide a design overlay for appropriate types and locations of public art in the Baylands; and design an interpretive messaging throughout the Baylands. The plan seeks to optimize opportunities for low impact recreation ensuring that these are compatible with the Baylands Master Plan direction for a passive park and nature preserve. The Conservation Plan will also provide input to the Byxbee Park Completion project, design of which is scheduled to begin in Fiscal Year 2019.

Justification

Staff needs a guiding plan to provide insight on best management practices for wildlife, habitat, vegetation, and recreation management. The plan will also provide priorities, which will help staff and volunteers guide resources to the most important projects. With numerous changes taking place in environmentally significant areas, it is vital to have a holistic vision for the corridor that will balance the diverse needs of stakeholders.

Supplemental Information

A prior project to create a Baylands Comprehensive Conservation Plan was initiated in June 2006 but due to funding cuts the project was not completed. This project will involve hiring a consultant to complete the plan.

Significant Changes

2019-2023 CIP: Additional funding of \$90,000 added for CEQA. Completion date revised to FY 2019.

2017-2021 CIP: Additional funding of \$60,000 was added to include design for interpretive messaging and design overlay for appropriate types and locations of public art.

2016-2020 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	330,000	330,000	94,529	0	0	0	0	94,529	0	424,529
Total	0	330,000	330,000	94,529	0	0	0	0	94,529	0	424,529

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	4,529	0	0	0	0	4,529	0	4,529
Design	0	330,000	330,000	90,000	0	0	0	0	90,000	0	420,000
Total	0	330,000	330,000	94,529	0	0	0	0	94,529	0	424,529

Operating Impact

This project is anticipated to impact operating expenses in the future. As these costs are quantified, adjustments will be brought forward in future budgets, as necessary.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Open Space

Goal: N-3

Policy: N-3.4

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation

Commission

Environmental Impact Analysis:

This project may be subject to CEQA review.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Various
Managing Department: Community Services
IBRC Reference: Keep-up
Initial Project Start: Recurring 1997
Initial Project Completion: Recurring
Project Number: PG-06003

Greer Park, January 2015

Benches, Signage, Walkways, Perimeter Landscaping

Description

This project provides funding for the restoration and replacement of existing benches, signage, fencing, walkways, and landscaping at various City facilities.

Justification

Benches, signage, fencing, walkways, and perimeter landscaping at various sites are due for replacement or upgrade based on their age and/or condition.

Supplemental Information

Replacements will be evaluated and recommended by the Community Services Department on a per park basis with actual work dependent upon bid results.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	298,103	200,000	260,588	159,907	164,060	171,390	169,947	925,892	0	N/A
Transfer from General Fund	N/A	94,200	94,200	0	0	0	0	0	0	0	N/A
Total	N/A	392,303	294,200	260,588	159,907	164,060	171,390	169,947	925,892	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	392,303	94,200	162,485	159,907	164,060	171,390	169,947	827,789	0	N/A
Design	N/A	0	200,000	98,103	0	0	0	0	98,103	0	N/A
Total	N/A	392,303	294,200	260,588	159,907	164,060	171,390	169,947	925,892	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan Primary Connection Element: Community Services & Facilities Section: Maintenance of Parks and Community Facilities Goal: C-3 Policy: C-3.2 Program: C3.2.1	Relationship to Comprehensive Plan Secondary Connection Element: Community Services & Facilities Section: Maintenance of Parks and Community Facilities Goal: C-3 Policy: C-3.3 Program: C3.3.1	Potential Board/Commission Review: Parks and Recreation Commission
Environmental Impact Analysis: This project is expected to have a possible exemption from CEQA under Section 15301.		

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 3590 Laguna Avenue
Managing Department: Public Works
IBRC Reference: Catch-up
Initial Project Start: Summer 2019
Initial Project Completion: Summer 2020
Revised Project Start:
Revised Project Completion:
Project Number: PE-16000

Bol Park, February 2015

Bol Park Improvements

Description

This project provides funding for safety renovations and accessibility improvements, including repairs to the decomposed granite pathways, park lighting, and fencing. Irrigation renovations and turf restoration are also included in this project, as well as the replacement of two drinking fountains and other site amenities.

Justification

The concrete walkway and decomposed granite pathway are cracked and/or uneven, creating safety hazards. The brick wall at the playground and other site amenities, including the playing-field backstops, are old or damaged. As park infrastructure ages, safety and compliance issues need to be addressed. This project will ensure compliance and address accessibility needs in addition to safety issues.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	231,461	0	0	0	231,461	0	231,461
Total	0	0	0	0	231,461	0	0	0	231,461	0	231,461

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	207,169	0	0	0	207,169	0	207,169
Design	0	0	0	0	24,292	0	0	0	24,292	0	24,292
Total	0	0	0	0	231,461	0	0	0	231,461	0	231,461

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan
Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Potential Board/Commission Review:

Parks and Recreation Commission

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 410 Fernando Ave.
Managing Department: Public Works
IBRC Reference: Catch-up
Initial Project Start: Fall 2017
Initial Project Completion: Fall 2018
Revised Project Start: Fall 2019
Revised Project Completion: Fall 2020
Project Number: PE-17005

Boulware Park, February 2015

Boulware Park Improvements

Description

This project provides funding for improvements to the existing children's playground, lighting and site amenities, and accessibility upgrades. Playground improvements include the installation of a new play structure and replacement of existing light pole fixtures, drinking fountains, benches, and trash receptacles. Rubberized surfacing will also be replaced and expanded to increase accessibility.

Justification

The existing playground equipment, installed in 1993, is approaching the end of its useful life and needs to be replaced. In addition, light poles and site amenities, including drinking fountains, benches and trash/recycle receptacles are aged and need replacing.

Significant Changes

2019-2023 CIP: Project construction funding moved to Fiscal Year 2020 to address workload plus project priorities.

2018-2022 CIP: Project shifted back to Fiscal Year 2018 following consideration of staff workload and park priorities.

2017-2021 CIP: Project shifted from Fiscal Year 2018 to Fiscal Year 2021 pending completion of the Parks Master Plan and a reprioritization of parks projects.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	45,000	15,000	31,173	440,879	0	0	0	472,052	0	487,052
Total	0	45,000	15,000	31,173	440,879	0	0	0	472,052	0	487,052

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	15,000	30,000	436,791	0	0	0	466,791	0	481,791
Design	0	45,000	0	1,173	4,088	0	0	0	5,261	0	5,261
Total	0	45,000	15,000	31,173	440,879	0	0	0	472,052	0	487,052

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 2500 Embarcadero Road
Managing Department: Public Works
IBRC Reference: New
Initial Project Start: Summer 2017
Initial Project Completion: Fall 2019
Revised Project Start: Fall 2019
Revised Project Completion: Summer 2021
Project Number: PE-18006

Byxbee Park , March 2015

Byxbee Park Completion

Description

This project provides funding for the remaining improvements to Byxbee Park following the completion of the remaining landfill capping work. As envisioned by the original artist and landscape architect, the completion of Byxbee Park would occur following capping of the remainder of the landfill and would consist of a network of white oyster shell-lined trails with wooden viewing platforms. The hilltops would also be accented with small soil mounds called “hillocks” to be used for planting wildflowers. Additionally, the parking lot for the park would be expanded.

Justification

While some improvements and amenities have already been provided through the Byxbee Park Trails Project, this project will revisit the vision for the entire park, and develop and implement the plan for the final park. Design of the project will incorporate recommendations from the Baylands Comprehensive Conservation Plan Project.

Supplemental Information

The Byxbee Park Completion Project is included in the Council Infrastructure Plan. Funds for the project are provided by the Parks Development Impact Fee Fund. The Parks, Trails, Natural Open Space and Recreational Master Plan projects were reviewed and adjusted according to staff availability as well as community and Infrastructure Blue Riddon Commission (IBRC) needs.

Significant Changes

2019-2023 CIP: Budget increased to reflect total project cost estimate of \$3.6 million.

CAPITAL IMPROVEMENT FUND

2018-2022 CIP: Funding has been moved to Fiscal Year 2019 to coordinate with the findings from the Baylands Comprehensive Conservation Plan project.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	(173,962)	(1,746,038)	2,450,000	270,000	0	0	973,962	0	800,000
Transfer from Parks Dedication Fund	0	400,000	400,000	2,400,000	0	0	0	0	2,400,000	0	2,800,000
Total	0	400,000	226,038	653,962	2,450,000	270,000	0	0	3,373,962	0	3,600,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	400,000	207,220	173,962	2,120,000	0	0	0	2,293,962	0	2,501,182
Design	0	0	18,818	480,000	330,000	270,000	0	0	1,080,000	0	1,098,818
Total	0	400,000	226,038	653,962	2,450,000	270,000	0	0	3,373,962	0	3,600,000

Operating Impact

This project is anticipated to impact operating expenses in the future. Byxbee Park is maintained under a large parks maintenance contract which will be bid out for services during FY 2019. As these costs are quantified, adjustments will be brought forward in future budgets.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Environmental Impact Analysis:

This project is anticipated to require an environmental assessment in accordance with CEQA guidelines.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 2101 Wellesley Street between College and Stanford Avenues
Managing Department: Community Services
IBRC Reference: Catch-up
Initial Project Start: Summer 2017
Initial Project Completion: Summer 2018
Revised Project Start: Summer 2021
Revised Project Completion: Summer 2022
Project Number: PG-14002

Cameron Park, January 2015

Cameron Park Improvements

Description

This project provides funding to upgrade and renovate safety and accessibility features at Cameron Park with a primary focus on the park playground.

Justification

As park infrastructure ages, safety and compliance issues need to be addressed. This project will ensure compliance and address accessibility needs as well as safety issues.

Significant Changes

2018-2022 CIP: Project shifted from Fiscal Year 2020 to Fiscal Year 2022 due to a reprioritization of parks projects.

2017-2021 CIP: Project shifted from Fiscal Year 2018 to Fiscal Year 2020 pending completion of the Parks Master Plan and a reprioritization of parks projects.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	0	141,682	0	141,682	0	141,682
Total	0	0	0	0	0	0	141,682	0	141,682	0	141,682

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	141,682	0	141,682	0	141,682
Total	0	0	0	0	0	0	141,682	0	141,682	0	141,682

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Program: C3.3.1

Relationship to Comprehensive Plan

Secondary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Various
Managing Department: Community Services
IBRC Reference: New
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: PG-18001

Mitchell Park Dog Run, March 2017

Dog Park Installation and Renovation

Description

This project provides funding for building dog parks at various City parks and facilities that currently do not have dog parks, as well as renovating existing dog parks.

Justification

Palo Alto has three dog parks, located at Mitchell Park, Hoover Park, and Greer Park. The dog parks at both Hoover and Greer are undersized and should be relocated within the park and expanded. All of the existing dog parks are located in South Palo Alto.

The Parks, Trails, Natural Open Space, and Recreation Master Plan provides guidance on dog parks. The policy states that Palo Alto should actively pursue adding dedicated, fenced, dog parks in multiple neighborhoods, equitably distributed between North and South Palo Alto. The size of the dog parks will vary, but should strive to be at least .25 acres and each new dog park installation will require a Park Improvement Ordinance.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	0	0	0	9,907	0	21,390	0	31,297	0	N/A
Transfer from Parks Development Impact Fee Fund	N/A	150,000	150,000	0	150,000	0	150,000	0	300,000	0	N/A
Total	N/A	150,000	150,000	0	159,907	0	171,390	0	331,297	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	140,000	140,000	0	149,907	0	161,390	0	311,297	0	N/A
Design	N/A	10,000	10,000	0	10,000	0	10,000	0	20,000	0	N/A
Total	N/A	150,000	150,000	0	159,907	0	171,390	0	331,297	0	N/A

Operating Impact

Contract cleaning cost of approximately \$2,000 per year per dog park.

Relationship to Comprehensive Plan	Relationship to Comprehensive Plan	Potential Board/Commission Review:
Primary Connection	Secondary Connection	Parks and Recreation Commission
Element: Community Services & Facilities	Element: Community Services & Facilities	
Section: Maintenance of Parks and Community Facilities	Section: Maintenance of Parks and Community Facilities	
Goal: C-3	Goal: C-3	
Policy: C-3.3	Policy: C-3.2	
Program: C3.3.1	Program: C3.2.1	
Environmental Impact Analysis:		
This project is expected to have possible exemption from CEQA under Section 15301		

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Foothills Park Boronda Lake (3300 Page Mill Road between Central and Moody)
Managing Department: Community Services
IBRC Reference: Keep-up
Initial Project Start: Fall 2017
Initial Project Completion: Spring 2018
Revised Project Start: Fall 2021
Revised Project Completion: Winter 2021
Project Number: OS-18000

Boronda Lake Dock, February 2017

Foothills Park Boronda Lake Dock Replacement

Description

This project provides funding for the replacement of an aged and deteriorating Boronda Lake Dock.

Justification

The dock was originally built in 1965 and was last refurbished in 2010 with repairs to the wood decking. The current condition of the dock is declining and now requires a complete replacement of the dock with new decking, ramp, floats, and pilings.

Significant Changes

2019-2023 CIP: Project funding has been pushed out to FY 2021.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	135,000	0	0	0	147,654	0	0	147,654	0	147,654
Total	0	135,000	0	0	0	147,654	0	0	147,654	0	147,654

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	125,000	0	0	0	12,654	0	0	12,654	0	12,654
Design	0	10,000	0	0	0	135,000	0	0	135,000	0	135,000
Total	0	135,000	0	0	0	147,654	0	0	147,654	0	147,654

Relationship to Comprehensive Plan**Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

Environmental Impact Analysis:

Possible exemption from CEQA under Section 15302.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Foothills Park (3300 Page Mill Road between Central and Moody)
Managing Department: Public Works
IBRC Reference: New
Initial Project Start: Fall 2019
Initial Project Completion: Spring 2020
Revised Project Start:
Revised Project Completion:
Project Number: PE-20000

Foothills Park

Foothills Park Dam Seepage Study

Description

This project provides funding to study a location of historic seepage from the Foothills Park Dam at the sharp bend in the road on the face of the dam. The seepage is very minor, but it appears to be slowly worsening. The source of the seepage is suspected to be the trench backfill around the pipe that returns shallow groundwater to Boronda Lake. This project will locate and investigate the pipe and trench backfill material. If an engineered solution can be found, this project will also fund construction to slow or stop the seepage as part of a future 5 year CIP plan. The anticipated solution is excavation of a portion of the pipe and backfill with material that is more impervious to water transmissivity.

Justification

Foothills Park Dam is the key to maintaining the Boronda Lake recreational facility. It is a cherished gateway feature of the park.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	33,066	0	0	0	33,066	0	33,066
Total	0	0	0	0	33,066	0	0	0	33,066	0	33,066

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	0	0	0	33,066	0	0	0	33,066	0	33,066
Total	0	0	0	0	33,066	0	0	0	33,066	0	33,066

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan**Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Foothills Park (3300 Page Mill Road between Central and Moody)
Managing Department: Public Works
IBRC Reference: Keep-up
Initial Project Start: Summer 2021
Initial Project Completion: Fall 2022
Revised Project Start:
Revised Project Completion:
Project Number: PE-21000

Foothills Park Orchard Glen picnic area, January 2016

Foothills Park Improvement Project

Description

This project provides funding to replace the bridge to Sunfish Island, design and permitting to replace the footbridge in Los Trancos Valley, and to replace the grade control structures along Buckeye Creek.

Justification

The Sunfish Island Bridge (located at Boronda Lake) is in disrepair and needs to be replaced. The footbridge in Los Trancos Valley and grade control structures along Buckeye Creek are deteriorating and approaching the end of their useful life. If no action is taken, the footbridge and grade control structures will likely fail in the next 5-10 years. This would lead to severe erosion in several areas of Foothills Park, especially Wild Horse Valley where the existing utility corridors would be threatened.

Supplemental Information

Sunfish Island Bridge was built in the early 1960's and significant exterior wear and erosion have deteriorated the condition of this bridge as well as the Los Trancos Valley footbridge. The City recently completed a hydrology study of Buckeye Creek to provide recommendations to reduce erosion, sediment deposition, and flooding conditions in Foothills Park. The study recommended options to resolve the current erosion issues and to restore the creek channel, including replacement of the footbridge and grade control structures along Buckeye Creek.

Significant Changes

2019-2023 CIP: The Los Trancos Valley footbridge and Buckeye Creek grade control structures replacement has been added to the scope of this project. Funding has been increased by \$150,000 to address added scope.

2018-2022 CIP: Funding has been moved from Fiscal Year 2020 to Fiscal Year 2021 to coordinate with the findings from the Foothills Park, Pearson Arastradero Preserve, and Esther Clark Park Comprehensive Conservation Plan project.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	455,152	0	0	455,152	0	455,152
Total	0	0	0	0	0	455,152	0	0	455,152	0	455,152

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	209,122	0	0	209,122	0	209,122
Design	0	0	0	0	0	246,030	0	0	246,030	0	246,030
Total	0	0	0	0	0	455,152	0	0	455,152	0	455,152

Operating Impact

This project is not anticipated to impact operating expenses in the future.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund

Category: Parks and Open Space

Project Location: Foothills Park, Pearson Arastradero Preserve, and Esther Clark Park

Managing Department: Community Services

IBRC Reference: Keep-up

Initial Project Start: Summer 2020

Initial Project Completion: Summer 2022

Revised Project Start: Summer 2018

Revised Project Completion: Summer 2020

Project Number: PG-17001

Pearson-Arastradero Preserve, January 2016

Foothills Park, Pearson Arastradero Preserve, and Esther Clark Park Conservation Plan

Description

This project provides funding to create a comprehensive conservation plan for Foothills Park, Pearson Arastradero Preserve, and Esther Clark Park. The plan will provide guidance on wildlife and habitat management, public access and recreation, trails, and interpretive messaging.

Justification

Staff needs a guiding plan to provide insight on best management practices for wildlife, habitat, vegetation, and recreation management. The plan will also provide priorities, which will help staff and volunteers guide resources to the most important projects.

Significant Changes

2018-2022 CIP: Project shifted from Fiscal Year 2021 to Fiscal Year 2019 due to a reprioritization of parks projects.

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	315,096	0	0	0	0	315,096	0	315,096
Total	0	0	0	315,096	0	0	0	0	315,096	0	315,096

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	15,096	0	0	0	0	15,096	0	15,096
Design	0	0	0	300,000	0	0	0	0	300,000	0	300,000
Total	0	0	0	315,096	0	0	0	0	315,096	0	315,096

Operating Impact

This project may result in recommendations that impact operating expenses.

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Open Space

Goal: N-3

Policy: N-3.4

Potential Board/Commission Review:

Parks and Recreation Commission

Planning and Transportation Commission

Environmental Impact Analysis:

This project may be subject to CEQA review.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Palo Alto Municipal Golf Course (1875 Embarcadero Road)
Managing Department: Community Services
IBRC Reference: Keep-up
Initial Project Start: Spring 2018
Initial Project Completion: Summer 2018
Revised Project Start: Winter 2020
Revised Project Completion: Spring 2020
Project Number: PG-18000

Golf Course Net and Artificial Turf

Golf Course Net and Artificial Turf Replacement

Description

This project provides funding for the removal and replacement of golf course driving range netting and synthetic turf.

Justification

Based on age, condition, and useful life expectancy, replacement is projected to be needed in 2020. The golf course driving range is a popular facility, and is used as a teaching area. The facility is an important source of revenue to the City, and keeping it in a state of good repair will aid in maintaining this revenue stream.

Supplemental Information

This project is pending a cost estimate update as current estimate was made in FY 2013.

Significant Changes

2018-2022 CIP: Project shifted from Fiscal Year 2018 to Fiscal Year 2020 due to a reprioritization of parks projects.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	820,858	0	0	0	820,858	0	820,858
Total	0	0	0	0	820,858	0	0	0	820,858	0	820,858

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	795,858	0	0	0	795,858	0	795,858
Design	0	0	0	0	25,000	0	0	0	25,000	0	25,000
Total	0	0	0	0	820,858	0	0	0	820,858	0	820,858

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan	Relationship to Comprehensive Plan	Potential Board/Commission Review:
Primary Connection	Secondary Connection	Parks and Recreation Commission
Element: Community Services & Facilities	Element: Community Services & Facilities	
Section: Maintenance of Parks and Community Facilities	Section: Maintenance of Parks and Community Facilities	
Goal: C-3	Goal: C-3	
Policy: C-3.2	Policy: C-3.3	
Program: C3.2.1	Program: C3.3.1	
Environmental Impact Analysis:		
This project is expected to have a possible exemption from CEQA under Section 15301.		

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 300 Homer Avenue (bounded by Waverley, Homer, and Bryant)
Managing Department: Community Services
IBRC Reference: Keep-up
Initial Project Start: Summer 2020
Initial Project Completion: Summer 2022
Revised Project Start:
Revised Project Completion:
Project Number: PG-21000

Heritage Park Bench, March 2017

Heritage Park Site Amenities Replacement

Description

The project provides funding for replacement of select walkways and all of the site amenities in Heritage Park including: benches, picnic tables, trash receptacles, playground arbor, bicycle racks and drinking fountain.

Justification

Installed in 2005, the current site amenities have reached the use expectancy and need replacement. As park infrastructure ages, safety and compliance issues need to be addressed. This project will ensure compliance and address accessibility needs as well as safety issues.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	9,844	103,976	0	113,820	0	113,820
Total	0	0	0	0	0	9,844	103,976	0	113,820	0	113,820

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	844	103,976	0	104,820	0	104,820
Design	0	0	0	0	0	9,000	0	0	9,000	0	9,000
Total	0	0	0	0	0	9,844	103,976	0	113,820	0	113,820

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan	Relationship to Comprehensive Plan	Potential Board/Commission Review:
Primary Connection	Secondary Connection	Parks and Recreation Commission
Element: Community Services & Facilities	Element: Community Services & Facilities	
Section: Maintenance of Parks and Community Facilities	Section: Maintenance of Parks and Community Facilities	
Goal: C-3	Goal: C-3	
Policy: C-3.3	Policy: C-3.2	
Program: C3.3.1	Program: C3.2.1	
Environmental Impact Analysis:		
This project is expected to have possible exemption from CEQA under Section 15301		

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 2901 Cowper Street

Managing Department: Public Works
IBRC Reference: Keep-up

Initial Project Start: Fall 2018
Initial Project Completion: Spring 2019

Revised Project Start: Summer 2021
Revised Project Completion: Winter 2022

Project Number: PE-18012

Hoover Park, February 2015

Hoover Park Improvements

Description

This project provides funding for the replacement of the existing concrete walkway, repairs to the existing decomposed granite walkway and replacement of site amenities, including playfield backstops, benches, tables and trash receptacles. Also included are repairs to the existing brick wall surrounding the children's playground.

Justification

The concrete walkway and decomposed granite pathway is cracked and/or uneven, creating safety hazards. The brick wall at the playground and other site amenities, including the playfield backstops, are old or damaged.

Significant Changes

2018-2022 CIP: The Parks, Trails, Natural Open Space and Recreational Master Plan projects were reviewed and adjusted according to staff availability as well as community and Infrastructure Blue Ribbon Commission (IBRC) needs.

2017-2021 CIP: Project shifted from Fiscal Year 2018 to Fiscal Year 2021 pending completion of the Parks Master Plan and a reprioritization of parks projects.

2016-2020 CIP: Project moved from 2018 to 2017 based on review of staff work load.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	49,335	0	0	0	84,528	675,936	0	760,464	0	760,464
Total	0	49,335	0	0	0	84,528	675,936	0	760,464	0	760,464

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	675,936	0	675,936	0	675,936
Design	0	49,335	0	0	0	84,528	0	0	84,528	0	84,528
Total	0	49,335	0	0	0	84,528	675,936	0	760,464	0	760,464

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 251 Waverley Street
Managing Department: Public Works
IBRC Reference: Keep-up
Initial Project Start: Spring 2021
Initial Project Completion: Winter 2022
Revised Project Start:
Revised Project Completion:
Project Number: PE-21002

Johnson Park

Johnson Park Renovation

Description

This project provides funding for the renovation of existing park elements, including asphalt concrete and brick pathways, site furnishings, and playground equipment, as well as resurfacing, fencing, and improvements to irrigation and lighting.

Justification

Pathways and park amenities are in need of repair or improvements to maintain functionality.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	110,537	1,351,872	0	1,462,409	0	1,462,409
Total	0	0	0	0	0	110,537	1,351,872	0	1,462,409	0	1,462,409

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	1,351,872	0	1,351,872	0	1,351,872
Design	0	0	0	0	0	110,537	0	0	110,537	0	110,537
Total	0	0	0	0	0	110,537	1,351,872	0	1,462,409	0	1,462,409

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 600 East Meadow Drive
Managing Department: Public Works
IBRC Reference: Keep-up
Initial Project Start: Fall 2018
Initial Project Completion: Summer 2019
Revised Project Start: Summer 2022
Revised Project Completion: Summer 2023
Project Number: PE-18010

Mitchell Park, February 2015

Mitchell Park Improvements

Description

This project provides funding for repair and replacement of equipment and amenities throughout Mitchell Park. The improvements include replacement of the playground equipment located along East Meadow Drive, renovation of the water-play element, repair of the covered wood walkway structure, replacement of playground and water-play area fencing, and new rubberized surfacing. Also included are irrigation renovations, turf restoration, and replacement of site amenities and decomposed granite pathways.

Justification

The playground equipment, water-play element, fencing, covered wood walkway structure, decomposed granite pathways and site amenities have surpassed their expected lifecycle. Repair and/or replacement is necessary. Loss of vegetation has been linked to poor irrigation.

Supplemental Information

Design of the new playground equipment will include outreach to nearby schools that have provided input regarding the playground equipment in the past. The Parks, Trails, Natural Open Space and Recreational Master Plan projects were reviewed and adjusted according to staff availability as well as community needs and recommendations from the Infrastructure Blue Ribbon Committee (IBRC).

Significant Changes

2019-2023 CIP: This project has been deferred due to staffing constraints.

2018-2022 CIP: Design shifted from Fiscal Year 2021 to Fiscal Year 2020.

CAPITAL IMPROVEMENT FUND

2016-2020 CIP: Based on the IBRC keep-up schedule for the park, irrigation renovations, turf restoration and park amenities replacement were added to the project's scope with an additional budget allocation of \$946,000. This additional work was scheduled for Fiscal Year 2020, and the project schedule was adjusted accordingly.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	0	318,087	1,877,905	2,195,992	0	2,195,992
Total	0	0	0	0	0	0	318,087	1,877,905	2,195,992	0	2,195,992

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	1,877,905	1,877,905	0	1,877,905
Design	0	0	0	0	0	0	318,087	0	318,087	0	318,087
Total	0	0	0	0	0	0	318,087	1,877,905	2,195,992	0	2,195,992

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Environmental Impact Analysis:

This project may require an environmental assessment in accordance with CEQA guidelines.



Fund: Capital Improvement Fund

Category: Parks and Open Space

Project Location: Various

Managing Department: Community Services

IBRC Reference: Keep-up

Initial Project Start: Recurring

Initial Project Completion: Recurring

Project Number: OS-09001

Byxbee Park pole field, January 2015

Off-Road Pathway Resurfacing And Repair

Description

This project provides funding for the maintenance of Palo Alto's 9-miles of off-road paved trail system that is 35 years old and requires on-going, phased repairs. This project removes and replaces severely damaged sections of asphalt, repairs, cracks and base failures, and resurfaces worn or uneven surfaces of off-road asphalt pathways and bicycle trails. Priority will be given to the repair of the most uneven sections of pathway. Staff uses surface assessment data prepared by Public Works Engineering and input from the public to prioritize repair or replacement projects.

Justification

This project is intended to maintain the existing system of off-road pathways and trails throughout Palo Alto in order to extend the useful life of pathway surfaces. The project will ensure safe, even and handicapped accessible surfaces for pedestrians, cyclists, and skaters. Repair of uneven trail surfaces will greatly reduce accidents.

Significant Changes

2019-2023 CIP: The Adobe Creek Reach Trail is a 600 foot long segment of the existing Santa Clara Valley Water District's maintenance road on the east side of Adobe Creek, between West Bayshore Road and East Meadow Drive. This trail will provide an off-road, more direct access to the Highway 101 Pedestrian and Bicycle Overcrossing. The project includes trail pavement, grading and drainage, and installation of safety railing and fencing.

CAPITAL IMPROVEMENT FUND

2018-2022 CIP: In accordance with the Funding Agreement for the project, a payment of approximately \$170,000 will be made to the Joint Power Agreement (JPA) "Highway 101 to Bay Flood Control" project in FY 2018. The remaining balance will be used for off-road trail repairs.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	236,109	183,334	291,753	106,605	109,373	114,260	113,298	735,289	0	N/A
Total	N/A	236,109	183,334	291,753	106,605	109,373	114,260	113,298	735,289	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	236,109	183,334	291,753	106,605	109,373	114,260	113,298	735,289	0	N/A
Total	N/A	236,109	183,334	291,753	106,605	109,373	114,260	113,298	735,289	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Foothills Park Boronda Lake (3300 Page Mill Road between Central and Moody)
Managing Department: Community Services
IBRC Reference: Keep-up
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: OS-00002

Boronda Lake, January 2015

Open Space Lakes And Pond Maintenance

Description

This project rehabilitates lakes and ponds in open space nature preserves to protect wildlife habitat and recreational safety and to meet State Division of Safety of Dams requirements. The project funds annual harvesting of non-native pond weeds and cattails at Boronda Lake in Foothills Park. The project also funds maintenance of the Duck Pond aerator for improved water quality.

Justification

Pond weeds and cattails must be regularly removed from Boronda Lake to prevent non-native plants from displacing native plants that are essential to the survival of fish and foraging animals. This also will provide access for recreational fishing and boating safety. The State Division of Safety of Dams mandates cattail removal to maintain the Boronda Dam. The Baylands Duck Pond aeration system maintains water quality for wildlife.

Significant Changes

2016-2020 CIP: This project was converted to annual recurring status, rather than past practice of receiving additional funding every other year. The change addressed the changing needs of Boronda Lake. The aquatic weeds that are harvested need to be cleared more thoroughly every year.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	72,791	72,000	48,095	47,972	49,218	51,417	50,984	247,686	0	N/A
Total	N/A	72,791	72,000	48,095	47,972	49,218	51,417	50,984	247,686	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	72,791	72,000	48,095	47,972	49,218	51,417	50,984	247,686	0	N/A
Total	N/A	72,791	72,000	48,095	47,972	49,218	51,417	50,984	247,686	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Open Space

Goal: N-1

Policy: N-1.5

Program: N1.5.1

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Various
Managing Department: Community Services
IBRC Reference: Keep-up
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: OS-00001

Baylands Bench, January 2015

Open Space Trails and Amenities

Description

This project provides funding to restore unpaved trails, fences, picnic areas, and campgrounds at Foothills Park, the Baylands, and the Pearson-Arastradero Nature Preserves. The project also provides habitat protection by guiding park users towards areas dedicated for hiking, biking, and assembling. Benches, tables, footbridges, and fences that are at the end of their useful life will systematically be replaced.

Justification

Open Space trails require ongoing repair of natural erosion, storm damage, and control of aggressive plants, such as thistle and poison oak to ensure that facilities are safe, accessible, and maintained for recreational uses. These restoration projects are consistent with the Arastradero Preserve Trails Management Plan and the Foothills Park Trails Maintenance Plan.

Supplemental Information

Improvements to the trails within Pearson-Arastradero Preserve move trails away from environmentally sensitive areas and correct steeply sloped trails, thereby reducing erosion and providing better access to park users with disabilities. These restoration projects are consistent with the Arastradero Preserve Trails Management Plan and the Foothills Park Trails Maintenance Plan.

Significant Changes

2017-2021 CIP: Additional \$55,000 in funding added in Fiscal Year 2017 for one-time repairs of the Los Trancos Trail.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	312,979	311,000	185,885	186,559	191,403	199,954	198,272	962,073	0	N/A
Total	N/A	312,979	311,000	185,885	186,559	191,403	199,954	198,272	962,073	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	312,979	311,000	185,885	186,559	191,403	199,954	198,272	962,073	0	N/A
Total	N/A	312,979	311,000	185,885	186,559	191,403	199,954	198,272	962,073	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Open Space

Goal: N-1

Policy: N-1.5

Program: N1.5.1

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Various
Managing Department: Community Services
IBRC Reference: Keep-up
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: PG-09002

Briones Park, January 2015

Park and Open Space Emergency Repairs

Description

This project provides funding for the replacement or extensive repair of playgrounds, play yard surfaces, wooden structures, park amenities, and play equipment in the event of storms, fire, vandalism or structural failure.

Justification

This project allows for the replacement or repair of damaged equipment or play structures for the convenience of the public.

Significant Changes

2019-2023 CIP: Funding is gradually increasing from \$75,000 to \$200,000 annually over the 5 year CIP. The project is used to address unpredicted issues like trails closed due to strong storm damage, failing infrastructure that can be repaired (the Baylands Sailing Station), and premature failure of playground equipment and surfacing.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	122,638	119,000	108,853	106,605	136,717	171,390	226,596	750,161	0	N/A
Total	N/A	122,638	119,000	108,853	106,605	136,717	171,390	226,596	750,161	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	122,638	0	105,215	106,605	136,717	171,390	226,596	746,523	0	N/A
Design	N/A	0	119,000	3,638	0	0	0	0	3,638	0	N/A
Total	N/A	122,638	119,000	108,853	106,605	136,717	171,390	226,596	750,161	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan Primary Connection Element: Community Services & Facilities Section: Maintenance of Parks and Community Facilities Goal: C-3 Policy: C-3.2 Program: C3.2.1	Relationship to Comprehensive Plan Secondary Connection Element: Community Services & Facilities Section: Maintenance of Parks and Community Facilities Goal: C-3 Policy: C-3.3 Program: C3.3.1	Potential Board/Commission Review: Parks and Recreation Commission
Environmental Impact Analysis: This project is expected to have a possible exemption from CEQA under Section 15301.		

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Various
Managing Department: Community Services
IBRC Reference: New
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: PG-19000

Park Restroom, February 2017

Park Restroom Installation

Description

This project provides funding for installation of restrooms at City parks that currently do not have restroom facilities. The restrooms may be prefabricated, and each installation will require a Park Improvement Ordinance.

Justification

Many parks in the City have no restroom facilities within the park boundaries. This project will provide for one park restroom installation every other year in parks that are approximately two acres or larger, have amenities that encourage visitors to stay in the park, have high level of use, and where there are no nearby public restrooms available. The Parks, Trails, Natural Open Space, and Recreation Master Plan provides guidance on potential restroom locations.

Supplemental Information

Public outreach will occur as specific parks are considered for restroom installation.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	0	0	17,612	0	32,806	0	46,544	96,962	0	N/A
Transfer from Parks Development Impact Fee Fund	N/A	0	0	350,000	0	350,000	0	350,000	1,050,000	0	N/A
Total	N/A	0	0	367,612	0	382,806	0	396,544	1,146,962	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	0	0	337,612	0	352,806	0	366,544	1,056,962	0	N/A
Design	N/A	0	0	30,000	0	30,000	0	30,000	90,000	0	N/A
Total	N/A	0	0	367,612	0	382,806	0	396,544	1,146,962	0	N/A

Operating Impact

Contracting cleaning costs about \$8,400 per year per restroom.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Program: C3.3.1

Relationship to Comprehensive Plan

Secondary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Environmental Impact Analysis:

This project is expected to have possible exemption from CEQA under Section 15303

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 1530 Arastradero Road
Managing Department: Public Works
IBRC Reference: Keep-up
Initial Project Start: Summer 2020
Initial Project Completion: Fall 2021
Revised Project Start: Fall 2019
Revised Project Completion: Fall 2021
Project Number: PE-21001

Pearson Arastradero Preserve

Pearson Arastradero Improvement Project

Description

This project provides funds for replacing fencing, signs, gates, bridge decking, and making improvements to some of the seasonal trails to help reduce winter trail closures.

Justification

The fencing, signs, gates, and bridge decking have exceeded their useful lifespans, and need to be replaced. There are a number of seasonal trails that must be closed during the rainy season. The Parks, Trails, Natural Open Space and Recreational Master Plan projects were reviewed and adjusted according to staff availability as well as community needs and Infrastructure Blue Ribbon Committee recommendations.

Significant Changes

2018-2022 CIP: Design was advanced from Fiscal Year 2021 to Fiscal Year 2020.

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	27,555	325,109	0	0	352,664	0	352,664
Total	0	0	0	0	27,555	325,109	0	0	352,664	0	352,664

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	325,109	0	0	325,109	0	325,109
Design	0	0	0	0	27,555	0	0	0	27,555	0	27,555
Total	0	0	0	0	27,555	325,109	0	0	352,664	0	352,664

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan**Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 1530 Arastradero Road
Managing Department: Community Services
IBRC Reference: Keep-up
Initial Project Start: Fall 2017
Initial Project Completion: Spring 2018
Revised Project Start: Fall 2020
Revised Project Completion: Winter 2020
Project Number: OS-18001

Pearson Arastradero Parking Lot - Overflow Area, February 2017

Pearson Arastradero Preserve Parking Lot Improvement

Description

This project provides funding to improve the Pearson Arastradero Preserve parking lot by improving the base rock surfacing, adding drainage, widening the entrance for safety, and new fencing. The improvement will allow the overflow parking area to be open year round, rather than only during the dry periods of the year.

Justification

The existing parking lot and overflow lot are in poor condition. The main parking lot holds approximately 32 cars when carefully parked. The adjacent overflow lot holds approximately 15 cars, and cannot be used during the rainy season. The parking lot fills typically on weekends by 9am. On weekdays the lot fills with users by late afternoon to sunset.

Significant Changes

2019-2023 CIP: Completion date revised to FY 2021.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	155,000	0	0	0	169,528	0	0	169,528	0	169,528
Total	0	155,000	0	0	0	169,528	0	0	169,528	0	169,528

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	125,000	0	0	0	14,528	0	0	14,528	0	14,528
Design	0	30,000	0	0	0	155,000	0	0	155,000	0	155,000
Total	0	155,000	0	0	0	169,528	0	0	169,528	0	169,528

Relationship to Comprehensive Plan**Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

This project may be exempt from CEQA under Section 15302.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 1899 Park Boulevard
Managing Department: Community Services
IBRC Reference: Catch-up
Initial Project Start: Summer 2017
Initial Project Completion: Summer 2018
Revised Project Start: Summer 2023
Revised Project Completion: Fall 2023
Project Number: PG-14001

Peers Park, January 2015

Peers Park Improvements

Description

This project provides funding for upgrades and renovations of the irrigation system and turf at Peers Park. The project will also replace the park benches and drinking fountains, resurface the basketball and tennis court playing surfaces, and repair court fencing.

Justification

The existing irrigation system, benches, and drinking fountains have exceeded their useful lives.

Significant Changes

2019-2023 CIP: Project shifted from Fiscal Year 2021 to Fiscal Year 2023 due to reprioritization of parks projects.

2018-2022 CIP: Project shifted from Fiscal Year 2020 to Fiscal Year 2021 due to reprioritization of parks projects.

2017-2021 CIP: Project shifted from Fiscal Year 2018 to Fiscal Year 2020 pending completion of the Parks Master Plan and a reprioritization of parks projects.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	0	0	232,261	232,261	0	232,261
Total	0	0	0	0	0	0	0	232,261	232,261	0	232,261

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	226,809	226,809	0	226,809
Design	0	0	0	0	0	0	0	5,452	5,452	0	5,452
Total	0	0	0	0	0	0	0	232,261	232,261	0	232,261

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan	Relationship to Comprehensive Plan	Potential Board/Commission Review:
Primary Connection	Secondary Connection	Parks and Recreation Commission
Element: Community Services & Facilities	Element: Community Services & Facilities	
Section: Maintenance of Parks and Community Facilities	Section: Maintenance of Parks and Community Facilities	
Goal: C-3	Goal: C-3	
Policy: C-3.3	Policy: C-3.2	
Program: C3.3.1	Program: C3.2.1	
Environmental Impact Analysis:		
This project is expected to have a possible exemption from CEQA under Section 15301.		



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 800 East Meadow Drive
Managing Department: Community Services
IBRC Reference: Catch-up
Initial Project Start: Summer 2015
Initial Project Completion: Summer 2015
Revised Project Start: Summer 2019
Revised Project Completion: Spring 2020
Project Number: PG-14000

Ramos Park, January 2015

Ramos Park Improvements

Description

This project provides funding for safety and accessibility improvements at Ramos Park including replacing the existing park playground, benches, and drinking fountain, as well as resurfacing the basketball court playing surface.

Justification

The existing playground, benches, basketball court surfaces, and drinking fountains have exceeded their useful lives. As park infrastructure ages, safety and compliance issues need to be addressed. This project will ensure compliance and address accessibility needs as well as safety issues.

Significant Changes

2018-2022 CIP: Project shifted from Fiscal Year 2018 to Fiscal Year 2020 due to reprioritization of parks projects. Also, project increased by \$54,000 to address IBRC recommendations.

2017-2021 CIP: Timeline extended to reflect direction from Finance Committee and City Council during budget approval process.

2016-2020 CIP: The project completion originally referred only to the pre-design phase and was modified to represent completion of the full project, including construction.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	244,125	0	0	0	244,125	0	244,125
Total	0	0	0	0	244,125	0	0	0	244,125	0	244,125

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	244,125	0	0	0	244,125	0	244,125
Total	0	0	0	0	244,125	0	0	0	244,125	0	244,125

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Program: C3.3.1

Relationship to Comprehensive Plan

Secondary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 777 Embarcadero Road
Managing Department: Public Works
IBRC Reference: New
Initial Project Start: Summer 2015
Initial Project Completion: Spring 2019
Revised Project Start: Summer 2017
Revised Project Completion: Winter 2019
Project Number: PE-08001

Rinconada Park February 2015

Rinconada Park Improvements

Description

This project provides funding for upgrades to safety, site amenities, playground facilities, irrigation, drainage and accessibility improvements at Rinconada Park.

Justification

The Rinconada Park Long Range Plan outlined improvements related to deferred maintenance items at the park, such as installing wider pathways rather than repairing the existing pathways.

Significant Changes

2019-2023 CIP: The project increased by \$1.3 million to reconstruct the parking lot, update park signage, and renovate the playground and reconstruct the paths on the west end of the park. Funding from the Community Center Impact Fee Fund will be used for these items.

2018-2022 CIP: The project was delayed to coordinate with environmental assessments for the Junior Museum and Zoo (JMZ), Rinconada Park Long Range Plan and the Parks, Trails, Natural Open Space and Recreation Master Plan Parks (Master Plan), to be complete by Fiscal Year 2018. Park construction will be coordinated to follow the proposed JMZ rebuilding. \$706,000 of the construction phase funding will be utilized for costs associated with relocation of the existing JMZ operation to Cubberley and permit & inspection fees needed for the JMZ rebuilding.

2017-2021 CIP: Timeline extended to reflect direction from Finance Committee and City Council during budget approval process.

2016-2020 CIP: Project was delayed to await the completion of the Rinconada Park Long Range Plan and environmental review. Funding for construction was advanced from Fiscal Year

CAPITAL IMPROVEMENT FUND

2018 to 2017 and combined with funding from Fiscal Year 2015 to implement a single phase project. The total budget has been reduced by \$600,000 from the budget shown in the Fiscal Years 2015-2019 CIP to focus on deferred maintenance items. Funding to enhance the park will be considered as part of the funding needs for the entire City park system once the Rinconada Park Long Range Plan and the Parks Master Plan are completed.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	9,961	1,929,000	1,629,000	330,434	204,347	22,533	0	0	557,314	0	2,196,275
Transfer from Community Center Impact Fee Fund	0	0	0	0	1,999,529	75,000	0	0	2,074,529	0	2,074,529
Total	9,961	1,929,000	1,629,000	330,434	2,203,876	97,533	0	0	2,631,843	0	4,270,804

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	1,629,000	1,629,000	318,000	2,203,876	97,533	0	0	2,619,409	0	4,248,409
Design	9,960	300,000	0	12,434	0	0	0	0	12,434	0	22,394
Total	9,960	1,929,000	1,629,000	330,434	2,203,876	97,533	0	0	2,631,843	0	4,270,803

Operating Impact

This project may impact operating expenses in future years. As the scope of this project is better defined through the design process, operating impacts will be reviewed and adjustments may be brought forward as part of the annual budget process, as necessary.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund

Category: Parks and Open Space

Project Location: 4116 Park Blvd

Managing Department: Public Works

IBRC Reference: Keep-up

Initial Project Start: Fall 2018

Initial Project Completion: Summer 2019

Revised Project Start: Summer 2020

Revised Project Completion: Winter 2021

Project Number: PE-18015

Robles Park, February 2015

Robles Park Improvements

Description

This project provides funding for the replacement of play equipment and resurfacing in two children's playground areas; repairs to a basketball court and adjacent concrete wall; and replacement of perimeter fencing, concrete pathways and other site amenities. Irrigation renovations and turf restoration are also included in this project.

Justification

The playground areas, backstop, basketball court, concrete pathways and site amenities have surpassed their intended useful lives and are in need of replacement or repairs. Damaged and/or dead vegetation necessitates irrigation renovation as well as turf restoration.

Supplemental Information

The Parks, Trails, Natural Open Space and Recreational Master Plan projects were reviewed and adjusted according to staff availability as well as community and IBRC needs.

Significant Changes

2018-2022 CIP: Design was shifted from Fiscal Year 2020 to Fiscal Year 2021. Construction was shifted from Fiscal Year 2020 to Fiscal Year 2022.

2017-2021 CIP: Project shifted from Fiscal Year 2018 to Fiscal Year 2021 pending completion of the Parks Master Plan and a reprioritization of parks projects.

2016-2020 CIP: Project schedule moved forward by one year based on review of staff workload and resources.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	104,035	946,310	0	1,050,345	0	1,050,345
Total	0	0	0	0	0	104,035	946,310	0	1,050,345	0	1,050,345

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	946,310	0	946,310	0	946,310
Design	0	0	0	0	0	104,035	0	0	104,035	0	104,035
Total	0	0	0	0	0	104,035	946,310	0	1,050,345	0	1,050,345

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 3100 Stockton Pl
Managing Department: Community Services
IBRC Reference: Keep-up
Initial Project Start: Summer 2018
Initial Project Completion: Winter 2018
Revised Project Start: Summer 2020
Revised Project Completion: Summer 2021
Project Number: PG-14003

Seale Park, February 2015

Seale Park Improvements

Description

This project provides funding for upgrades and renovations for safety and accessibility improvements at Seale Park. The project will replace existing park amenities, picnic tables, and playground structures including a playhouse and swings; refinish the playground perimeter fencing; and repair damaged decomposed granite and concrete pathways. Turf restoration and irrigation renovations will also be included as well as replacement of bollards at the park entrances, the park sign, and a small stone wall located in the middle of the park.

Justification

As park infrastructure ages, safety and compliance issues need to be addressed. This project will ensure compliance and address accessibility needs as well as safety issues. Drainage issues will be resolved with repairs to the damaged pathways. Irrigation renovations and turf restoration is required where existing areas are damaged or dead.

Significant Changes

2018-2022 CIP: Project shifted from Fiscal Year 2020 to Fiscal Year 2021 due to a reprioritization of parks projects.

2017-2021 CIP: Project shifted from Fiscal Year 2018 to Fiscal Year 2020 pending completion of the Parks Master Plan and a reprioritization of parks projects.

2016-2020 CIP: Based on the IBRC keep-up schedule for the park, replacement of the playground structure has been added to the project's scope with an additional budget allocation of \$209,000.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	360,932	0	0	360,932	0	360,932
Total	0	0	0	0	0	360,932	0	0	360,932	0	360,932

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	327,170	0	0	327,170	0	327,170
Design	0	0	0	0	0	33,762	0	0	33,762	0	33,762
Total	0	0	0	0	0	360,932	0	0	360,932	0	360,932

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan Primary Connection Element: Community Services & Facilities Section: Maintenance of Parks and Community Facilities Goal: C-3 Policy: C-3.3 Program: C3.3.1	Relationship to Comprehensive Plan Secondary Connection Element: Community Services & Facilities Section: Maintenance of Parks and Community Facilities Goal: C-3 Policy: C-3.2 Program: C3.2.1	Potential Board/Commission Review: Parks and Recreation Commission
Environmental Impact Analysis: This project is expected to have a possible exemption from CEQA under Section 15301.		



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Various
Managing Department: Community Services
IBRC Reference: Keep-up
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: PG-06001

Rinconada Tennis Courts, February 2015

Tennis and Basketball Court Resurfacing

Description

This project provides funding for tennis and basketball court repair and resurfacing in various Palo Alto parks.

Justification

Tennis and basketball courts require ongoing repairs and resurfacing due to wear and tear. Resurfacing of courts will enhance the safety, quality, and condition of these athletic facilities.

Supplemental Information

Work to be completed under this project is scheduled as follows:

Fiscal Year 2019: Mitchell Park tennis and handball courts reconstruction or resurfacing

Fiscal Year 2020: Rinconada Park tennis courts reconstruction (all courts)

Fiscal Year 2021: Basketball court resurfacing: Briones Park, Johnson Park and Terman Park

Fiscal Year 2022: Tennis courts at Terman Park, and Weisshaar Park

Fiscal Year 2023: Terman basketball courts resurfacing

Significant Changes

2017-2021 CIP: Tennis courts at Cubberley Community Center have been removed from this project and now are covered in a separate project within the Cubberley Infrastructure Fund.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	544,522	363,734	415,704	229,201	235,152	245,658	243,591	1,369,306	0	N/A
Total	N/A	544,522	363,734	415,704	229,201	235,152	245,658	243,591	1,369,306	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	544,522	0	234,916	229,201	235,152	245,658	243,591	1,188,518	0	N/A
Design	N/A	0	363,734	180,788	0	0	0	0	180,788	0	N/A
Total	N/A	544,522	363,734	415,704	229,201	235,152	245,658	243,591	1,369,306	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities
 Section: Maintenance of Parks and Community Facilities
 Goal: C-3
 Policy: C-3.2
 Program: C3.2.1

Relationship to Comprehensive Plan

Secondary Connection

Element: Community Services & Facilities
 Section: Maintenance of Parks and Community Facilities
 Goal: C-3
 Policy: C-3.3
 Program: C3.3.1

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Various
Managing Department: Community Services
IBRC Reference: New
Initial Project Start: Fall 2017
Initial Project Completion: Spring 2018
Revised Project Start: Fall 2018
Revised Project Completion: Spring 2020
Project Number: PG-18002

Cubberley Fields, March 2017

Turf Management Plan

Description

This project provides funding to evaluate select natural turf athletic fields maintained and brokered by the City for organized sports activities, and provides recommendations for improving the quality and durability of the fields.

Justification

The Parks, Trails, Open Space, and Recreation Master Plan emphasizes a high community priority to maintain quality turf fields to accommodate high demand and high use of the fields. With such volume of usage, the ability to maintain natural turf fields becomes difficult. The Turf Management Plan will make recommendations to upgrade the fields making them more durable for heavy use and recommend maintenance practices to ensure extensive use.

Significant Changes

2019-2023 CIP: Completion date revised to FY 2020

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	(100,000)	105,032	0	0	0	0	105,032	0	5,032
Transfer from Parks Development Impact Fee Fund	0	100,000	100,000	0	0	0	0	0	0	0	100,000
Total	0	100,000	0	105,032	0	0	0	0	105,032	0	105,032

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	100,000	0	105,032	0	0	0	0	105,032	0	105,032
Total	0	100,000	0	105,032	0	0	0	0	105,032	0	105,032

Relationship to Comprehensive Plan**Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Program: C3.3.1

Relationship to Comprehensive Plan**Secondary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

This project is expected to have possible exemption from CEQA under Section 15301

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 2100 Dartmouth Street between College and Stanford Avenues
Managing Department: Community Services
IBRC Reference: Keep-up
Initial Project Start: Fall 2021
Initial Project Completion: Spring 2022
Revised Project Start:
Revised Project Completion:
Project Number: PG-22000

Werry Playground, March 2017

Werry Park Playground Improvements

Description

This project provides funding for the replacement and ADA upgrades of the existing playground. The benches, tables, trash receptacles, bicycle rack and drinking fountain have reached the end of their useful life and need replacement as well. Perimeter landscaping will be replaced as part of this project.

Justification

Built in 2002, the existing playground equipment has reached its use expectancy with limited accessibility. As park infrastructure ages, safety and compliance issues need to be addressed. This project will ensure compliance and address accessibility needs as well as safety issues.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	0	114,260	0	114,260	0	114,260
Total	0	0	0	0	0	0	114,260	0	114,260	0	114,260

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	104,260	0	104,260	0	104,260
Design	0	0	0	0	0	0	10,000	0	10,000	0	10,000
Total	0	0	0	0	0	0	114,260	0	114,260	0	114,260

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan	Relationship to Comprehensive Plan	Potential Board/Commission Review:
Primary Connection	Secondary Connection	Parks and Recreation Commission
Element: Community Services & Facilities	Element: Community Services & Facilities	
Section: Maintenance of Parks and Community Facilities	Section: Maintenance of Parks and Community Facilities	
Goal: C-3	Goal: C-3	
Policy: C-3.3	Policy: C-3.2	
Program: C3.3.1	Program: C3.2.1	
Environmental Impact Analysis:		
This project is expected to have possible exemption from CEQA under Section 15301		



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Streets and Sidewalks

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Streets and Sidewalks
Project Location: Various
Managing Department: Public Works
IBRC Reference: New
Initial Project Start: Summer 2017
Initial Project Completion: Winter 2018
Revised Project Start:
Revised Project Completion:
Project Number: PE-18001

East Meadow Caltrain Crossing

CalTrain Corridor Video Management System Installation

Description

This project will install video cameras at the four at-grade crossings along the Caltrain corridor. The integrated video management system would be connected to the City's fiber loop and can be accessed in the Emergency Operations Center or monitored by a third-party.

Justification

Since 2009, the City has used the services of contract security guards at the Caltrain at-grade crossings. This program is commonly referred to as Track Watch. Given the on-going expense of these contracts, the installation of the integrated video systems would be a permanent solution.

Supplemental Information

Funding sources for this project are currently under review by staff. In addition the timing of this project will be aligned with the overall Project Safety Net strategy, including a review of the use of Track Watch guards as well as Project Safety Net collaborative initiatives.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	1,550,000	1,521,689	29,418	0	0	0	0	29,418	0	1,551,107
Total	0	1,550,000	1,521,689	29,418	0	0	0	0	29,418	0	1,551,107

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	1,550,000	1,521,689	29,418	0	0	0	0	29,418	0	1,551,107
Total	0	1,550,000	1,521,689	29,418	0	0	0	0	29,418	0	1,551,107

Anticipated Operating Budget Needs

Fund	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
General Fund-Operating	325,000	334,750	344,792	355,136	365,790

Operating Impact

The ongoing annual expenditures for remote monitoring, maintenance, fiber subscription costs, and power is estimated to be \$0.3 million in FY 2019 and increase by 3% annually thereafter.

Relationship to Comprehensive Plan**Primary Connection**

Element: Transportation

Section: Road Safety

Goal: T-6

Policy: T-6.3

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation

Commission

Environmental Impact Analysis:

This project is expected to have a possible categorical exemption from CEQA under section 15301.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Streets and Sidewalks
Project Location: Various
Managing Department: Public Works
IBRC Reference: Keep-up
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: PO-12001

Byron Street (1200 Block), January 2013

Curb and Gutter Repairs

Description

This project provides funding to repair curbs and gutters that have been uplifted by tree roots and allows for the installation of valley gutters in the Barron Park neighborhood to address ponding and poor drainage.

Justification

Ponding related to curb and gutter problems is a health hazard. Standing water can be a breeding ground for mosquitoes and encourage algae growth, becoming a hazard for bicyclists and pedestrians. The annual street maintenance project does not address these problems on small isolated sections of curb and gutter found on streets with good road surfaces.

Significant Changes

2018-2022 CIP: Additional funding in the amount of \$250,000 for Fiscal Year 2018 to install valley gutters as needed in the Barron Park neighborhood in coordination with Street Resurfacing Program work occurring in Barron Park.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	930,112	592,364	454,864	110,220	130,043	159,044	165,863	1,020,034	0	N/A
Total	N/A	930,112	592,364	454,864	110,220	130,043	159,044	165,863	1,020,034	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	922,266	584,518	452,527	108,555	126,370	153,140	159,277	999,869	0	N/A
Design	N/A	7,846	7,846	2,337	1,665	3,673	5,904	6,586	20,165	0	N/A
Total	N/A	930,112	592,364	454,864	110,220	130,043	159,044	165,863	1,020,034	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan**Primary Connection**

Element: Land Use and Community Design

Section: Public Streets and Public Spaces

Goal: L-9

Policy: L-9.10

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Streets and Sidewalks
Project Location: Various
Managing Department: Public Works
IBRC Reference: Catch-up
Initial Project Start: Summer 2015
Initial Project Completion: Spring 2017
Revised Project Start: Summer 2019
Revised Project Completion: Fall 2022
Project Number: PE-13017

El Camino Median Landscape Improvements March 2015

El Camino Median Landscape Improvements

Description

This project provides funding for median improvements on El Camino Real. The improvements will include water conservation measures such as new drip irrigation systems and new drought tolerant trees, shrubs, and groundcover. Median designs will be consistent with the goals and objectives of the March 2007 El Camino Real Master Planning Study, and will also consider any relevant guidance from the Grand Boulevard Initiative.

Justification

Medians, planters, and islands along El Camino Real have fallen into disrepair. Landscape plants and materials have exceeded their useful lives. These structures are primarily designed to regulate traffic and provide attractive landscapes and welcoming gateways to the City.

Supplemental Information

The provision of adequate landscaping and irrigation reduces siltation and runoff and removes carbon dioxide from the environment. The Fiscal Year 2021 improvements will address medians from City limits to University Avenue, and from Page Mill Road to Arastradero Road.

Significant Changes

2018-2022 CIP: The Cambridge to Grant median scope of work previously included in this project is now included in the El Camino Real Pedestrian Safety and Streetscape Project, PL-18002.

CAPITAL IMPROVEMENT FUND

2017-2021 CIP: The Cambridge to Grant median work has been moved to Fiscal Year 2017. The City limits to University Avenue and Page Mill Road to Arastradero Road work has been moved to Fiscal Year 2021.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	12,329	0	0	0	77,154	918,107	0	0	995,261	0	1,007,590
Total	12,329	0	0	0	77,154	918,107	0	0	995,261	0	1,007,590

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	212,107	0	0	212,107	0	212,107
Design	12,328	0	0	0	77,154	706,000	0	0	783,154	0	795,482
Total	12,328	0	0	0	77,154	918,107	0	0	995,261	0	1,007,589

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Land Use and Community Design

Section: Employment Districts

Goal: L-5

Policy: L-5.3

Potential Board/Commission Review:

Architectural Review Board

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Newell Road Bridge, February 2015

Fund: Capital Improvement Fund
Category: Streets and Sidewalks
Project Location: Newell Rd at SF Creek
Managing Department: Public Works
IBRC Reference: New
Initial Project Start: Spring 2012
Initial Project Completion: Spring 2015
Revised Project Start:
Revised Project Completion: Fall 2018
Project Number: PE-12011

Newell Road/San Francisquito Creek Bridge Replacement

Description

This project will provide funding to remove and replace the Newell Road bridge over San Francisquito Creek. Design considerations include a clear span over the creek to allow the channel to convey a flow consistent with the San Francisquito Joint Powers Authority's (JPA) initial flood protection project as well as bicycle and pedestrian traffic.

Justification

The existing bridge, constructed in 1911, acts as a flow restriction of San Francisquito Creek as its abutments encroach into the channel cross-section. Removal of the existing bridge is a necessary element of the San Francisquito Creek Joint Powers Authority (JPA) comprehensive flood management program. Additionally, the existing bridge does not have accommodations for either pedestrians or bicyclists.

Supplemental Information

Staff has secured grant funding from Caltrans Highway Bridge Program (HBP) for the design and environmental assessment/permitting of the project. HBP funds will likely be approved to pay for 88.5% of project construction costs. As the bridge links to East Palo Alto and is part of the JPA's comprehensive flood management plan, staff of all three agencies will coordinate closely on the design and public outreach elements of this project.

Due to community concern for traffic and the visual impacts of a replacement bridge, the scope of the project has expanded to include a CEQA Environmental Impact Report/NEPA Environ-

mental Assessment (EIR/EA) process that will evaluate multiple project alternatives, addressing flood control, traffic, aesthetics, and other potential impacts of the project. The cost estimate on this project will likely need to be reevaluated and adjusted since last done in 2015. The cost will likely increase due to escalation, project delays, and the need for more coordination with other agencies than initially anticipated.

Significant Changes

2017-2021 CIP: The project completion date has been extended to Fall 2018 to account for the expanded environmental analysis and project permitting requirements.

2016-2020 CIP: Construction funding moved to Fiscal Year 2017 to reflect delays in securing State funding for environmental work. Timeline extended to reflect project duration through construction phase.

2015-2019 CIP: Construction funding moved to Fiscal Year 2016 to reflect the time needed to complete the additional CEQA work.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	706,284	3,255,502	730,502	123,726	0	0	0	0	123,726	0	1,560,512
Revenue from Other Agencies	37,755	0	0	0	0	0	0	0	0	0	37,755
Revenue from the State of California	171,593	0	0	2,500,000	0	0	0	0	2,500,000	0	2,671,593
Total	915,632	3,255,502	730,502	2,623,726	0	0	0	0	2,623,726	0	4,269,860

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	548,422	2,500,000	730,502	2,623,726	0	0	0	0	2,623,726	0	3,902,650
Design	367,208	755,502	0	0	0	0	0	0	0	0	367,208
Total	915,630	3,255,502	730,502	2,623,726	0	0	0	0	2,623,726	0	4,269,858

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan Primary Connection Element: Safety Section: Natural Hazards Goal: S-2 Policy: S-2.8 Program: S2.8.4	Relationship to Comprehensive Plan Secondary Connection Element: Community Services & Facilities Section: Maintenance of Parks and Community Facilities Goal: C-3 Policy: C-3.2	Potential Board/Commission Review: Architectural Review Board Historic Resources Board Planning and Transportation Commission
Environmental Impact Analysis: An Environmental Impact Report and NEPA analysis are being completed for this project.		



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Fund: Capital Improvement Fund

Category: Streets and Sidewalks

Project Location: Various

Managing Department: Public Works

IBRC Reference: Keep-up

Initial Project Start: Recurring

Initial Project Completion: Recurring

Project Number: PO-89003

Middlefield Road (1500 Block), January 2013

Sidewalk Repairs

Description

This project provides funding for sidewalk repairs as part of an annual district-based rehabilitation program, alleviating the backlog of sidewalk repairs and enhancing pedestrian comfort and safety. Additionally, a sidewalk program assessment to evaluate options for improving the City's Sidewalk Repair Program will be completed in Summer 2018 and offer suggestions for establishing goals and priorities related to repairs and replacements throughout the City.

Justification

The result of this project is better sidewalk conditions and a potential reduction in sidewalk-related injuries.

Supplemental Information

There are 23 sidewalk districts throughout the City. The district program began in 1986 with a goal of completing work in all 23 districts within 30 years. Work for all 23 districts was completed in early 2017 and the sidewalk program assessment was completed in 2016.

Significant Changes

2018-2022 CIP: Funding for this project has been reduced by \$0.5 million per year pending completion of the assessment study.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	2,331,144	1,974,377	1,628,027	1,333,659	1,573,525	1,924,429	2,006,946	8,466,586	0	N/A
Total	N/A	2,331,144	1,974,377	1,628,027	1,333,659	1,573,525	1,924,429	2,006,946	8,466,586	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	2,302,219	1,956,446	1,600,954	1,304,998	1,543,530	1,893,312	1,974,770	8,317,564	0	N/A
Design	N/A	28,925	17,931	27,073	28,661	29,995	31,117	32,175	149,021	0	N/A
Total	N/A	2,331,144	1,974,377	1,628,027	1,333,659	1,573,525	1,924,429	2,006,945	8,466,585	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Parks and Recreation Commission

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund

Category: Streets and Sidewalks

Project Location: Various

Managing Department: Public Works

IBRC Reference: Keep-up

Initial Project Start: Recurring

Initial Project Completion: Recurring

Project Number: PO-11000

Traffic sign, April 2015

Sign Reflectivity Upgrade

Description

This project provides funding for inventorying, upgrading, and maintaining all traffic signs owned by the City of Palo Alto in order to comply with new federal requirements for sign reflectivity standards.

Justification

The FHWA (Federal Highway Administration) has passed regulations requiring minimum retro-reflectivity levels for traffic signs. The new retroreflectivity regulations require regular annual sign inspections and replacement of signs not meeting the new minimum retroreflectivity standards.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	205,355	87,520	174,397	55,110	65,022	79,522	82,932	456,983	0	N/A
Total	N/A	205,355	87,520	174,397	55,110	65,022	79,522	82,932	456,983	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	205,355	87,520	174,397	55,110	65,022	79,522	82,932	456,983	0	N/A
Total	N/A	205,355	87,520	174,397	55,110	65,022	79,522	82,932	456,983	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan	Potential Board/Commission Review:
Primary Connection	Planning and Transportation Commission
Element: Land Use and Community Design	
Section: Public Streets and Public Spaces	
Goal: L-9	
Policy: L-9.10	
Environmental Impact Analysis:	
This project is expected to have a possible exemption from CEQA under Section 15301.	



Fund: Capital Improvement Fund

Category: Streets and Sidewalks

Project Location: Various

Managing Department: Public Works

IBRC Reference: N/A

Initial Project Start: Summer 2012

Initial Project Completion: Spring 2013

Revised Project Start: Spring 2018

Revised Project Completion: Fall 2019

Project Number: PE-13014

Streetlight, Guinda Street, November 2014

Street Lights Condition Assessment

Description

This project provides funding to assess the condition of the streetlight system. The assessment will include an inventory of the entire lighting system, including age and condition of conduit, wiring, street light poles, foundations, luminaires, and lighting coverage. Determining the inspection, maintenance, repair, and rehabilitation necessary to prolong the life of the City's streetlight system is also included in this project.

Justification

There are over 6,000 streetlights in Palo Alto. In some areas, existing conduit is over 40 years old and in such poor condition that no repairs can be made. Streetlight systems are integral as they afford safe routes for motorists and pedestrians. An assessment is needed to evaluate the age and condition of each element of the streetlight system in order to plan cost-effective maintenance and replacement programs for the future.

Supplemental Information

The Infrastructure Blue Ribbon Commission recommended that a streetlight system assessment be conducted to determine the condition of and replacement program for the City's streetlight infrastructure. The assessment will also consider appropriate recommendations for streetlights determined to be historic, or in neighborhoods with unique streetlights.

Significant Changes

2019-2023 CIP: Due to other high priority projects, this project has been delayed until Spring 2019.

CAPITAL IMPROVEMENT FUND

2018-2022 CIP: Due to other high priority projects, this project has been delayed until Summer 2017.

2017-2021 CIP: Due to other high priority projects, initiation of this project has been delayed until Spring 2016.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	8,798	220,078	0	228,683	0	0	0	0	228,683	0	237,481
Total	8,798	220,078	0	228,683	0	0	0	0	228,683	0	237,481

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	220,078	0	0	0	0	0	0	0	0	0
Design	8,798	0	0	228,683	0	0	0	0	228,683	0	237,481
Total	8,798	220,078	0	228,683	0	0	0	0	228,683	0	237,481

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Land Use and Community Design

Section: Public Streets and Public Spaces

Goal: L-9

Policy: L-9.3

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund

Category: Streets and Sidewalks

Project Location: Various

Managing Department: Public Works

IBRC Reference: Keep-up

Initial Project Start: Recurring

Initial Project Completion: Recurring

Project Number: PO-05054

East Bayshore Road street lights, February 2015

Street Lights Improvements

Description

This project provides funding to replace street light poles, pole foundations, luminaires, and wiring as needed to restore or improve street lighting.

Justification

There are over 6,000 street lights in Palo Alto. In some areas existing concrete or cast iron street light poles are failing and no longer serviceable. Additionally, poles damaged due to accidents must be replaced immediately. Luminaires are replaced to improve lighting levels and therefore safety. The Electric Fund maintains the poles, luminaires, and circuits and installs new street lights as requested by Public Works.

Supplemental Information

The Streetlight Condition Assessment project (PE-13014) is expected to be completed in 2019 and will result in recommendations for replacement of street lights. Where desired, efforts to match existing will be made.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	305,737	28,958	259,775	165,330	195,065	238,566	248,795	1,107,531	0	N/A
Total	N/A	305,737	28,958	259,775	165,330	195,065	238,566	248,795	1,107,531	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	305,737	28,958	259,775	165,330	195,065	238,566	248,795	1,107,531	0	N/A
Total	N/A	305,737	28,958	259,775	165,330	195,065	238,566	248,795	1,107,531	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan**Primary Connection**

Element: Land Use and Community Design

Section: Public Streets and Public Spaces

Goal: L-9

Policy: L-9.3

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund

Category: Streets and Sidewalks

Project Location: Various

Managing Department: Public Works

IBRC Reference: Keep-up

Initial Project Start: Recurring

Initial Project Completion: Recurring

Project Number: PE-86070

Curtner Avenue (300 Block), February 2015

Street Maintenance

Description

This project provides funding for annual resurfacing, slurry seal, crack seal, and reconstruction of various city streets.

Justification

The Pavement Maintenance Management System (PMMS) and StreetSaver are used to identify streets requiring maintenance (based on the biannual Pavement Condition Index (PCI) survey of all City streets). City Council established a goal of achieving an average citywide PCI of 85, excellent pavement condition, by 2021. The approved funding level in this CIP is expected to result in reaching that goal by 2019. At the end of Fiscal Year 2019, the average PCI is expected to be 84.

Supplemental Information

Staff is supplementing the City's PMMS with Metropolitan Transportation Agency's StreetSaver software, whose modeling capabilities will be used to determine future funding levels to maintain the citywide PCI average of 85 once it has been achieved.

The list of streets to be included in this project will be prioritized and coordinated with Utilities Department projects and in the Bicycle and Pedestrian Transportation Plan. This project is partially funded by revenues from gas taxes and vehicle registration fees.

Significant Changes

2019-2023 CIP: FY 2019 costs are offset by One Bay Area Grant (OBAG) Cycle 2 guaranteed funding and San Antonio/W.Bayshore Impact Fee Fund in the amount of \$1.0 million and \$0.9 million, respectively. The impact fee funding will be used to make improvements on the San Antonio/Charles-ton intersection and repave the San Antonio overpass. Funding increased by \$1.2 million annually from Road Maintenance and Rehabilitation Account (RMRA - S.B.1 funding) from the State of California, starting in FY 2020.

2018-2022 CIP: The last phase of work on Alma Street (Rinconada Avenue to Palo Alto Avenue) is postponed until FY 2018 to incorporate additional transportation improvements that are currently in design.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	8,819,484	8,545,253	3,995,552	4,092,524	2,747,683	3,962,195	4,249,417	19,047,371	0	N/A
Revenue from Other Agencies	N/A	406,970	48,970	394,000	394,000	394,000	9,000	421,000	1,612,000	0	N/A
Revenue from the Federal Government	N/A	946,170	946,170	1,009,000	0	0	0	0	1,009,000	0	N/A
Revenue from the State of California	N/A	412,376	385,000	27,000	27,000	27,000	412,000	0	493,000	0	N/A
Transfer from SA/W Bayshore Traffic Impact Fee Fund	N/A	0	0	900,000	0	0	0	0	900,000	0	N/A
Transfer from Gas Tax Fund	N/A	1,300,000	1,685,376	1,300,000	2,470,000	2,470,000	2,470,000	2,470,000	11,180,000	0	N/A
Total	N/A	11,885,000	11,610,769	7,625,552	6,983,524	5,638,683	6,853,195	7,140,417	34,241,371	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	11,631,969	11,357,738	7,514,305	6,800,056	5,374,025	6,344,356	6,573,334	32,606,076	0	N/A
Design	N/A	253,031	253,031	111,247	183,468	264,658	508,839	567,083	1,635,295	0	N/A
Total	N/A	11,885,000	11,610,769	7,625,552	6,983,524	5,638,683	6,853,195	7,140,417	34,241,371	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

CAPITAL IMPROVEMENT FUND

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



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CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund

Category: Streets and Sidewalks

Project Location: Various

Managing Department: Public Works

IBRC Reference: Keep-up

Initial Project Start: Recurring

Initial Project Completion: Recurring

Project Number: PO-11001

Park and Oxford lane lines, February 2015

Thermoplastic Lane Marking and Striping

Description

This project provides funding for thermoplastic pavement markings on paved roadways to provide guidance and information to motorists, bicyclists, and pedestrians. By 2010, most pavement markings had been converted from paint to thermoplastic. While thermoplastic is a durable, long lasting pavement marking, most streets will require a second or third application of thermoplastic during the pavement's useful lifespan.

Justification

Upgrading all street painting to thermoplastic has improved roadway safety for motorists, pedestrians, and bicyclists as the reflectivity and durability of thermoplastic exceeds that of paint.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	136,731	63,250	154,287	82,665	97,533	119,283	124,398	578,166	0	N/A
Total	N/A	136,731	63,250	154,287	82,665	97,533	119,283	124,398	578,166	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	136,731	63,250	154,287	82,665	97,533	119,283	124,398	578,166	0	N/A
Total	N/A	136,731	63,250	154,287	82,665	97,533	119,283	124,398	578,166	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan**Primary Connection**

Element: Land Use and Community Design

Section: Public Streets and Public Spaces

Goal: L-9

Policy: L-9.10

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



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Traffic and Transportation



Fund: Capital Improvement Fund

Category: Traffic and Transportation

Project Location: Various

Managing Department: Planning and Community Environment

IBRC Reference: New

Initial Project Start: Recurring

Initial Project Completion: Recurring

Project Number: PL-04010

Bicycle and Pedestrian Safety Upgrades Rendering

Bicycle and Pedestrian Transportation Plan Implementation

Description

This project provides funding for the design and construction of bicycle boulevards, enhanced bikeways, shared-use paths, bicycle parking, and a citywide bicycle sharing system in accordance with the Palo Alto Bicycle and Pedestrian Transportation Plan, which was adopted by City Council in 2012.

Justification

Projects identified in the Palo Alto Bicycle and Pedestrian Transportation Plan, as well as bicycle parking facilities and bicycle/pedestrian project planning activities, will facilitate safer, traffic calmed biking routes and provide better commute alternatives.

Supplemental Information

The Neighborhood Traffic Safety and Bicycle Boulevards Project - Phase 1 is under construction and scheduled to be completed in late 2018. It includes seven miles of bicycle boulevards identified in the 2012 Palo Alto Bicycle and Pedestrian Transportation Plan. The Neighborhood Traffic Safety and Bicycle Boulevards Project - Phase 2 project will be ready for construction in Fiscal Year 2019.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	7,756,516	5,756,516	3,061,921	1,033,234	300,000	0	0	4,395,155	0	N/A
Construction	N/A	203,463	0	0	0	0	0	0	0	0	N/A
Revenue from Other Agencies	N/A	0	203,463	0	0	0	0	0	0	0	N/A
Transfer from Stanford University Medical Ctr Fund	N/A	5,200,000	5,200,000	1,200,000	1,200,000	0	0	0	2,400,000	0	N/A
Total	N/A	13,159,979	11,159,979	4,261,921	2,233,234	300,000	0	0	6,795,155	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	12,947,889	10,947,889	4,261,921	2,233,234	300,000	0	0	6,795,155	0	N/A
Design	N/A	212,090	212,090	0	0	0	0	0	0	0	N/A
Total	N/A	13,159,979	11,159,979	4,261,921	2,233,234	300,000	0	0	6,795,155	0	N/A

Operating Impact

This project is anticipated to impact operating expenses in the future. As these costs are quantified, adjustments will be brought forward in future budgets, as necessary.

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Sustainable Transportation

Goal: T-1

Policy: T-1.19

Program: T1.19.2

Relationship to Comprehensive Plan

Secondary Connection

Element: Transportation

Section: Streets

Goal: T-3

Policy: T-3-5

Program: T3.5.1

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Traffic and Transportation
Project Location: Charleston/Arastradero Corridor
Managing Department: Public Works
IBRC Reference: New
Initial Project Start: Spring 2013
Initial Project Completion: Summer 2016
Revised Project Start: Spring 2014
Revised Project Completion: Spring 2020
Project Number: PE-13011

Charleston-Arastradero, Arastradero at Clemo, January 2013

Charleston/Arastradero Corridor Project

Description

This project provides funding for the reconfiguration of the Charleston/Arastradero corridor including engineering design and construction of new landscaped median islands, bulb outs, enhanced bike lanes, new street trees, and lighting. During the design phase, opportunities for including "green infrastructure" features such as infiltration basins and porous hardscape surfaces will be explored. The conceptual design and California Environmental Quality Act (CEQA) review for the entire corridor was completed in September 2015 and National Environmental Protection Act (NEPA) was completed in October 2016. Final design for the corridor was completed in Fall 2017.

Justification

The project will result in enhanced travel safety, increased use of environmentally friendly travel alternatives, reduced motor vehicle congestion, and enhanced aesthetics on the Charleston-Arastradero Corridor. Construction will be addressed in phases due to grant funding deadlines starting with Arastradero Road (Georgia Avenue to Foothill Expressway) and Charleston Road (Middlefield Road to Alma Street). The last phase is Arastradero Road (Georgia Avenue to El Camino Real) and Charleston Road (El Camino Real to Alma Street and Middlefield Road to Fabian Way).

Supplemental Information

The Charleston/Arastradero Corridor project was adopted by City Council in January 2003, and included in the City Council Infrastructure Plan in 2014. City Council approved the permanent retention of the new lane configurations on Charleston in 2008 and on Arastradero in 2012.

Grant proceeds and funding from the State will be used to partially offset the costs of this project, including: a \$0.5 million Caltrans Safe Routes to School (SR2S) grant, awarded in 2012; a \$1.0 million Valley Transportation Authority - Vehicle Emissions Reductions Based at Schools (VERBS) grant, awarded in 2013; a \$0.1 CalRecycle grant for rubberized asphalt pavement, awarded in 2017; and \$1.2 million for Road Maintenance and Rehabilitation (S.B.1 funding) from the State of California.

The cost estimate for this project will likely need to be adjusted from what derived during the City Council Infrastructure Plan's development because older estimates were not escalated to the current year or to future years when construction would actually occur.

Significant Changes

2019-2023 CIP: Budget increased to reflect total project cost estimate of \$19.6 million. This project will be completed in three phases, and the first phase was awarded in Fiscal Year 2018.

2018-2022 CIP: This project is expected to be constructed in phases. The first phase of construction is anticipated to begin in November 2017.

2016-2020 CIP: The project completion date has been extended to reflect the full funding of the project's estimated cost.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	(653,062)	9,120,333	10,570,333	(2,315,986)	5,945,200	400,000	0	0	4,029,214	0	13,946,485
Revenue from Other Agencies	0	1,000,000	0	0	0	0	0	0	0	0	0
Revenue from the State of California	0	700,604	250,604	1,575,300	0	0	0	0	1,575,300	0	1,825,904
Transfer from Charleston/Arastradero Dev Impct Fund	835,000	12,000	12,000	0	0	0	0	0	0	0	847,000
Transfer from Gas Tax Fund	0	0	0	1,140,686	0	0	0	0	1,140,686	0	1,140,686
Transfer from Stanford University Medical Ctr Fund	1,550,000	0	0	0	0	0	0	0	0	0	1,550,000
Transfer From Storm Drainage Fund	0	330,000	330,000	0	0	0	0	0	0	0	330,000
Total	1,731,938	11,162,937	11,162,937	400,000	5,945,200	400,000	0	0	6,745,200	0	19,640,075

CAPITAL IMPROVEMENT FUND

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	4,748	10,242,545	10,917,831	400,000	5,945,200	400,000	0	0	6,745,200	0	17,667,779
Design	1,727,185	920,392	245,106	0	0	0	0	0	0	0	1,972,291
Total	1,731,933	11,162,937	11,162,937	400,000	5,945,200	400,000	0	0	6,745,200	0	19,640,070

Anticipated Operating Budget Needs

Fund	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
General Fund-Operating	0	70,545	72,136	73,775	75,463

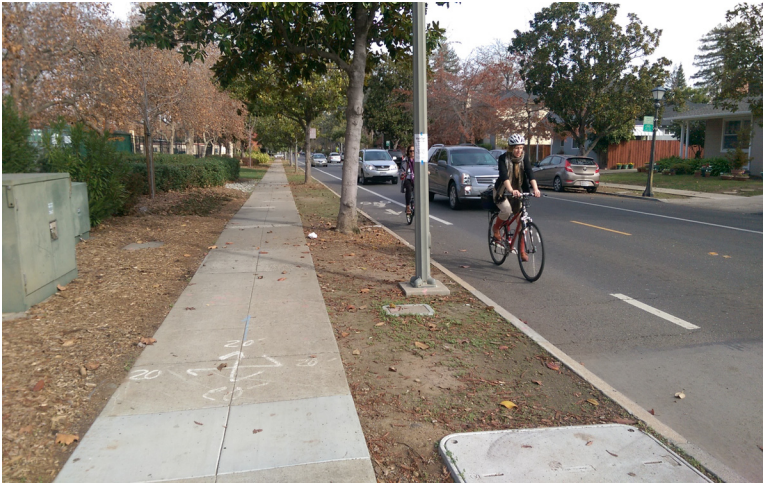
Operating Impact

This project is anticipated to impact operating expenses in the future. Landscaping and irrigation maintenance is estimated to increase by \$53,045 in FY 2020 and by 3% annually thereafter. Tree trimming maintenance is estimated to be \$17,500 per year.

Relationship to Comprehensive Plan Primary Connection Element: Transportation Section: Road Safety Goal: T-6 Policy: T-6.7	Relationship to Comprehensive Plan Secondary Connection Element: Transportation Section: Road Safety Goal: T-6 Policy: T-6.6 Program: T6.6.6	Potential Board/Commission Review: Architectural Review Board Planning and Transportation Commission
Environmental Impact Analysis: A Mitigated Negative Declaration was completed in 2004, with an addendum completed in September 2015 for CEQA.		



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Fund: Capital Improvement Fund
Category: Traffic and Transportation
Project Location: El Camino Real & Churchill Avenue
Managing Department: Planning and Community Environment
IBRC Reference: New
Initial Project Start: Fall 2013
Initial Project Completion: Fall 2015
Revised Project Start:
Revised Project Completion: Summer 2019
Project Number: PL-14000

Bicyclists on Churchill 2015

Churchill Avenue Enhanced Bikeway

Description

This project includes planning, design and construction of a shared-use path along the north side of Churchill Avenue between the existing shared-use path at Castelleja Avenue and the Stanford Perimeter Trail. It also includes intersection improvements at Churchill Avenue and El Camino Real, which will include a new dedicated westbound right-turn lane and an improved bicycle connection to the Bryant Street Bicycle Boulevard east of Alma Street.

Justification

This is a priority project within the Palo Alto Bicycle + Pedestrian Transportation Plan. Specifically, this project advances objective three, which develops a core network of shared paths, bikeways, and traffic-calmed streets that connect residential districts, schools, and parks.

Supplemental Information

In prior years, this project was funded only for design. This project is funded by Transportation Impact fees through transfer to the Capital Improvement Fund. Additional funding for this project is in PL-04010, Bicycle and Pedestrian Transportation Plan Implementation.

Significant Changes

Acquisition of necessary easements has been more time-consuming than was originally estimated. Project timeline has also been adjusted in light of project management staff departures and a focus on enhanced community engagement.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	204,767	129,961	(620,039)	750,000	0	0	0	0	750,000	0	334,728
Transfer from Traffic Impact Fee Fund	0	1,000,000	1,000,000	0	0	0	0	0	0	0	1,000,000
Total	204,767	1,129,961	379,961	750,000	0	0	0	0	750,000	0	1,334,728

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	198,127	1,129,961	379,961	750,000	0	0	0	0	750,000	0	1,328,088
Design	6,640	0	0	0	0	0	0	0	0	0	6,640
Total	204,767	1,129,961	379,961	750,000	0	0	0	0	750,000	0	1,334,728

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Road Safety

Goal: T-6

Policy: T-6.1

Relationship to Comprehensive Plan

Secondary Connection

Element: Transportation

Section: Sustainable Transportation

Goal: T-1

Policy: T-1.19

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**GARAGE ID PYLON W/ LEVEL DISPLAY
SIGN 48A OR 48B**

2

Fund: Capital Improvement Fund

Category: Traffic and Transportation

Project Location: Downtown

Managing Department: Planning and Community Environment

IBRC Reference: New

Initial Project Start: Summer 2015

Initial Project Completion: Summer 2018

Revised Project Start:

Revised Project Completion: Summer 2020

Project Number: PL-15002

Parking Revenue Collection Equipment

Downtown Automated Parking Guidance Systems, Access Controls & Revenue Collection Equip.

Description

This project addresses infrastructure and capital improvements for downtown parking facilities. This includes a facility management system, lane equipment, lane access controls, and pay-on-foot pay stations. This project includes design and installation of new downtown parking guidance systems, access controls and revenue collection equipment that will be coordinated with both the Downtown Parking Wayfinding project (PL-15004) and findings from the Downtown Parking Management Study, which were presented to the City Council early in 2017. This project also includes cameras in garages for patron security.

City Council has directed staff to proceed with a Single Space Detection with Individual Indicator Lights: This system provides the highest level of customer service, and track occupancy by space using ceiling mounted detection sensors in conjunction with LED lights mounted above each space that indicate type of space (available, occupied, permit, public, handicapped, valet, etc.).

Justification

This project is identified in both the City's Comprehensive Plan and the Transportation Nexus Study as a means to reduce congestion and air quality impacts resulting from motorists searching for vacant parking spaces.

Significant Changes

2019-2023 CIP: This project is scheduled to go out to bid in summer of 2018. Implementation will span Fiscal Years 2019 and 2020. The budget has been increased by \$0.4 million to cover the cost of security cameras in garages in Fiscal Year 2020.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	113,233	108,571	44,571	191,734	113,105	0	0	0	304,839	0	462,643
Transfer from University Ave. Parking Permit Fund	0	0	0	1,100,000	1,300,000	0	0	0	2,400,000	0	2,400,000
Total	113,233	108,571	44,571	1,291,734	1,413,105	0	0	0	2,704,839	0	2,862,643

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	108,571	44,571	1,291,734	1,413,105	0	0	0	2,704,839	0	2,749,410
Design	113,233	0	0	0	0	0	0	0	0	0	113,233
Total	113,233	108,571	44,571	1,291,734	1,413,105	0	0	0	2,704,839	0	2,862,643

Operating Impact

The ongoing operating costs for cameras is not know at this time; however, as these costs are quantified, adjustments will be brought forward in future budgets.

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Motor Vehicle and Bicycle Parking

Goal: T-5

Policy: T-5.2

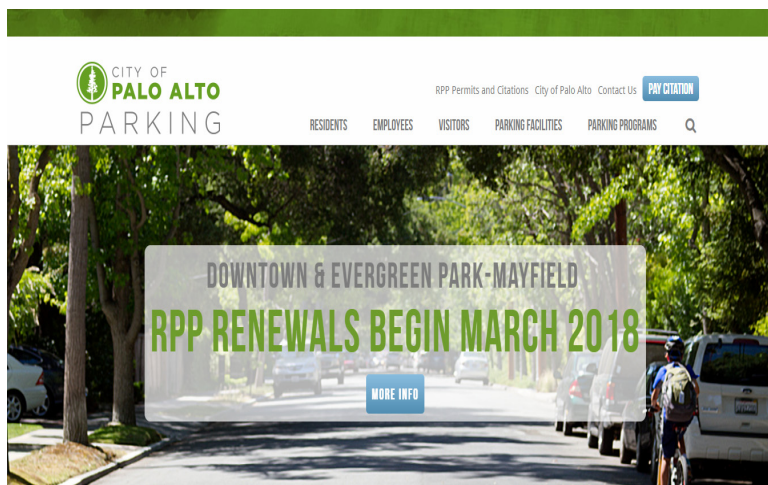
Program: T5.2.1

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to be eligible for an exemption from CEQA under Section 15302.



Fund: Capital Improvement Fund
Category: Traffic and Transportation
Project Location: Downtown

Managing Department: Planning and Community Environment

IBRC Reference: New

Initial Project Start: Summer 2016

Initial Project Completion: Winter 2017

Revised Project Start: Summer 2018

Revised Project Completion: Spring 2022

Project Number: PL-16002

Residential Parking Permit Website

Downtown Parking Management and System Implementation

Description

This project includes implementation and installation of equipment to implement the outcomes of the paid parking study for Downtown, including the Comprehensive Parking Permit and Citation System.

Justification

As part of the integrated strategy to address Downtown traffic and parking concerns, staff conducted a comprehensive study of parking management strategies, including paid parking for the Downtown core. The study included an evaluation of how to best use the City's existing parking supply and recommended comprehensive paid parking strategies in Downtown Palo Alto. \$140,000 programmed in FY 2020 is for license plate reader technology.

Supplemental Information

This project is funded proportionally by parking revenues from all parking funds. This may require a loan from the General Fund, to be repaid by the appropriate parking funds.

Significant Changes

2019-2023 CIP: Recent accomplishments include the completion of the Downtown Parking Management Plan and development of a finance and implementation plan. The bid for the Comprehensive Parking Permit and Citation System is expected to be released in Summer of 2018 with system implementation expected by September, 2018.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	22,970	22,970	116,122	12,181	2,102	10,508	0	140,913	0	163,883
Transfer from California Ave. Parking Permit Fund	0	0	0	138,000	0	0	0	0	138,000	0	138,000
Transfer from Residential Parking Fund	0	0	0	255,000	0	0	0	0	255,000	0	255,000
Transfer from University Ave. Parking Permit Fund	0	0	0	607,000	140,000	20,000	20,000	0	787,000	0	787,000
Total	0	22,970	22,970	1,116,122	152,181	22,102	30,508	0	1,320,913	0	1,343,883

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	22,970	22,970	1,116,122	152,181	22,102	30,508	0	1,320,913	0	1,343,883
Total	0	22,970	22,970	1,116,122	152,181	22,102	30,508	0	1,320,913	0	1,343,883

Relationship to Comprehensive Plan**Primary Connection**

Element: Transportation

Section: Motor Vehicle and Bicycle Parking

Goal: T-5

Policy: T-5.2

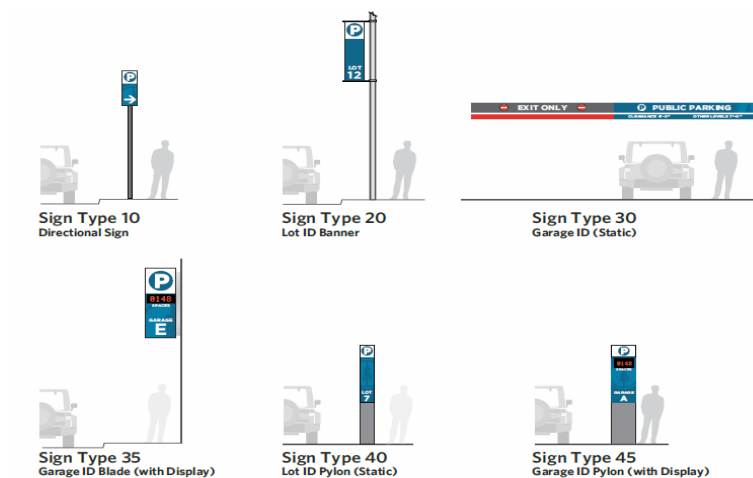
Program: T5.2.3

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to be eligible for an exemption from CEQA under Section 15302.



Fund: Capital Improvement Fund
Category: Traffic and Transportation
Project Location: Downtown

Managing Department: Planning and Community Environment

IBRC Reference: New

Initial Project Start: Summer 2015

Initial Project Completion: Spring 2017

Revised Project Start: Summer 2015

Revised Project Completion: Spring 2022

Project Number: PL-15004

Various Parking Signage Options

Downtown Parking Wayfinding

Description

This project includes design and installation of new downtown parking wayfinding signage that will incorporate a new parking brand for the City and replace the existing parking signage to improve parking visibility of parking in Downtown Palo Alto. This project will be implemented in coordination with the planning and design work associated with Downtown Parking Guidance Systems, Access Controls and Revenue Collection Equipment, PL-15002 project, which will include parking availability displays. The different types of signs to be installed as part of this project include:

Directional signs: direct customers toward parking facilities

Lot Identification Banners: identify a particular lot via a banner attached to an existing light pole

Garage Identification Signs: identify a particular garage via a sign mounted to the exterior of the garage

Pylons: visible/architectural markers that show parking facility information

Rules/regulation Signs: depicts hours, permit/hourly parking regulatory information

The combination of a visually appealing parking brand with an improved, comprehensive approach to wayfinding placement will help guide visitors, residents, and employees to find off-street parking more easily and the real-time occupancy will help to reduce congestion and circling by efficiently delineating where parking is available.

Justification

This project is identified in both the City's Comprehensive Plan and the Transportation Nexus Study as a means to reduce congestion and air quality impacts resulting from motorists searching for vacant parking spaces.

Supplemental Information

This project is funded by a transfer from the University Avenue Parking Permit Fund to the Capital Improvement Fund. This project is expected to be under construction by the time of the adoption of the Fiscal Year 2019 budget.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	677,561	677,561	26,919	0	0	357	0	16,552	0	168,959
Transfer from University Ave. Parking Permit Fund	74,846	61,325	61,325	280,015	16,305	16,576	22,524	0	346,144	0	1,007,469
Total	74,846	738,886	738,886	306,934	16,305	16,576	22,881	0	362,696	0	1,176,428

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	738,886	738,886	306,934	16,305	16,576	22,881	0	362,696	0	1,101,582
Design	74,846	0	0	0	0	0	0	0	0	0	74,846
Total	74,846	738,886	738,886	306,934	16,305	16,576	22,881	0	362,696	0	1,176,428

Operating Impact

Operating impacts are expected to be limited to general maintenance in the way of replacement of signs, as needed.

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Motor Vehicle and Bicycle Parking

Goal: T-5

Policy: T-5.2

Program: T5.2.1

Environmental Impact Analysis:

This project is expected to be eligible for an exemption from CEQA under Section 15301.

Potential Board/Commission Review:

Planning and Transportation Commission



Fund: Capital Improvement Fund
Category: Traffic and Transportation
Project Location: El Camino Real between Stanford and Sheridan Avenues
Managing Department: Planning and Community Environment
IBRC Reference: New
Initial Project Start: Fall 2018
Initial Project Completion: Summer 2020
Revised Project Start:
Revised Project Completion: Summer 2021
Project Number: PL-18000

El Camino Real and California Avenue Intersection

El Camino Real Pedestrian Safety and Streetscape Project

Description

The El Camino Real Pedestrian Safety and Streetscape Project will install street improvements focused on pedestrian safety at controlled and uncontrolled crosswalks, enhanced bus operations at two existing major transit stops, and new urban design amenities between Stanford Avenue and Sheridan Avenue. The project includes: curb extensions; median refuges; two pedestrian hybrid beacons at new and existing uncontrolled crosswalks; median shade trees; and pedestrian scale lighting.

Justification

California Avenue and this segment of El Camino Real has a documented history of reported collisions for all modes, particularly the most vulnerable roadway user, pedestrians. This is documented in the collision history as well as several plans and studies, including the City of Palo Alto Bicycle and Pedestrian Transportation Plan (BPTP, 2012), the Grand Boulevard Multimodal Transportation Corridor Plan (2010), and the El Camino Real Master Planning Study (2007). The Palo Alto PBTP reported that some of the highest frequency of active mode collisions in the city occurred on the project segment, highlighting the California Avenue/El Camino Real intersection as one of the top five locations for reported pedestrian collisions in Palo Alto. In addition to those documented safety concerns and reported collisions, the design of El Camino Real can be further enhanced to improve pedestrian safety. With its multi-lane cross-section, El Camino Real carries high volumes of traffic as a primary arterial connection between Peninsula cities in Santa Clara and San Mateo Counties, but it also has some of the highest levels of observed pedestrian

activity along the Palo Alto segment of the corridor - particularly at the El Camino Real/Stanford Avenue and El Camino Real/California Avenue intersections, as documented in the El Camino Real Master Planning Study (2007). Despite the high volumes of pedestrians, the high volumes of autos and general auto-orientation of the roadway design is uninviting and not conducive to pedestrian travel. The long crossing distances and infrequency of crossing opportunities in particular pose safety concerns on the corridor, which can be observed in the reported collision data.

Supplemental Information

100% of construction of this project will be funded by an OBAG 2 grant through VTA.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	83,811	83,811	179,975	143,338	850,596	0	0	1,173,909	0	1,257,720
Revenue from Other Agencies	0	0	0	0	1,647,500	3,007,500	0	0	4,655,000	0	4,655,000
Total	0	83,811	83,811	179,975	1,790,838	3,858,096	0	0	5,828,909	0	5,912,720

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	1,647,500	3,858,096	0	0	5,505,596	0	5,505,596
Design	0	83,811	83,811	179,975	143,338	0	0	0	323,313	0	407,124
Total	0	83,811	83,811	179,975	1,790,838	3,858,096	0	0	5,828,909	0	5,912,720

Operating Impact

Once construction is complete, operating impacts are estimated to be approximately \$93,100.

Relationship to Comprehensive Plan Primary Connection Element: Transportation Section: Road Safety Goal: T-6 Policy: T-6.1 Program: T6.1.4	Relationship to Comprehensive Plan Secondary Connection Element: Transportation Section: Streets Goal: T-3 Policy: T-3-6	Potential Board/Commission Review: Architectural Review Board Planning and Transportation Commission
Environmental Impact Analysis: This project is expected to have possible exemption from CEQA		



Fund: Capital Improvement Fund
Category: Traffic and Transportation
Project Location: Embarcadero Road & El Camino Real
Managing Department: Planning and Community Environment
IBRC Reference: New
Initial Project Start: Summer 2015
Initial Project Completion: Spring 2019
Revised Project Start:
Revised Project Completion:
Project Number: PL-15001

El Camino Real and Embarcadero Rd Intersection Rendering

Embarcadero Rd at El Camino Improvements (formerly Embarcadero Rd Corridor Improvements)

Description

This project includes planning, design and construction of bicycle, pedestrian and traffic circulation improvements along Embarcadero Road between Bryant Street and El Camino Real. The concept approved by City Council includes Class IV raised separated bikeways between the Caltrain Path, Bryant Street Bicycle Boulevard and Stanford Perimeter Trail, a protected intersection for bicyclists and pedestrians at El Camino Real, intersection realignments at High Street, Emerson Street and Kingsley Avenue, new landscaping, transit amenities, and pedestrian safety enhancements.

Justification

This project provides mobility and safety improvements in response to resident and City Council concerns regarding congestion along Embarcadero Road.

Supplemental Information

This project was bid out for construction in early 2018. Construction is scheduled to begin in Fiscal Year 2019.

Significant Changes

2019-2023 CIP: Budget increased by \$1.2 million due to estimated increases in construction costs.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	555,062	4,988,512	508,512	5,709,966	0	0	0	0	5,709,966	0	6,773,540
Other	102,151	0	0	0	0	0	0	0	0	0	102,151
Total	657,213	4,988,512	508,512	5,709,966	0	0	0	0	5,709,966	0	6,875,691

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	384,068	4,834,029	354,029	5,709,966	0	0	0	0	5,709,966	0	6,448,063
Design	273,144	154,483	154,483	0	0	0	0	0	0	0	427,627
Total	657,212	4,988,512	508,512	5,709,966	0	0	0	0	5,709,966	0	6,875,690

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation
Section: Road Safety
Goal: T-6
Policy: T-6.6

Relationship to Comprehensive Plan

Secondary Connection

Element: Transportation
Section: Road Safety
Goal: T-6
Policy: T-6.1
Program: T6.1.1

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Capital Improvement Fund
Category: Traffic and Transportation
Project Location: Various
Managing Department: Planning and Community Environment
IBRC Reference: New
Initial Project Start: Fall 2018
Initial Project Completion: Spring 2019
Revised Project Start:
Revised Project Completion:
Project Number: PL-19000

Fire Engine #6

Emergency Vehicle Traffic Signal Preemption System Pilot

Description

This project provides funding for the purchase and implementation of an emergency vehicle preemption system pilot project. The system will integrate with the City's current traffic signal management system and with the City's computer-aided emergency response dispatch system to provide safer and quicker response times for emergency vehicles. The new system will be able to adjust intersections along the route of an emergency vehicle, using priority signal operation well in advance of the arrival of the emergency vehicle. By the time the emergency vehicle reaches each intersection, it would potentially be relieved of traffic, allowing for safe and rapid progress.

Justification

This pilot project will test the effectiveness of the system to improve and expand the coordination between emergency response vehicles and traffic signal operations. Currently, a very limited number of intersections have the hardware to pre-empt signal operations to provide priority to emergency response vehicles. This pilot will provide central management and dispatch-based emergency vehicle pre-emption for 25 intersections throughout the City, to achieve faster response times and improve emergency services.

Currently, the City uses a different traffic signal priority system at a very limited number of intersections. The cost per intersection is approximately the same, presuming the existing signal infrastructure (conduit, signal pole, and cabinet conditions) is in compatible condition, but to

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install it at more locations could require significant modifications to signals to retrofit and install the system.

Supplemental Information

This pilot project will provide pre-emption services at 25 intersections throughout the City to test the effectiveness on maintaining or improving emergency vehicle response times. Based on the effectiveness of the pilot, this project could be expanded to more intersections throughout the City in future Capital Budgets.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	585,925	0	0	0	0	585,925	0	585,925
Transfer from Stanford University Medical Ctr Fund	0	0	0	11,200	0	0	0	0	11,200	0	11,200
Total	0	0	0	597,125	0	0	0	0	597,125	0	597,125

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	497,125	0	0	0	0	497,125	0	497,125
Design	0	0	0	100,000	0	0	0	0	100,000	0	100,000
Total	0	0	0	597,125	0	0	0	0	597,125	0	597,125

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation
Section: Road Safety
Goal: T-6
Policy: T-6.6
Program: T6.6.1

Environmental Impact Analysis:

Not Applicable

Relationship to Comprehensive Plan

Secondary Connection

Element: Transportation
Section: Road Safety
Goal: T-6
Policy: T-6.7

Potential Board/Commission Review:

Planning and Transportation Commission



Fund: Capital Improvement Fund
Category: Traffic and Transportation
Project Location: Hwy 101 corridor north of the San Antonio Road interchange by Adobe Creek
Managing Department: Public Works
IBRC Reference: New
Initial Project Start: Summer 2012
Initial Project Completion: Summer 2018
Revised Project Start: Summer 2016
Revised Project Completion: Spring 2020
Project Number: PE-11011

Bike path along E. Bayshore, Feb. 2015

Highway 101 Pedestrian/Bicycle Overpass Project

Description

This project provides funding for a new pedestrian/bicycle bridge across Highway 101 at Adobe Creek.

Justification

The Highway 101 Pedestrian/Bicycle Overpass project is a priority project in the City's Bicycle & Pedestrian Transportation Plan 2012, providing safe, year-round access across Highway 101 in South Palo Alto to the Baylands and regional employment centers.

Supplemental Information

The Highway 101 Pedestrian/Bicycle Overpass project is included in the Council Infrastructure Plan. The project will replace the existing seasonal Benjamin Lefkowitz Underpass. A Santa Clara County - Recreation Trails Program grant, awarded to the City in November 2012, will provide \$4.0 million for the project. An additional \$4.4 million will be provided by a grant from One Bay Area Grant (OBAG) Program Cycle 2, approved in March, 2018. A contribution of \$1 million from Google is also planned. Project design is anticipated to be complete by Fall 2018 and construction is anticipated from early 2019 through Spring 2020.

Significant Changes

2019-2023 CIP: Budget increased to reflect total project cost estimate of \$18.5 million.

2018-2022 CIP: The project budget has been increased by \$1.0 million to include a contribution from Google toward the cost of the bridge. Additional design funding is budgeted in FY2018.

2017-2021 CIP: The estimate for the project included in the prior budget document was \$10.0 million. The City Council increased the total project budget to \$13.0 million to account for construction cost escalation. The total project budget of \$13.0 million includes a feasibility study, conceptual design, design competition, environmental assessment, and design costs. The \$13.0 million figure does not include City staff time to support design and construction of the project

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	2,687,799	1,505,391	1,505,391	6,733,000	(1,780,000)	0	0	0	4,953,000	0	9,146,190
Revenue from Other Agencies	0	333,000	333,000	7,017,000	2,000,000	0	0	0	9,017,000	0	9,350,000
Total	2,687,799	1,838,391	1,838,391	13,750,000	220,000	0	0	0	13,970,000	0	18,496,190

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	130,107	331,125	331,125	13,605,617	220,000	0	0	0	13,825,617	0	14,286,849
Design	2,557,690	1,507,266	1,507,266	144,382	0	0	0	0	144,382	0	4,209,338
Total	2,687,797	1,838,391	1,838,391	13,749,999	220,000	0	0	0	13,969,999	0	18,496,187

Operating Impact

This project is anticipated to impact operating expenses in the future. As these costs are quantified, adjustments will be brought forward in future budgets, as necessary.

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Sustainable Transportation

Goal: T-1

Policy: T-1.19

Program: T1.19.2

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation

Commission

Environmental Impact Analysis:

This project will require CEQA and NEPA environmental assessments.



Fund: Capital Improvement Fund
Category: Traffic and Transportation
Project Location: Quarry Road between El Camino Real and Welch Road
Managing Department: Planning and Community Environment
IBRC Reference: Catch-up
Initial Project Start: Winter 2016
Initial Project Completion: Spring 2017
Revised Project Start:
Revised Project Completion: Fall 2021
Project Number: PL-16000

Bicycle/Pedestrian Pathway at El Camino Real and Quarry Rd Intersection

Quarry Road Improvements and Transit Center Access

Description

This project includes planning, design and construction of bicycle and pedestrian improvements along Quarry Road between El Camino Real and Welch Road, including, but not limited to, upgraded bicycle lanes and crosswalks, innovative intersection treatments for bicyclists, and improved access to transit stops. The temporary bicycle and pedestrian pathway between the Palo Alto Transit Center and the intersection of El Camino Real and Quarry Road was completed in Summer 2017. With completion of this phase, the project now includes planning, design, and construction of a new bicycle, pedestrian, and transitway between the Palo Alto Transit Center bus depot and the intersection of Quarry Road and El Camino Real.

Justification

The August 2011 Development Agreement between Stanford Hospitals and Clinics, the Lucile Salter Packard Children's Hospital at Stanford, the Board of Trustees of the Leland Stanford Junior University and the City of Palo Alto obligates the City to design and construct enhancements of various pedestrian and bicycle connections between the Palo Alto Intermodal Transit Center and the Stanford University Medical Center Campus (SUMC). Stanford provided funds for these projects. New to this project is a transit improvement element. The Comprehensive Plan Update 2030 identified the need for a transit, bicycle, and pedestrian linkage between the Palo Alto Transit Center bus depot and the Quarry Road and El Camino Real intersection to improve bus transit connectivity and service efficiency. As this project would directly benefit transit service between the Transit Center and the Medical Center campus, it would draw from

the Stanford University Medical Center Development Agreement Intermodal Transit budget. Implementation is timed to support expanded operations of the hospital and the completion of Caltrain electrification in 2022.

Supplemental Information

This project is funded by the Quarry Road Improvements and Intermodal Transit funds from the Stanford University Medical Center Development Agreement via transfer to the Capital Improvement Fund. Design and construction of the temporary bicycle and pedestrian Transit Center pathway was completed in Summer 2017. The pathway is accented with seating, decorative lighting, and new landscaping. Final design was completed for bicycle and pedestrian improvements along the Quarry Road corridor between El Camino Real and Welch Road.

Significant Changes

2019-2023 CIP: Changes include planning, design, and construction for a new bicycle, pedestrian, and transitway between El Camino Real and Quarry Road and the Palo Alto Transit Center. The location, project characteristics, and funding source are consistent with the portion of the project already completed. The construction of the Quarry Road improvements (signing and striping along Quarry Road) has been delayed due to underground (trenching) electrical work needed to be done by Stanford. The project delay will most likely increase the cost to complete construction due to increasing construction costs.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	(449,616)	567,031	457,031	110,000	17,401	156,932	0	0	284,333	0	291,748
Transfer from Stanford University Medical Ctr Fund	892,004	550,000	550,000	0	200,000	1,493,513	0	0	1,693,513	0	3,135,517
Total	442,388	1,117,031	1,007,031	110,000	217,401	1,650,445	0	0	1,977,846	0	3,427,265

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	359,076	715,185	605,185	110,000	0	156,932	0	0	266,932	0	1,231,193
Design	83,310	401,846	401,846	0	217,401	1,493,513	0	0	1,710,914	0	2,196,070
Total	442,386	1,117,031	1,007,031	110,000	217,401	1,650,445	0	0	1,977,846	0	3,427,263

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Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Road Safety

Goal: T-3

Policy: T-3-10

Program: T3.10.4

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Environmental Impact Analysis:

May Require Environmental Review



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Fund: Capital Improvement Fund

Category: Traffic and Transportation

Project Location: Various

Managing Department: Planning and Community Environment

IBRC Reference: New

Initial Project Start: Summer 2016

Initial Project Completion: Summer 2018

Revised Project Start:

Revised Project Completion: Summer 2023

Project Number: PL-17001

University Avenue CalTrain Station

Railroad Grade Separation and Safety Improvements

Description

This project will advance the railroad grade crossing circulation study and context sensitive solutions study envisioned by the City Council. It will also fund the preparation of Project Study Report and environmental analysis that will be required for the City to realize its goals of advancing grade separations.

Justification

This project is essential to support the City Council Rail Committee's work and coordinate the requested circulation study, community engagement efforts, and subsequent tasks needed to advance the City's goal of grade separating railroad crossings in Palo Alto.

Supplemental Information

Recent accomplishments include:

- Context sensitive solutions alternatives analysis process underway
- Design of Churchill Avenue grade crossing safety improvements underway

Significant Changes

2019-2023 CIP: The City has received a reimbursement grant from Caltrans for safety improvements at the railroad crossing at Alma Street and Churchill Avenue, an intersection with Palo Alto High School located in the northwest quadrant and a bicycle lane through the crossing for eastbound traffic. In addition, \$1.0 million in annual funding from the VTA Measure B has been programmed for this project

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	315,878	1,485,915	1,485,915	116,122	377,161	105,076	525,395	678,311	1,802,065	0	3,603,858
Revenue from Other Agencies	0	0	0	1,000,000	4,335,000	1,000,000	1,000,000	1,000,000	8,335,000	0	8,335,000
Total	315,878	1,485,915	1,485,915	1,116,122	4,712,161	1,105,076	1,525,395	1,678,311	10,137,065	0	11,938,858

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	931,013	934,000	1,078,595	4,712,161	1,105,076	1,525,395	1,678,311	10,099,538	0	11,033,538
Design	315,878	554,902	551,915	37,527	0	0	0	0	37,527	0	905,320
Total	315,878	1,485,915	1,485,915	1,116,122	4,712,161	1,105,076	1,525,395	1,678,311	10,137,065	0	11,938,858

Operating Impact

Operating impacts are estimated at 2% of actual construction costs.

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Streets

Goal: T-3

Policy: T-3-15

Program: T3.15.1

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation

Commission

Environmental Impact Analysis:

This project includes the completion of the necessary environmental analysis.

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Fund: Capital Improvement Fund

Category: Traffic and Transportation

Project Location: Various

Managing Department: Planning and Community Environment

IBRC Reference: New

Initial Project Start: Summer 2015

Initial Project Completion: Spring 2016

Revised Project Start:

Revised Project Completion: Fall 2019

Project Number: PL-15003

Southgate Parking District

Residential Preferential Parking

Description

In response to increasing concern that non-resident parking in residential neighborhoods was negatively impacting the quality of life, City Council approved a citywide Residential Preferential Parking (RPP) ordinance to establish uniform procedures to implement RPP districts. This project will fund the introduction of additional RPP programs throughout the City, through the process outlined in the RPP ordinance.

Justification

Implementing RPP is a parking management strategy; it regulates parking where previously parking has been unregulated. Parking management strategies are critical to maximizing the use of existing parking supply and prioritizing the “right space for the right use” concept; RPP prioritizes parking on residential streets for residents. Implementation of an RPP program is consistent with the City’s three-pronged approach aimed at addressing traffic and parking demand, and is also consistent with Comprehensive Plan goals.

Supplemental Information

A recent accomplishment of this project was the implementation of the Southgate Residential Preferred Parking (RPP) Program.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	450,631	440,312	386,312	165,612	0	0	0	0	165,612	0	1,002,555
Transfer from General Fund	83,656	0	0	0	0	0	0	0	0	0	83,656
Transfer from Refuse Fund	15,810	0	0	0	0	0	0	0	0	0	15,810
Total	550,097	440,312	386,312	165,612	0	0	0	0	165,612	0	1,102,021

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	549,575	440,312	386,312	165,612	0	0	0	0	165,612	0	1,101,499
Design	522	0	0	0	0	0	0	0	0	0	522
Total	550,097	440,312	386,312	165,612	0	0	0	0	165,612	0	1,102,021

Operating Impact

The Downtown RPP, and other City parking programs, are expected to have operating impacts to maintain the programs. The amounts of impact are not yet quantified and depend on the programs initiated.

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Motor Vehicle and Bicycle Parking

Goal: T-5

Policy: T-5.1

Program: T5.11.1

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to be eligible for an exemption from CEQA under Section 15301.

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Traffic and Transportation
Project Location: Streets on Suggested Walk and Roll Routes for PAUSD schools
Managing Department: Planning and Community Environment
IBRC Reference: Keep-up
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: PL-00026

Bicycle Safety Class

Safe Routes To School

Description

This project provides funding for the City's Safe Routes to Schools program, including school commute planning, encouragement activities, and capital improvements along local and collector streets that may be impacted by school commute activities. Typical capital improvements include traffic calming devices, enhanced crosswalks, and improved signage along suggested routes to school. In Fiscal Year 2019, traffic calming projects from prior years will continue and traffic studies will be pursued for locations in need of traffic calming and other safety counter-measures.

Justification

In collaboration with the Palo Alto Unified School District and Parent Teacher Associations, the City is leading the design and construction of capital improvements for suggested routes to school, helping to reduce risks to students and encouraging more families to use alternatives to driving. The budget reflects the award of a grant from the Santa Clara Valley Transportation Authority for enhanced signage, striping and buffers on East Meadow Drive from Alma to Fabian Way, on Fabian Way from East Meadow Drive to East Charleston Road, and the widening and repaving of the Waverly Bike Path between East Meadow Drive and Charleston Road.

Supplemental Information

The City was awarded a Vehicle Emissions Reductions Based at Schools (VERBS) grant of \$0.9 million for the Meadow-Fabian protected bikeway. The local match is \$0.2 million. Both amounts are included in the 2019-2023 CIP, and construction is scheduled for Fiscal Years 2020 and 2021.

CAPITAL IMPROVEMENT FUND

A few of the recent accomplishments of this project include:

- Bicycle safety improvements at Donald Drive and Arastradero Road
- Implementation of permanent bicycle and pedestrian improvements at Coleridge Avenue and Cowper Street
- Pedestrian safety improvements at Coleridge Avenue and Waverley Street
- Addressed loading and unloading issues at the Keys School

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	479,298	358,298	149,354	48,694	97,486	105,928	126,572	528,034	0	N/A
Revenue from Other Agencies	N/A	0	0	0	459,677	459,677	0	0	919,354	0	N/A
Transfer from Gas Tax Fund	N/A	100,000	100,000	100,000	100,000	100,000	100,000	100,000	500,000	0	N/A
Total	N/A	579,298	458,298	249,354	608,371	657,163	205,928	226,572	1,947,388	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	541,273	420,273	199,354	573,371	622,163	170,928	191,572	1,757,388	0	N/A
Design	N/A	38,025	38,025	50,000	35,000	35,000	35,000	35,000	190,000	0	N/A
Total	N/A	579,298	458,298	249,354	608,371	657,163	205,928	226,572	1,947,388	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan Primary Connection Element: Transportation Section: Road Safety Goal: T-6 Policy: T-6.4 Program: T6.4.2 Environmental Impact Analysis: This project is expected to have a possible exemption from CEQA under Section 15301.	Relationship to Comprehensive Plan Secondary Connection Element: Transportation Section: Sustainable Transportation Goal: T-1 Policy: T-1.16	Potential Board/Commission Review: Planning and Transportation Commission
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Fund: Capital Improvement Fund

Category: Traffic and Transportation

Project Location: Various

Managing Department: Planning and Community Environment

IBRC Reference: Keep-up

Initial Project Start: Recurring

Initial Project Completion: Recurring

Project Number: PL-05030

Traffic Signal and Camera on Quarry Rd

Traffic Signal and Intelligent Transportation Systems

Description

This project provides funding for the design and construction of traffic signals, traffic signal communications networks, video surveillance projects for transportation use, and maintenance of the City's traffic signal central system. The project includes the replacement of traffic signal controllers/cabinets, video detection systems, and other field equipment.

Justification

Traffic signal upgrades are essential in maintaining traffic safety and improving roadway operations including the reduction of roadway congestion with traffic signal retiming projects. To accomplish this, there is a need to add new traffic signals at locations throughout the city. This project replaces or adds traffic signal controller inventory in the field with new controllers and expands the current central management system to allow for communications to all signalized intersections. The new controllers enable additional traffic signal timing strategies and improve the reliability of the City's traffic signals. A new signal will be added at Hamilton and Waverly due to the planned construction of a new downtown garage.

Supplemental Information

A few of the recent accomplishments of this project include:

- New traffic signal at Middlefield Road and Embarcadero Road
- New pedestrian crossing signals at Middlefield Road and Addison Avenue

CAPITAL IMPROVEMENT FUND

- Upgraded 17 speed feedback signs
- Upgraded 1 crosswalk location with new rectangular rapid flashing beacon system
- Added traffic signal video detection devices at three intersections

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	456,043	256,043	381,744	(3,985)	73,553	365,150	203,493	1,019,955	0	N/A
Revenue from Other Agencies	N/A	0	0	400,000	300,000	300,000	300,000	300,000	1,600,000	0	N/A
Transfer from Traffic Impact Fee Fund	N/A	378,361	378,361	506,475	383,362	400,000	395,000	0	1,684,837	0	N/A
Total	N/A	834,404	634,404	1,288,219	679,377	773,553	1,060,150	503,493	4,304,792	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	780,549	580,549	1,258,219	649,377	773,553	1,060,150	503,493	4,244,792	0	N/A
Design	N/A	53,855	53,855	30,000	30,000	0	0	0	60,000	0	N/A
Total	N/A	834,404	634,404	1,288,219	679,377	773,553	1,060,150	503,493	4,304,792	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan Primary Connection Element: Transportation Section: Traffic Delay and Congestion Goal: T-2 Policy: T-2.1 Program: T2.1.1 Environmental Impact Analysis: This project is expected to be eligible for an exemption from CEQA under Section 15302.	Relationship to Comprehensive Plan Secondary Connection Element: Transportation Section: Streets Goal: T-3 Policy: T-3-6	Potential Board/Commission Review: Planning and Transportation Commission
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Fund: Capital Improvement Fund
Category: Traffic and Transportation
Project Location: Various
Managing Department: Planning and Community Environment
IBRC Reference: Keep-up
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: PL-12000

Improved Intersection Rendering

Transportation and Parking Improvements

Description

This project provides funding for the implementation of miscellaneous neighborhood traffic calming improvements including neighborhood traffic studies and parking improvements. This project also funds the development of grant proposals used to procure funding for future projects.

Justification

Traffic calming is identified as a high priority in the adopted Transportation Strategic Plan. Traffic studies and miscellaneous traffic calming improvements help to improve the quality of life for residents and visitors.

Supplemental Information

A few of the recent accomplishments of this project include:

- Signing and striping improvements along Middlefield Road between Forest Avenue and Lowell Avenue
- Middlefield Road North Traffic Safety Pilot Project implementation and monitoring
- Addressed dozens of Palo Alto 311 service requests submitted by constituents
- Bicycle safety improvements at Park Boulevard and El Camino Real

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	955,748	955,748	251,127	244,576	331,523	457,619	503,493	1,788,338	0	N/A
Total	N/A	955,748	955,748	251,127	244,576	331,523	457,619	503,493	1,788,338	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	785,748	785,748	176,127	169,576	331,523	457,619	503,493	1,638,338	0	N/A
Design	N/A	170,000	170,000	75,000	75,000	0	0	0	150,000	0	N/A
Total	N/A	955,748	955,748	251,127	244,576	331,523	457,619	503,493	1,788,338	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Streets

Goal: T-4

Policy: T-4.2

Program: T4.2.1

Relationship to Comprehensive Plan

Secondary Connection

Element: Transportation

Section: Road Safety

Goal: T-6

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to be eligible for an exemption from CEQA under Section 15301.



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Unallocated Salaries and Benefits

CAPITAL IMPROVEMENT FUND



Fund: Capital Improvement Fund
Category: Unallocated Salaries and Benefits
Project Location: N/A
Managing Department: Administrative Services
IBRC Reference: N/A
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: AS-10000

Capital Management Team

Salaries and Benefits - Capital Improvement Fund CIP Projects

Description

This project provides funding for the estimated salaries and benefit costs of City staff assigned to manage the General Fund Capital Improvement program.

Justification

Salaries and benefits costs of City staff assigned to manage CIP projects are an associated costs in the completion of CIP projects. As such, these costs are capitalized and are added to the total costs of a project.

Supplemental Information

Salaries and benefits have been included in CIP projects where appropriate and possible, in all fiscal years. The amounts included in this project represent salaries and benefits expense not associated with any particular project (for example, administration and oversight of the CIP process).

As part of the annual year-end process, the annually incurred amount will be allocated to all projects in the Capital Improvement Fund, on a proportional basis. At the end of each fiscal year, any unused balance will be returned to the Infrastructure Reserve.

Significant Changes

2019-2023 CIP: Salary and benefit expenses have been allocated to capital projects in all years of the CIP. In prior years, costs were allocated only in the first year of the CIP.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	2,239,196	2,239,196	379,529	407,354	426,667	449,392	468,128	2,131,070	0	N/A
Total	N/A	2,239,196	2,239,196	379,529	407,354	426,667	449,392	468,128	2,131,070	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	N/A	2,239,196	2,239,196	379,529	407,354	426,667	449,392	468,128	2,131,070	0	N/A
Total	N/A	2,239,196	2,239,196	379,529	407,354	426,667	449,392	468,128	2,131,070	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Environmental Impact Analysis:

N/A



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CUBBERLEY PROPERTY INFRASTRUCTURE FUND

Overview

The Cubberley Property Infrastructure Fund accounts for expenditures related to the maintenance and renovation of the Cubberley Community Center property which was formerly Cubberley High School from 1955 to 1979. Due to budget constraints resulting from the passage of Proposition 13 and declining enrollment, the Palo Alto Unified School District (PAUSD) was forced to close and sell school properties, including Terman Middle School, which the City of Palo Alto acquired, while PAUSD retained ownership of the Cubberley site. In 1989, the City and PAUSD entered into a lease agreement, with the City providing annual revenue to PAUSD in exchange for 1) a lease of the 35-acre Cubberley site; 2) a Covenant Not to Develop for five other neighborhood school sites; and 3) an agreement that PAUSD provide space for extended day care at each of the eleven remaining elementary school sites.

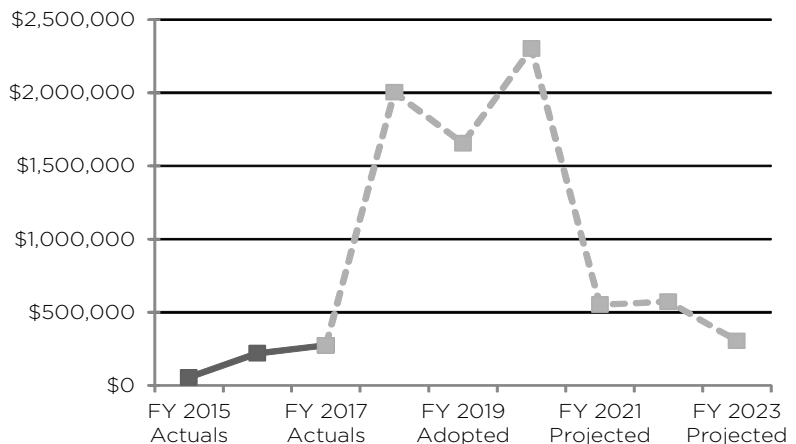
In 2001, the City relinquished ownership of the Terman site in exchange for ownership of eight acres of the Cubberley site. After several lease extensions and amendments in the years following, a restructured lease agreement was finalized in 2014. As part of the lease agreement the previous Covenant Not to Develop clause which required the City to transfer \$1.86 million to the school district was eliminated and the funds were dedicated towards repairing, renovating and/or improving the Cubberley site, which is jointly owned by the City and PAUSD.

The budget for the Cubberley Property Infrastructure Fund is broken into two separate categories: Buildings and Facilities, and Parks and Open Space. Additional categories may be established in future years once needs are identified through the master plan process.

Buildings and Facilities

The Buildings and Facilities category accounts for the budget projects to maintain the facilities on the Cubberley Community Center campus.

Cubberley Fund Capital Expenditures



Infrastructure Inventory

CLASSIFICATION	QUANTITY
City-owned acres	8
PAUSD-owned acres	27
Total square footage of buildings	175,540 (94,402 City-owned)
Parking spaces	750 (130 City-owned)
Artist studios	23
Dance studios	3
Schools	2
Childcare facilities	2
Nonprofit community organizations	4

Recent Accomplishments

- Continued the joint City of Palo Alto and Palo Alto Unified School District development of the scope of work for an upcoming solicitation of Master Plan consultant assistance, anticipated to be awarded in calendar year 2018
- Completion of roof replacements for the Auditorium and Wing-J
- Modernized the building management system in Wing-P to meet energy efficiency goals

2019-2023 Capital Improvement Program

For the 2019-2023 Capital Improvement Program, \$3.1 million is budgeted, with \$1.2 million allocated in Fiscal Year 2019 for four projects.

Recurring Projects

- Cubberley Roofing Replacements project (Fiscal Year 2019: \$0.5 million; 5-year CIP: \$2.4 million)
- Cubberley Repairs (Fiscal Year 2019 and 5-year CIP: \$0.3 million)

Non-Recurring Projects

- Cubberley Building Management Systems (Fiscal Year 2019 and 5-year CIP: \$0.4 million)
- Cubberley Community Center Master Plan (Fiscal Year 2019 and 5-year CIP: \$0.1 million)

Parks and Open Space

The Parks and Open Space category accounts for projects that maintain Cubberley outdoor space and facilities improvements.

Recent Accomplishments

- Began design of the field restroom, which is anticipated to be installed in Fiscal Year 2019

CUBBERLEY PROPERTY INFRASTRUCTURE FUND

2019-2023 Capital Improvement Program

For the 2019-2023 Capital Improvement Program, \$2.3 million is budgeted, with \$0.4 million allocated in Fiscal Year 2019 for two projects.

Non-Recurring Projects

- Cubberley Field Restrooms (Fiscal Year 2019 and 5-year CIP: \$0.4 million)
- Cubberley Track and Field (Fiscal Year 2019: \$0.02 million; 5-year CIP: \$1.8 million)

Summary of Capital Activity

CUBBERLEY PROPERTY INFRASTRUCTURE FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Source of Funds									
Transfers from the General Fund									
	General Fund Annual Capital Transfer	1,864,248	1,864,248	1,864,248	1,864,248	1,864,248	1,864,248	1,864,248	9,321,240
	Total Transfers from the General Fund	1,864,248	1,864,248	1,864,248	1,864,248	1,864,248	1,864,248	1,864,248	9,321,240
	Total Sources	1,864,248	1,864,248	1,864,248	1,864,248	1,864,248	1,864,248	1,864,248	9,321,240
Use of Funds									
Buildings and Facilities									
CB-19001	Cubberley Building Management Systems	0	0	356,807	0	0	0	0	356,807
CB-16001	Cubberley Community Center Master Plan	0	477,291	60,000	0	0	0	0	60,000
CB-17001	Cubberley Repairs	22,000	227,753	308,999	0	0	0	0	308,999
CB-16002	Cubberley Roof Replacements	250,265	1,284,043	480,711	469,738	551,413	572,892	304,605	2,379,359
	Buildings and Facilities Total	272,265	1,989,087	1,206,517	469,738	551,413	572,892	304,605	3,105,165
Parks and Open Space									
CB-17000	Cubberley Amenities Improvements (Reserve)*	0	0	0	0	0	0	0	0
CB-17002	Cubberley Field Restrooms	1,815	13,758	427,576	0	0	0	0	427,576
CB-19000	Cubberley Track and Field Replacement	0	0	20,389	1,831,319	0	0	0	1,851,708
	Parks and Open Space Total	1,815	13,758	447,965	1,831,319	0	0	0	2,279,284
	Total Uses	274,080	2,002,845	1,654,482	2,301,057	551,413	572,892	304,605	5,384,449
* Project recommended to be closed, see project page for more details.									

Buildings and Facilities

CUBBERLEY PROPERTY INFRASTRUCTURE FUND



Fund: Cubberley Property Infrastructure Fund

Category: Buildings and Facilities

Project Location: 4000 Middlefield Road

Managing Department: Public Works

Initial Project Start: Summer 2018

Initial Project Completion: Spring 2019

Revised Project Start:

Revised Project Completion:

Project Number: CB-19001

Building Management System Controls, March 2018

Cubberley Building Management Systems

Description

This project provides funding for replacement of the Building Management System (BMS) controls for the Pavilion, Theater, Wing I, and Gyms A and B boiler rooms at the Cubberley Community Center. The BMS is a software program that controls building systems such as air conditioning and heating.

Justification

The old BMS is no longer supported by the City's IT department or the BMS vendor. The new BMS controls will align the buildings mentioned above with the City's current standard BMS.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Cubberley Property Infrastructure Fund	0	0	0	356,807	0	0	0	0	356,807	0	356,807
Total	0	0	0	356,807	0	0	0	0	356,807	0	356,807

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	356,807	0	0	0	0	356,807	0	356,807
Total	0	0	0	356,807	0	0	0	0	356,807	0	356,807

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Cubberley Property Infrastructure Fund

Category: Buildings and Facilities

Project Location: 4000 Middlefield Road

Managing Department: Public Works

Initial Project Start: Fall 2015

Initial Project Completion: Summer 2016

Revised Project Start: Spring 2018

Revised Project Completion: Summer 2019

Project Number: CB-16001

Cubberley Community Center, February 2015

Cubberley Community Center Master Plan

Description

This project provides funding to develop a master plan for the future of the Cubberley Community Center complex. The plan will include a prioritization for future projects to replace failing systems, improve reliability for use as an emergency shelter, and support tenant needs. The Master Plan is a requirement of the lease with the Palo Alto Unified School District (PAUSD).

Justification

The City owns eight acres of the Cubberley Community Center and leases the remaining area from PAUSD. The renewed lease terms provide funding for additional capital investment in the facilities that are currently overdue for major improvements. This project is necessary to map out the future facility needs, determine the manner in which the improvements will be executed and prepare a long-term plan for the whole complex. Cubberley is a valuable community resource and significant source of rental income.

Supplemental Information

The Cubberley Community Advisory Committee (CCAC) Report recommended that a community needs assessment and site Master Plan be developed in the first five years of the new lease extension.

Significant Changes

2017-2021 CIP: The project schedule has been extended to reflect the expected initiation of the project in Fiscal Year 2017. The project budget has been increased by \$150,000.

CUBBERLEY PROPERTY INFRASTRUCTURE FUND

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Cubberley Property Infrastructure Fund	0	332,986	477,291	60,000	0	0	0	0	60,000	0	537,291
Revenue from Other Agencies	0	332,986	0	0	0	0	0	0	0	0	0
Total	0	665,972	477,291	60,000	0	0	0	0	60,000	0	537,291

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	665,972	477,291	60,000	0	0	0	0	60,000	0	537,291
Total	0	665,972	477,291	60,000	0	0	0	0	60,000	0	537,291

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan Primary Connection Element: Community Services & Facilities Section: Maintenance of Parks and Community Facilities Goal: C-3 Policy: C-3.2 Program: C3.2.1	Relationship to Comprehensive Plan Secondary Connection Element: Land Use and Community Design Section: Public Streets and Public Spaces Goal: L-9 Policy: L-9.5	Potential Board/Commission Review: Parks and Recreation Commission Planning and Transportation Commission
Environmental Impact Analysis: This project is expected to have a possible exemption from CEQA under Section 15301.		

CUBBERLEY PROPERTY INFRASTRUCTURE FUND



Fund: Cubberley Property Infrastructure Fund

Category: Buildings and Facilities

Project Location: 4000 Middlefield Road

Managing Department: Public Works

Initial Project Start: Recurring

Initial Project Completion: Recurring

Project Number: CB-17001

Cubberley Pavement, 2016

Cubberley Repairs

Description

This project provides funding to make repairs and minor improvements at the Cubberley Community Center. Work completed under this project may include items such as painting, sidewalk repairs, breezeway pavement resurfacing, landscaping improvements, minor equipment replacement, and improvements to interior finishes.

Justification

The Cubberley Community Center Master Plan will establish the long term vision for the future use of the Cubberley complex. In advance of the Master Plan, this project allows minor improvements to occur that will address safety concerns, functionality of building systems, and aesthetics.

Supplemental Information

Repairs in various parts of facility are scheduled on a per year basis. Funding for Fiscal Year 2019 is programmed for exterior maintenance and repairs to concrete and asphalt, tree removals, and interior maintenance and repairs including heating and ventilation, radiant floor heating, lighting, and paint.

Significant Changes

2019-2023 CIP: This project has shifted from non-recurring to recurring to address repairs needed annually throughout the property. Funding will continue to be allocated on an annual basis until completion of the Cubberley Master Plan.

2017-2021 CIP: Project established.

CUBBERLEY PROPERTY INFRASTRUCTURE FUND

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Cubberley Property Infrastructure Fund	N/A	228,000	227,753	308,999	0	0	0	0	308,999	0	N/A
Total	N/A	228,000	227,753	308,999	0	0	0	0	308,999	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	228,000	227,753	308,999	0	0	0	0	308,999	0	N/A
Total	N/A	228,000	227,753	308,999	0	0	0	0	308,999	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

CUBBERLEY PROPERTY INFRASTRUCTURE FUND



Fund: Cubberley Property Infrastructure Fund

Category: Buildings and Facilities

Project Location: 4000 Middlefield Road

Managing Department: Public Works

Initial Project Start: Recurring

Initial Project Completion: Recurring

Project Number: CB-16002

Cubberley Wing P, January 2015

Cubberley Roof Replacements

Description

This project provides funding for the replacement or restoration of failing roofs at the Cubberley Community Center.

Justification

Most of the existing mineral cap roofs at Cubberley have exceeded their useful lives and are in poor condition. Rehabilitation is needed to prevent significant problems that may cause structural damage to buildings. In some cases, a more cost-effective roof restoration process is planned while in other cases a full replacement is necessary. A fluid, reinforced waterproofing system can be applied over the existing roof that also meets current cool roofing codes to optimize energy efficiency.

Supplemental Information

Facilities scheduled for re-roofing with a fluid applied system or for major repairs are:

Fiscal Year 2019: Cubberley Wing F & FH

Fiscal Year 2020: Cubberley Wing T1 and T2

Fiscal Year 2021: Cubberley Wing J and K

Fiscal Year 2022: Cubberley Wing H and D

Fiscal Year 2023: Cubberley Wing U

CUBBERLEY PROPERTY INFRASTRUCTURE FUND

Significant Changes

2016-2020 CIP: Project established in the Cubberley Property Infrastructure Fund. Funding was allocated in prior years for roofing replacements at Cubberley Community Center in the Capital Improvement Fund. Funding is now recommended in the Cubberley Property Infrastructure Fund for this purpose, consistent with the revised lease agreement with the Palo Alto Unified School District, approved by the City Council in 2014.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Cubberley Property Infrastructure Fund	N/A	1,379,676	1,284,043	480,711	469,738	551,413	572,892	304,605	2,379,359	0	N/A
Total	N/A	1,379,676	1,284,043	480,711	469,738	551,413	572,892	304,605	2,379,359	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	931,186	835,553	480,711	469,738	551,413	572,892	304,605	2,379,359	0	N/A
Design	N/A	448,490	448,490	0	0	0	0	0	0	0	N/A
Total	N/A	1,379,676	1,284,043	480,711	469,738	551,413	572,892	304,605	2,379,359	0	N/A

Operating Impact

The project is not anticipated to impact operating expenses.

<p>Relationship to Comprehensive Plan</p> <p>Primary Connection</p> <p>Element: Community Services & Facilities</p> <p>Section: Maintenance of Parks and Community Facilities</p> <p>Goal: C-3</p> <p>Policy: C-3.2</p> <p>Environmental Impact Analysis:</p> <p>This project is expected to have a possible exemption from CEQA under Section 15301.</p>	<p>Potential Board/Commission Review:</p> <p>Architectural Review Board</p> <p>Historic Resources Board</p> <p>Planning and Transportation Commission</p>
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CITY OF
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Parks and Open Space



Fund: Cubberley Property Infrastructure Fund

Category: Parks and Open Space

Project Location: 4000 Middlefield Road

Managing Department: Public Works

Initial Project Start: Summer 2016

Initial Project Completion: Fall 2019

Revised Project Start: N/A

Revised Project Completion: N/A

Project Number: CB-17000

Cubberley Tennis Courts, 2016

Cubberley Amenities Improvements - (Reserve)

Description

This project provides funding for renovations of existing community recreational amenities at the Cubberley facility which include: tennis courts, playing fields, a gymnasium, an activity room, and a dance studio.

Justification

Pending the completion of the Cubberley Community Center Master Plan, funding may be required to improve existing recreation facilities at the Cubberley site. As project costs become more refined, recommendations will be brought forth to the City Council.

Supplemental Information

The funding for this project is being placed in a reserve pending completion of the Cubberley Community Center Master Plan.

Significant Changes

2019-2023 CIP: This project is recommended to be closed, because the scope for amenities improvements will be defined after the completion of the Cubberley Master Plan (CB-16001). The funding from this project will remain in the Cubberley Property Infrastructure Fund to be allocated for other facility needs identified in the master plan.

2017-2021 CIP: Project established.

CUBBERLEY PROPERTY INFRASTRUCTURE FUND

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Cubberley Property Infrastructure Fund	0	950,000	0	0	0	0	0	0	0	0	0
Total	0	950,000	0	0	0	0	0	0	0	0	0

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	900,000	0	0	0	0	0	0	0	0	0
Design	0	50,000	0	0	0	0	0	0	0	0	0
Total	0	950,000	0	0	0	0	0	0	0	0	0

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

Environmental Impact Analysis:

The project is expected to have a possible exemption from CEQA under Section 15301.

CUBBERLEY PROPERTY INFRASTRUCTURE FUND



Fund: Cubberley Property Infrastructure Fund
Category: Parks and Open Space
Project Location: 4000 Middlefield Road
Managing Department: Public Works
Initial Project Start: Summer 2016
Initial Project Completion: Summer 2018
Revised Project Start: Fall 2017
Revised Project Completion: Fall 2018
Project Number: CB-17002

Cubberley Fields, February 2016

Cubberley Field Restroom

Description

This project provides the installation of restroom at the Cubberley Community Center Fields. The restroom may be a prefabricated structure.

Justification

This project will provide a restroom facility to the Cubberley Community Center Fields due to intensive sports league and recreational usage. The facility consists of soccer and softball fields as well as tennis courts and a running track. It is the City's largest field complex without a restroom.

Significant Changes

2019-2023 CIP: Funding has been increased by \$150,000 due to the placement, associated utility connections, and updated cost estimates.

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Cubberley Property Infrastructure Fund	1,815	283,185	13,758	427,576	0	0	0	0	427,576	0	443,149
Total	1,815	283,185	13,758	427,576	0	0	0	0	427,576	0	443,149

CUBBERLEY PROPERTY INFRASTRUCTURE FUND

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	200	249,338	13,758	427,576	0	0	0	0	427,576	0	441,534
Design	1,614	33,847	0	0	0	0	0	0	0	0	1,614
Total	1,814	283,185	13,758	427,576	0	0	0	0	427,576	0	443,148

Anticipated Operating Budget Needs

Fund	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Cubberley Property Infrastructure Fund	15,965	16,444	16,937	17,445	17,968

Operating Impact

This project is anticipated to impact operating expenses in the future. Custodial and maintenance costs are estimated to be \$15,500 in Fiscal Year 2019 and increase by 3% annually thereafter. These costs will be included as part of the City's custodial contract

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible categorical exemption from CEQA under section 15301.

CUBBERLEY PROPERTY INFRASTRUCTURE FUND



Fund: Cubberley Property Infrastructure Fund

Category: Parks and Open Space

Project Location: Cubberley

Managing Department: Public Works

Initial Project Start: Summer 2019

Initial Project Completion: Spring 2021

Revised Project Start:

Revised Project Completion:

Project Number: CB-19000

Cubberley Field

Cubberley Track and Field Replacement

Description

This project provides funding for replacement of the synthetic turf field for multiple sport use, replaces the surrounding track to an all-weather surface, replaces the existing bleachers, and adds a new multi-generational fitness area.

Justification

The current synthetic turf field was installed in 2009 and has reached the end of its useful life. The decomposed granite track is older and the material does not support year round use. It is also not compatible positioned adjacent to synthetic turf as the material migrates onto the athletic field. The large bleachers with wood plank seating are deteriorating and would be replaced with smaller aluminum bleachers while creating space for a fitness area and equipment.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Cubberley Property Infrastructure Fund	0	0	0	20,389	1,831,319	0	0	0	1,851,708	0	1,851,708
Total	0	0	0	20,389	1,831,319	0	0	0	1,851,708	0	1,851,708

CUBBERLEY PROPERTY INFRASTRUCTURE FUND

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	1,800,000	0	0	0	1,800,000	0	1,800,000
Design	0	0	0	20,389	31,319	0	0	0	51,708	0	51,708
Total	0	0	0	20,389	1,831,319	0	0	0	1,851,708	0	1,851,708

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

Environmental Impact Analysis:

Possible exemption from CEQA under Section 15302.



CITY OF
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Enterprise Funds





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AIRPORT FUND

Overview

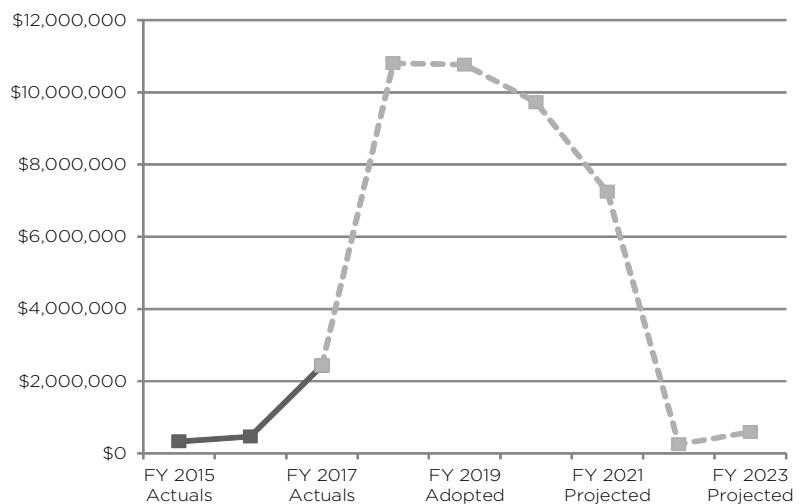
The Airport Fund Capital Improvement Program (CIP) accounts for activities related to the construction and replacement of the airport's infrastructure necessary to operate and maintain the airport. The Palo Alto Airport (PAO) is a federally obligated airport which receives federal funds for airport capital improvement projects based on Federal Aviation Administration (FAA) established grant assurances that airport operators must adhere to in order to receive funds. For detailed information on the maintenance and operations of the airport, please refer to the Airport Fund section in the Operating Budget.

The 2019-2023 CIP includes projects totaling \$28.6 million with Fiscal Year 2019 projects totaling \$10.8 million. It is important to note the FAA provides grants to public agencies for the planning and development of public-use airports and reimburses up to 90% of the non-salary cost of eligible projects. Staff intends to continue applying to the FAA for grant eligible capital improvement projects to ensure a safe and well-maintained airport. Staff will also apply for state grant matching opportunities when available. The budget for the Airport CIP is divided into two categories: Airport Apron, Runways, and Taxiways; and Airport Facilities.

Airport Apron, Runways, and Taxiways

The Airport Apron, Runways, and Taxiways category accounts for the design and construction of improvements and enhancements which include pavement, lighting, drainage, and perimeter fencing. The Palo Alto Airport includes one runway of approximately 2,400 feet in length, one parallel taxiway of the same length, and four connector taxiways for entering and exiting the runway. In Fiscal Year 2015, staff conducted a survey to determine the pavement condition index (PCI) values for all airfield pavement. Based on visual inspection, the average apron PCI value was 36, indicating the need for full pavement reconstruction. The completed Apron And Taxi Lane Reconstruction (AP-15003) and current Airport Apron Reconstruction (AP-16000) projects have improved and will continue to improve the average PCI score.

Airport Fund Capital Expenditures



Infrastructure Inventory - Summary of Airport Taxiways

CLASSIFICATION	QUANTITY	DESCRIPTION
Apron or Ramp	468	Tie down spots
Runway	1	2443 x 70 feet
Taxiway	5	4 connector taxiways and 1 parallel taxiway

Recent Accomplishments

- Completed and closed the Apron and Taxi Lane Reconstruction project (AP-15003) and received the remaining \$15,968 in FAA grant funding for design and construction of the project.
- Completed construction of Phase I of the Apron Reconstruction project (AP-16000) utilizing an FAA grant reimbursement awarded for 90% of project costs.
- Completed the Invitation for Bid for Phase II of the Airport Apron Reconstruction project (AP-16000) with construction anticipated to begin in Fiscal Year 2019.

2019-2023 Capital Improvement Program

Recurring Projects

There are no recurring projects scheduled at this time.

Non-Recurring Projects

There is one non-recurring, multi-phase project scheduled in the 2019-2023 CIP; Airport Apron Reconstruction project (Fiscal Year 2019: \$10.8 million; 5-year CIP: \$28.0 million). The FAA prioritized this project to be completed before all other airport projects, deferring the other projects, including the Airfield Electrical Improvements project and the Runway and Taxiway Reconstruction and Drainage Improvements project, beyond the 5-year CIP to 2024.

The Airport Apron Reconstruction project will reconstruct 38 acres of pavement. In 2015 the FAA requested a Pavement Maintenance Management Plan (PMMP) to document conditions and prioritize future airport pavement projects. The completed PMMP showed all areas in disrepair, with the apron being most critical. Construction costs and associated grant reimbursements for the multi-phased project are budgeted during the 2019-2023 CIP.

Airport Facilities

The Airport Facilities category accounts for buildings, security systems, parking lot and all other infrastructure improvements. Prior to April 2017, Fixed Base Operators (FBO) leased spaces at the Airport and were responsible for the maintenance of their structures with the exception of the terminal. In April 2017 the FBO leases expired and the City became responsible for the maintenance of these structures. Interim lease agreements (1-3 years) between the City and existing businesses were executed, with the understanding that agreements will need to be renegotiated based on the completion of the airport business plan.

Infrastructure Inventory - Summary of Airport Facilities

CLASSIFICATION	QUANTITY	DESCRIPTION
Terminal Building	1	Trailer
Hangars	12	Medium Conventional Box Hangar
Hangars	2	Large Conventional Box Hangar
Hangars	45	Small Nested T-Hangar
Hangars	3	Large Conventional Multi-Aircraft Hangar

Recent Accomplishments

- Executed Airport Aircraft Storage License Agreements with hangar and tie-down tenants.
- Completed and closed the Wildlife Hazard Plan project (AP-16002) and received FAA grant funding for 90% of project design and construction expenditures.
- Completed and closed the Airport Perimeter Fence project (AP-16003) and received FAA grant funding for 90% of project design and construction expenditures.

2019-2023 Capital Improvement Program

Recurring Projects

There are no recurring projects scheduled at this time.

Non-Recurring Projects

There is one non-recurring project during the 2019-2023 CIP; Airport Layout Plan (5-year CIP: \$0.6 million). Per FAA prioritization of the Apron Reconstruction project, all other airport projects were deferred beyond the 5-year CIP, including the Automated Weather Observation System (AWOS) project to 2024.

The Airport Layout Plan is required by the FAA to ensure grant eligibility and will include existing facilities and planned development, air traffic activity, noise contours, environmental documentation and 20-year demand forecasts.

Summary of Capital Activity

AIRPORT FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Source of Funds									
Revenue from Federal Government									
AP-16000	Airport Apron Reconstruction	455,013	9,102,015	9,499,500	8,544,600	6,300,000	0	0	24,344,100
AP-21000	Airport Layout Plan	0	0	0	0	0	0	297,000	297,000
AP-16003	Airport Perimeter Fence	1,570,011	340,972	0	0	0	0	0	0
AP-15003	Apron and Taxi Lane Reconstruction	143,303	15,968	0	0	0	0	0	0
AP-16002	Wildlife Hazard Plan	14,914	22,796	0	0	0	0	0	0
	Revenue from the Federal Government Total	2,183,241	9,481,751	9,499,500	8,544,600	6,300,000	0	297,000	24,641,100
	Total Sources	2,183,241	9,481,751	9,499,500	8,544,600	6,300,000	0	297,000	24,641,100
Use of Funds									
Airport Apron, Runways, and Taxiways									
AP-19001	Airfield Electrical Improvements *	0	0	0	0	0	0	0	0
AP-16000	Airport Apron Reconstruction	532,745	10,698,676	10,768,663	9,722,410	7,244,483	253,946	0	27,989,502
AP-15003	Apron and Taxi Lane Reconstruction	16,564	0	0	0	0	0	0	0
AP-22000	Runway and Taxiway Reconstruction and Drainage Improvements *	0	0	0	0	0	0	0	0
	Airport Apron, Runways, and Taxiways Total	549,309	10,698,676	10,768,663	9,722,410	7,244,483	253,946	0	27,989,502
Airport Facilities									
AP-21000	Airport Layout Plan	0	0	0	0	0	0	593,481	593,481
AP-16003	Airport Perimeter Fence	1,862,024	88,000	0	0	0	0	0	0
AP-19000	Automated Weather Observation System (AWOS) *	0	0	0	0	0	0	0	0
AP-16002	Wildlife Hazard Plan	18,692	21,308	0	0	0	0	0	0
	Airport Facilities Total	1,880,716	109,308	0	0	0	0	593,481	593,481
	Total Uses	2,430,025	10,807,984	10,768,663	9,722,410	7,244,483	253,946	593,481	28,582,983

*FAA grant funding for these projects deferred beyond Fiscal Year 2023, see project pages for more details.



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Airport Apron, Runways, and Taxiways



Airfield Electrical, July 2017

Fund: Airport Enterprise Fund
Category: Airport Apron, Runways, and Taxiways
Project Location: 1925 Embarcadero Road
Managing Department: Public Works
Initial Project Start: Fall 2019
Initial Project Completion: Summer 2020
Revised Project Start: TBD
Revised Project Completion: TBD
Project Number: AP-19001

Airfield Electrical Improvements

Description

This project provides funding for electrical and lighting improvements to the airfield.

Justification

The last known airfield electrical improvements were performed in 1993. Results of the electrical assessment conducted as part of the Airport Apron Reconstruction project will inform the necessary above ground electrical infrastructure needs, including lighting, signage and possible vault modifications.

Supplemental Information

The design and construction of underground infrastructure being utilized will be completed in the Airport Apron Reconstruction project. For greater efficiency and to comply with City sustainability goals, LED lighting is intended.

Significant Changes

2019-2023 CIP: The FAA is deferring grant funding for this project from Fiscal Year 2019 to Fiscal Year 2024 to complete the Airport Apron Reconstruction project (AP-16000).

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Airport Fund	0	0	0	0	0	0	0	0	0	150,000	150,000
Revenue from the Federal Government	0	0	0	0	0	0	0	0	0	1,350,000	1,350,000
Total	0	0	0	0	0	0	0	0	0	1,500,000	1,500,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	0	0	1,500,000	1,500,000
Total	0	0	0	0	0	0	0	0	0	1,500,000	1,500,000

Operating Impact

This project is anticipated to have operating expenses related to pavement maintenance. As these costs are quantified, adjustments will be brought forward in future budgets, as necessary.

Relationship to Comprehensive Plan

Primary Connection

Element: Land Use and Community Design

Section: Airport

Goal: L-10

Policy: L-10.1

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Environmental Impact Analysis:

This project may be exempt from CEQA under Section 15301.



Fund: Airport Enterprise Fund
Category: Airport Apron, Runways, and Taxiways
Project Location: 1925 Embarcadero Road
Managing Department: Public Works
Initial Project Start: Summer 2015
Initial Project Completion: Spring 2020
Revised Project Start:
Revised Project Completion: Fall 2022
Project Number: AP-16000

Airport Apron, July 2013

Airport Apron Reconstruction

Description

This project provides funding for the design and reconstruction of the Palo Alto Airport apron in multiple phases within the existing footprint.

Justification

The pavement surfaces at the airport are failing and uneven and the need to reconstruct the aircraft parking apron is critical to airport safety. The City conducted a Pavement Management Study in Fiscal Year 2015 to determine pavement condition index (PCI) and to assist in prioritization of pavement improvement projects. The average apron PCI value from the study was 36, which indicated a need for full pavement reconstruction.

Supplemental Information

This project is being implemented in multiple phases. Design commenced in 2016 and was completed in 2017. Construction began in 2018 and is expected to be complete in 2022. Construction of Phase I is scheduled to be complete June 2018. Invitation for bids for Phase II of project is anticipated in April 2018 and bids opening in May 2018. FAA grants will fund 90% of design and construction costs. Staff will pursue other funding opportunities to offset the City obligation for the remaining 10% where available.

Additionally, the FAA will use the average apron PCI information to prioritize the Palo Alto Airport against other airport applicants. Due to the condition of the airport infrastructure, staff anticipates the Palo Alto Airport will rank high in eligibility for grant funding of this project.

Significant Changes

2019-2023 CIP: The apron reconstruction costs substantially increased from the previous estimate of \$18 million to \$39.3 million. Budget estimates for the project increased to include all remaining phases of the project as well as reconstruction design changes, solar infrastructure, and construction escalation costs identified while constructing Phase I.

2018-2022 CIP: Due to the findings of a geotechnical study, the subgrade requires more stabilization. The FAA recognizing the safety implications, has agreed to accelerate funding to expedite pavement corrections. Funding of \$17.3 million added to the project to account for the multiple phases of this project over the 5-year CIP.

2017-2021 CIP: Additional funding of \$715,845 in Fiscal Year 2017 to complete Phase I.

2016-2020 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Airport Fund	66,202	1,596,661	1,596,661	1,269,163	1,177,810	944,483	253,946	0	3,645,402	0	5,308,265
Revenue from the Federal Government	569,431	9,102,015	9,102,015	9,499,500	8,544,600	6,300,000	0	0	24,344,100	0	34,015,546
Total	635,633	10,698,676	10,698,676	10,768,663	9,722,410	7,244,483	253,946	0	27,989,502	0	39,323,811

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	10,280,906	10,698,676	10,768,663	9,722,410	7,244,483	253,946	0	27,989,502	0	38,688,178
Design	635,632	417,770	0	0	0	0	0	0	0	0	635,632
Total	635,632	10,698,676	10,698,676	10,768,663	9,722,410	7,244,483	253,946	0	27,989,502	0	39,323,810

Operating Impact

This project will have maintenance operating expenses for asphalt slurry seal estimated every five years.

Relationship to Comprehensive Plan

Primary Connection

Element: Land Use and Community Design

Section: Airport

Goal: L-10

Policy: L-10.1

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

Environmental Impact Analysis:

This project may be exempt from CEQA under Section 15301.



Fund: Airport Enterprise Fund
Category: Airport Apron, Runways, and Taxiways
Project Location: 1925 Embarcadero Road
Managing Department: Public Works
Initial Project Start: Summer 2014
Initial Project Completion: Summer 2015
Revised Project Start: TBD
Revised Project Completion: TBD
Project Number: AP-22000

Runway and Taxiway, July 2017

Runway and Taxiway Reconstruction and Drainage Improvements

Description

This project will provide funding for the design and implementation of runway and taxiway reconstruction and drainage improvements.

Justification

In 2015, the Airport Pavement Management Plan identified integrity deficiencies beyond the immediate safety concerns addressed in the Airport Apron Reconstruction project. This project will address the lower priority repairs and drainage improvements after the Airport Apron Reconstruction project is completed in Spring 2022.

Significant Changes

2019-2023 CIP: The FAA is deferring grant funding for this project from Fiscal Year 2022 to Fiscal Year 2024 to complete the Airport Apron Reconstruction project (AP-16000).

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Airport Fund	0	0	0	0	0	0	0	0	0	25,000	25,000
Revenue from the Federal Government	0	0	0	0	0	0	0	0	0	225,000	225,000
Total	0	0	0	0	0	0	0	0	0	250,000	250,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	0	0	0	0	0	0	0	0	250,000	250,000
Total	0	0	0	0	0	0	0	0	0	250,000	250,000

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Land Use and Community Design

Section: Airport

Goal: L-10

Policy: L-10.1

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Environmental Impact Analysis:

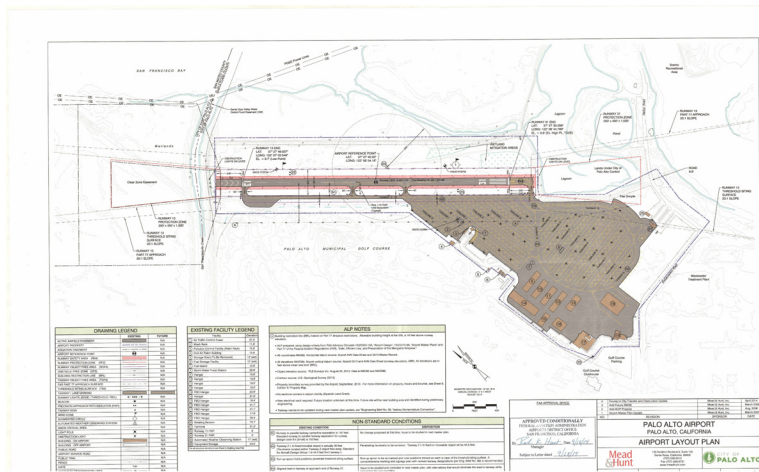
This project may be exempt from CEQA under Section 15301.



CITY OF
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Airport Facilities

AIRPORT FUND



Airport Layout, July 2017

Fund: Airport Enterprise Fund
Category: Airport Facilities
Project Location: 1925 Embarcadero Road
Managing Department: Public Works
Initial Project Start: Fall 2021
Initial Project Completion: Summer 2022
Revised Project Start: Summer 2022
Revised Project Completion: Spring 2023
Project Number: AP-21000

Airport Layout Plan

Description

This project provides funding for an update to the airport layout plan, including a narrative report and environmental study.

Justification

The Airport Layout Plan (ALP) serves as a critical planning tool that depicts both existing facilities and planned development for an airport and is required by the FAA to ensure eligibility for the highest level of grant funding available for construction of safety and infrastructure improvements. A key objective of airport planning is to assure the effective use of airport resources to satisfy aviation demand in a financially feasible manner. Additionally, the plan will include air traffic activity, noise contours, environmental documentation and 20-year demand forecasts.

Significant Changes

2019-2023 CIP: The FAA is deferring grant funding for this project from Fiscal Year 2021 to Fiscal Year 2023 to complete the Airport Apron Reconstruction project (AP-16000).

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Airport Fund	0	0	0	0	0	0	0	296,481	296,481	0	296,481
Revenue from the Federal Government	0	0	0	0	0	0	0	297,000	297,000	0	297,000
Total	0	0	0	0	0	0	0	593,481	593,481	0	593,481

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	263,481	263,481	0	263,481
Design	0	0	0	0	0	0	0	330,000	330,000	0	330,000
Total	0	0	0	0	0	0	0	593,481	593,481	0	593,481

Relationship to Comprehensive Plan

Primary Connection

Element: Land Use and Community Design

Section: Airport

Goal: L-10

Policy: L-10.1

Program: L10.1.2

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Environmental Impact Analysis:

Requires Environmental Review



Fund: Airport Enterprise Fund
Category: Airport Facilities
Project Location: 1925 Embarcadero Road
Managing Department: Public Works
Initial Project Start: Fall 2019
Initial Project Completion: Summer 2020
Revised Project Start: TBD
Revised Project Completion: TBD
Project Number: AP-19000

Automated Weather Observation System, July 2017

Automated Weather Observation System (AWOS)

Description

This project provides funding for a new weather information system to be installed.

Justification

The FAA tower is staffed from 7:00am to 9:00pm and uses ceilometers, wind indicators, altimeters and known distances to communicate weather and visibility to users. The new Automated Weather Observation System (AWOS) will provide users more information about weather conditions, feed all weather services and give present weather 24 hours a day, 7 days a week. Providing users with accurate and up to date weather information is essential to the safe and economic operation of the airport.

Significant Changes

2019-2023 CIP: The FAA is deferring grant funding for this project from Fiscal Year 2019 to Fiscal Year 2024 to complete the Airport Apron Reconstruction project (AP-16000).

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Airport Fund	0	0	0	0	0	0	0	0	0	15,000	15,000
Revenue from the Federal Government	0	0	0	0	0	0	0	0	0	135,000	135,000
Total	0	0	0	0	0	0	0	0	0	150,000	150,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	0	0	150,000	150,000
Total	0	0	0	0	0	0	0	0	0	150,000	150,000

Relationship to Comprehensive Plan

Primary Connection

Element: Land Use and Community Design

Section: Airport

Goal: L-10

Policy: L-10.1

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Environmental Impact Analysis:

May Require Environmental Review



CITY OF
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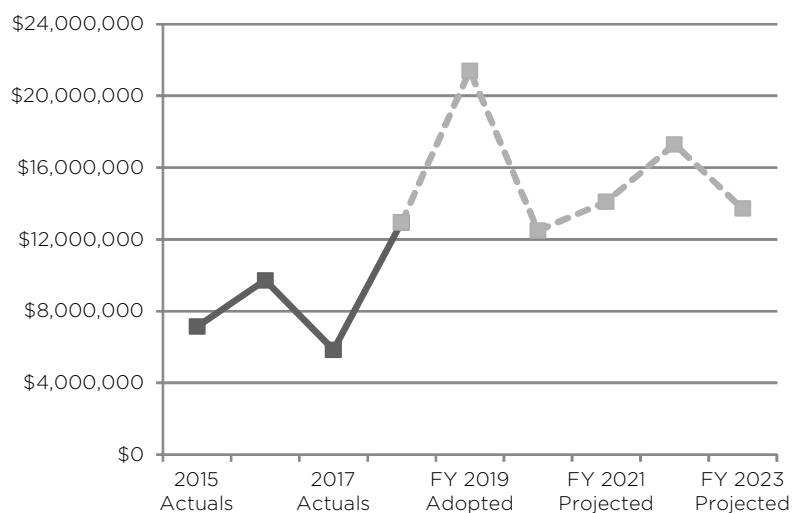
ELECTRIC FUND

Overview

The City of Palo Alto is the only municipality in California that operates a full suite of City-owned utility services. The municipal electric power system began operation in 1900 and continues to provide safe, reliable, cost effective electric service to residents and customers of Palo Alto. For the 2019-2023 Capital Improvement Program (CIP), approximately \$79.0 million is programmed, with \$21.4 million budgeted in Fiscal Year 2019, of which \$9.9 million is reappropriated funds from Fiscal Year 2018. Overall, a total of 44 projects are programmed over the 5-year CIP.

Major projects funded in the 2019-2023 CIP include Smart Grid Technology Installation (\$14.3 million), Electric Customer Connections (\$12.0 million), Electric System Improvements (\$7.7 million), 4/12kV conversion projects (\$7.7 million), Overhead to Underground Conversion (\$6.1 million), Facility Relocation for Caltrain Modernization (\$3.0 million), and various underground system rebuild projects (\$6.3 million). The budget for the Electric Fund CIP is broken into three separate categories: Customer Connections, System Improvements, and Undergrounding Projects.

Electric Fund Capital Expenditures



Infrastructure Inventory

CLASSIFICATION	QUANTITY
Miles of 60kV sub transmission lines	18 miles
Substations (w/300 MVA total capacity)	9
Traffic Signals (intersections) maintained	101
Streetlights maintained	6,600
Overhead Primary Distribution	117 miles
Underground Primary Distribution	187 miles
Overhead Secondary Distribution	94 miles
Underground Secondary Distribution	74 miles

Customer Connections

As customers continually change their electric power needs due to equipment additions, new construction, building expansions, building remodels, teardowns and rebuilds, and new building occupancy types, the electric system must evolve to meet these needs. The Electric Customer Connections Project, which is the largest project within the Electric Fund (\$2.4 million in Fiscal Year 2019, \$12.0 million over the 2019-2023 CIP), is accounted for within this category. Projects can range from new buildings associated with Stanford Hospital to upgrades of residential electric panels. Also included in this category is work for the VA Hospital load increase (\$0.7 million). These projects allow for the completion of work required to meet the needs of customers who have applied for new or upgraded electric service, need temporary power for construction, or require other services. The Electric Fund pays for a portion of these projects, while remaining costs are supported by reimbursements from customers for project work performed by the City.

Recent Accomplishments

In Fiscal Year 2017 the Utilities Electric Division completed over 350 customer service projects with a total cost of \$2.4 million and revenue of \$1.6 million.

2019-2023 Capital Improvement Program

Recurring Projects

The Electric Customer Connections project, described above, is the only recurring project in this category.

Non-Recurring Projects

Funding for the VA Hospital - Customer Load Requirements project was approved in Fiscal Year 2018. Utilities is working with the VA on their plans and awaits a decision from VA on what alternative they will implement to ultimately serve their facility over the foreseeable future.

System Improvements

Necessary elements in ensuring reliable electric service to City of Palo Alto residents and customers include the replacement of electric system components before they reach their end of life and the installation of protective equipment to minimize the impact of system problems. Projects in the System Improvements category allow for a variety of improvements, including the replacement/upgrade of old cables and equipment and bringing designs up to current standards, installation of protective equipment and switches, conversion of the electric system from 4,160 Volts (4kV) to 12,470 Volts (12kV), and installation of capacitors to improve efficiency.

The 2019-2023 CIP includes total funding of \$59.6 million in this category, with \$15.8 million allocated in FY 2019. Significant projects in this category include Smart Grid Technology Installation (\$14.3 million), Electric System Improvements (\$7.7 million), Wood Pole Replacements (\$7.5 million), 60kV Circuit Breaker Replacements (\$0.4 million), and various projects to rebuild under-

ground districts and substation components. In the past, funding for wood pole replacements was included in the Electric System Improvements project. To facilitate completion of a backlog of pole replacements, a new project specifically for pole replacements will begin in FY 2019.

Recent Accomplishments

- Added security cameras at one electric substation.
- Completed replacement of one 60kV circuit breaker.
- Completed the construction of a distribution tie-line that will improve system operations in the Stanford Shopping Center area.
- Completed other miscellaneous system improvement projects dealing with replacement of deteriorated facilities or to improve system operation and reliability.

2019-2023 Capital Improvement Program

Recurring Projects

A total of \$40.1 million is programmed for System Improvements recurring projects in the 2019-2023 CIP, with \$5.4 million allocated in Fiscal Year 2019. Recurring projects in this category include the following:

- Communication System Improvements (Fiscal Year 2019: \$0.1 million; 5-Year CIP: \$0.5 million)
- Electric Distribution System Improvements (Fiscal Year 2019: \$1.5 million; 5-Year CIP: \$7.7 million)
- Electric Utility Geographic Information System (Fiscal Year 2019: \$0.2 million; 5-Year CIP: \$0.8 million)
- SCADA System Upgrades (Fiscal Year 2019: \$0.1 million; 5-Year CIP: \$0.3 million)
- Smart Grid Technology Installation (Fiscal Year 2019: \$1.0 million; 5-Year CIP: \$14.3 million)
- Substation Facility Improvements (Fiscal Year 2019: \$0.3 million; 5-Year CIP: \$1.1 million)
- Substation Protection Improvements (Fiscal Year 2019: \$0.5 million; 5-Year CIP: \$1.7 million)
- Underground System Rebuild (Fiscal Year 2019: \$0.2 million; 5-Year CIP: \$1.7 million)
- Wood Pole Replacements (Fiscal Year 2019: \$1.5 million; 5-Year CIP: \$7.5 million)

Non-Recurring Projects

A total of \$24.0 million is allocated in the 2019-2023 CIP for non-recurring System Improvement projects. Much of the funding for the projects was approved by the City Council in prior years. New projects include:

- Colorado Power Station Equipment Upgrades (Fiscal Year 2019: \$0.9 million)
- Colorado Substation Site Improvements: (Fiscal Year 2019: \$0.1 million; 5-Year CIP: \$0.5 million)
- Rebuild Underground District 25: (Fiscal Year 2019: \$0.1 million; 5-Year CIP: \$0.6 million)
- Rebuild Underground District 30: (Fiscal Year 2019: \$0.1 million; 5-Year CIP: \$1.3 million)

Undergrounding Projects

The City of Palo Alto began a program to underground overhead electric, telephone, and cable TV facilities in 1965 with a project along Oregon Expressway. Since that time, 45 Underground Districts have been formed. The undergrounding of electrical lines is a joint process between the City and AT&T, due to joint ownership of the poles, and Comcast, which leases pole space from AT&T. All three entities share in the cost of the installation of underground conduit and boxes necessary to enclose and protect wires and equipment. The City typically takes the lead in the design, bidding, and construction processes with AT&T and Comcast reimbursing the City for construction and administrative costs. During the 2019-2023 CIP, \$6.7 million is allocated for Undergrounding Projects, with \$2.5 million allocated in FY 2019.

Recent Accomplishments

- Underground District 47 - Completed the installation of underground electric utility system in the area bounded by Middlefield Road/Addison Avenue/Cowper Street/Homer Avenue. FY 2019 will see completion of customer service conversions and connection of new services to the underground system.
- Underground District 46 - Started installation of underground substructures (conduits and boxes) near the intersection of El Camino Real and Arastradero Road/West Charleston Road.

2019-2023 Capital Improvement Program

Non-Recurring Projects

A total of \$6.7 million is allocated in the 2019-2023 CIP for non-recurring Undergrounding projects, with \$2.5 million allocated in FY 2019. Significant projects in this category include the following:

- Underground District 42 (\$2.1 million), which will underground overhead utility facilities in the area near Embarcadero Road/Emerson Street/Middlefield Road.
- Underground District 43 (\$2.2 million), which will underground overhead utility facilities in the area along Alma Street and Embarcadero Road.

Summary of Capital Activity

ELECTRIC FUND

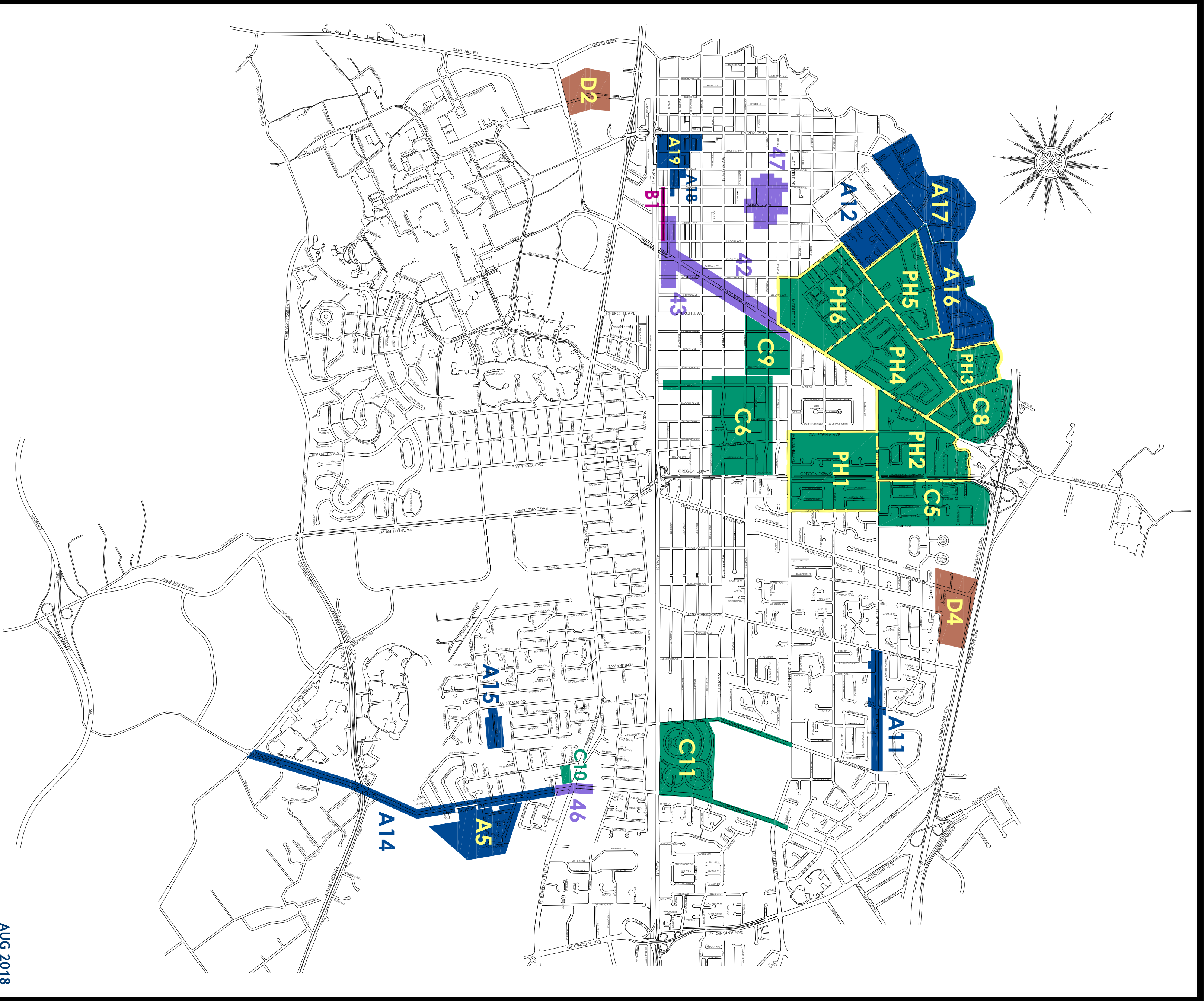
Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Source of Funds									
Transfers from Other Funds									
Gas Fund									
EL-11014	Smart Grid Technology Installation	136,335	300,000	180,000	0	540,000	1,800,000	900,000	3,420,000
	Total Gas Tax Fund Transfers	136,335	300,000	180,000	0	540,000	1,800,000	900,000	3,420,000

ELECTRIC FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Water Fund									
EL-11014	Smart Grid Technology Installation	136,335	300,000	290,000	0	870,000	2,900,000	1,450,000	5,510,000
	Total Water Fund Transfers	136,335	300,000	290,000	0	870,000	2,900,000	1,450,000	5,510,000
	Total Transfers from Other Funds	272,670	600,000	470,000	0	1,410,000	4,700,000	2,350,000	8,930,000
Reimbursement from Customers, Telephone, and Cable Television Companies									
EL-98003	Electric System Improvements	134,291	10,000	210,000	210,000	210,000	210,000	210,000	1,050,000
EL-89028	Electric Customer Connections	1,607,133	1,726,950	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	8,500,000
EL-08001	Underground District 42 - Embarcadero Road, Emerson, Middlefield	0	0	0	0	0	300,000	0	300,000
EL-11009	Underground District 43 - Alma/Embarcadero	0	0	0	0	0	300,000	0	300,000
	Reimbursement from Customers, Telephone, and Cable Television Companies Total	1,741,424	1,736,950	1,910,000	1,910,000	1,910,000	2,510,000	1,910,000	10,150,000
	Total Sources	2,014,094	2,336,950	2,380,000	1,910,000	3,320,000	7,210,000	4,260,000	19,080,000
Use of Funds									
Customer Connections									
EL-89028	Electric Customer Connections	2,445,562	2,653,268	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000	12,000,000
EL-17003	VA Hospital Customer Load Requirements	46,231	100,000	700,000	0	0	0	0	700,000
	Customer Connections Total	2,491,793	2,753,268	3,100,000	2,400,000	2,400,000	2,400,000	2,400,000	12,700,000
System Improvements									
EL-06001	230 kV Electric Intertie	745	1,000	177,481	0	0	0	0	177,481
EL-16002	Capacitor Bank Installation	0	0	350,000	0	0	0	0	350,000
EL-14000	Coleridge/Cowper/Tennyson 4/12Kv Conversion	0	0	520,000	0	0	0	0	520,000
EL-19001	Colorado Power Station Equipment Upgrade	0	0	900,000	0	0	0	0	900,000
EL-19002	Colorado Substation Improvements	0	0	100,000	400,000	0	0	0	500,000
EL-15000	Colorado/Hopkins System Improvement	0	0	50,000	1,750,000	0	0	0	1,800,000
EL-89031	Communications System Improvements	82,686	1,100,000	100,000	100,000	100,000	100,000	100,000	500,000
EL-17001	East Meadow Circles 4/12kV Conversion	0	2,000	48,000	0	800,000	0	0	848,000
EL-13000	Edgewood/Wildwood 4kV Tie	0	0	0	0	50,000	400,000	0	450,000
EL-20000	Hopkins Substation 4/12kV Conversion	0	0	0	100,000	2,000,000	1,975,000	1,675,000	5,750,000
EL-98003	Electric System Improvements	1,352,420	3,100,000	1,500,000	1,500,000	1,500,000	1,500,000	1,710,000	7,710,000
EL-02011	Electric Utility Geographic Information System	55,235	225,000	165,000	165,000	165,000	165,000	165,000	825,000
EL-17007	Facility Relocation for Caltrain Modernization Project	0	15,000	2,985,000	0	0	0	0	2,985,000
EL-17005	HCB Pilot Wire Relay Replacement	51,503	89,559	352,000	0	0	0	0	352,000
EL-14004	Maybell 1&2 4/12kV Conversion	172	0	100,000	0	0	0	0	100,000

ELECTRIC FUND

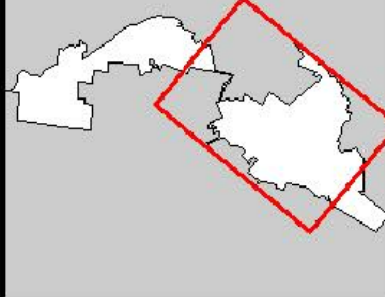
Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
EL-11003	Rebuild Underground District 15	0	5,000	475,000	0	0	0	0	475,000
EL-13003	Rebuild Underground District 16	0	0	400,000	0	0	0	0	400,000
EL-11008	Rebuild Underground District 19	12,262	0	115,000	0	0	0	0	115,000
EL-14002	Rebuild Underground District 20	8,634	20,000	1,380,000	0	0	0	0	1,380,000
EL-17000	Rebuild Underground District 23	0	0	200,000	550,000	0	0	0	750,000
EL-10006	Rebuild Underground District 24	20,008	170,988	585,000	0	0	0	0	585,000
EL-19000	Rebuild Underground District 25	0	0	50,000	500,000	0	0	0	550,000
EL-16000	Rebuild Underground District 26	981	0	149,000	650,000	0	0	0	799,000
EL-19003	Rebuild Underground District 30	0	0	50,000	1,200,000	0	0	0	1,250,000
EL-14005	Reconfigure Quarry Feeders	169,279	0	581,616	0	0	0	0	581,616
EL-13002	Relocate Quarry/Hopkins Substation 60kV Line (A & B)	0	0	0	0	750,000	0	0	750,000
EL-13006	Sand Hill Quarry 12kV Ties	82,982	0	0	0	0	0	0	0
EL-02010	SCADA System Upgrades	70,402	240,805	65,000	65,000	65,000	65,000	65,000	325,000
EL-11014	Smart Grid Technology Installation	17,240	350,000	1,000,000	0	2,113,750	7,939,212	3,243,996	14,296,958
EL-17002	Substation 60kV Breaker Replacement	22,513	0	250,000	150,000	0	0	0	400,000
EL-15001	Substation Battery Replacement	21,991	0	0	0	0	0	0	0
EL-89044	Substation Facility Improvements	304,419	318,384	300,000	200,000	200,000	200,000	200,000	1,100,000
EL-89038	Substation Protection Improvements	266,296	685,000	540,000	300,000	300,000	300,000	300,000	1,740,000
EL-16003	Substation Security	46,992	300,000	300,000	500,000	0	0	0	800,000
EL-16001	Underground System Rebuild	0	55,000	245,000	350,000	350,000	350,000	350,000	1,645,000
EL-13008	Upgrade Estimating Software	37,440	33,614	75,000	0	0	0	0	75,000
EL-17008	Utility Control Center Upgrades	2,813	400,000	97,186	0	0	0	0	97,186
EL-04012	Utility Site Security Improvements	14,040	105,080	110,000	50,000	50,000	0	0	210,000
EL-19004	Wood Pole Replacement	0	0	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000
	System Improvements Total	2,641,051	6,126,430	15,815,283	10,030,000	9,943,750	14,494,212	9,308,996	59,592,241
Undergrounding Projects									
EL-13007	Underground Distribution System Security	889	0	600,000	0	0	0	0	600,000
EL-08001	Underground District 42 - Embarcadero Road, Emerson, Middlefield	0	0	0	50,000	1,750,000	250,000	0	2,050,000
EL-11009	Underground District 43 - Alma/Embarcadero	0	0	0	0	0	150,000	2,000,000	2,150,000
EL-12001	Underground District 46 - Charleston/El Camino Real	76,862	1,895,454	1,385,000	0	0	0	0	1,385,000
EL-11010	Underground District 47 - Midd/Homer/ Webster/Addi	632,835	0	500,000	0	0	0	0	500,000
	Undergrounding Projects Total	710,586	1,895,454	2,485,000	50,000	1,750,000	400,000	2,000,000	6,685,000
	Total Uses	5,843,431	11,326,653	21,400,283	12,480,000	14,093,750	17,294,212	13,708,996	78,977,241



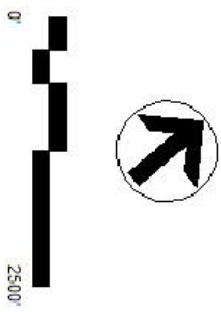
LEGEND

42 PROPOSED UNDERGROUND PROJECTS			
42	UG DISTRICT #42	(08001)	2020-2022
43	UG DISTRICT #43	(11099)	2021-2023
46	UG DISTRICT #46	(12001)	2015-2020
47	UG DISTRICT #47	(11010)	2015-2019
A PROPOSED UNDERGROUND REBUILD			
A5	REBUILD U.G. DISTRICT #15 (11003)		2014-2019
A11	REBUILD U.G. DISTRICT #11 (13003)		2017-2020
A12	REBUILD U.G. DISTRICT #12 (14003)		2017-2020
A14	REBUILD U.G. DISTRICT #14 (16000)		2016-2020
A15	REBUILD U.G. DISTRICT #15 (19000)		2019-2021
A16	REBUILD U.G. DISTRICT #16 (17000)		2019-2021
A17	REBUILD U.G. DISTRICT #17 (11008)		2014-2019
A18	REBUILD U.G. DISTRICT #18 (11008)		2014-2019
A19	REBUILD U.G. DISTRICT #19 (10004)		2014-2019
B PROPOSED 60KV SYSTEM REBUILD			
B1	RELOCATE GRAHO 60KV LINE (LANE A & B) (13002)		2019-2022
C PROPOSED 4/12KV CONVERSION			
C5	ST. FRANCIS / OREGON / AMARILLO / LOUIS 4/12KV	(11002)	2021-2023
C6	SCALE / WAVERLEY 4/12KV	(11000)	2022-2024
C8	EDGEWOOD / WILLOWOOD 4/12KV	(13000)	2021-2023
C9	COLEBROOK / COVER / TENNISON 4/12KV	(14004)	2019-2021
C10	MARVEL 1822 CONVERSION 4/12KV	(14004)	2014-2019
C11	EAST MEADOW - PARKVIEW 4/12KV	(17001)	2017-2020
C12	HORNES SUBSTATION 4/12KV	(20000)	2020-2022
PH1	LOUIS / OREGON / AMARILLO / MOORE 4/12KV		2020-2022
PH2	LOUIS / OREGON / EMBARCADERO / ST. FRANCIS 4/12KV		2020-2022
PH3	CHANNING / EDGEWOOD / JACKSON / GREER 4/12KV		2021-2023
PH4	CHANNING / EMBARCADERO / NEWELL / GREER 4/12KV		2021-2023
PH5	CHANNING / CENTER / DANA 4/12KV		2022-2024
PH6	CHANNING / EMBARCADERO / MELVILLE / NEWELL 4/12KV		2022-2024
D PROPOSED SYSTEM IMPROVEMENT			
D2	RECONFIGURE QUARRY FEEDERS	(14005)	2014-2019
D4	COLOMADO / HORNES SYSTEM IMPROVEMENT	(19000)	2015-2020
	COLOMADO / HORNES SYSTEM UPGRADE	(19002)	2019-2020
	COLOMADO SUBSTATION IMPROVEMENTS	(19003)	2019-2020
	UNDERGROUND DISTRIBUTION SYSTEM SECURITY	(13007)	2018-2019
MISCELLANEOUS PROJECTS NOT LABELED			
	VA HOSPITAL CUSTOMER CONNECTION	(17003)	2017-2020
	FACILITY REPLACEMENT FOR CALTRAM ELECTRIFICATION	(17007)	2018-2019
	UTILITY CONTROL CENTER UPGRADE	(17008)	2017-2019
	UNDERGROUND SYSTEM REBUILD - VARIOUS AREAS	(14001)	2016-2020
	CAPACITOR BANK INSTALLATION - VARIOUS AREAS	(14002)	2016-2018
	SUBSTATION SECURITY - VARIOUS AREAS	(14003)	2016-2019
	SMART GRID TECHNOLOGY REPLACEMENT	(13001)	2017-2021
	SMART GRID TECHNOLOGY INSTALLATION	(11014)	2019-2025
	ELECTRIC CUSTOMER CONNECTIONS	(06008)	2018-2023
	COMMUNICATIONS SYSTEM IMPROVEMENTS	(06001)	2018-2023
	UPGRADE ESTIMATING SOFTWARE	(13008)	2018-2019
	ELECTRIC SYSTEM IMPROVEMENTS	(02011)	2018-2023
	ELECTRIC UTILITY GEOGRAPHIC INFORMATION SYSTEM	(02011)	2018-2023
	SUBSTATION FACILITY IMPROVEMENTS	(09010)	2018-2023
	SUBSTATION PROTECTION IMPROVEMENTS	(09038)	2018-2023
	UTILITY SITE SECURITY IMPROVEMENTS	(04012)	2018-2021
	WOOD POLE REPLACEMENT	(19004)	2018-2023

AUG 2018



ELECTRIC FUND 2019-2023
CAPITAL IMPROVEMENT PROGRAM



File: 2012.03.09.18.05

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Customer Connections

ELECTRIC FUND



Fund: Electric Fund - Operating
Category: Customer Connections
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: EL-89028

Electric Troubleshooter installing an electric meter to provide service to a customer

Electric Customer Connections

Description

This project allows for the installation of services, transformers, meters for new customers, upgrades of existing services, temporary service connections, and overhead/underground extensions for new/existing customers.

Justification

The project provides funding for the connection of new customers and the upgrading of existing services. These are critical functions for providing electrical service to the City's customers. During a typical year, over 200 electric services are installed or upgraded in the City.

Supplemental Information

Budget amounts requested for work covered by this project are based on historical expenditures and growth projections. The Electric Fund pays for a portion of this project while remaining costs are supported by reimbursements from customers, telephone, and cable television companies for project work performed by the City.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	2,003,617	926,318	700,000	700,000	700,000	700,000	700,000	3,500,000	0	N/A
Other	N/A	1,650,000	1,726,950	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	8,500,000	0	N/A
Total	N/A	3,653,617	2,653,268	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000	12,000,000	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	3,653,617	2,653,268	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000	12,000,000	0	N/A
Total	N/A	3,653,617	2,653,268	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000	12,000,000	0	N/A

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Veteran Affairs Hospital

Fund: Electric Fund - Operating
Category: Customer Connections
Project Location: VA Hospital
Managing Department: Utilities
Initial Project Start: Summer 2017
Initial Project Completion: Summer 2018
Revised Project Start:
Revised Project Completion: Summer 2019
Project Number: EL-17003

VA Hospital - Customer Load Requirements

Description

The VA Hospital is outgrowing the capability of the electric infrastructure the City has traditionally provided. Hanover and Maybell Substations currently serve the VA Hospital campus with two electric lines, as the federal guidelines require full redundancy of electric power in case one line goes down. Additional capacity is required at the VA Hospital, and this need will be met using mostly existing underground conduits in the short term. VA Hospital and CPAU staff are reviewing options to meet long term needs.

Justification

The interim, short-term solution is scheduled to be implemented by 2019 and will use existing underground pathways to upsize the existing 12kV wires and bring additional 12kV wires to the VA Hospital from Hanover and Maybell Substations. This will meet the rapid load growth needs, since the local 12kV system cannot support the full VA Hospital load projections by 2022. The long term solution for a 60kV customer-owned substation addition will take a minimum of 2.5 years to build and energize and is one alternative to meet both the VA Hospital's power needs and the needs of other 12kV power users in the neighborhood. The 60kV substation can take its power from a higher level in the electric system that has adequate capacity. Without this improvement, once the VA Hospital is at full load in 2022, in the event of an outage in the Hanover/Maybell area, a majority of customers would experience sustained time frames of outages until the power could be restored.

Significant Changes

2019-2023 CIP: Funding for 2019 has been reduced as the VA Hospital agreed to pay for the construction costs through their own contractors.

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	22,313	1,393,718	100,000	700,000	0	0	0	0	700,000	0	822,313
Revenue from Other Agencies	0	1,600,000	0	0	0	0	0	0	0	0	0
Total	22,313	2,993,718	100,000	700,000	0	0	0	0	700,000	0	822,313

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	17,849	2,993,718	100,000	700,000	0	0	0	0	700,000	0	817,849
Design	4,461	0	0	0	0	0	0	0	0	0	4,461
Total	22,310	2,993,718	100,000	700,000	0	0	0	0	700,000	0	822,310

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



CITY OF
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System Improvements



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: National Accelerator Laboratory Substation
Managing Department: Utilities
Initial Project Start: Spring 2013
Initial Project Completion: Fall 2015
Revised Project Start:
Revised Project Completion: TBD
Project Number: EL-06001

Possible electric substation connection point to existing 60 kV system

230 kV Electric Intertie

Description

Funding for this project is used to perform technical feasibility studies to determine the general project requirements to establish a 230kV electric intertie line and construct a 230/60kV substation to connect the City's electric system directly to the 230kV transmission line. The City is in discussions with Stanford University and Stanford Linear Accelerator Laboratory (SLAC), one of ten Department of Energy (DOE) Office of Science laboratories, on the shared interest and benefits in the new intertie. If this project comes to fruition, the estimated total project cost for a secondary transmission line is \$40 - \$50 million and could be shared with both Stanford and SLAC/DOE. If this project is cancelled, staff will seek funding for an alternative solution to provide a second transmission source to Palo Alto.

Justification

This new electric line will allow the City to bypass the local transmission fees charged by PG&E. This transmission line will provide the City with an alternate source of power during emergencies, such as the plane crash in 2010 that impacted electric power to the entire City.

Significant Changes

2019-2023 CIP: The City presented its findings to Stanford and SLAC/DOE and is waiting for a response from SLAC to determine whether this project will move forward.

2017-2021 CIP: Project completion has been moved out as discussions with Stanford and SLAC/DOE are ongoing and no agreement has been finalized. Cooperation of these two entities is necessary for this project to move forward.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	262,056	178,607	1,000	177,481	0	0	0	0	177,481	0	440,537
Total	262,056	178,607	1,000	177,481	0	0	0	0	177,481	0	440,537

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	209,644	0	1,000	177,481	0	0	0	0	177,481	0	388,125
Design	52,409	178,607	0	0	0	0	0	0	0	0	52,409
Total	262,053	178,607	1,000	177,481	0	0	0	0	177,481	0	440,534

Operating Impact

Projected net annual savings resulting from the interconnection fee reduction will be approximately \$2.0 million based on projected energy purchases and the price difference between 115 kV and 230 kV service as, lower voltage services are more expensive than higher voltage services.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Electric Substation
Managing Department: Utilities
Initial Project Start: Fall 2014
Initial Project Completion: Spring 2016
Revised Project Start: Fall 2015
Revised Project Completion: Fall 2019
Project Number: EL-16002

Capacitor Bank

Capacitor Bank Installation

Description

The City of Palo Alto is required to maintain a power factor greater than 0.95 at its main supply point as part of its agreement with the Northern California Power Association. The power factor is the ratio of power drawn from the main supply and the power that it actually consumes. This project will install capacitor banks at electric substations and on distribution lines to ensure this requirement is met.

Justification

In recent years, the power factor, as measured at the service point from PG&E transmission lines, has dropped below the required 0.95 lagging amount. To raise the power factor above the required limit the Utilities Department will install up to 10 mega volt ampere reactive (MVAR) of capacitors at various locations on the electric system. This project will increase the power factor to meet the current requirements and it is anticipated that the installation of the capacitor bank will allow for the power factor to be sufficient for the next 7 years.

Significant Changes

2019-2023 CIP: Staff has performed an analysis on where capacitors are needed to provide MVAR support to the system. This project has become a lower priority due to a decrease in the system electric load and staff shortages that have elevated other projects above this one.

2017-2021 CIP: Shifting project priorities have delayed the completion of this project.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	350,000	0	350,000	0	0	0	0	350,000	0	350,000
Total	0	350,000	0	350,000	0	0	0	0	350,000	0	350,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	350,000	0	350,000	0	0	0	0	350,000	0	350,000
Total	0	350,000	0	350,000	0	0	0	0	350,000	0	350,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

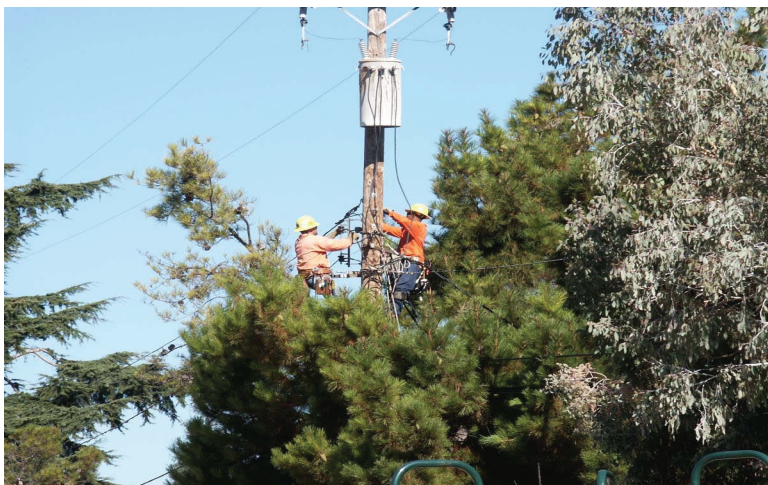
Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Coleridge/Cowper/Tennyson area
Managing Department: Utilities
Initial Project Start: Spring 2016
Initial Project Completion: Spring 2017
Revised Project Start: Spring 2019
Revised Project Completion: Fall 2019
Project Number: EL-14000

Overhead crews working on overhead lines

Coleridge/Cowper/Tennyson 4/12kV Conversion

Description

The project will convert the primary electric distribution system in the Coleridge/Cowper/Tennyson area from 4kV to 12kV.

Justification

Because of the difference in voltage, the 4kV and 12kV systems cannot be directly connected and used to back up one another. Due to prior 4kV to 12kV conversions in adjacent areas, this area, now at 4kV, needs to be converted to 12kV so that adequate circuit connections can be restored. This will allow customers to be switched from one circuit to another during normal or emergency conditions, improve operating flexibility of the system, and enhance service reliability to customers in this area. Converting to 12kV will eliminate the need to replace this equipment as it is not needed at that voltage level.

Significant Changes

2019-2023 CIP: This project is a precursor to work being planned for Colorado/Hopkins System Improvements (EL-15000). The purpose of this project converts the primary electric distribution system in the Coleridge/Cowper/Tennyson area from 4kV to 12kV. The start date has been pushed out to coordinate with other projects planned in conjunction with the Colorado/Hopkins System Improvements.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	120,000	0	520,000	0	0	0	0	520,000	0	520,000
Total	0	120,000	0	520,000	0	0	0	0	520,000	0	520,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	120,000	0	520,000	0	0	0	0	520,000	0	520,000
Total	0	120,000	0	520,000	0	0	0	0	520,000	0	520,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Colorado Substation
Managing Department: Utilities
Initial Project Start: Fall 2018
Initial Project Completion: Fall 2019
Revised Project Start:
Revised Project Completion:
Project Number: EL-19001

Colorado Power Substation

Colorado Power Station Equipment Upgrades

Description

This project will replace aging peripheral equipment used on the substation transformer banks at the Colorado Power Station. The Colorado Power Station is the 115kV/60kV transmission side of the Colorado Substation, which transforms the electricity to a lower voltage for distribution.

Justification

A project was done in 2015 to replace all the original primary and secondary bushings. With these preventative maintenance and operating practices, the transformers have a life expectancy well beyond the industry expectations.

The condition of the auxiliary equipment, however, is not as good. The tanks and radiators are rusty and the paint is chalky and faded, lending to breakdown of the steel. The transformers have many minor oil leaks around the radiator flanges, inspection covers and valve packings from old and compressed cork gaskets. The leaks are a potential environmental hazard if the oil migrates to the ground and into storm water. Additionally, where oil gets out, water can seep in. This will eventually increase the moisture in the oil that could result in failure of the transformer. The temperature and level gauges show signs of long term UV exposure and the plastics have become brittle and cracked.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	900,000	0	0	0	0	900,000	0	900,000
Total	0	0	0	900,000	0	0	0	0	900,000	0	900,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	900,000	0	0	0	0	900,000	0	900,000
Total	0	0	0	900,000	0	0	0	0	900,000	0	900,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.4

Program: N7.4.3

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Colorado Substation
Managing Department: Utilities
Initial Project Start: Fall 2018
Initial Project Completion: Summer 2020
Revised Project Start:
Revised Project Completion:
Project Number: EL-19002

Colorado Electric Substation Driveway

Colorado Substation Site Improvements

Description

This project will make modifications to the substation driveways and fence to provide adequate ingress and egress for utility vehicles used for maintenance and repair as well as building concrete barriers between transformers #1 and #3.

Justification

The Colorado Power Station (COP) site contains three, large utility power transformers. It also contains the 60kV main bus that forms the backbone of the 60kV loop throughout the City. COP transformers #1 and #3 are situated in close proximity to each other and in recent years, it has become apparent that catastrophic failure of an adjacent power transformer can damage the other. Although the station is built and designed to avoid the majority of disasters from an electric system protection perspective, environmental and other penetrants can also play a critical role in the status of these assets. It is prudent to guard against such events by erecting concrete barriers between COP transformers #1 and #3 and to begin conceptual design for concrete walls on a partial perimeter to protect against outside adversaries.

Significant Changes

2019-2023 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	100,000	400,000	0	0	0	500,000	0	500,000
Total	0	0	0	100,000	400,000	0	0	0	500,000	0	500,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	400,000	0	0	0	400,000	0	400,000
Design	0	0	0	100,000	0	0	0	0	100,000	0	100,000
Total	0	0	0	100,000	400,000	0	0	0	500,000	0	500,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.4

Program: N7.4.3

Potential Board/Commission Review:

Architectural Review Board

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Hopkins and Colorado Substations
Managing Department: Utilities
Initial Project Start: Spring 2015
Initial Project Completion: Spring 2018
Revised Project Start: Spring 2019
Revised Project Completion: Spring 2020
Project Number: EL-15000

Electric Substation

Colorado/Hopkins System Improvement

Description

This project will replace deteriorating equipment, which will increase system capacity and improve service reliability for the areas served by the Hopkins and Colorado substations and adjacent substations.

Justification

Transformers at both the Hopkins and Colorado Substations are near the end of their useful life, along with much of the other equipment. Hopkins is a 4kV substation and has no ties to other substations, so there is no backup to serve customers should there be a catastrophic problem at that substation.

Supplemental Information

Improvements are necessary to serve projected future electrical load projections and provide back up service to Hopkins. This project will evaluate solutions to best solve the multitude of issues facing these substations, such as how best to accommodate the replacement of this equipment.

Significant Changes

2019-2023 CIP: Staff has completed the initial cost/benefit analysis to assess various alternatives to meet distribution system needs and increased the budget by \$0.2 million.

2013-2022 CIP: Revised load projections associated with new loads in the Stanford Hospital area and has necessitated adjustment to the project plans.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	1,575,000	0	50,000	1,750,000	0	0	0	1,800,000	0	1,800,000
Total	0	1,575,000	0	50,000	1,750,000	0	0	0	1,800,000	0	1,800,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	1,575,000	0	0	1,750,000	0	0	0	1,750,000	0	1,750,000
Design	0	0	0	50,000	0	0	0	0	50,000	0	50,000
Total	0	1,575,000	0	50,000	1,750,000	0	0	0	1,800,000	0	1,800,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

ELECTRIC FUND



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: EL-89031

Traffic/Fiber technicians repairing the city fiber optic cables

Communications System Improvements

Description

This project installs copper wire cable systems, high frequency coaxial cable, fiber optic cable, and related equipment to provide communications services for traffic signal coordination, telephone links, computer data transmission, and the Electric Supervisory Control and Data Acquisition (SCADA) system.

Justification

Installation of communication lines is essential for the provision of City services. The broadband system provides communication between the Utility Control Center to substations and field equipment and between substation protection equipment. This annual project funds, as necessary, expansion of the system and replacement of deteriorating facilities.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	1,312,375	1,100,000	100,000	100,000	100,000	100,000	100,000	500,000	0	N/A
Total	N/A	1,312,375	1,100,000	100,000	100,000	100,000	100,000	100,000	500,000	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	1,312,375	1,100,000	100,000	100,000	100,000	100,000	100,000	500,000	0	N/A
Total	N/A	1,312,375	1,100,000	100,000	100,000	100,000	100,000	100,000	500,000	0	N/A

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: East Charleston/Alma Street/East Meadow Drive/Middlefield Road area
Managing Department: Utilities
Initial Project Start: Summer 2017
Initial Project Completion: Spring 2018
Revised Project Start:
Revised Project Completion: Summer 2021
Project Number: EL-17001

Electric Linemen working on utility pole

East Meadow Circles 4/12kV Conversion

Description

The project will convert the primary electric distribution system in the East Charleston/Alma Street/East Meadow Drive/Middlefield Road area from 4kV to 12kV.

Justification

Because of the difference in voltage, the 4kV and 12kV systems cannot be directly connected and used to back up one another. Due to prior 4kV to 12kV conversions in adjacent areas, this area, now at 4kV, needs to be converted to 12kV so that adequate circuit connections can be restored. This will allow customers to be switched from one circuit to another during normal or emergency conditions, and improve operating flexibility of the system and service reliability to customers in this area. Converting to 12kV will eliminate the need to replace this equipment as it is not needed at that voltage level.

Significant Changes

2019-2023 CIP: This project is in the preliminary stages of assessment for engineering design and is being reevaluated to determine the scope of work that should be involved. Issues with replacing the rear-easement facilities may dictate a change in direction of the project scope. Project funding has been decreased by \$0.9 million and pushed out.

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	50,000	2,000	48,000	0	800,000	0	0	848,000	0	850,000
Total	0	50,000	2,000	48,000	0	800,000	0	0	848,000	0	850,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	50,000	2,000	48,000	0	800,000	0	0	848,000	0	850,000
Total	0	50,000	2,000	48,000	0	800,000	0	0	848,000	0	850,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Edgewood/Wildwood area
Managing Department: Utilities
Initial Project Start: Spring 2016
Initial Project Completion: Spring 2017
Revised Project Start: Spring 2021
Revised Project Completion: Spring 2022
Project Number: EL-13000

Electric linemen working on overhead electric connection

Edgewood/Wildwood 4kV Tie

Description

This project will install new overhead wires to connect the Hopkins electric feeders #3 (HO-3) and #7 (HO-7) in the Edgewood/Wildwood area.

Justification

Because of the voltage difference, the 4kV and 12kV systems cannot be directly connected and provide redundancy. When the East Meadow 4kV feeders are converted to 12kV (EL-17001), the 4kV back-up connections from East Meadow to Hopkins substations will be eliminated. In order to maintain reliable service in the event of a feeder outage at the Hopkins Substation, this project will construct a tie between the HO-3 and HO-7 feeders.

Significant Changes

2019-2023 CIP: The project has shifted to begin in Fiscal Year 2021 after completion of the East Meadow Cicles 4/12kV Conversion project (EL-17001).

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	0	0	50,000	400,000	0	450,000	0	450,000
Total	0	0	0	0	0	50,000	400,000	0	450,000	0	450,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	400,000	0	400,000	0	400,000
Design	0	0	0	0	0	50,000	0	0	50,000	0	50,000
Total	0	0	0	0	0	50,000	400,000	0	450,000	0	450,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

ELECTRIC FUND



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: EL-98003

Electric crews working in an underground vault terminating cables

Electric System Improvements

Description

This project provides funding, as needed, to improve the Electric Distribution System. Typical activities include: increasing system capacity for load growth, replacing deteriorated capital facilities, reconfiguring/adding to the system to improve service reliability, repairing and replacing storm damaged equipment, and making general improvements to the system.

Justification

Electric system service reliability and adequate system capacity are critical to providing a high level of service to customers in Palo Alto. When service interruptions occur, customers may experience significant economic losses. The City must continuously evaluate service reliability needs and make improvements to the system to maintain top-level service to City customers.

Supplemental Information

Other funding sources include reimbursements from the telephone company for work performed on their behalf by City staff.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	3,161,078	3,080,000	1,290,000	1,290,000	1,290,000	1,290,000	1,500,000	6,660,000	0	N/A
Other	N/A	200,000	10,000	210,000	210,000	210,000	210,000	210,000	1,050,000	0	N/A
Total	N/A	3,361,078	3,090,000	1,500,000	1,500,000	1,500,000	1,500,000	1,710,000	7,710,000	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	3,361,078	3,090,000	1,500,000	1,500,000	1,500,000	1,500,000	1,710,000	7,710,000	0	N/A
Total	N/A	3,361,078	3,090,000	1,500,000	1,500,000	1,500,000	1,500,000	1,710,000	7,710,000	0	N/A

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

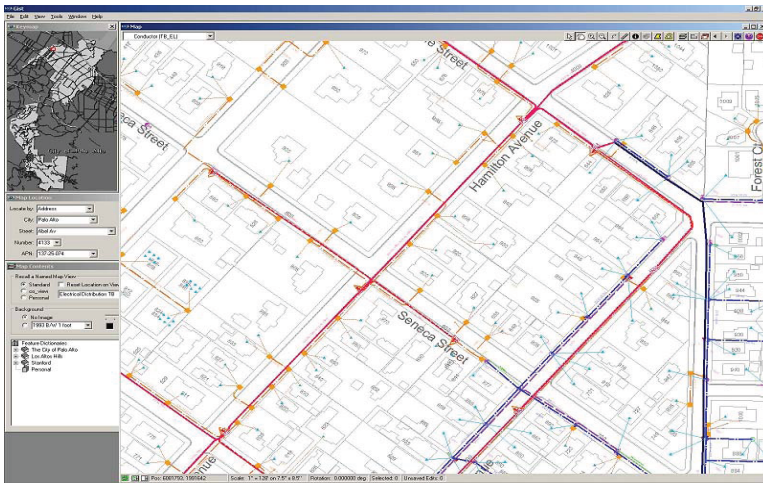
Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

ELECTRIC FUND



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: EL-02011

View of City of Palo Alto GIS System

Electric Utility Geographic Information System

Description

This project will enhance the citywide Geographical Information System (GIS). The primary emphasis will be to provide a compatible user interface and estimating software to edit and update data, which will reside in the citywide GIS. The project includes the migration of the existing electric and fiber networks to a unified mapping solution compatible with the citywide GIS.

Justification

GIS has grown from being a set of special purpose computer applications to being an information tool that serves all segments of the City. Applications have been developed that make GIS information accessible to hundreds of users, which has greatly increased the value of the system. Funding in the CIP is for ongoing mapping system modifications to facilitate technical requirements, external contractor system support, anticipated system upgrades, and to meet future needs and facilitate integration to the new citywide GIS. This could include recommendations for upgrade or replacement of existing systems.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	225,000	225,000	165,000	165,000	165,000	165,000	165,000	825,000	0	N/A
Total	N/A	225,000	225,000	165,000	165,000	165,000	165,000	165,000	825,000	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	225,000	225,000	165,000	165,000	165,000	165,000	165,000	825,000	0	N/A
Total	N/A	225,000	225,000	165,000	165,000	165,000	165,000	165,000	825,000	0	N/A

Relationship to Comprehensive Plan**Primary Connection**

Element: Community Services & Facilities

Section: Efficient and Effective Service Delivery

Goal: C-1

Policy: C-1.3

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Various locations along railroad
Managing Department: Utilities
Initial Project Start: Fall 2017
Initial Project Completion: Winter 2018
Revised Project Start:
Revised Project Completion: Winter 2019
Project Number: EL-17007

Intersection of Alma and East Meadow

Facility Relocation for Caltrain Modernization

Description

This project allows for the relocation of overhead Utility Electric and Fiber Optic lines to provide adequate clearance from new electric lines being installed by the Peninsula Corridor Joint Powers Board (Caltrain) to convert their commuter trains from diesel to electric power.

Justification

The Caltrain Modernization Program consists of converting Caltrain from diesel-hauled to Electric Multiple Unit trains. The installation of the Overhead Catenary System above the rails to power the trains will cause conflicts with the City's overhead electric and communication lines, as well as those owned by others, such as AT&T and Comcast, which cross the railroad tracks. Originally, Caltrain was looking to have the overhead lines relocated/removed by August 2018 for an anticipated project completion in 2020. In order to meet Caltrain's timeline, Utilities obtained funding and started the design process in FY 2017. If lines are placed underground, Utilities will look for opportunities to share the costs with AT&T and Comcast as part of the joint construction agreement between the three entities for installation of underground facilities.

Supplemental Information

Though electric power for the trains will be provided by PG&E from outside of Palo Alto's city limits, the timely relocation/removal of overhead electric lines will facilitate the conversion of the commuter train system from diesel fuel to electricity, reducing greenhouse gas emissions, noise, and pollution in Palo Alto. Caltrain is receiving funding for the project from several differ-

ent sources. If Caltrain does not obtain full funding to complete the project, construction funding approved by the City Council for the relocation of facilities will be returned to reserves.

Significant Changes

2019-2023 CIP: The project was put on hold until Caltrain received funding and gave the Utilities Department notice that the project was moving ahead. Staff is still negotiating with Caltrain on an agreement on cost sharing. At this time, Caltrain's requirement is to raise the overhead power lines and the budget was increased by \$1.3 million to reflect the change.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	1,700,000	15,000	2,985,000	0	0	0	0	2,985,000	0	3,000,000
Total	0	1,700,000	15,000	2,985,000	0	0	0	0	2,985,000	0	3,000,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	1,500,000	15,000	2,985,000	0	0	0	0	2,985,000	0	3,000,000
Design	0	200,000	0	0	0	0	0	0	0	0	0
Total	0	1,700,000	15,000	2,985,000	0	0	0	0	2,985,000	0	3,000,000

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Summer 2017
Initial Project Completion: Spring 2019
Revised Project Start:
Revised Project Completion: Summer 2019
Project Number: EL-17005

Picture of aging electric equipment

HCB Pilot Wire Relay Replacement

Description

This project funds the replacement of existing HCB pilot wire relays with new microprocessor-based line differential protective relays to protect the City's 60kV sub-transmission line sections and equipment from damage due to faults (i.e. short circuits) on the 60kV line sections.

Justification

The existing electro-mechanical HCB pilot wire differential relays are approaching the end of their useful life and rely on a copper pilot wire cable system running between each substation to maintain communication between the relay pairs located at the ends of each 60kV line section. These pilot wire cables have aged significantly and are the source of repeated failures due to corrosion in connections and splices, which cause open circuits, particularly during the rainy season. During these periods of interrupted pilot wire communication, the existing pilot wire relays do not provide adequate back-up protection, putting the City at risk of an outage should a fault occur on the 60kV line section.

Significant Changes

2019-2023 CIP: Staff completed the relay replacements between Quarry and Hopkins Substations, installation of fiber optic communication cables between Colorado, Maybell, East Meadow and Adobe Creek Substations, and is now working on installation of the relays at Maybell and East Meadow and placing them in service.

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	51,503	274,559	89,559	352,000	0	0	0	0	352,000	0	493,062
Total	51,503	274,559	89,559	352,000	0	0	0	0	352,000	0	493,062

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	41,200	274,559	89,559	352,000	0	0	0	0	352,000	0	482,759
Design	10,299	0	0	0	0	0	0	0	0	0	10,299
Total	51,499	274,559	89,559	352,000	0	0	0	0	352,000	0	493,058

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Louis/Oregon/Embarcadero/St Francis
Managing Department: Utilities
Initial Project Start: Fall 2019
Initial Project Completion: Spring 2023
Revised Project Start:
Revised Project Completion:
Project Number: EL-20000

Garland Drive

Hopkins Substation 4/12kV Conversion

Description

This project will fund the conversion of the distribution system connected to the Hopkins Substation from 4kV to 12kV.

Justification

The future conversion of the Hopkins Substation from 4kV to 12kV requires that all the areas currently served at 4kV from the Hopkins Substation be converted to 12kV. This project will improve operating flexibility of the system, service reliability, and back-up to customers in downtown and other adjacent areas.

Supplemental Information

This project will be completed in the following seven phases, (schedule subject to change):

FY 2020 - Louis/California/Middlefield/Moreno and Louis/Oregon/Embarcadero/St Francis

FY 2021 - St Francis/Oregon/Amarillo/Louis, Channing/Edgewood/Jackson/Greer, and Channing/Embarcadero/Newell/Greer

FY 2022 - Channing/Center/Dana and Channing/Embarcadero/Melville/Newell

Significant Changes

2019-2023 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	0	100,000	2,000,000	1,975,000	1,675,000	5,750,000	0	5,750,000
Total	0	0	0	0	100,000	2,000,000	1,975,000	1,675,000	5,750,000	0	5,750,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	1,850,001	1,875,001	1,675,000	5,400,002	0	5,400,002
Design	0	0	0	0	100,000	149,999	99,999	0	349,998	0	349,998
Total	0	0	0	0	100,000	2,000,000	1,975,000	1,675,000	5,750,000	0	5,750,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



El Camino Way at James Road

Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Maybell Avenue and El Camino Real between El Camino Way and Arastradero
Managing Department: Utilities
Initial Project Start: Spring 2014
Initial Project Completion: Summer 2018
Revised Project Start:
Revised Project Completion: Spring 2019
Project Number: EL-14004

Maybell 1 & 2 4/12kV Conversion

Description

This project will convert the Maybell Substation circuits 1 & 2 from 4kV to 12kV and remove the remaining 4kV equipment at Maybell. This covers the remaining area to be converted at Maybell Substation including the areas around Maybell Avenue and El Camino Real between El Camino Way and Arastradero.

Justification

The existing 4kV distribution system at Maybell has been converted to 12kV as the distribution facilities in areas have been rebuilt. This remaining area needs to be converted to 12kV so that adequate circuit ties are maintained to ensure high levels of service reliability to customers. This will also allow for the removal of deteriorating facilities at Maybell Substation reducing maintenance and operating requirements.

Significant Changes

2019-2023 CIP: Distribution system conversion work is completed. The protective relays at Maybell Substation need to be relocated before the 4kV equipment can be removed. Completion of this project depends on the relay relocation, which is being done in project Substation Facility Improvements (EL-89044) and anticipated to be completed by December 2018.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	264,797	100,000	0	100,000	0	0	0	0	100,000	0	364,797
Total	264,797	100,000	0	100,000	0	0	0	0	100,000	0	364,797

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	211,837	100,000	0	100,000	0	0	0	0	100,000	0	311,837
Design	52,959	0	0	0	0	0	0	0	0	0	52,959
Total	264,796	100,000	0	100,000	0	0	0	0	100,000	0	364,796

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Area bounded by Los Palos, Glenbrook, Pomona, and Arastradero
Managing Department: Utilities
Initial Project Start: Spring 2010
Initial Project Completion: Summer 2012
Revised Project Start: Spring 2018
Revised Project Completion: Winter 2018
Project Number: EL-11003

Underground transformer and cable after years of service

Rebuild Underground District 15

Description

This project will rebuild and replace the underground electric system in Underground District 15. The area is bounded by Los Palos, Glenbrook, Pomona, and Arastradero. Work will include the replacement of deteriorated electrical cables, transformers and enclosures. Installation of new equipment will bring the electrical system up to current construction standards.

Justification

The underground system serving Underground District 15 was installed in 1973. The cables and equipment in the area have exceeded their expected life of 30 years. In addition, most of the equipment and cables were installed in subsurface enclosures that have standing water in winter. The water reduces the life of the equipment and electrical connections and requires the rebuilding of the facilities.

Significant Changes

2019-2023 CIP: This project is in the preliminary stages of assessment for engineering design and work will be coordinated with Rebuild Underground District 26 (EL-16000) which is rebuilding the electric system along Arastradero Road. Work on this project has been delayed due to staffing shortages.

2017-2021 CIP: Shifting project priorities and the loss of Engineering staff have delayed the completion of this project.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	29,463	144,181	5,000	475,000	0	0	0	0	475,000	0	509,463
Total	29,463	144,181	5,000	475,000	0	0	0	0	475,000	0	509,463

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	23,570	144,181	5,000	475,000	0	0	0	0	475,000	0	503,570
Design	5,892	0	0	0	0	0	0	0	0	0	5,892
Total	29,462	144,181	5,000	475,000	0	0	0	0	475,000	0	509,462

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

ELECTRIC FUND



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Louis Road between Greer Street and Loma Verde Avenue
Managing Department: Utilities
Initial Project Start: Winter 2016
Initial Project Completion: Spring 2018
Revised Project Start:
Revised Project Completion: Summer 2018
Project Number: EL-13003

Electric crews installing new underground cables

Rebuild Underground District 16

Description

This project will rebuild and replace the underground electric system in Underground District 16. The area is located along Louis Road between Greer Street and Loma Verde Avenue. Work will include the replacement of deteriorated electrical cables, transformers, and enclosures. Installation of new equipment will bring the electrical system up to current construction standards.

Justification

The underground system serving Underground District 16 was installed in 1974, and cables and equipment in the area have exceeded their expected life of 30 years. In addition, most of the equipment and cables were installed in subsurface enclosures that have standing water in them in the winter. The water reduces the life of the equipment and electrical connections and requires the rebuilding of the facilities.

Significant Changes

2019-2023 CIP: This project is in the preliminary stages of assessment for engineering design and work will be coordinated with Rebuild Underground District 26 (EL-16000), which is rebuilding the electric system along Arastradero Road. Funding has increased by \$0.1 million to reflect market prices and moved to FY 2019.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	300,000	0	400,000	0	0	0	0	400,000	0	400,000
Total	0	300,000	0	400,000	0	0	0	0	400,000	0	400,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	300,000	0	400,000	0	0	0	0	400,000	0	400,000
Total	0	300,000	0	400,000	0	0	0	0	400,000	0	400,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Forest, Waverley, Addison, and Alma in downtown Palo Alto
Managing Department: Utilities
Initial Project Start: Fall 2009
Initial Project Completion: Summer 2010
Revised Project Start: Spring 2014
Revised Project Completion: Winter 2018
Project Number: EL-11008

Electric crews installing new underground cables

Rebuild Underground District 19

Description

This project will rebuild and replace the underground electric system in Underground District 19. Work will include the replacement of deteriorated electrical cables, transformers, switches, and enclosures. Installation of new equipment will bring the electrical system up to current construction standards.

Justification

The Underground District 19 is bounded by Forest, Waverley, Addison, and Alma in downtown Palo Alto and the underground electric distribution system was installed in 1979. Although typical cable and equipment expected life is 30 years when conditions are ideal, most of the equipment and cables operate in standing water during winter. Standing water reduces the life of the equipment and connections and requires that the system be rebuilt before failures begin to occur prematurely.

Significant Changes

2019-2023 CIP: Much of this work is performed during the evening hours to avoid impacting commercial businesses, which increases the construction timeline. Construction by City staff is approximately 85% completed for this area. Work is being done in conjunction with the Underground District 24 project (EL-10006).

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	149,023	116,420	0	115,000	0	0	0	0	115,000	0	264,023
Total	149,023	116,420	0	115,000	0	0	0	0	115,000	0	264,023

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	119,217	116,420	0	115,000	0	0	0	0	115,000	0	234,217
Design	29,804	0	0	0	0	0	0	0	0	0	29,804
Total	149,021	116,420	0	115,000	0	0	0	0	115,000	0	264,021

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

ELECTRIC FUND



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Channing Avenue; Center Street; Hamilton Avenue; and Lincoln Avenue
Managing Department: Utilities
Initial Project Start: Winter 2017
Initial Project Completion: Spring 2018
Revised Project Start:
Revised Project Completion: Spring 2019
Project Number: EL-14002

Utility Engineer planning out the next underground rebuild project

Rebuild Underground District 20

Description

This project will rebuild and replace the underground electric system in Underground District 20, the area bounded by Channing Avenue, Center Street, Hamilton Avenue, and Lincoln Avenue. Work will include the replacement of deteriorated electrical cables, transformers, and enclosures. Installation of new equipment will bring the electrical system up to current construction standards.

Justification

The underground system serving Underground District 20 was installed in 1979, and cables and equipment in the area have exceeded their expected life of 30 years. In addition, most of the equipment and cables were installed in subsurface enclosures that have standing water during winter. The water reduces the life of the equipment and electrical connections and requires the rebuilding of the facilities.

Significant Changes

2019-2023 CIP: This project rebuilds and replaces the underground electric system in Underground District 20. This project is in the preliminary stages of assessment for engineering design.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	8,633	900,000	20,000	1,380,000	0	0	0	0	1,380,000	0	1,408,633
Total	8,633	900,000	20,000	1,380,000	0	0	0	0	1,380,000	0	1,408,633

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	6,906	900,000	20,000	1,380,000	0	0	0	0	1,380,000	0	1,406,906
Design	1,725	0	0	0	0	0	0	0	0	0	1,725
Total	8,631	900,000	20,000	1,380,000	0	0	0	0	1,380,000	0	1,408,631

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

ELECTRIC FUND



Electric underground cable vault

Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Hamilton Avenue, San Francisquito Creek, Southwood Drive and Chaucer Street
Managing Department: Utilities
Initial Project Start: Fall 2016
Initial Project Completion: Summer 2019
Revised Project Start:
Revised Project Completion: Summer 2020
Project Number: EL-17000

Rebuild Underground District 23

Description

This project will rebuild and replace the underground electric system in the area of the City bounded by Hamilton Avenue, San Francisquito Creek, Southwood Drive, and Chaucer Street. Work will include the replacement of deteriorated electrical cables, transformers, switches and enclosures.

Justification

The underground electric distribution system in the area bounded by Hamilton Avenue, San Francisquito Creek, Southwood Drive, and Chaucer Street was installed in 1983. Typical underground cable and equipment expected life is approximately 30 years in ideal conditions and now needs to be replaced. Installation of new equipment will bring the electrical system up to current construction standards.

Significant Changes

2019-2023 CIP: This project is in the preliminary stages of assessment for engineering design.

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	200,000	0	200,000	550,000	0	0	0	750,000	0	750,000
Total	0	200,000	0	200,000	550,000	0	0	0	750,000	0	750,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	200,000	0	0	550,000	0	0	0	550,000	0	550,000
Design	0	0	0	200,000	0	0	0	0	200,000	0	200,000
Total	0	200,000	0	200,000	550,000	0	0	0	750,000	0	750,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Lytton Avenue; Bryant Street; Forest Avenue; and Alma Street
Managing Department: Utilities
Initial Project Start: Spring 2009
Initial Project Completion: Spring 2016
Revised Project Start:
Revised Project Completion: Fall 2018
Project Number: EL-10006

University Avenue (part of Underground District 24 where underground electric facilities will be replaced)

Rebuild Underground District 24

Description

This project will rebuild and replace the underground electric system in Underground District 24, the area bounded by Lytton Avenue, Bryant Street, Forest Avenue, and Alma Street. Work will include the replacement of deteriorated electrical cables, transformers, switches, and enclosures. Installation of new equipment will bring the electrical system up to current construction standards.

Justification

The underground electric distribution system in the Underground District 24 was installed in 1983 and cables and equipment in the area have exceeded their useful life of 30 years. In addition, most of the equipment and cables were installed in subsurface enclosures that have standing water during winter. The water reduces the life of the equipment and electrical connections and requires that rebuilding be performed on the facilities. Underground District 24 covers a major portion of the University Avenue downtown area and reliable electric power is critical to the businesses in the area.

Significant Changes

2019-2023 CIP: Much of this work is performed during the evening hours to avoid impacting commercial businesses, which increases the construction timeline. Construction by City staff is approximately 85% completed and further progress is delayed waiting for delivery of long lead-time materials. Work is being done in conjunction with Rebuild Underground District 19 (EL-11008).

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	1,778,094	923,105	170,988	585,000	0	0	0	0	585,000	0	2,534,082
Total	1,778,094	923,105	170,988	585,000	0	0	0	0	585,000	0	2,534,082

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	1,422,463	923,105	170,988	585,000	0	0	0	0	585,000	0	2,178,451
Design	355,608	0	0	0	0	0	0	0	0	0	355,608
Total	1,778,071	923,105	170,988	585,000	0	0	0	0	585,000	0	2,534,059

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Architectural Review Board

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

ELECTRIC FUND



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Orme Street between Los Robles Avenue and Juana Briones School
Managing Department: Utilities
Initial Project Start: Winter 2018
Initial Project Completion: Spring 2020
Revised Project Start:
Revised Project Completion:
Project Number: EL-19000

Orme Street (part of Underground District 25)

Rebuild Underground District 25

Description

This project will rebuild and replace the underground electric system in Underground District 25. Work will include the replacement of deteriorated electrical cables, transformers, switches, and enclosures. Installation of new equipment will bring the electrical system up to current construction standards.

Justification

The electric system included in the scope of work of Underground District 25 was installed in 1983. Underground District 25 includes Orme Street between Los Robles Avenue and Juana Briones School. The cables are at the end of their expected life of 30 years and need to be replaced. In addition, most of the other equipment (transformers, junctions, etc.) were installed in subsurface enclosures that have standing water, garden chemicals, oil, or other corrosive materials that impact equipment life.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	50,000	500,000	0	0	0	550,000	0	550,000
Total	0	0	0	50,000	500,000	0	0	0	550,000	0	550,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	500,000	0	0	0	500,000	0	500,000
Design	0	0	0	50,000	0	0	0	0	50,000	0	50,000
Total	0	0	0	50,000	500,000	0	0	0	550,000	0	550,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Arastradero Road between El Camino Real and Hillview Avenue
Managing Department: Utilities
Initial Project Start: Spring 2016
Initial Project Completion: Spring 2016
Revised Project Start: Spring 2019
Revised Project Completion: Fall 2020
Project Number: EL-16000

Arastradero Road (part of Underground District 26)

Rebuild Underground District 26

Description

This project will rebuild and replace the underground electric system in Underground District 26. Work will include the replacement of deteriorated electrical cables, transformers, switches, and enclosures. Installation of new equipment will bring the electrical system up to current construction standards.

Justification

The electric system included in the scope of work of Underground District 26 was installed in 1984. Underground District 26 includes Arastradero Road between El Camino Real and Hillview Avenue. The cables are nearing the end of their expected life of 30 years and the fused switches that were installed at that time have issues with operation and need to be replaced. In addition, most of the other equipment (transformers, junctions, etc.) were installed in subsurface enclosures that have standing water, garden chemicals, oil, or other corrosive materials that impact equipment life.

Significant Changes

2019-2023 CIP: This project is in the preliminary stages of assessment for engineering design and will be designed in conjunction with the Underground District 15 project, which is rebuilding the electric system on Los Palos/Glenbrook/Pomona area.

2017-2021 CIP: Shifting project priorities and turnover of engineering staff have caused the delay for the completion of this project.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	1,330	99,019	0	149,000	650,000	0	0	0	799,000	0	800,330
Total	1,330	99,019	0	149,000	650,000	0	0	0	799,000	0	800,330

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	1,063	99,019	0	0	650,000	0	0	0	650,000	0	651,063
Design	264	0	0	149,000	0	0	0	0	149,000	0	149,264
Total	1,327	99,019	0	149,000	650,000	0	0	0	799,000	0	800,327

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

ELECTRIC FUND



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Louis/California/Middlefield/Moreno
Managing Department: Utilities
Initial Project Start: Fall 2018
Initial Project Completion: Spring 2020
Revised Project Start:
Revised Project Completion:
Project Number: EL-19003

Rebuild Underground District 30

Description

This project will rebuild and replace the underground electric system in the area of the City bounded by San Francisquito Creek, Edgewood Drive, Island Drive, Hamilton Avenue, Center Drive, Dana Avenue, Alester Avenue, and Jackson Drive. Work will include the replacement of deteriorated electrical cables, transformers, switches, and enclosures.

Justification

The underground electric distribution system in the area bounded by San Francisquito Creek, Edgewood Drive, Island Drive, Hamilton Avenue, Center Drive, Dana Avenue, Alester Avenue, and Jackson Drive was installed in 1987. Typical underground cable and equipment expected life is approximately 30 years in ideal conditions and now need to be replaced. Installation of new equipment will bring the electrical system up to current construction standards. Rebuild of this area is being done ahead of other older underground areas to facilitate the 4/12kV conversions needed for changes at Hopkins Substation (EL-20000).

Significant Changes

2019-2023 CIP: Project established

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	50,000	1,200,000	0	0	0	1,250,000	0	1,250,000
Total	0	0	0	50,000	1,200,000	0	0	0	1,250,000	0	1,250,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	1,200,000	0	0	0	1,200,000	0	1,200,000
Design	0	0	0	50,000	0	0	0	0	50,000	0	50,000
Total	0	0	0	50,000	1,200,000	0	0	0	1,250,000	0	1,250,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

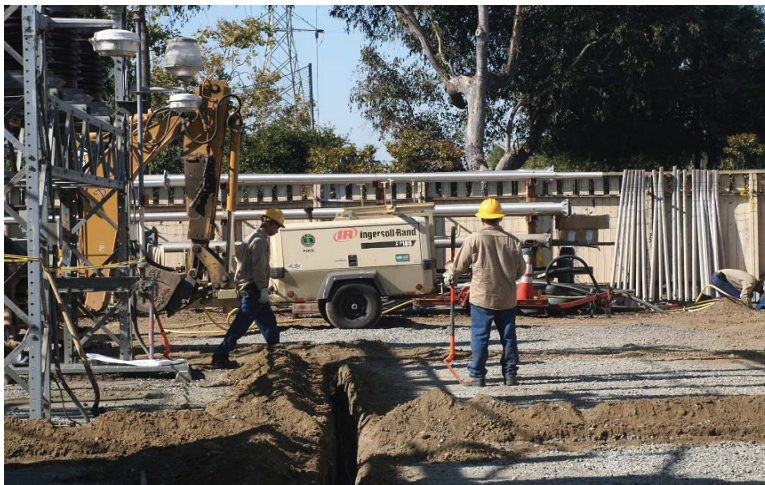
San Francisquito Creek Joint Powers

Authority

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Quarry Substation
Managing Department: Utilities
Initial Project Start: Spring 2013
Initial Project Completion: Spring 2015
Revised Project Start:
Revised Project Completion: Fall 2019
Project Number: EL-14005

Substation crews installing underground facilities

Reconfigure Quarry Feeders

Description

This project includes the reconfiguration of distribution circuit connections to substation transformers at Quarry Substation. The circuits will be more evenly divided between the four transformers at this substation to provide greater operating flexibility during outages.

Justification

Quarry Substation serves the Stanford Mall/Hospital area and the majority of the University Avenue downtown area. It has four substation transformers and ten circuits emanate from the substation to serve different areas. Two transformers have four circuits each while two (formerly at Alma Substation) have one circuit each. Load growth in the area requires the transfer of some of the circuits to the newly installed transformers to maintain operating flexibility and balance the load. If this work is not performed, outages that affect two of the transformers could be longer in duration, leading to customer dissatisfaction, business impact, and financial losses.

Significant Changes

2019-2023 CIP: The designs for this project are being adjusted to facilitate new electric loads proposed by Stanford Hospital and other significant projects in the area. The new design will incorporate work required to serve the new loads and will be constructed after the customer service work is completed. The project estimate and construction drawings are completed. The project has been delayed waiting for Stanford to complete the installation of boxes and conduits to facilitate the work as part of the service to the new Stanford BioMedical Innovations building.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	481,260	581,616	0	581,616	0	0	0	0	581,616	0	1,062,876
Total	481,260	581,616	0	581,616	0	0	0	0	581,616	0	1,062,876

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	384,996	581,616	0	581,616	0	0	0	0	581,616	0	966,612
Design	96,242	0	0	0	0	0	0	0	0	0	96,242
Total	481,238	581,616	0	581,616	0	0	0	0	581,616	0	1,062,854

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Spring 2018
Initial Project Completion: Spring 2020
Revised Project Start: Spring 2020
Revised Project Completion: Fall 2021
Project Number: EL-13002

Electric linemen working on 60 kV overhead lines

Relocate Quarry/Hopkins Substation 60kV Line (A & B)

Description

This project relocates the Quarry/Hopkins (QR/HO) 60kV sub-transmission line and associated facilities in Lanes A & B, and the nearby Alma Street area to a more physically accessible route for electric crews and equipment. When the Alma Substation was removed, the current transmission line route was no longer required. This project will investigate relocating this line to a more acceptable location that meets technical and aesthetic requirements.

Justification

The old 60kV overhead lines are located in a congested area of downtown and are difficult to access and maintain. The existing configuration is awkward and space consuming.

Significant Changes

2019-2023 CIP: This project relocates the Quarry/Hopkins (QR/HO) 60kV sub-transmission line and associated facilities in Lanes A & B, and the nearby Alma Street area to a more physically accessible route for electric crews and equipment. The engineering design has been delayed to FY 2020 with construction anticipated to begin in FY 2021.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	100,000	0	0	0	750,000	0	0	750,000	0	750,000
Total	0	100,000	0	0	0	750,000	0	0	750,000	0	750,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	750,000	0	0	750,000	0	750,000
Design	0	100,000	0	0	0	0	0	0	0	0	0
Total	0	100,000	0	0	0	750,000	0	0	750,000	0	750,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

ELECTRIC FUND



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: SCADA System at Utility Control Center
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: EL-02010

SCADA Technologist configuring SCADA software

SCADA System Upgrades

Description

This project will upgrade the Supervisory Control and Data Acquisition (SCADA) system hardware. The SCADA system is used to monitor and control critical assets of the City's electric, gas, and water utility systems from the Utility Control Center.

Justification

An upgrade to peripheral equipment is necessary each year to keep the hardware and software current in order to handle the ever-increasing demands on the system and maintain manufacturer/industry support.

Supplemental Information

Annual budget amounts are for minor system upgrades/replacements. Full system upgrades are on a 3 to 4 year cycle.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	289,599	198,000	65,000	65,000	65,000	65,000	65,000	325,000	0	N/A
Total	N/A	289,599	198,000	65,000	65,000	65,000	65,000	65,000	325,000	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	289,599	198,000	65,000	65,000	65,000	65,000	65,000	325,000	0	N/A
Total	N/A	289,599	198,000	65,000	65,000	65,000	65,000	65,000	325,000	0	N/A

Relationship to Comprehensive Plan**Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Fall 2016
Initial Project Completion: Fall 2022
Revised Project Start:
Revised Project Completion: Fall 2023
Project Number: EL-11014

Sample of energy use information that could be available to customers

Smart Grid Technology Installation

Description

This project will implement portions of the Smart Grid Road Map that can be cost effectively applied to the City's electric, gas, and water utility systems resulting in operating cost savings, environmental benefits, plus an increased quality of life and productivity for the residents and businesses of Palo Alto.

Justification

The Smart Grid will help the City of Palo Alto achieve its goals in: energy conservation, carbon emission reduction, efficient utilization of aging infrastructure, improved system reliability, integration of distributed energy resources, accommodation of battery charging demands, cost-effective commodity purchases, and meeting customer demands for information.

Supplemental Information

This project could include aspects of data management system, smart metering, fiber optic infrastructure improvement, distribution system automation, outage management system, load management system, demand-side management system, leak and revenue protection, customer interface to energy usage, and customer equipment control.

Significant Changes

2019-2023 CIP: Project activities in 2019 include consultant development of system specifications in preparation for an RFP to solicit contracts with meter data management systems and advanced metering infrastructure vendors for delivery in 2021 and 2022, respectively. Implementation will begin in 2021 once the upgrade of Utilities' Customer Information System is complete.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	(155,064)	614,735	185,500	530,000	0	703,750	3,239,212	893,996	5,366,958	0	5,397,394
Transfer from Gas Fund	136,334	300,000	101,500	180,000	0	870,000	2,900,000	1,450,000	5,400,000	0	5,637,834
Transfer from Water Fund	136,334	300,000	63,000	290,000	0	540,000	1,800,000	900,000	3,530,000	0	3,729,334
Total	117,604	1,214,735	350,000	1,000,000	0	2,113,750	7,939,212	3,243,996	14,296,958	0	14,764,562

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	91,303	1,214,735	350,000	1,000,000	0	2,113,750	7,939,212	3,243,996	14,296,958	0	14,738,261
Design	26,298	0	0	0	0	0	0	0	0	0	26,298
Total	117,601	1,214,735	350,000	1,000,000	0	2,113,750	7,939,212	3,243,996	14,296,958	0	14,764,559

Relationship to Comprehensive Plan**Primary Connection**

Element: Transportation

Section: Sustainable Transportation

Goal: T-1

Policy: T-1.5

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Summer 2017
Initial Project Completion: Summer 2020
Revised Project Start:
Revised Project Completion:
Project Number: EL-17002

High voltage circuit breakers

Substation 60kV Breaker Replacement

Description

This project funds the purchase and replacement of high voltage circuit breakers that interconnect the nine electric substations and two power switching stations. The circuit breakers are reaching the end of their recommended reliable useful life expectancy and/or are now under-rated for the use.

Justification

A recent 60kV circuit breaker study performed for the City of Palo Alto found that the interrupting current rating of two of these circuit breakers on the system is not high enough to handle the expected maximum fault current level. Three other circuit breakers are marginal with respect to their interrupting current rating. Six additional older oil circuit breakers are obsolete and have reached or are reaching the ends of their operable lives. One oil circuit breaker has experienced a non-catastrophic failure. Should there be a fault, it could result in a failure of any one of these twelve circuit breakers to operate properly, damaging the breaker and leading to a prolonged electric outage. These circuit breakers are integral and critical components of the electric utility transmission system. The project will be a 10-year program replacing 1-2 breakers per year.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	22,512	150,000	150,000	250,000	150,000	0	0	0	400,000	0	572,512
Total	22,512	150,000	150,000	250,000	150,000	0	0	0	400,000	0	572,512

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	18,008	150,000	150,000	250,000	150,000	0	0	0	400,000	0	568,008
Design	4,501	0	0	0	0	0	0	0	0	0	4,501
Total	22,509	150,000	150,000	250,000	150,000	0	0	0	400,000	0	572,509

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: EL-89044

Electric Substation transformer and bus structure

Substation Facility Improvements

Description

This project involves several improvements to each of the nine substation facilities in Palo Alto, including installation and replacement of capacitors, replacement of various substation equipment, renovation of security fences and entry gates, paving of driveways and parking areas in substations, upgrading of substation drainage systems, replacement of Remote Terminal Unit (RTU) equipment, bus voltage monitoring and local area network (LAN) connections, as well as other improvements.

Justification

The electric substations are the link between the transmission and distribution systems. At the substations, voltage levels are converted and distribution circuits branch out to provide power throughout the City. They are a key element to providing reliable electric service to residents and customers in Palo Alto. Work completed under this project helps to ensure reliable operation and electric service.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	318,384	318,384	300,000	200,000	200,000	200,000	200,000	1,100,000	0	N/A
Total	N/A	318,384	318,384	300,000	200,000	200,000	200,000	200,000	1,100,000	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	318,384	318,384	300,000	200,000	200,000	200,000	200,000	1,100,000	0	N/A
Total	N/A	318,384	318,384	300,000	200,000	200,000	200,000	200,000	1,100,000	0	N/A

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Electric Substations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: EL-89038

Electric Substation used to distribute power to City of Palo Alto customers

Substation Protection Improvements

Description

This project funds the purchase of protective overcurrent relays, circuit breakers, high voltage fuses, and other equipment used at electric substations to protect the equipment and circuits emanating from the substation from damage due to faults (i.e. short circuits) on the electric system.

Justification

The electric substations are the link between the transmission and distribution systems. At the substations, voltage levels are converted and distribution circuits branch out to provide power throughout the City. They are a key element to providing reliable electric service to residents and customers in Palo Alto. Protective equipment is used to stop power flow when there are problems on the electric system. As the electric distribution system becomes more complex and reliability more critical, maintenance of these systems is imperative.

This project includes replacement of old protective devices and controls that no longer provide the level of functionality now required for more sophisticated and sensitive devices. Properly designed and operating protective systems are required to ensure public safety, reduce equipment damage, and minimize the impact of faults such as reduction in outage durations.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	685,000	685,000	540,000	300,000	300,000	300,000	300,000	1,740,000	0	N/A
Total	N/A	685,000	685,000	540,000	300,000	300,000	300,000	300,000	1,740,000	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	685,000	685,000	540,000	300,000	300,000	300,000	300,000	1,740,000	0	N/A
Total	N/A	685,000	685,000	540,000	300,000	300,000	300,000	300,000	1,740,000	0	N/A

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Colorado Substation
Managing Department: Utilities
Initial Project Start: Fall 2015
Initial Project Completion: Spring 2017
Revised Project Start: Fall 2018
Revised Project Completion: Winter 2019
Project Number: EL-16003

Substation perimeter wall providing security for the enclosed equipment

Substation Security

Description

The electric substations are a key element of the Electric Distribution System used to provide electricity to residents and customers of Palo Alto. This project will evaluate options for protecting electric substations from outside vandalism and intrusion. If necessary, fences and other protections will be repaired. Staff will issue a Professional Services request for proposal with construction, if warranted and approved, to follow.

Justification

The 2013 incident involving PG&E's Metcalf Substation in South San Jose has brought about increased security concerns regarding utility sites and systems. A severe disruption to one of Palo Alto's substations could result in outages of an extended period. The Utility Site Security Improvements project (EL-04012) is addressing the aspects of visual security such as digital cameras, while this project will address the need for physical protection.

Significant Changes

2019-2023 CIP: Project budget increased by \$0.3 million to account for construction escalation.

2017-2021 CIP: Shifting project priorities have caused the delay for the completion of this project. A consultant assessed and recommended security measures in 2017. Staff will review recommendations and issue bids for selected improvements.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	48,900	350,000	300,000	300,000	500,000	0	0	0	800,000	0	1,148,900
Total	48,900	350,000	300,000	300,000	500,000	0	0	0	800,000	0	1,148,900

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	39,117	350,000	300,000	300,000	500,000	0	0	0	800,000	0	1,139,117
Design	9,777	0	0	0	0	0	0	0	0	0	9,777
Total	48,894	350,000	300,000	300,000	500,000	0	0	0	800,000	0	1,148,894

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: EL-16001

Electric crews preparing to enter underground vault

Underground System Rebuild

Description

Underground primary electric cables and equipment have a limited life span and need to be replaced before they fail and cause outages. This project will replace underground electric equipment in areas that were originally installed underground. Work will include the replacement of deteriorated electrical cables, transformers, switches and enclosures. Installation of new equipment will bring the electrical system up to current construction standards.

Justification

The underground system cables and equipment installed prior to 1990 have an expected life of 30 years and now need to be replaced. In addition, most of the equipment and cables were installed in subsurface enclosures that have standing water in them in the winter. The water reduces the life of the equipment and electrical connections and require the rebuilding of the facilities. Utilities has specific projects to address rebuilding Underground Districts. This project will address replacing underground equipment that was installed originally as underground and not part of an Underground District.

Significant Changes

2019-2023 CIP: Shifting project priorities and staffing shortages have delayed identification and development of projects to replace underground facilities that fall under this CIP.

2016-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	300,000	55,000	245,000	350,000	350,000	350,000	350,000	1,645,000	0	N/A
Total	N/A	300,000	55,000	245,000	350,000	350,000	350,000	350,000	1,645,000	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	300,000	55,000	245,000	350,000	350,000	350,000	350,000	1,645,000	0	N/A
Total	N/A	300,000	55,000	245,000	350,000	350,000	350,000	350,000	1,645,000	0	N/A

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

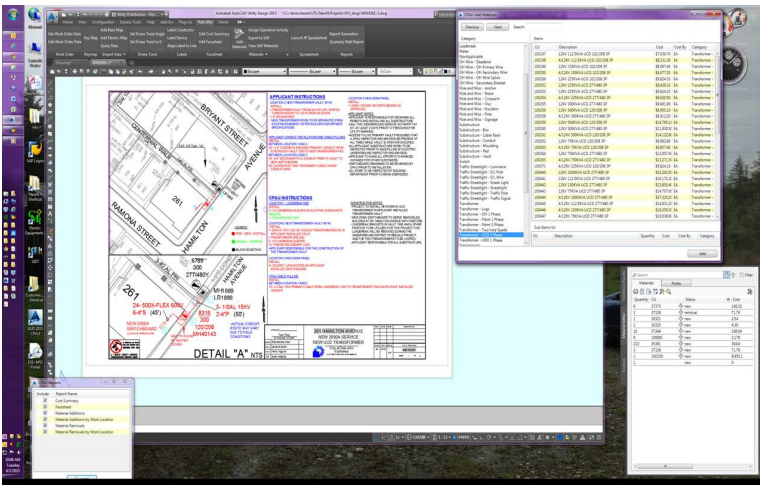
Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

ELECTRIC FUND



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Software maintenance & update
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: EL-13008

Screenshot of software used to prepare project estimates

Upgrade Electric Estimating System

Description

This project will upgrade the existing Electric estimating software used for preparing job estimates by integrating engineering analysis, adding predefined standards and templates, and by integrating documentation, materials ordering, and work management functions.

Justification

The existing Electric estimating software does not integrate the materials requisition, engineering calculation, labor requirements, and drawing functions necessary to produce an estimate. The integration of these functions will reduce the time needed to prepare estimates and improve the accuracy and consistency of the engineering drawings, material lists, and map updates.

Significant Changes

2019-2023 CIP: Engineering standards and pre-determined labor and material kits will be completed in Fiscal Year 2019.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	108,614	33,614	75,000	0	0	0	0	75,000	0	N/A
Total	N/A	108,614	33,614	75,000	0	0	0	0	75,000	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	108,614	33,614	75,000	0	0	0	0	75,000	0	N/A
Total	N/A	108,614	33,614	75,000	0	0	0	0	75,000	0	N/A

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

ELECTRIC FUND



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Utility Control Center
Managing Department: Utilities
Initial Project Start: Fall 2017
Initial Project Completion: Spring 2018
Revised Project Start:
Revised Project Completion: Spring 2019
Project Number: EL-17008

System Operator overseeing electric distribution system operations

Utility Control Center Upgrades

Description

This project will make the following improvements to the Utility Control Center: upgrade the existing lighting system, improve the operation map display by installing large video display panels, and improve the system-wide security monitoring facilities.

Justification

The Utilities Control Center (UCC) is used to coordinate the activities of the City's Electric Utility. Within the facility there are large maps for monitoring the control of the system, video surveillance feeds from other utility facilities and the Supervisory Control and Data Acquisition (SCADA) system. This project will improve efficiency and operation of the room by updating map displays and the surveillance facilities to newer technologies.

Significant Changes

2018-2022 CIP: Staff has gone out to bid for the UCC upgrades.

2017-2021 CIP: Shifting project priorities have caused the delay for the completion of this project.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	2,812	497,187	400,000	97,186	0	0	0	0	97,186	0	499,998
Total	2,812	497,187	400,000	97,186	0	0	0	0	97,186	0	499,998

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	2,249	497,187	400,000	97,186	0	0	0	0	97,186	0	499,435
Design	562	0	0	0	0	0	0	0	0	0	562
Total	2,811	497,187	400,000	97,186	0	0	0	0	97,186	0	499,997

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

ELECTRIC FUND



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Spring 2004
Initial Project Completion: Spring 2016
Revised Project Start:
Revised Project Completion: Summer 2021
Project Number: EL-04012

Security cameras for system security and monitoring

Utility Site Security Improvements

Description

The Utilities Electric, Water, and Gas Distribution Systems provide services to residents and businesses that are fundamental necessities of living and working in Palo Alto. This project will add electronic security systems at utility sites to protect equipment at electric substations, water pumping plants, reservoirs, and gas stations from intrusion and vandalism.

Justification

This project addresses security risks and mitigation methods for City utility facilities identified in a utility site assessment that was completed in 2003. The 2013 vandalism incident at PG&E's Metcalf Substation have heightened security concerns regarding utility sites and systems. This CIP implements the recommendations in the site assessment report and installs equipment at two to three facilities per year. Through December 2016, 7 of 9 electric utility sites were completed.

Significant Changes

2017-2021 CIP: Shifting project priorities have caused the delay for the completion of this project.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	1,389,568	105,080	45,080	110,000	50,000	50,000	0	0	210,000	0	1,644,648
Total	1,389,568	105,080	45,080	110,000	50,000	50,000	0	0	210,000	0	1,644,648

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	1,111,650	105,080	45,080	110,000	50,000	50,000	0	0	210,000	0	1,366,730
Design	277,908	0	0	0	0	0	0	0	0	0	277,908
Total	1,389,558	105,080	45,080	110,000	50,000	50,000	0	0	210,000	0	1,644,638

Relationship to Comprehensive Plan**Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

ELECTRIC FUND



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: EL-19004

Aging pole that needs to be replaced.

Wood Pole Replacement

Description

This project will fund the annual replacement of deteriorated wood poles.

Justification

Wood poles are used to support overhead utility lines throughout the City of Palo Alto. Though poles are inspected, tested, and treated to maintain their integrity, over time poles will deteriorate to the point that they are no longer safe for utility workers. Replacement of wood poles has been funded under the Electric System Improvement project (EL-98003); however, wood pole replacement competes with other system improvement and service reliability work for funding. A new specific project for pole replacement is being established to give pole replacement a higher priority, as poles are getting older, and to ensure proper funding is approved and allocated each year.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	0	0	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000	0	N/A
Total	N/A	0	0	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	0	0	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000	0	N/A
Total	N/A	0	0	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000	0	N/A

Operating Impact

2019-2023 CIP: Project established.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301



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Undergrounding Projects

ELECTRIC FUND



Fund: Electric Fund - Operating
Category: Undergrounding Projects
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Spring 2015
Initial Project Completion: Spring 2017
Revised Project Start:
Revised Project Completion: Spring 2019
Project Number: EL-13007

The damage done by copper/metal thieves can far exceed the value to the thief and cost of protection

Underground Distribution System Security

Description

This project funds the purchase and installation of equipment to secure underground electric distribution facilities from vandalism, tampering, and theft to facilitate a safe, secure, and reliable electric system used to provide electricity to utility customers in the City of Palo Alto.

Justification

In recent years, the theft of metals for scrap has escalated due to increased demand overseas and shortages of raw materials. This has included the theft of electrical wire and cast iron manhole covers. The electric system, and to a lesser extent the dark fiber system, fuels the economy of the City as technology has become more reliant on electricity and communications systems.

Significant Changes

2017-2021 CIP: Engineering evaluation design is in progress. Additional time was requested to complete evaluation of samples.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	1,716	300,000	0	600,000	0	0	0	0	600,000	0	601,716
Total	1,716	300,000	0	600,000	0	0	0	0	600,000	0	601,716

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	1,371	300,000	0	600,000	0	0	0	0	600,000	0	601,371
Design	342	0	0	0	0	0	0	0	0	0	342
Total	1,713	300,000	0	600,000	0	0	0	0	600,000	0	601,713

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

ELECTRIC FUND



Fund: Electric Fund - Operating
Category: Undergrounding Projects
Project Location:
Managing Department: Utilities
Initial Project Start: Spring 2017
Initial Project Completion: Spring
Revised Project Start: Spring 2019
Revised Project Completion: Spring 2022
Project Number: EL-08001

Intersection of Embarcadero Road and Waverley Street (part of Underground District 42)

Underground District 42 - Embarcadero Road, Emerson, Middlefield

Description

This project will replace the existing overhead electrical distribution system with an underground system along Embarcadero between Emerson and Middlefield. This project involves creating an Underground Utilities District and performing the work on a general benefit basis under the provisions of Utility Rule 17 which requires the Utility to bear the cost of the distribution system and the property owners to bear the cost of undergrounding their services.

Justification

Benefits of undergrounding include system improvement, higher reliability, reduced tree trimming, and improved aesthetics. Undergrounding has been approved to continue the ongoing underground conversion program and also because the area meets the California Public Utilities Commission rules dictating the areas where a telephone company can underground their lines.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	0	50,000	1,750,000	(50,000)	0	1,750,000	0	1,750,000
Other	0	0	0	0	0	0	300,000	0	300,000	0	300,000
Total	0	0	0	0	50,000	1,750,000	250,000	0	2,050,000	0	2,050,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	1,750,000	250,000	0	2,000,000	0	2,000,000
Design	0	0	0	0	50,000	0	0	0	50,000	0	50,000
Total	0	0	0	0	50,000	1,750,000	250,000	0	2,050,000	0	2,050,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Alma Street at Embarcadero Road (part of Underground District 43)

Fund: Electric Fund - Operating
Category: Undergrounding Projects
Project Location: Alma, Addison, Bryant, and Melville
Managing Department: Utilities
Initial Project Start: Spring 2018
Initial Project Completion: Spring 2019
Revised Project Start: Spring 2021
Revised Project Completion: Spring 2023
Project Number: EL-11009

Underground District 43 - Alma/ Embarcadero

Description

This project will replace the existing overhead electrical distribution system with an underground system in the area bounded by Alma, Addison, Bryant, and Melville. This project involves creating an Underground Utilities District and performing the work on a general benefit basis under the provisions of Utility Rule 17, which requires the Utility to bear the cost of the distribution system and the property owners to bear the cost of undergrounding their services. The design phase of this project will start in Fiscal Year 2020.

Justification

Benefits of undergrounding include system improvement, higher reliability, reduced tree trimming, and improved aesthetics. Undergrounding has been approved to continue the ongoing underground conversion program and also because the area meets California Public Utilities Commission rules dictating the areas where a telephone company can underground their lines.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	0	0	0	0	1,850,000	1,850,000	0	1,850,000
Other	0	0	0	0	0	0	150,000	150,000	300,000	0	300,000
Total	0	0	0	0	0	0	150,000	2,000,000	2,150,000	0	2,150,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	2,000,000	2,000,000	0	2,000,000
Design	0	0	0	0	0	0	150,000	0	150,000	0	150,000
Total	0	0	0	0	0	0	150,000	2,000,000	2,150,000	0	2,150,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

ELECTRIC FUND



Fund: Electric Fund - Operating
Category: Undergrounding Projects
Project Location: 400 block of West Charleston and El Camino Real
Managing Department: Utilities
Initial Project Start: Spring 2015
Initial Project Completion: Spring 2017
Revised Project Start: Spring 2017
Revised Project Completion: Winter 2019
Project Number: EL-12001

Overhead facilities at the intersection of Arastradero Road and El Camino Real (part of Underground District 46)

Underground District 46 - Charleston/El Camino Real

Description

This project includes the costs to underground the existing overhead electrical distribution system in the area along the 400 block of West Charleston and El Camino Real. Undergrounding will be completed in FY 2019, and the overhead system will be removed.

Justification

Benefits of undergrounding include system improvement, higher reliability, reduced tree trimming, and improved aesthetics of this busy intersection. Funding has been approved to continue the ongoing underground conversion program and also because the area meets California Public Utilities Commission rules dictating the areas where a telephone company can underground their lines.

Significant Changes

2017-2021 CIP: Due to safety concerns, this project has been re-prioritized and moved up by one year.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	219,549	2,636,679	1,895,454	1,385,000	0	0	0	0	1,385,000	0	3,500,003
Other	0	643,775	0	0	0	0	0	0	0	0	0
Total	219,549	3,280,454	1,895,454	1,385,000	0	0	0	0	1,385,000	0	3,500,003

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	175,634	3,280,454	1,895,454	1,385,000	0	0	0	0	1,385,000	0	3,456,088
Design	43,905	0	0	0	0	0	0	0	0	0	43,905
Total	219,539	3,280,454	1,895,454	1,385,000	0	0	0	0	1,385,000	0	3,499,993

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Electric Fund - Operating
Category: Undergrounding Projects
Project Location: Middlefield, Homer Avenue, Webster Street, and Addison Avenue
Managing Department: Utilities
Initial Project Start: Spring 2013
Initial Project Completion: Spring 2016
Revised Project Start:
Revised Project Completion: Winter 2018
Project Number: EL-11010

Overhead facilities that will be undergrounded as part of Underground District 47

Underground District 47-Middlefield, Homer, Webster, Addison

Description

This project includes the design costs to underground the existing overhead distribution system. Undergrounding will be completed in FY 2018, and the overhead system will be removed in FY 2019.

Justification

Benefits of undergrounding include system improvement, higher reliability, reduced tree trimming, and improved aesthetics. Funding has been approved to continue the ongoing underground conversion program and also because the area meets California Public Utilities Commission rules dictating the areas where a telephone company can underground their lines. Underground District 47 is bounded by Middlefield, Homer Avenue, Webster Street, and Addison Avenue.

Significant Changes

2019-2023 CIP: Construction by City staff is approximately 85% completed for this area. Work is being done in conjunction with the Underground District 19 project (EL-11008).

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	2,027,640	518,772	18,772	500,000	0	0	0	0	500,000	0	2,546,412
Other	1,105,161	0	0	0	0	0	0	0	0	0	1,105,161
Total	3,132,801	518,772	18,772	500,000	0	0	0	0	500,000	0	3,651,573

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	2,506,229	518,772	18,772	500,000	0	0	0	0	500,000	0	3,025,001
Design	626,547	0	0	0	0	0	0	0	0	0	626,547
Total	3,132,776	518,772	18,772	500,000	0	0	0	0	500,000	0	3,651,548

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



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FIBER OPTICS FUND

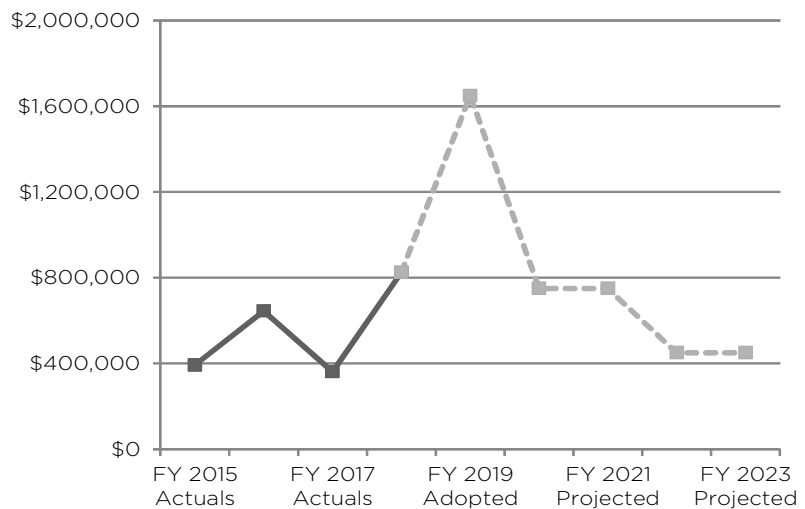
Overview

The City of Palo Alto is the only municipality in California that operates a full suite of City-owned utility services. The most recent addition to this list of services provided to City of Palo Alto residents and customers is the leasing of “dark” fiber on a fiber optic loop, built by the City in 1996. For the 2019-2023 Capital Improvement Program (CIP), expenditures of \$4.1 million are programmed, with \$1.7 million allocated in Fiscal Year 2019. Major projects funded in the 2019-2023 CIP include the Fiber Optics Customer Connections (\$1.3 million) and Fiber Optics Network System Improvements (\$1.0 million). The budget for the Fiber Optics CIP is broken into two separate categories: Capacity Improvements and Customer Connections.

Capacity Improvements

With the advance in technology, increase in online services, and increase in data transmission needs to meet consumer demand, the capability afforded by fiber optic cables is increasingly in demand. To ensure reliable fiber optic service to City of Palo Alto residents and customers, fiber optic system components (fiber optic cables and splice cabinets) need to be upgraded or added to increase capacity; replaced or protected from damage by animals; and rerouted away from hazardous conditions.

Fiber Optics Fund Capital Expenditures



Infrastructure Inventory

CLASSIFICATION	QUANTITY
Route Miles of Backbone Fiber Cable	42
Miles of Overhead Fiber Optic Cable	25
Miles of Underground Fiber Optic Cable	60

Recent Accomplishments

- Upgraded the downtown backbone between a number of splice points to improve fiber infrastructure and efficiency for customer connections.
- Upgraded AutoCAD fiber maps to include Advanced Modeling Extension module for the Geographic Information System (GIS).
- Upgraded the dark fiber network from University Avenue to Lytton Avenue at Bryant Street to add capacity and improve efficiency for downtown businesses.

- Completed upgrade of fiber maps to Utilities GIS system, enabling a single view of multiple utility infrastructures.
- Conducted a physical audit of the dark fiber network to improve network performance and add capacity.

2019-2023 Capital Improvement Program

Recurring Projects

There is one recurring project in the Capacity Improvements Category: the Fiber Optics Network System Improvements. This project extends the “dark” fiber optic network around Palo Alto through the development of fiber sub-rings and completion of general improvements to the fiber system. The annual funding for this project remains at \$0.2 million throughout the CIP.

Non-Recurring Projects

As part of the 2019-2023 Capital Improvement Program, one project is included within this category: Fiber Optic System Rebuild (Fiscal Year 2019: \$1.2 million; total cost: \$1.8 million). This project is expected to extend through Fiscal Year 2021 and will rebuild portions of the “dark” fiber optics network. Certain sections of the system have reached capacity, limiting the City’s ability to provide fiber optic service to all potential customers. Rebuilding portions of the “dark” fiber optic network includes installation of additional fiber optic cables in the Stanford Research Park area and replacement of several below ground splice closures with pad-mounted pedestals.

Customer Connections

As customers continually change their fiber optic needs due to equipment additions, new construction, building expansions, building remodels, teardowns and rebuilds, and new building occupancy types, the fiber optics system must evolve to meet these needs. Projects in this category include work required to meet the needs of customers who have applied for new or upgraded fiber optic service. The connection costs associated with new or upgraded connections are offset by charges to the customer.

Recent Accomplishments

- Several services installed for Stanford University offsite facilities and other customers in the Stanford Research Park area.
- New services installed at 17 Public Works storm water/creek monitoring system locations.

2019-2023 Capital Improvement Program

Recurring Projects

In the Customer Connections category there is one recurring project: Fiber Optics Customer Connections. In the 2019-2023 Capital Improvement Program, recurring funding in this project

FIBER OPTICS FUND

remains at \$0.3 million. This project provides funding for the installation of fiber optic infrastructure for new service connections.

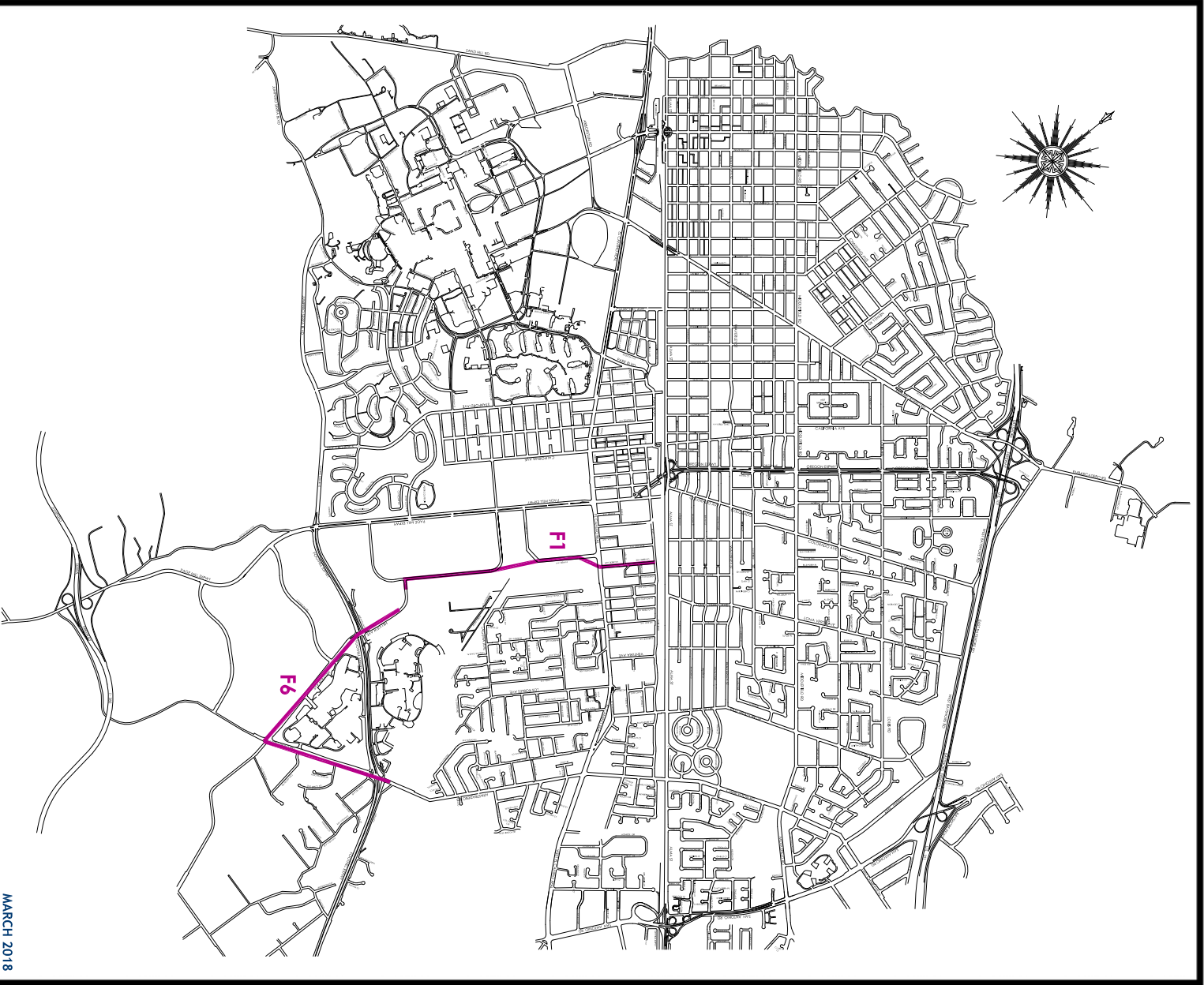
Non-Recurring Projects

There are no non-recurring projects in this category.

Summary of Capital Activity

FIBER OPTICS FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Source of Funds									
Other Revenues									
FO-10000	Fiber Optics Customer Connections: Connection Charges	119,466	412,941	200,000	200,000	200,000	200,000	200,000	1,000,000
	Other Revenues Total	119,466	412,941	200,000	200,000	200,000	200,000	200,000	1,000,000
	Total Sources	119,466	412,941	200,000	200,000	200,000	200,000	200,000	1,000,000
Use of Funds									
Capacity Improvements									
FO-10001	Fiber Optics Network System Improvements	155,478	411,557	200,000	200,000	200,000	200,000	200,000	1,000,000
FO-16000	Fiber Optic System Rebuild	20,636	0	1,200,000	300,000	300,000	0	0	1,800,000
	Capacity Improvements Total	176,114	411,557	1,400,000	500,000	500,000	200,000	200,000	2,800,000
Customer Connections									
FO-10000	Fiber Optics Customer Connections	185,385	412,941	250,000	250,000	250,000	250,000	250,000	1,250,000
	Customer Connections Total	185,385	412,941	250,000	250,000	250,000	250,000	250,000	1,250,000
	Total Uses	361,499	824,498	1,650,000	750,000	750,000	450,000	450,000	4,050,000



LEGEND

PROPOSED FIBER OPTIC BACKBONE EXTENSION

F1 ADD FIBER CABLE TO INCREASE CAPACITY TO SERVE (1,0000) 2014-2019
 F6 SAME AS ABOVE (1,0000) 2014-2020

PROPOSED FIBER OPTIC SYSTEM IMPROVEMENT

VARIOUS RELAYMENT IMPROVEMENT (1,0001)



THE CITY OF
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FIBER OPTIC FUND 2019-2023 CAPITAL IMPROVEMENT PROGRAM

This map is a product of the
City of Palo Alto GIS



0 2000'

Capacity Improvements

FIBER OPTICS FUND



Fund: Fiber Optics
Category: Capacity Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: FO-10001

Fiber optic crew installing new fiber optic cables

Fiber Optics Network System Improvements

Description

This project provides funding to improve reliability within the fiber optic network system. Typical activities in this project include: purchasing, upgrading, and installing fiber optic cables, conduits, and splice enclosures.

Justification

This project promotes the formation of a competitive market for telecommunications in Palo Alto, accelerating the pace at which high-quality, low-cost, advanced telecommunications services are delivered to the residents and businesses of Palo Alto. It does so while limiting the negative impacts on Palo Alto's environment by using pre-existing conduit and poles. Finally, it enables the Fiber Optics Fund to generate additional revenues through the enhanced use of its conduit and poles.

Supplemental Information

The Fiber Optics Utility continues to add capital improvements in the form of additional fiber in congested areas as well as areas of predicted growth.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Fiber Optics Fund	N/A	1,476,059	411,557	200,000	200,000	200,000	200,000	200,000	1,000,000	0	N/A
Total	N/A	1,476,059	411,557	200,000	200,000	200,000	200,000	200,000	1,000,000	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	1,476,059	411,557	200,000	200,000	200,000	200,000	200,000	1,000,000	0	N/A
Total	N/A	1,476,059	411,557	200,000	200,000	200,000	200,000	200,000	1,000,000	0	N/A

Relationship to Comprehensive Plan**Primary Connection**

Element: Business & Economics

Section: Growth

Goal: B-4

Policy: B-4.1

Potential Board/Commission Review:

Architectural Review Board

Utilities Advisory Commission

Environmental Impact Analysis:

This project is categorically exempt from CEQA under section 15302.



Fund: Fiber Optics
Category: Capacity Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Spring 2016
Initial Project Completion: Spring 2018
Revised Project Start:
Revised Project Completion: Fall 2021
Project Number: FO-16000

Fiber optic splice closer ready for inspection and work

Fiber Optics System Rebuild

Description

This system capacity improvement project rebuilds portions of the "dark" fiber optic network around Palo Alto, which, in turn, is leased to parties providing telecommunication services to citizens and businesses in Palo Alto. The rebuild projects will install new aerial duct or substructures (conduit and boxes) and additional fiber backbone cable to increase capacity for sections of the dark fiber ring that are at or near capacity and allow the Utilities Department to meet customer requests for service. The main rebuild project areas are the Stanford Research Park, Palo Alto Internet Exchange, and Downtown.

Justification

The dark fiber optic network was constructed in the early 1990s and started leasing fibers to customers in 1996. Since that time several sections of the network have reached capacity and limited the City's ability to serve its customers. This project improves the ability to maintain a competitive market for telecommunications in Palo Alto, accelerating the pace at which high-quality, low cost, advanced telecommunications services are delivered to the residents and businesses of Palo Alto. Work included in the project is intended to increase system capacity and improve system reliability.

Significant Changes

2019-2023 CIP: Due to limited staffing, this project has shifted to start in FY 2019. Additionally, \$300,000 has been added to the following two years to address additional site locations.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Fiber Optics Fund	161,510	1,200,000	0	1,200,000	300,000	300,000	0	0	1,800,000	0	1,961,510
Total	161,510	1,200,000	0	1,200,000	300,000	300,000	0	0	1,800,000	0	1,961,510

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	157,379	1,200,000	0	1,200,000	300,000	300,000	0	0	1,800,000	0	1,957,379
Design	4,124	0	0	0	0	0	0	0	0	0	4,124
Total	161,503	1,200,000	0	1,200,000	300,000	300,000	0	0	1,800,000	0	1,961,503

Relationship to Comprehensive Plan**Primary Connection**

Element: Business & Economics

Section: Growth

Goal: B-4

Policy: B-4.1

Potential Board/Commission Review:

Architectural Review Board

Utilities Advisory Commission

Environmental Impact Analysis:

This project is categorically exempt from CEQA under section 15302.



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Customer Connections

FIBER OPTICS FUND



Fund: Fiber Optics
Category: Customer Connections
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: FO-10000

Technician installing new fiber optic cables

Fiber Optics Customer Connections

Description

This project provides funding for the installation of fiber optic infrastructure for new service connections. Typical activities in this project include: purchasing, upgrading, and installing fiber optic cables, conduits, and splice enclosures at customer sites.

Justification

This project promotes the formation of a competitive market for telecommunications in Palo Alto, accelerating the pace at which high-quality, low-cost, advanced telecommunications services are delivered to businesses while limiting the negative impacts on Palo Alto's environment by using existing conduits and poles rather than adding additional infrastructure to the system. Finally, it enables the Fibers Optics Fund to generate additional revenues through the enhanced use of its conduits and poles.

Supplemental Information

The cost to the Fiber Optics Fund associated with new service connections and the City's cost of ownership are billed to the requesting parties.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Fiber Optics Fund	N/A	83,001	225,910	50,000	50,000	50,000	50,000	50,000	250,000	0	N/A
Other	N/A	200,000	101,077	200,000	200,000	200,000	200,000	200,000	1,000,000	0	N/A
Total	N/A	283,001	326,987	250,000	250,000	250,000	250,000	250,000	1,250,000	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	283,001	326,987	250,000	250,000	250,000	250,000	250,000	1,250,000	0	N/A
Total	N/A	283,001	326,987	250,000	250,000	250,000	250,000	250,000	1,250,000	0	N/A

Relationship to Comprehensive Plan**Primary Connection**

Element: Business & Economics

Section: Growth

Goal: B-4

Policy: B-4.1

Potential Board/Commission Review:

Architectural Review Board

Utilities Advisory Commission

Environmental Impact Analysis:

This project is categorically exempt from CEQA under section 15302.



CITY OF
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GAS FUND

Overview

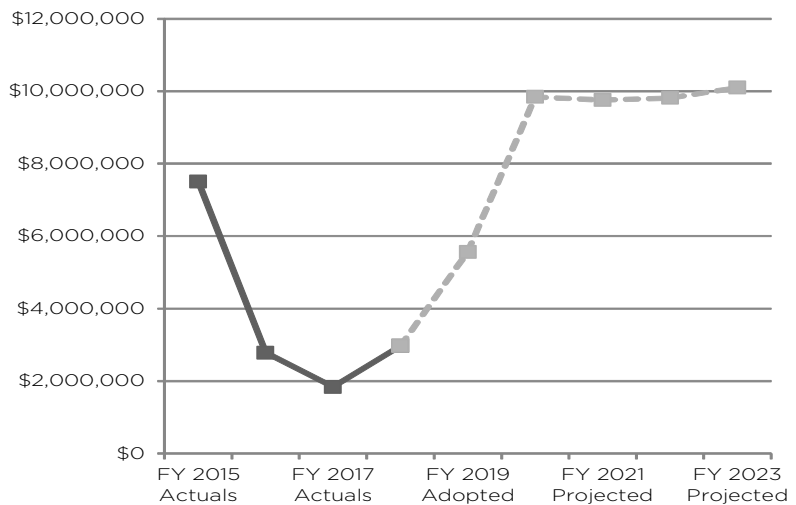
The City of Palo Alto is the only municipality in California that operates a full suite of City-owned utility services. The municipal gas distribution system began operation in 1917. It provides safe, reliable, and cost effective gas service to residents and customers of Palo Alto. For the 2019-2023 Capital Improvement Program (CIP), approximately \$45.1 million is programmed, with \$5.6 million allocated in Fiscal Year 2019. Overall, a total of 14 projects are programmed for the 5-year CIP. Major projects funded in the 2019-2023 CIP include Gas Main Replacements (cumulative total of \$30.3 million), Gas System Customer Connections (\$6.9 million), and Gas Meters and Regulators (\$2.0 million). The budget for the Gas Fund CIP is broken into three separate categories: Customer Connections, Gas Main Replacements, and System Improvements.

Customer Connections

As customers continually change their gas needs due to equipment additions, new construction, building expansions, building remodels, tear-downs and rebuilds, and new building occupancy types, the gas system must evolve to meet these needs. The Gas System Customer

Connections project, which is the largest project within the Gas Fund (\$1.3 million in Fiscal Year 2019, \$6.9 million over the 2019-2023 CIP), is accounted for within this category. This project allows for the completion of work required to meet the needs of customers who have applied for new or upgraded gas service. The Gas Fund pays for a portion of this project, while remaining costs are supported by reimbursements from customers for project work performed by the City.

Gas Fund Capital Expenditures



Infrastructure Inventory

CLASSIFICATION	QUANTITY
Total miles of gas main distribution system	210.31 miles
Total miles of gas service extension to residents and businesses	205.55 miles
Number of gas receiving stations	4

Recent Accomplishments

- In Fiscal Year 2017 the Utilities Gas Division completed approximately 168 customer service projects, at a cost of \$1.3 million.

2019-2023 Capital Improvement Program

Recurring Projects

A total of \$9.2 million is programmed for Customer Connection recurring projects in the 2019-2023 CIP, with \$1.7 million allocated in Fiscal Year 2019. Recurring projects in this category include the following:

- Gas System Customer Connections (Fiscal Year 2019: \$1.3 million; 5-Year CIP: \$6.9 million)
- System Extensions - Unreimbursed (Fiscal Year 2019: \$0.4 million; 5-Year CIP: \$2.2 million)

Gas Main Replacements

The Gas Main Replacements (GMR) category accounts for the replacement of inadequately-sized and structurally deficient gas mains that are subject to corrosion or reaching the end of their expected life. The Utilities Department coordinates with the Public Works Department's street maintenance projects to minimize damage to the City's pavement and maximize cost efficiency. In the next five years, it is anticipated that 90,391 linear feet of gas mains, or 8 percent of the entire system, will be replaced. The 2019-2023 CIP includes \$30.3 million in funding for projects within this category.

Recent Accomplishments

- Completed the design and started construction of gas main replacement project GMR 22 to replace approximately 19,440 linear feet of gas main pipelines and 367 service pipelines.

2019-2023 Capital Improvement Program

Non-Recurring Projects

Six GMR projects are included in the 2019-2023 CIP (Fiscal Year 2019: \$1.4 million; 5-Year CIP: \$30.3 million).

System Improvements

To ensure reliable gas services for the City of Palo Alto residents and customers, gas infrastructure must be replaced upon reaching the end of its expected life. The System Improvements category includes five projects during the 2019-2023 CIP at a total cost of \$5.6 million, with \$2.5 million allocated in Fiscal Year 2019.

2019-2023 Capital Improvement Program

Recurring Projects

There are three funded recurring projects in the System Improvements category in the 2019-2023 CIP:

GAS FUND

- Gas Distribution System Improvements (Fiscal Year 2019: \$0.2 million, 5-Year CIP: \$1.3 million)
- Gas Equipment and Tools (Fiscal Year 2019: \$0.4 million, 5-Year CIP: \$0.8 million)
- Gas Meters and Regulators (Fiscal Year 2019: \$0.4 million, 5-Year CIP: \$2.0 million).

Non-Recurring Projects

There are two one-time projects in the System Improvements category in the 2019-2023 CIP

- Gas ABS/Tenite Replacement (Fiscal Year 2019: \$1.5 million, 5-Year CIP: \$1.5 million)
- Gas Distribution System Model (Fiscal Year 2019: \$0.02 million, 5-Year CIP: \$0.06 million).

Please refer to the City of Palo Alto Utilities webpage to confirm project details: <http://www.cityofpaloalto.org/gov/depts/utl/projects/default.asp>

Summary of Capital Activity

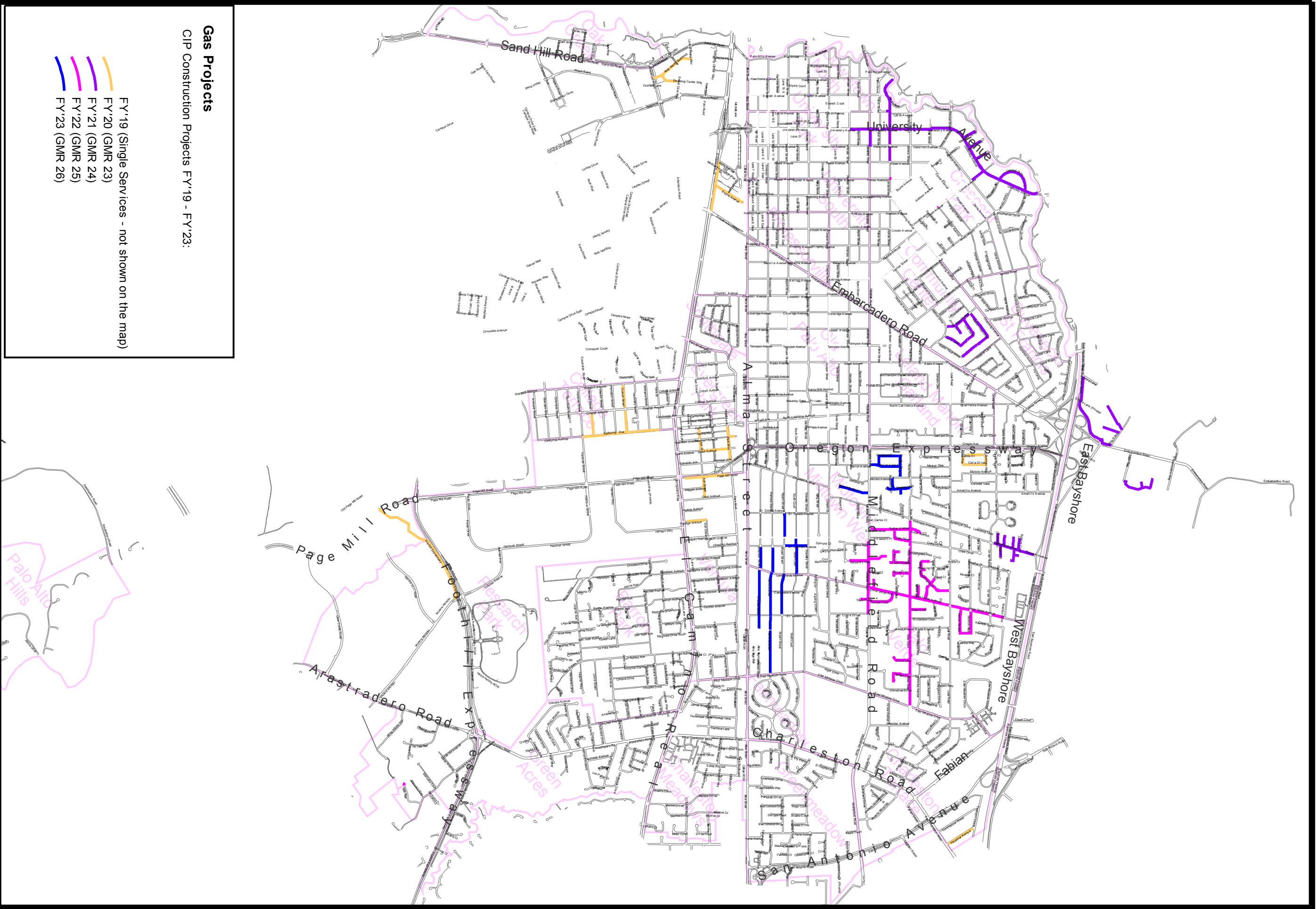
GAS FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Source of Funds									
Other Revenues									
GS-80017	Gas System, Customer Connections	955,081	956,000	1,078,935	1,111,303	1,144,642	1,178,981	1,200,000	5,713,861
	Other Revenue Total	955,081	956,000	1,078,935	1,111,303	1,144,642	1,178,981	1,200,000	5,713,861
	Total Sources	955,081	956,000	1,078,935	1,111,303	1,144,642	1,178,981	1,200,000	5,713,861
Use of Funds									
Customer Connections									
GS-80017	Gas System, Customer Connections	1,155,768	1,100,000	1,303,315	1,342,415	1,382,688	1,424,169	1,466,894	6,919,481
GS-03009	System Extensions - Unreimbursed	96,796	100,000	421,180	433,816	446,830	460,234	474,042	2,236,102
	Customer Connections Total	1,252,564	1,200,000	1,724,495	1,776,231	1,829,518	1,884,403	1,940,936	9,155,583
Gas Main Replacements									
GS-12001	Gas Main Replacement - Project 22	383,432	9,820,739	800,000	0	0	0	0	800,000
GS-13001	Gas Main Replacement - Project 23	42,500	350,000	550,000	6,500,000	0	0	0	7,050,000
GS-14003	Gas Main Replacement - Project 24	0	0	0	804,525	6,500,000	0	0	7,304,525
GS-15000	Gas Main Replacement - Project 25	0	0	0	0	650,000	6,500,000	0	7,150,000
GS-16000	Gas Main Replacement - Project 26	0	0	0	0	0	650,000	6,500,000	7,150,000
GS-20000	Gas Main Replacement - Project 27	0	0	0	0	0	0	856,180	856,180
	Gas Main Replacements Total	425,932	10,170,739	1,350,000	7,304,525	7,150,000	7,150,000	7,356,180	30,310,705

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
System Improvements									
GS-18000	Gas ABS/Tenite Replacement Project	0	0	1,500,000	0	0	0	0	1,500,000
GS-11002	Gas Distribution System Improvements	91,322	200,000	246,036	253,417	261,020	268,851	276,916	1,306,240
GS-14004	Gas Distribution System Model	0	19,574	20,000	20,000	20,000	0	0	60,000
GS-13002	Gas Equipment and Tools	0	50,000	350,000	100,000	100,000	100,000	100,000	750,000
GS-80019	Gas Meters and Regulators	0	130,000	376,652	387,952	399,591	411,579	423,926	1,999,700
GS-15001	Security at City's Gas Receiving Stations	69,358	44,992	0	0	0	0	0	0
	System Improvements Total	160,680	444,566	2,492,688	761,369	780,611	780,430	800,842	5,615,940
	Total Uses	1,839,177	11,815,305	5,567,183	9,842,125	9,760,129	9,814,833	10,097,958	45,082,228



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Gas Projects
CIP Construction Projects FY'19 - FY'23:

- FY'19 (Single Services - not shown on the map)
- FY'20 (GMR 23)
- FY'21 (GMR 24)
- FY'22 (GMR 25)
- FY'23 (GMR 26)



The City of
Palo Alto



**GAS FUND 2019-2023
CAPITAL IMPROVEMENT PROGRAM**

This map is a product of the
City of Palo Alto GIS



Customer Connections



Fund: Gas Fund - Operating
Category: Customer Connections
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: GS-80017

Gas System Customer Connections

Gas System, Customer Connections

Description

This funding allows for the Gas Distribution System to be extended in order to provide gas service to new customers and augment service to customers with increased natural gas demands. Improvements include new mains, services, valves, regulators, meters, and accessories.

Justification

This project upgrades infrastructure to provide gas service connections to new customers, meet changes in existing customer service demands, and respond to changes in gas service requirements due to new development or redevelopment. This project is funded partially from reimbursements by customers.

Significant Changes

2015-2019 CIP: Project was retitled from "Gas Systems Extensions".

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	N/A	292,313	144,000	224,380	231,112	238,046	245,188	266,894	1,205,620	0	N/A
Other	N/A	1,047,510	956,000	1,078,935	1,111,303	1,144,642	1,178,981	1,200,000	5,713,861	0	N/A
Total	N/A	1,339,823	1,100,000	1,303,315	1,342,415	1,382,688	1,424,169	1,466,894	6,919,481	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	1,339,823	1,100,000	1,303,315	1,342,415	1,382,688	1,424,169	1,466,894	6,919,481	0	N/A
Total	N/A	1,339,823	1,100,000	1,303,315	1,342,415	1,382,688	1,424,169	1,466,894	6,919,481	0	N/A

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

GAS FUND



Fund: Gas Fund - Operating
Category: Customer Connections
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: GS-03009

New gas main being installed by horizontal direction drill (HDD) method

System Extensions - Unreimbursed

Description

This funding allows for the replacement of existing sections of the Gas Distribution System. This project will ensure continuous gas service to existing customers. Improvements include replacement of existing main sections, services, valves, regulators, meters, and accessories.

Justification

This project replaces gas distribution and existing customer service infrastructure. Existing gas service connections are replaced by the Gas Utility to maintain customer service. This project will capture non-reimbursed capital assets installed by staff.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	N/A	204,455	100,000	421,180	433,816	446,830	460,234	474,042	2,236,102	0	N/A
Total	N/A	204,455	100,000	421,180	433,816	446,830	460,234	474,042	2,236,102	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	204,455	100,000	421,180	433,816	446,830	460,234	474,042	2,236,102	0	N/A
Total	N/A	204,455	100,000	421,180	433,816	446,830	460,234	474,042	2,236,102	0	N/A

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



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Gas Main Replacements



Fund: Gas Fund - Operating
Category: Gas Main Replacements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Summer 2015
Initial Project Completion: Winter 2017
Revised Project Start: Fall 2017
Revised Project Completion: Winter 2019
Project Number: GS-12001

New gas main being installed by horizontal direction drill (HDD) method

Gas Main Replacement - Project 22

Description

This project replaces approximately 23,960 linear feet of leaking, inadequately-sized, and structurally deficient gas mains and services located on various streets, including the Stanford Shopping Center, Midtown, and El Camino Real business districts. Staff identifies problematic mains/services by researching maintenance and leak histories, analyzing performance of the entire gas distribution system, and considering risk ratings of the Distribution Integrity Management Plan.

Justification

The project will target replacing PVC mains and services, also known in the industry as cathodic protection, located in business districts and steel mains and services with ineffective corrosion protection. This project is mandatory due to the need to replace aging infrastructure and to reduce the City's liability exposure due to PVC and steel gas facilities with ineffective corrosion protection.

Supplemental Information

The City of Palo Alto Distribution Integrity Management Plan's mathematical model is used to evaluate risks presented by PVC facilities located within business districts that have been assigned the highest probability and consequence scores. Targeted streets will be coordinated with the Public Works Street Maintenance Program to complete replacement before streets are paved. Linear footage and locations are subject to change. Please refer to the City of Palo Alto Utilities webpage to confirm project details.

Significant Changes

2019 - 2023 CIP: GMR 22 includes additional budget of \$6.7 million for the Upgrade Downtown project. Construction began January 2018 and will continue until the end of the calendar year.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	1,038,258	9,820,739	9,820,739	800,000	0	0	0	0	800,000	0	11,658,997
Total	1,038,258	9,820,739	9,820,739	800,000	0	0	0	0	800,000	0	11,658,997

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	830,605	9,820,739	9,820,739	800,000	0	0	0	0	800,000	0	11,451,344
Design	207,648	0	0	0	0	0	0	0	0	0	207,648
Total	1,038,253	9,820,739	9,820,739	800,000	0	0	0	0	800,000	0	11,658,992

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Gas Fund - Operating
Category: Gas Main Replacements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Summer 2016
Initial Project Completion: Winter 2018
Revised Project Start: Summer 2018
Revised Project Completion: Winter 2020
Project Number: GS-13001

Installation of new HDP gas service main

Gas Main Replacement - Project 23

Description

This project replaces approximately 40,000 linear feet of gas mains and services that are leaking, inadequately-sized, and structurally deficient. These replacements are located on various streets in Evergreen Park, College Terrace, Ventura, Green Acres, and Midtown neighborhoods. Staff identifies problematic mains/services by researching maintenance and leak histories, analyzing performance of the entire Gas Distribution System, and considering risk ratings of the Distribution Integrity Management Plan.

Justification

The project will target replacing PVC mains and services located in business districts and steel mains and services with ineffective corrosion protection, also known as cathodic protection. This project is mandatory due to the need to replace aging infrastructure and to reduce the City's liability exposure due to PVC and steel gas facilities with ineffective cathodic protection.

Supplemental Information

The City of Palo Alto Distribution Integrity Management Plan's mathematical model is used to evaluate risks presented by PVC facilities located within business districts that have been assigned the highest probability and consequence scores. Targeted streets will be coordinated with the Public Works Street Maintenance Program to complete replacement before streets are paved. Linear footage and locations are subject to change. Please refer to the City of Palo Alto Utilities webpage for the most recent project details.

Significant Changes

2019-2023 CIP: The budget has been increased by \$3.3 million to account for construction cost escalation.

2018-2022 CIP: The construction is postponed to start in FY 2018 due to GMR 22 being delayed.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	42,500	700,000	200,000	550,000	6,500,000	0	0	0	7,050,000	0	7,292,500
Total	42,500	700,000	200,000	550,000	6,500,000	0	0	0	7,050,000	0	7,292,500

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	34,000	0	0	50,000	6,500,000	0	0	0	6,550,000	0	6,584,000
Design	8,500	700,000	200,000	500,000	0	0	0	0	500,000	0	708,500
Total	42,500	700,000	200,000	550,000	6,500,000	0	0	0	7,050,000	0	7,292,500

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Gas Fund - Operating
Category: Gas Main Replacements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Summer 2017
Initial Project Completion: Winter 2020
Revised Project Start: Summer 2019
Revised Project Completion: Winter 2021
Project Number: GS-14003

Installation of new HDP gas service main

Gas Main Replacement - Project 24

Description

This project replaces approximately 24,030 linear feet of leaking, inadequately-sized, and structurally deficient gas mains and services located on various streets in neighborhoods of the Stanford Research Park, Green Acres, Charleston Terrace, and the Stanford Industrial business districts. Staff identifies problematic mains/services by researching maintenance and leak histories, analyzing performance of the entire gas distribution system, and considering risk ratings of the Distribution Integrity Management Plan.

Justification

The project will target replacing PVC mains and services located in business districts and steel mains and services with ineffective corrosion protection, also known as cathodic protection. This project is mandatory due to the need to replace aging infrastructure and to reduce the City's liability exposure due to PVC and steel gas facilities with ineffective cathodic protection.

Supplemental Information

The City of Palo Alto Distribution Integrity Management Plan's mathematical model is used to evaluate risks presented by PVC facilities, located within business districts that have been assigned the highest probability and consequence scores. Targeted streets will be coordinated with the Public Works Street Maintenance Program to complete replacement before streets are paved. Linear footage and locations are subject to change. Please refer to the City of Palo Alto Utilities webpage for the most recent project details.

Significant Changes

2019-2023 CIP: The budget has been increased by \$3.6 million to account for construction cost escalation, and the project will begin in FY 2020.

2018-2022 CIP: Due to delays of GMR 22 and GMR 23, GMR 24 is being postponed to FY 2019.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	0	0	0	0	804,525	6,500,000	0	0	7,304,525	0	7,304,525
Total	0	0	0	0	804,525	6,500,000	0	0	7,304,525	0	7,304,525

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	6,500,000	0	0	6,500,000	0	6,500,000
Design	0	0	0	0	804,525	0	0	0	804,525	0	804,525
Total	0	0	0	0	804,525	6,500,000	0	0	7,304,525	0	7,304,525

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Gas Fund - Operating
Category: Gas Main Replacements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Summer 2018
Initial Project Completion: Winter 2020
Revised Project Start: Summer 2020
Revised Project Completion: Winter 2022
Project Number: GS-15000

New gas service meter and regulating equipment

Gas Main Replacement - Project 25

Description

This project replaces approximately 21,623 linear feet of leaking, inadequately-sized, and structurally deficient gas mains and services located on various streets in the neighborhoods of Palo Verde, Midtown, Evergreen, and Ventura. Staff identifies problematic mains/services by researching maintenance and leak histories, analyzing performance of the entire gas distribution system, and considering risk ratings of the Distribution Integrity Management Plan.

Justification

The project will target replacing PVC mains and services, also known in the industry as cathodic protection, located in business districts and steel mains and services with ineffective corrosion protection. This project is mandatory due to the need to replace aging infrastructure and to reduce the City's liability exposure due to PVC and steel gas facilities with ineffective cathodic protection.

Supplemental Information

The City of Palo Alto Distribution Integrity Management Plan's mathematical model is used to evaluate risks presented by PVC facilities located within business districts that have been assigned the highest probability and consequence scores. Targeted streets will be coordinated with the Public Works Street Maintenance Program to complete replacement before streets are paved. Linear footage and locations are subject to change. Please refer to the City of Palo Alto Utilities webpage for the most recent project details.

Significant Changes

2019-2023 CIP: The budget has been increased by \$3.3 million to account for construction cost escalation, and the project will begin in FY 2021.

2018-2022 CIP: Project postponed to begin in FY 2020 due to GMR 22 being delayed.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	0	0	0	0	0	650,000	6,500,000	0	7,150,000	0	7,150,000
Total	0	0	0	0	0	650,000	6,500,000	0	7,150,000	0	7,150,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	6,500,000	0	6,500,000	0	6,500,000
Design	0	0	0	0	0	650,000	0	0	650,000	0	650,000
Total	0	0	0	0	0	650,000	6,500,000	0	7,150,000	0	7,150,000

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Gas Fund - Operating
Category: Gas Main Replacements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Summer 2019
Initial Project Completion: Winter 2021
Revised Project Start: Summer 2021
Revised Project Completion: Winter 2023
Project Number: GS-16000

Gas Main Replacement - Project 26

Gas Main Replacement - Project 26

Description

This project replaces approximately 13,471 linear feet of leaking, inadequately-sized, and structurally deficient gas mains and services located on various streets in the University Park and Crescent Park neighborhoods. Staff identifies problematic mains/services by researching maintenance and leak histories, analyzing performance of the entire gas distribution system, and considering risk ratings of the Distribution Integrity Management Plan.

Justification

The project will target replacing PVC mains and services located in business districts and steel mains and services with ineffective corrosion protection, also known in the industry as cathodic protection. This project is mandatory due to the need to replace aging infrastructure and to reduce the City's liability exposure due to PVC and steel gas facilities with ineffective cathodic protection.

Supplemental Information

The City of Palo Alto Distribution Integrity Management Plan's mathematical model is used to evaluate risks presented by PVC facilities located within business districts assigned the highest probability and consequences scores. Targeted streets will be coordinated with the Public Works Street Maintenance Program to complete replacement before streets are paved. Linear footage and locations are subject to change. Please refer to the City of Palo Alto Utilities web-page for the most recent project details.

Significant Changes

2019-2023 CIP: The budget has been increased by \$3.2 million to account for construction cost escalation, and the project will begin in FY 2022.

2018-2022 CIP: Due to delays of GMR 22 and GMR 23, this project is postponed to FY 2021.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	0	0	0	0	0	0	650,000	6,500,000	7,150,000	0	7,150,000
Total	0	0	0	0	0	0	650,000	6,500,000	7,150,000	0	7,150,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	6,500,000	6,500,000	0	6,500,000
Design	0	0	0	0	0	0	650,000	0	650,000	0	650,000
Total	0	0	0	0	0	0	650,000	6,500,000	7,150,000	0	7,150,000

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Gas Fund - Operating
Category: Gas Main Replacements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Summer 2020
Initial Project Completion: Winter 2022
Revised Project Start: Summer 2022
Revised Project Completion: Winter 2024
Project Number: GS-20000

New gas service meter and regulating equipment

Gas Main Replacement - Project 27

Description

This project replaces approximately 15,655 linear feet of leaking, inadequately-sized, and structurally deficient gas mains and services located on various streets in the Crescent Park and University South neighborhoods. Staff identifies problematic mains/services by researching maintenance and leak histories, analyzing performance of the entire gas distribution system, and considering risk ratings of the Distribution Integrity Management Plan.

Justification

The project will target replacing PVC mains and service, also known in the industry as cathodic protection, located in business districts and steel mains and services with ineffective corrosion protection. This project is mandatory due to the need to replace aging infrastructure and to reduce the City's liability exposure due to PVC and steel gas facilities with ineffective cathodic protection.

Supplemental Information

The City of Palo Alto Distribution Integrity Management Plan's mathematical model is used to evaluate risks presented by PVC facilities, located within business districts that have been assigned the highest probability and consequence scores. Targeted streets will be coordinated with the Public Works Street Maintenance Program to complete replacement before streets are paved. Linear footage and locations are subject to change. Please refer to the City of Palo Alto Utilities webpage for the most recent project details.

Significant Changes

2019-2023 CIP: The budget has been increased by \$3.3 million to account for construction cost escalation, and the project will begin in FY 2023.

2018-2022 CIP: Due to delays of GMR 22 and GMR 23, this project is postponed to FY 2022.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	0	0	0	0	0	0	0	856,180	856,180	6,500,000	7,356,180
Total	0	0	0	0	0	0	0	856,180	856,180	6,500,000	7,356,180

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	0	0	6,500,000	6,500,000
Design	0	0	0	0	0	0	0	856,180	856,180	0	856,180
Total	0	0	0	0	0	0	0	856,180	856,180	6,500,000	7,356,180

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



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System Improvements



Fund: Gas Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Winter 2018
Initial Project Completion: Summer 2019
Revised Project Start:
Revised Project Completion:
Project Number: GS-18000

Installed PE gas service pipe

Gas ABS/Tenite Replacement Project

Description

This project replaces approximately 160 gas services using acrylonitrile-butadiene-styrene (ABS) or tenite gas pipes. These gas services are located in various neighborhoods throughout the City. The Distribution Integrity Management Plan (DIMP) has identified ABS/tenite gas pipes as a priority to be replaced.

Justification

Over time ABS pipes develop an elliptical shape with brittle sidewalls and have become vulnerable to rapid crack propagation failure. In addition, these services do not have tracer wires and are hard to locate. This project is needed to reduce the City's liability exposure due to material failure or damage caused by construction dig-ins.

Supplemental Information

The City of Palo Alto's DIMP mathematical model is used to evaluate risks presented by ABS and tenite material with high probability and consequence scores. The number of gas services is subject to change upon further validation.

Significant Changes

2019-2023 CIP: The number of gas services with ABS or tenite gas pipes was updated from 250 to 160.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	0	0	0	1,500,000	0	0	0	0	1,500,000	0	1,500,000
Total	0	0	0	1,500,000	0	0	0	0	1,500,000	0	1,500,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	1,500,000	0	0	0	0	1,500,000	0	1,500,000
Total	0	0	0	1,500,000	0	0	0	0	1,500,000	0	1,500,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Gas Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: GS-11002

Gas system improvements

Gas Distribution System Improvements

Description

This project provides funding as needed to improve the Gas Distribution System. Typical activities include: increasing distribution system capacity for load growth, replacing deteriorated capital facilities, re-configuring/adding to the system to improve service reliability, conducting research related to performance of the gas distribution system or its various components, and making general improvements to the system.

Justification

Gas Distribution System reliability and adequate capacity are critical to providing a high level of service to customers. When service interruptions occur, customers may experience significant economic losses. The City must continuously evaluate service reliability needs and make improvements to the system to maintain top-level service to City customers.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	N/A	555,672	200,000	246,036	253,417	261,020	268,851	276,916	1,306,240	0	N/A
Total	N/A	555,672	200,000	246,036	253,417	261,020	268,851	276,916	1,306,240	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	555,672	200,000	246,036	253,417	261,020	268,851	276,916	1,306,240	0	N/A
Total	N/A	555,672	200,000	246,036	253,417	261,020	268,851	276,916	1,306,240	0	N/A

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

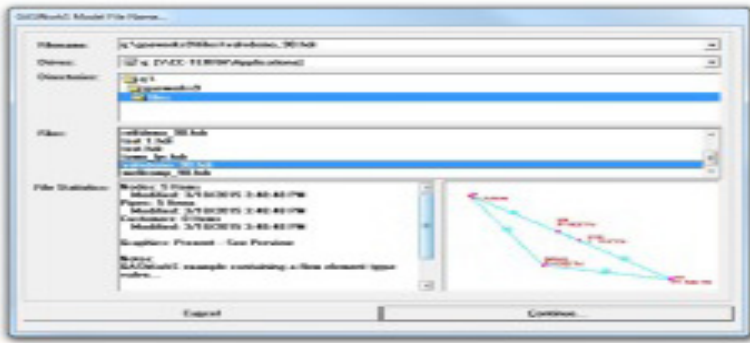
Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

GAS FUND



Fund: Gas Fund - Operating
Category: System Improvements
Project Location: N/A
Managing Department: Utilities
Initial Project Start: Fall 2014
Initial Project Completion: Fall 2016
Revised Project Start: Fall 2015
Revised Project Completion: Winter 2022
Project Number: GS-14004

GASWorks model snapshot example of a flow element type valve

Gas Distribution System Model

Description

This project funds development of a computerized geographic information system (GIS) based natural gas distribution system model, installation, testing of the model, and staff training.

Justification

A GIS based computerized natural gas distribution system model will significantly improve engineering staff's ability to analyze the performance of the distribution system, predict gas flow and pressures at any location within the system, foresee possible affects of additional loads, and provide a scientific basis for sizing new gas mains.

Supplemental Information

The model will also facilitate managing the distribution systems' risks determined by the City of Palo Alto Distribution Integrity Management Plan (DIMP).

Significant Changes

2019-2023 CIP: Additional funding was added for professional services in Fiscal Years 2019 through 2021.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	43,239	19,574	19,574	20,000	20,000	20,000	0	0	60,000	0	122,813
Total	43,239	19,574	19,574	20,000	20,000	20,000	0	0	60,000	0	122,813

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	7,405	19,574	19,574	20,000	20,000	20,000	0	0	60,000	0	86,979
Design	35,831	0	0	0	0	0	0	0	0	0	35,831
Total	43,236	19,574	19,574	20,000	20,000	20,000	0	0	60,000	0	122,810

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Gas Fund - Operating
Category: System Improvements
Project Location: Municipal Service Center
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: GS-13002

New HDPE gas pipe being fused prior to installation

Gas Equipment and Tools

Description

This project funds the purchase of polyethylene (PE) fusion equipment and tools, directional boring/locating equipment and tools, and general shop equipment and tools.

Justification

In order to safely operate and maintain a natural gas distribution system and support operating personnel safety and productivity, PE fusion, directional boring/locating, and general equipment and tools need to be upgraded on an annual basis.

Significant Changes

2019-2023 CIP: Project funding increased in FY 2019 by \$250,000 on a one-time basis to include purchase of new tapping and stopping equipment for Operations. This equipment is required to safely interrupt the flow of gas without performing large shutdowns of service to customers.

2015-2019 CIP: Project was retitled from "General Shop Equipment and Tools".

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	N/A	50,000	50,000	350,000	100,000	100,000	100,000	100,000	750,000	0	N/A
Total	N/A	50,000	50,000	350,000	100,000	100,000	100,000	100,000	750,000	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	50,000	50,000	350,000	100,000	100,000	100,000	100,000	750,000	0	N/A
Total	N/A	50,000	50,000	350,000	100,000	100,000	100,000	100,000	750,000	0	N/A

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

GAS FUND



Fund: Gas Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: GS-80019

Gas Meters and Regulators

Gas Meters and Regulators

Description

This project provides replacement of the existing meters and regulators at approximately 2,000 meter sets per year.

Justification

The meter replacement program ensures accuracy of gas consumption measurement, reduces possible revenue loss due to under-registering gas, and provides customers with accurate monthly bills. The program exchanges large meters (630 cubic feet per hour and larger) every 10 years and smaller meters every 17 to 20 years.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	N/A	492,453	130,000	376,652	387,952	399,591	411,579	423,926	1,999,700	0	N/A
Total	N/A	492,453	130,000	376,652	387,952	399,591	411,579	423,926	1,999,700	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	492,453	130,000	376,652	387,952	399,591	411,579	423,926	1,999,700	0	N/A
Total	N/A	492,453	130,000	376,652	387,952	399,591	411,579	423,926	1,999,700	0	N/A

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



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REFUSE FUND

Overview

The Refuse Fund Capital Improvement Program has historically been associated with activities related to the City of Palo Alto Landfill's closure and post-closure maintenance and to buildings and facilities mainly related to the operation of the Household Hazardous Waste (HHW) Station.

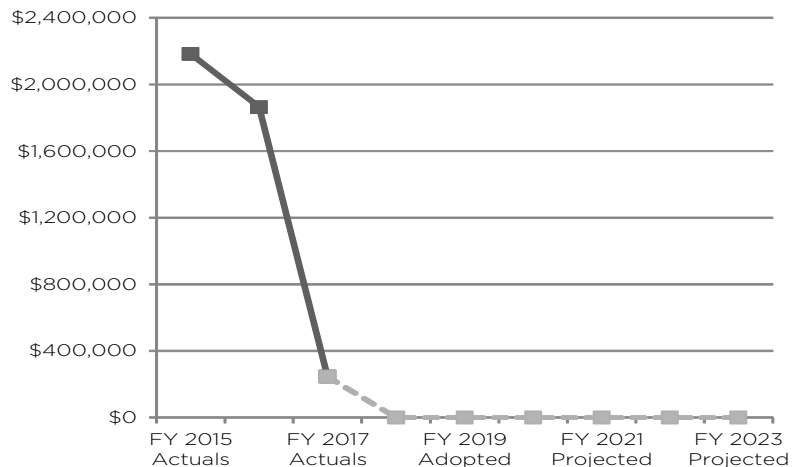
For the Fiscal Years 2019-2023, there are no capital improvement expenditures forecasted. All capital projects programmed previously were completed in Fiscal Year 2017.

Buildings and Facilities

The Buildings and Facilities category mainly accounted for improvements to the Household Hazardous Waste (HHW) Station

located at the Regional Water Quality Control Plant. The improvements allow the City to facilitate weekly hazardous waste collection from residents and small businesses. No further projects are anticipated at this time.

Refuse Fund Capital Expenditures



Landfill Post-Closure

The Landfill Post Closure category accounted for the construction of the landfill's cap and the repair or replacement of the landfill gas and leachate collection systems at the landfill. These projects were required by State and Federal regulations. The final cap construction over the landfill's 126 acre area was completed and regulatory approval for the closure was received in March 2016. No further large projects are anticipated at this time.

Summary of Capital Activity

REFUSE FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Use of Funds									
Buildings and Facilities									
RF-16001	Household Hazardous Waste Station Collection Facility Improvements	131,705	0	0	0	0	0	0	0
	Buildings and Facilities Total	131,705	0	0	0	0	0	0	0
Landfill Post-Closure									
RF-11001	Landfill Closure	113,966	0	0	0	0	0	0	0
	Landfill Post-Closure Total	113,966	0	0	0	0	0	0	0
	Total Uses	245,671	0	0	0	0	0	0	0



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STORM DRAINAGE FUND

Overview

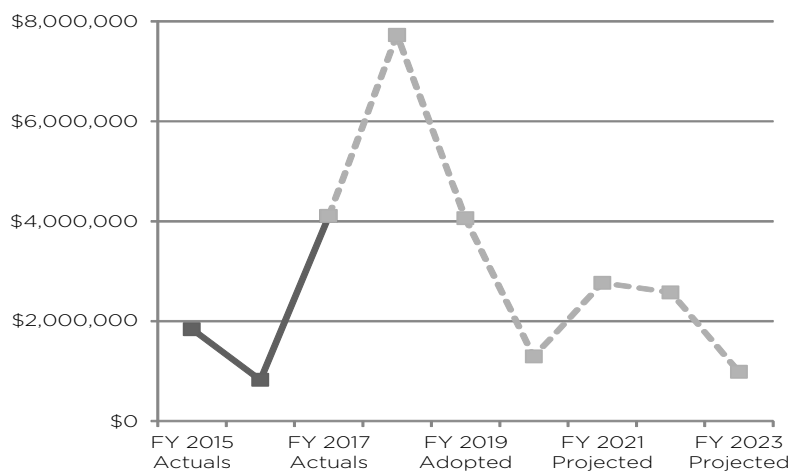
The Storm Drainage Fund (aka Storm Water Management Fund) Capital Improvement Program (CIP) accounts for activities related to the improvement of the City's storm drain system (including pipelines, manholes, catch basins, and pump stations). The Fiscal Year 2019-2023 CIP includes projects totaling \$11.7 million, with Fiscal Year 2019 projects totaling \$4.1 million. The budget for the Storm Water Management CIP is divided into two categories: Capacity Improvements (projects to upgrade the conveyance capacity of the storm drain system as a whole) and System Rehabilitation (projects for the replacement and rehabilitation of the existing storm drain infrastructure).

In April 2017 the Storm Water Management fee was approved by a majority of property owners via a ballot-by-mail process, establishing a base rate of \$13.65 per Equivalent Residential Unit (ERU) per month along with a provision that the City Council could increase the rate on an annual basis by the local inflation rate (as measured by the Consumer Price Index) or 6 percent, whichever is less. Under the provisions of the ballot measure, the fee is recommended to be increased by 2.9% to \$14.05 per ERU for Fiscal Year 2019.

Capacity Improvements

The Capacity Improvements category accounts for new or enhanced infrastructure added to the storm drain system, increasing its capacity to convey storm water runoff to local creeks and San Francisco Bay. In Fiscal Year 2015, an update to the Storm Water Master Plan resulted in the identification of \$98 million in additional recommended storm drainage improvements, with \$22 million identified as high priority projects. With the passage of the 2017 Storm Water Management Fee ballot measure, 13 drainage improvement projects will be recommended over the next 14 years. Construction of the first high priority project, Loma Verde Avenue Trunk Line Improvements (SD-19000), is scheduled for Fiscal Year 2019.

Storm Drainage Fund Capital Expenditures



Recent Accomplishments

- Completed construction of the Matadero Creek Storm Water Pump Station project which included electrical and fiber services, an electrical building with back-up generator and a below ground wet well.

2019-2023 Capital Improvement Program

Recurring Projects

There are no recurring Capacity Improvement projects scheduled for this five year CIP.

Non-Recurring Projects

There are four projects in this category during the 2019-2023 CIP: Corporation Way System Upgrades and Pump Station (5-Year CIP: \$3.1 million), East Meadow Drive System Upgrades (5-year CIP: \$0.6 million), Loma Verde Avenue Trunk Line Improvements (5-Year CIP: \$2.5 million), and West Bayshore Road Pump Station (5-Year CIP: \$1.4 million). Improvements to the trunk storm drain pipelines along Loma Verde Avenue to the Matador Creek Pump Station will increase capacity, benefiting a watershed area of 1,250-acres including the Midtown and Palo Verde neighborhoods. The upgrade of pipes located under East Meadow Drive between East Meadow Circle and the Adobe Pump Station will reduce flooding in the area. The design and construction of the two new pump stations at Corporation Way and West Bayshore Road will reduce flooding where storm water is discharged into Adobe Creek.

System Rehabilitation

The System Rehabilitation category accounts for the replacement or rehabilitation of deteriorated components of the storm drain system. Funding is budgeted annually to replace or rehabilitate storm drain pipelines, manholes, catch basins, and pump station equipment. Funding is also budgeted for system modifications needed to accommodate new operational requirements, such as the mandate in the regional storm water discharge permit to incorporate trash capture devices into the storm drain system to reduce the amount of trash entering local creeks and San Francisco Bay.

Recent Accomplishments

- Completed the installation of new creek sensors, program logic controllers, hardware, and electrical and fiber services to improve the speed and accuracy of the creek flow data transferred from the sensors to Supervisory Control and Data Acquisition (SCADA) and the public Creek Monitor web page.

Infrastructure Inventory

CLASSIFICATION	QUANTITY
Storm drain pipelines	107 miles
Catch Basins	2,750
Manholes	800
Stormwater pump stations	8

STORM DRAINAGE FUND

2019-2023 Capital Improvement Program

Recurring Projects

The Fiscal Year 2019-2023 CIP includes funding for one project in this category: Storm Drain System Replacement and Rehabilitation (5-Year CIP: \$4.2 million), focused on the replacement and rehabilitation of the existing storm drain pipelines, manholes and catch basins.

Non-Recurring Projects

There are no non-recurring System Rehabilitation projects scheduled for this five year CIP.

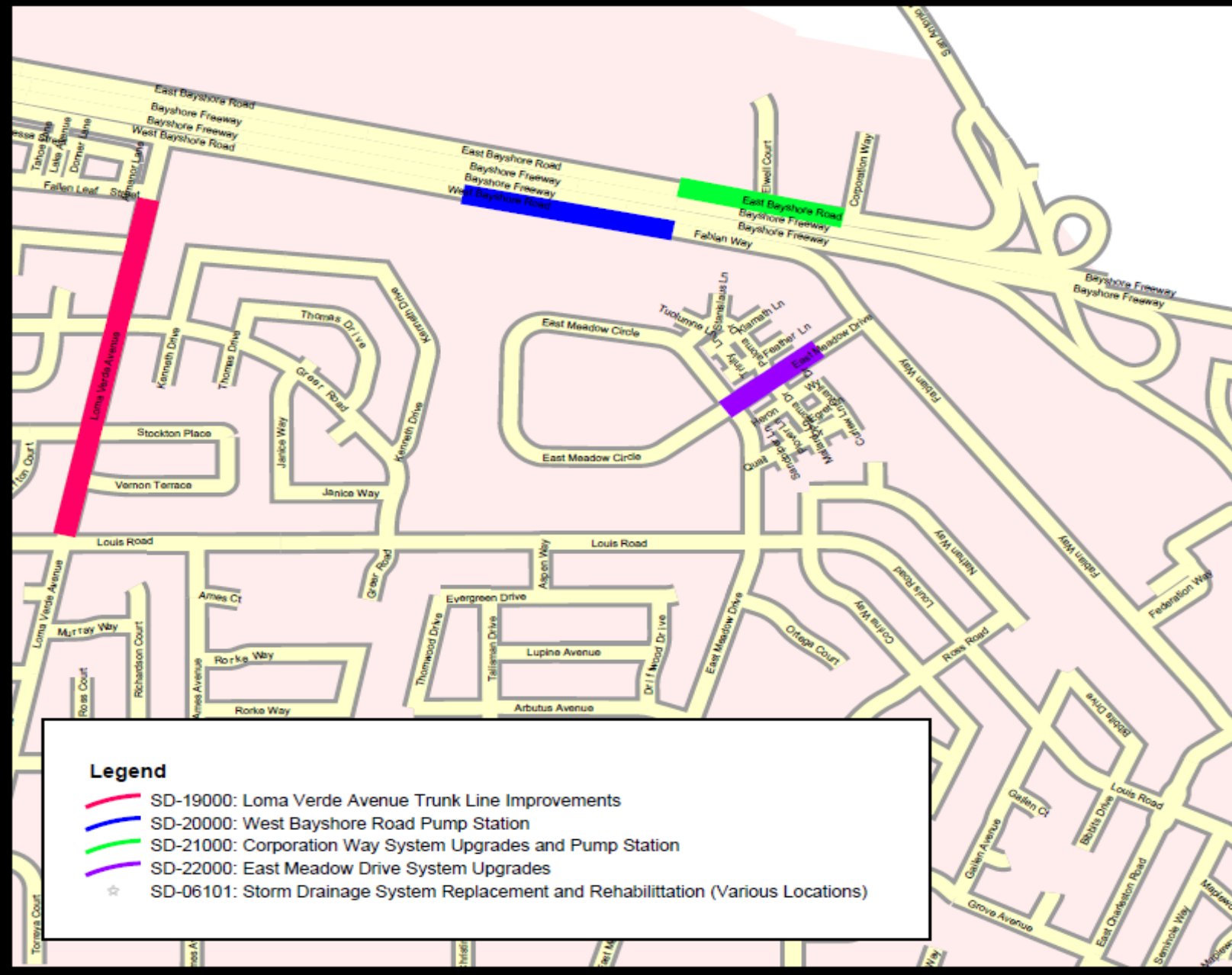
Summary of Capital Activity

STORM DRAINAGE FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Use of Funds									
Capacity Improvements									
SD-11101	Channing Avenue/Lincoln Avenue Storm Drain Improvements	3,240,837	600,117	0	0	0	0	0	0
SD-21000	Corporation Way System Upgrades and Pump Station	0	0	40,000	313,128	1,184,253	1,467,859	50,000	3,055,240
SD-22000	East Meadow Drive System Upgrades	0	0	0	0	20,000	497,659	30,000	547,659
SD-19000	Loma Verde Avenue Trunk Line Improvements	0	0	2,430,913	60,000	0	0	0	2,490,913
SD-13003	Matadero Creek Storm Water Pump Station and Trunk Line Improvements	808,729	5,619,423	0	0	0	0	0	0
SD-20000	West Bayshore Road Pump Station	0	0	40,000	313,128	1,019,972	50,000	0	1,423,100
	Capacity Improvements Total	4,049,566	6,219,540	2,510,913	686,256	2,224,225	2,015,518	80,000	7,516,912
System Rehabilitation									
SD-06101	Storm Drain System Replacement and Rehabilitation	54,009	1,506,790	1,545,877	603,832	540,628	559,866	907,141	4,157,344
	System Rehabilitation Total	54,009	1,506,790	1,545,877	603,832	540,628	559,866	907,141	4,157,344
	Total Uses	4,103,575	7,726,330	4,056,790	1,290,088	2,764,853	2,575,384	987,141	11,674,256

City of Palo Alto

2019-2023 Proposed Storm Drain Projects, Storm Drainage Fund



The City of
Palo Alto



Storm Drain Projects

This map is a product of the
City of Palo Alto GIS



STORM DRAINAGE FUND

Capacity Improvements

STORM DRAINAGE FUND



Fund: Storm Drainage - Operating
Category: Capacity Improvements
Project Location: East Bayshore Road- from Corporation Way to Adobe Creek
Managing Department: Public Works
Initial Project Start: Summer 2020
Initial Project Completion: Winter 2021
Revised Project Start:
Revised Project Completion:
Project Number: SD-21000

E. Bayshore Road at Corporation Way, 2017

Corporation Way System Upgrades and Pump Station

Description

This project provides funding for the design of a new small pump station with 25 cubic feet per second capacity and upgrade of 700 linear feet of storm drain pipe to 30-inch High Density Polyethylene.

Justification

The invert elevations of the existing storm drain lines are lower than the outfall, and as a result, this area is subject to flooding problems. Adding a pump in advance of the outfall will eliminate the routine flooding along East Bayshore Road, and upsizing the pipe from 21 inches will also eliminate ponding and increase capacity to convey runoff from a 10-year storm event. Due to hydraulics requirements, the pump station will be constructed before the storm drain line will be replaced. The pump station design is scheduled in Fiscal Year 2020, construction in Fiscal Year 2021, and associated pipe upgrades in Fiscal Year 2022 due to funding constraints.

Supplemental Information

This project is funded by the Storm Water Management Fee approved via a ballot measure by Palo Alto voters in April 2017. On the ballot, this project is referred to as 2. Corporation Way/E. Bayshore Road Pump Station to Adobe Creek. The need for this project was identified in Fiscal Year 2015 in the Storm Drain Master Plan dated June 2015. The funding amount is based on the engineer's cost estimate prepared for the Storm Drain Master Plan, which references the 2014 Current Construction Cost, Saylor Publications Inc. Contractor bids for this project may be higher than originally estimated and any additional cost will need to be approved by the Storm

Water Management Oversight Committee and paid for with ongoing storm water management fees.

Significant Changes

2019-2023 CIP: Previously split between Storm Drainage Pump Stations to Adobe Creek (SD-20000) and Storm Drainage System Upgrades-East Bayshore Road and East Meadow Drive (SD-22000), the scope of this project was combined in alignment with the 13 projects approved in April 2017 as part of the Storm Water Management Fee ballot measure.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Storm Drainage Fund	0	0	0	40,000	313,128	1,184,253	1,467,859	50,000	3,055,240	0	3,055,240
Total	0	0	0	40,000	313,128	1,184,253	1,467,859	50,000	3,055,240	0	3,055,240

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	1,184,253	1,247,859	50,000	2,482,112	0	2,482,112
Design	0	0	0	40,000	313,128	0	220,000	0	573,128	0	573,128
Total	0	0	0	40,000	313,128	1,184,253	1,467,859	50,000	3,055,240	0	3,055,240

Operating Impact

This project is anticipated to impact operating expenses in the future. As these costs are quantified, adjustments will be brought forward in future budgets, as necessary.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.14

Potential Board/Commission Review:

Architectural Review Board

Storm Drain Oversight Committee

Environmental Impact Analysis:

This project is expected to have an exemption from CEQA under Section 15302

STORM DRAINAGE FUND



East Meadow Drive

Fund: Storm Drainage - Operating
Category: Capacity Improvements
Project Location: East Meadow Drive from East Meadow Circle to Adobe Creek Pump Station
Managing Department: Public Works
Initial Project Start: Winter 2021
Initial Project Completion: Winter 2022
Revised Project Start:
Revised Project Completion:
Project Number: SD-22000

East Meadow Drive System Upgrades (Formerly-Strm Drain Sys Upgrade E Bayshore & E Meadow)

Description

This project provides funding for the upgrade of approximately 400 linear feet of 36-inch pipe located in East Meadow Drive between East Meadow Circle and Adobe Pump Station.

Justification

Upgrading this segment of pipe to 48-inches will reduce flooding, contain runoff from a 10-year storm event and allow for upstream improvements at a later date. Along with the new pipe lines, this project will also replace storm drain manholes, reconnect and/or install new inlets, and connect lines to the pump station.

Supplemental Information

This project is funded by the Storm Water Management Fee approved via a ballot measure by Palo Alto voters in April 2017. On the ballot, this project is referred to as 7. East Meadow Drive to Adobe Creek Pump Station capacity upgrades. The need for this project was identified in Fiscal Year 2015 and ranked as a highest priority on the Storm Drain Master Plan dated June 2015. The funding amount shown here is based on the engineer's cost estimate prepared for the Storm Drain Master Plan, which references the 2014 Current Construction Cost, Saylor Publications Inc. Contractor bids for this project may be higher than originally estimated and any additional cost will need to be approved by the Storm Water Management Oversight Committee and paid for with ongoing storm water management fees.

Significant Changes

2019-2023 CIP: Previously incorporating two separate projects, the scope of this project was separated in alignment with the 13 projects approved in April 2017 as part of the Storm Water Management Fee ballot measure. SD-22000 was renamed "East Meadow Drive System Upgrades" from the previous title "Storm Drainage System Upgrades - East Bayshore Road and East Meadow Drive" in the 2018-2022 CIP.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Storm Drainage Fund	0	0	0	0	0	20,000	497,659	30,000	547,659	0	547,659
Total	0	0	0	0	0	20,000	497,659	30,000	547,659	0	547,659

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	379,986	30,000	409,986	0	409,986
Design	0	0	0	0	0	20,000	117,673	0	137,673	0	137,673
Total	0	0	0	0	0	20,000	497,659	30,000	547,659	0	547,659

Operating Impact

This project is not anticipated to impact operating expenses in the future.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.14

Potential Board/Commission Review:

Storm Drain Oversight Committee

Environmental Impact Analysis:

This project is expected to have an exemption from CEQA under Section 15302.

STORM DRAINAGE FUND



Fund: Storm Drainage - Operating

Category: Capacity Improvements

Project Location: Loma Verde Avenue between Louis Road and Sterling Canal past Maddux Drive

Managing Department: Public Works

Initial Project Start: Summer 2019

Initial Project Completion: Winter 2020

Revised Project Start:

Revised Project Completion:

Project Number: SD-19000

Loma Verde Trunk Line Improvements Location

Loma Verde Avenue Trunk Line Improvements

Description

This project provides funding to upgrade 1,750 linear feet of storm drain pipe with 51-inch High Density Polyethylene and replace associated catch basins, laterals and manholes.

Justification

Upsizing the pipe from 36 inches will eliminate ponding and increase capacity to convey runoff from a 10-year storm event in the Midtown and Palo Verde neighborhoods.

Supplemental Information

This project is funded by the Storm Water Management Fee approved via a ballot measure by Palo Alto voters in April 2017. The need for this project was identified in Fiscal Year 2015 and ranked as a highest priority on the Storm Drain Master Plan dated June 2015. This is the first project on the list that was described to the voters. The funding amount shown here is based on the engineer's cost estimate prepared for the Storm Drain Master Plan, which references the 2014 Current Construction Cost, Saylor Publications Inc. Contractor bids for this project may be higher than originally estimated and any additional cost will need to be approved by the Storm Water Management Oversight Committee and paid for with ongoing storm water management fees.

Significant Changes

2019-2023 CIP: This project was previously planned as part of the Matadero Creek Storm Water Pump Station Station and Trunk Line Improvements (SD-13003) project. Due to funding con-

straints, the trunk line was separated and approved as one of the 13 projects included in the April 2017 Storm Water Management Fee ballot measure.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Storm Drainage Fund	0	0	0	2,430,913	60,000	0	0	0	2,490,913	0	2,490,913
Total	0	0	0	2,430,913	60,000	0	0	0	2,490,913	0	2,490,913

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	1,895,734	60,000	0	0	0	1,955,734	0	1,955,734
Design	0	0	0	535,179	0	0	0	0	535,179	0	535,179
Total	0	0	0	2,430,913	60,000	0	0	0	2,490,913	0	2,490,913

Operating Impact

This project is not anticipated to impact operating expense in the future.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.14

Potential Board/Commission Review:

Storm Drain Oversight Committee

Environmental Impact Analysis:

This project is expected to have an exemption from CEQA under Section 15302.

STORM DRAINAGE FUND



Fund: Storm Drainage - Operating
Category: Capacity Improvements
Project Location: West Bayshore Road at Adobe and Barron Creek junction
Managing Department: Public Works
Initial Project Start: Summer 2019
Initial Project Completion: Winter 2021
Revised Project Start:
Revised Project Completion:
Project Number: SD-20000

Location of New west Bayshore Pump Station

West Bayshore Road Pump Station (Formerly - Storm Drain Pump Stations to Adobe Creek)

Description

This project provides funding for the design and construction of a new small pump station with 15 cubic feet per second capacity.

Justification

The invert elevations of the existing storm drain lines are lower than the outfall. As such, this area is subject to flooding problems. Adding a pump in advance of the outfall would eliminate the routine flooding along West Bayshore Road. The pump station design is scheduled for Fiscal Year 2020 and construction is scheduled for Fiscal Year 2021.

Supplemental Information

This project is funded by the Storm Water Management Fee approved via a ballot measure by Palo Alto voters in April 2017. On the ballot, this project is referred to as 4. West Bayshore Road Pump Station to Adobe Creek. The need for this project was identified in Fiscal Year 2015 and ranked as a highest priority on the Storm Drain Master Plan dated June 2015. The funding amount shown here is based on the engineer's cost estimate prepared for the Storm Drain Master Plan, which references the 2014 Current Construction Cost, Saylor Publications Inc. Contractor bids for this project may be higher than originally estimated and any additional cost will need to be approved by the Storm Water Management Oversight Committee and paid for with ongoing storm water management fees.

Significant Changes

2019-2023 CIP: Previously incorporating two separate projects, the scope of this project was separated in alignment with the 13 projects approved in April 2017 as part of the Storm Water Management Fee ballot measure. SD-20000 was renamed “West Bayshore Road Pump Station” from the previous title “Storm Drain Pump Stations to Adobe Creek” in the 2018-2022 CIP.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Storm Drainage Fund	0	0	0	40,000	313,128	1,019,972	50,000	0	1,423,100	0	1,423,100
Total	0	0	0	40,000	313,128	1,019,972	50,000	0	1,423,100	0	1,423,100

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	1,019,972	50,000	0	1,069,972	0	1,069,972
Design	0	0	0	40,000	313,128	0	0	0	353,128	0	353,128
Total	0	0	0	40,000	313,128	1,019,972	50,000	0	1,423,100	0	1,423,100

Operating Impact

This project is anticipated to impact operating expenses in the future. As these costs are quantified, adjustments will be brought forward in future budgets, as necessary.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.14

Potential Board/Commission Review:

Storm Drain Oversight Committee

Environmental Impact Analysis:

This project is expected to have an exemption from CEQA under Section 15302.



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System Rehabilitation

STORM DRAINAGE FUND



Fund: Storm Drainage - Operating

Category: System Rehabilitation

Project Location: Various

Managing Department: Public Works

Initial Project Start: Recurring

Initial Project Completion: Recurring

Project Number: SD-06101

Storm Drain Repair & Rehabilitation

Storm Drainage System Replacement And Rehabilitation

Description

This project provides funding for annual replacement and rehabilitation projects, identified by a previous condition assessment, to help maintain the integrity of the storm drain system, including the replacement or rehabilitation of deteriorated storm drain pipes, manholes, and storm drain inlets.

Justification

The project implements the recommendations established by the 1993 Storm Drain Condition Assessment Report. The specific pipes and drainage structures selected for replacement and/or rehabilitation were determined based on their 1993 condition score and recommendations by field maintenance staff. The pipelines and structures need to be replaced since they are approaching the end of their intended useful life.

Supplemental Information

The proposed improvements are feasible due to the passing of the Storm Water Management Fee ballot measure. Several of the highest priority projects are located under Page Mill Road and will be coordinated as part of a resurfacing project. Pipe and structure replacements also include recommendations by field maintenance staff who inspect structures during routine inlet and pipe cleaning, identifying broken segments or structures. Lastly, if an existing storm drain line is located near or within another public improvement project, replacement may be warranted to extend useful life and/or avoid limited future access.

Significant Changes

2019-2023 CIP: Replace pipes within Page Mill ranked high priority and pipes within public utility easements associated with public infrastructure.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Storm Drainage Fund	N/A	2,506,790	1,506,790	1,545,877	603,832	540,628	559,866	907,141	4,157,344	0	N/A
Total	N/A	2,506,790	1,506,790	1,545,877	603,832	540,628	559,866	907,141	4,157,344	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	2,506,790	1,506,790	1,511,905	568,005	505,428	520,670	856,866	3,962,874	0	N/A
Design	N/A	0	0	33,972	35,827	35,200	39,196	50,275	194,470	0	N/A
Total	N/A	2,506,790	1,506,790	1,545,877	603,832	540,628	559,866	907,141	4,157,344	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.14

Potential Board/Commission Review:

Storm Drain Oversight Committee

Environmental Impact Analysis:

This project is exempt from CEQA under Section 15302.



CITY OF
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WASTEWATER COLLECTION FUND

Overview

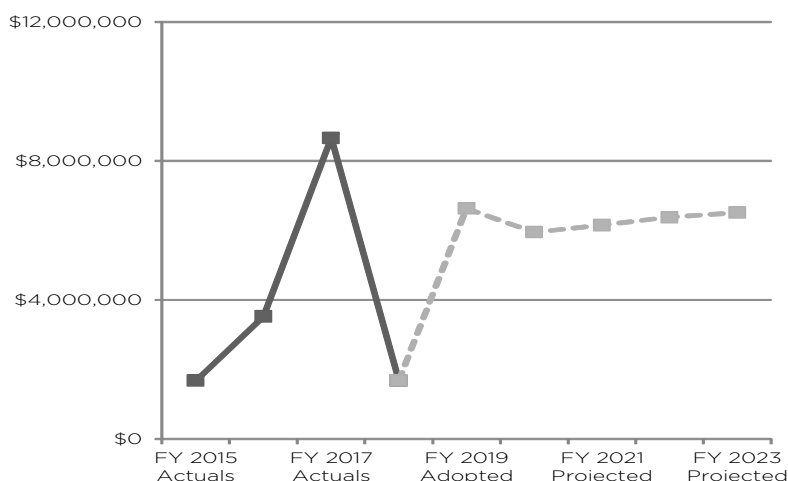
The City of Palo Alto is the only municipality in California that operates a full suite of City-owned utility services. The municipal Wastewater Collection System began operation in 1898 and continues to provide safe, reliable, and cost effective services to residents and customers of Palo Alto. For the 2019-2023 Capital Improvement Program (CIP), approximately \$31.6 million is programmed, with \$6.6 million allocated in Fiscal Year 2019. Overall, a total of 10 projects are programmed for the 5-year CIP. Major projects funded in the 2019-2023 CIP include Wastewater Collection System Rehabilitation/Augmentation projects (cumulative total of \$24.3 million), Sewer Lateral/Manhole Rehabilitation and Replacement (\$3.5 million), and Sewer System Customer Connections (\$2.3 million). The budget for the Wastewater Collection Fund CIP is broken into two separate categories: Customer Connections and System Improvements.

Customer Connections

As customers continually change their wastewater needs due to equipment additions, new construction, building expansions, building remodels, teardowns and rebuilds, and new building occupancy types, the Wastewater Collection System must evolve to meet these needs. The

Sewer System Customer Connections project is the only project within this category and includes work required to meet the needs of customers who have applied for new sewer laterals. The Wastewater Collection Fund pays for a portion of this project while remaining costs are supported by reimbursements from customers for project work performed by the City.

Wastewater Collection Fund
Capital Expenditures



Infrastructure Inventory

CLASSIFICATION	QUANTITY
Total miles of sanitary sewer lines	217 miles
Total number of sanitary laterals	18,141

Recent Accomplishments

- In Fiscal Year 2017 the Utilities Wastewater Division completed over 79 customer service projects with a total cost of \$0.4 million.

2019-2023 Capital Improvement Program

Recurring Projects

There is only one project within this category, the Sewer System Customer Connections project with funding of \$2.3 million over the 5-year CIP. This project funds changes to customer connections and costs are partially offset by reimbursements from customers requesting the service.

System Improvements

To ensure reliable wastewater services for the City of Palo Alto residents and customers, infrastructure must be replaced upon reaching the end of its useful life. The infrastructure replacement program includes projects that will rehabilitate or replace deteriorated pipelines. In the next five years, it is estimated that approximately 92,300 linear feet of wastewater mains will be replaced.

Recent Accomplishments

- Completed construction of multi-year CIP projects for Wastewater Collection System Rehabilitation/Augmentation Projects 24, 25, 26, and 27 which included replacement of 58,151 linear feet of wastewater mains and 1,038 sewer laterals.

2019-2023 Capital Improvement Program

Recurring Projects

A total of \$5.1 million is programmed for System Improvement recurring projects in the 2019-2023 CIP, with \$1.0 million allocated in Fiscal Year 2019. Recurring projects in this category include the following:

- Wastewater System Improvements (Fiscal Year 2019: \$0.3 million; 5-Year CIP: \$1.3 million)
- Wastewater General Equipment and Tools (Fiscal Year 2019: \$0.1 million; 5-Year CIP: \$0.3 million)
- Sewer Lateral/Manhole Rehabilitation and Replacement (Fiscal Year 2019: \$0.7 million; 5-Year CIP: \$3.5 million)

Non-Recurring Projects

The majority of funding within this category is allocated towards Wastewater Collection System Rehabilitation/Augmentation Projects (cumulative total of \$24.3 million). These projects implement high priority rehabilitation, augmentation, and lateral replacement work which reduces inflow of rainfall and groundwater into the collection system. The Utilities Department coordinates with the Public Works Department's street maintenance projects to minimize damage to the City's pavement and maximize cost efficiencies.

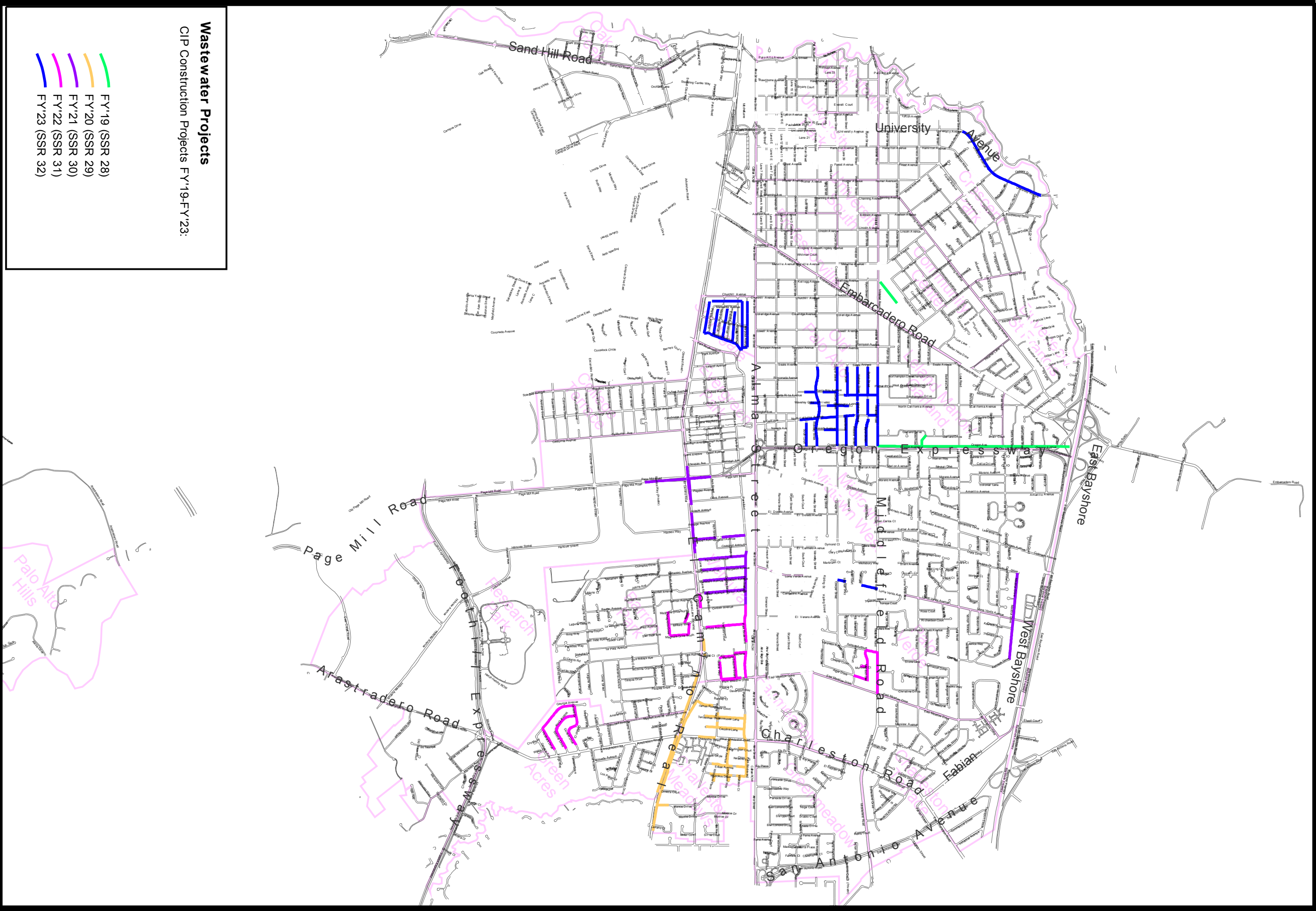
Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.

WASTEWATER COLLECTION FUND

Summary of Capital Activity

WASTEWATER COLLECTION FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Source of Funds									
Other Revenues									
WC-80020	Sewer System, Customer Connections	1,051,089	514,000	417,995	430,534	443,450	456,754	470,457	2,219,190
	Other Revenue Total	1,051,089	514,000	417,995	430,534	443,450	456,754	470,457	2,219,190
	Total Sources	1,051,089	514,000	417,995	430,534	443,450	456,754	470,457	2,219,190
Use of Funds									
Customer Connections									
WC-80020	Sewer System, Customer Connections	325,114	325,000	420,000	445,000	463,000	480,000	497,000	2,305,000
	Customer Connections Total	325,114	325,000	420,000	445,000	463,000	480,000	497,000	2,305,000
System Improvements									
WC-99013	Sewer Lateral/Manhole Rehabilitation and Replacement	899,035	900,000	655,636	675,305	695,564	716,431	737,924	3,480,860
WC-11000	Wastewater Collection System Rehabilitation/ Augmentation Project 24	1,265,999	121,353	0	0	0	0	0	0
WC-12001	Wastewater Collection System Rehabilitation/ Augmentation Project 25	1,383,387	346,594	0	0	0	0	0	0
WC-13001	Wastewater Collection System Rehabilitation/ Augmentation Project 26	1,672,424	166,536	0	0	0	0	0	0
WC-14001	Wastewater Collection System Rehabilitation/ Augmentation Project 27	2,988,313	741,531	0	0	0	0	0	0
WC-15001	Wastewater Collection System Rehabilitation/ Augmentation Project 28	0	33,201	4,842,600	0	0	0	0	4,842,600
WC-16001	Wastewater Collection System Rehabilitation/ Augmentation Project 29	0	0	409,849	4,098,490	0	0	0	4,508,339
WC-17001	Wastewater Collection System Rehabilitation/ Augmentation Project 30	0	0	0	421,684	4,209,845	0	0	4,631,529
WC-19001	Wastewater Collection System Rehabilitation/ Augmentation Project 31	0	0	0	0	465,185	4,408,150	0	4,873,335
WC-20000	Wastewater Collection System Rehabilitation/ Augmentation Project 32	0	0	0	0	0	448,249	4,482,495	4,930,744
WC-21000	Wastewater Collection System Rehabilitation/ Augmentation Project 33	0	0	0	0	0	0	461,696	461,696
WC-13002	Wastewater General Equipment and Tools	0	22,854	50,000	50,000	50,000	50,000	50,000	250,000
WC-15002	Wastewater System Improvements	128,927	185,453	253,000	260,000	269,000	276,875	285,181	1,344,056
	System Improvements Total	8,338,085	2,517,522	6,211,085	5,505,479	5,689,594	5,899,705	6,017,296	29,323,159
	Total Uses	8,663,199	2,842,522	6,631,085	5,950,479	6,152,594	6,379,705	6,514,296	31,628,159



Wastewater Projects
CIP Construction Projects FY'19-FY'23:

- FY'19 (SSR 28)
- FY'20 (SSR 29)
- FY'21 (SSR 30)
- FY'22 (SSR 31)
- FY'23 (SSR 32)

WASTEWATER FUND 2019-2023
CAPITAL IMPROVEMENT PROGRAM



This map is a product of the
City of Palo Alto GIS



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WASTEWATER COLLECTION FUND

Customer Connections



Fund: Wastewater Collection - Operating
Category: Customer Connections
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: WC-80020

Sewer System, Customer Connections

Sewer System, Customer Connections

Description

This project provides for the installation of sewer lateral connections, additions of existing mains, and extensions of mains for new or existing customers.

Justification

It is necessary to provide sewer connections to serve new customers and to respond to changes in sewer requirements due to redevelopment. Old existing non-plastic sewer service laterals become cracked and broken by tree root intrusion, ground movement, and third party excavation requiring the laterals to be replaced.

Supplemental Information

Other funding sources includes customer connection and capacity fees for connecting to the Wastewater Collection System. Capacity fees are collected through connection charges to cover the proportionate cost of system improvements required to serve new customers.

Significant Changes

2015-2019 CIP: This project was previously titled "Sewer System Extension". As part of the Fiscal Year 2015 budget it was retitled to "Sewer System, Customer Connections" to more accurately reflect the work done with this funding.

WASTEWATER COLLECTION FUND

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	N/A	405,820	514,000	417,995	430,534	443,450	456,754	470,457	2,219,190	0	N/A
Wastewater Collection Fund	N/A	51,900	(189,000)	2,005	14,466	19,550	23,246	26,543	85,810	0	N/A
Total	N/A	457,720	325,000	420,000	445,000	463,000	480,000	497,000	2,305,000	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	457,720	325,000	420,000	445,000	463,000	480,000	497,000	2,305,000	0	N/A
Total	N/A	457,720	325,000	420,000	445,000	463,000	480,000	497,000	2,305,000	0	N/A

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



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System Improvements

WASTEWATER COLLECTION FUND



Fund: Wastewater Collection - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: WC-99013

Sewer manhole base

Sewer Lateral/Manhole Rehabilitation and Replacement

Description

This project will replace defective sewer laterals, cleanouts, and manholes; install backwater devices; and purchase equipment to support these activities in order to maintain the Wastewater Collection System. Information collected during routine annual maintenance activities is used to prioritize work. Defective laterals, for example, will be replaced to re-establish existing services, reduce maintenance expenses, and eliminate ground water intrusion. Backwater devices will be installed to reduce backflows of sewage. New manholes will be installed or rehabilitated to improve structural integrity.

Justification

The work will help reduce both the backflow of sewage onto private property and the City's treatment expenses. This project also cleans and takes videos of sewer collection mains and laterals as necessary.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	N/A	1,301,505	900,000	655,636	675,305	695,564	716,431	737,924	3,480,860	0	N/A
Total	N/A	1,301,505	900,000	655,636	675,305	695,564	716,431	737,924	3,480,860	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	1,301,505	900,000	655,636	675,305	695,564	716,431	737,924	3,480,860	0	N/A
Total	N/A	1,301,505	900,000	655,636	675,305	695,564	716,431	737,924	3,480,860	0	N/A

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Wastewater Collection - Operating

Category: System Improvements

Project Location: Various locations

Managing Department: Utilities

Initial Project Start: Summer 2016

Initial Project Completion: Winter 2018

Revised Project Start: Summer 2018

Revised Project Completion: Fall 2019

Project Number: WC-15001

Trenching for installation of HDPE sewer main by open trench method

Wastewater Collection System Rehabilitation/Augmentation Project 28

Description

The project will fund the design and construction of high priority main and lateral replacement work, which reduces inflow of rainfall and groundwater into the collection system. The project replaces 21,889 linear feet (which represents 1.5% of the City's Wastewater Collection System) for various streets in the City, including large sections in the Charleston Meadows and Leland Manor/Garland neighborhoods. The project will be comprised of laterals identified in video inspection work or through maintenance records as deficient and in need of replacement. Priority will be given to areas identified by Public Works as targeted work zones ensuring infrastructure coordination among different City departments.

Justification

The 2004 Collection System Master Plan (Master Plan Study) update indicated certain facilities are in need of enlargement to handle growth and peak flows. The mains selected for replacement and/or rehabilitation are determined by the recommendations for the Master Plan Study; research and analysis of sewer main maintenance records; cleaning and videotaping of sanitary sewer mains; condition assessment; real-time flow monitoring of existing sewers; and hydraulic computer modeling.

WASTEWATER COLLECTION FUND

Supplemental Information

Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.

Significant Changes

2019-2023 CIP: Project budget has increased by \$0.8 million to account for construction cost escalation.

2018-2022 CIP: Due to delays in Wastewater Collection System Replacement (WCSR) Projects 24, 25, 26, and 27, the construction for this project is postponed to FY2019.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	0	702,600	33,201	4,842,600	0	0	0	0	4,842,600	0	5,092,600
Total	0	702,600	33,201	4,842,600	0	0	0	0	4,842,600	0	5,092,600

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	702,600	33,201	4,390,000	0	0	0	0	4,390,000	0	4,640,000
Design	0	0	0	452,600	0	0	0	0	452,600	0	452,600
Total	0	702,600	33,201	4,842,600	0	0	0	0	4,842,600	0	5,092,600

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Wastewater Collection - Operating
Category: System Improvements
Project Location: Various locations

Managing Department: Utilities

Initial Project Start: Summer 2017

Initial Project Completion: Winter 2019

Revised Project Start: Summer 2019

Revised Project Completion: Winter 2021

Project Number: WC-16001

Rehabilitation Equipment

Wastewater Collection System Rehabilitation/Augmentation Project 29

Description

This project funds the design and construction of high priority main and lateral replacement work, which reduces inflow of rainfall and groundwater into the collection system. The project replaces 14,352 linear feet (which represents 1.3% of the City's Wastewater Collection System) for large sections in the Ventura neighborhood and along several streets on El Camino Real. The project will be comprised of laterals identified in video inspection work or through maintenance records as deficient and in need of replacement. Priority will be given to areas identified by Public Works as targeted work zones ensuring infrastructure coordination among different City departments.

Justification

The 2004 Collection System Master Plan (Master Plan Study) update indicated certain facilities are in need of enlargement to handle growth and peak flows. The mains selected for replacement and/or rehabilitation are determined by the recommendations for the Master Plan Study; research and analysis of sewer main maintenance records; cleaning and videotaping of sanitary sewer mains; condition assessment; real-time flow monitoring of existing sewers; and hydraulic computer modeling.

WASTEWATER COLLECTION FUND

Supplemental Information

Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.

Significant Changes

2019-2023 CIP: Project budget has increased by \$0.9 million to account for construction cost escalation.

2018-2022 CIP: Due to delays in WCSR 24, 25, 26, and 27, the construction for this project is postponed to FY 2020.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	0	0	0	409,849	4,098,490	0	0	0	4,508,339	0	4,508,339
Total	0	0	0	409,849	4,098,490	0	0	0	4,508,339	0	4,508,339

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	4,098,490	0	0	0	4,098,490	0	4,098,490
Design	0	0	0	409,849	0	0	0	0	409,849	0	409,849
Total	0	0	0	409,849	4,098,490	0	0	0	4,508,339	0	4,508,339

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Wastewater Collection - Operating
Category: System Improvements
Project Location:

Managing Department: Utilities

Initial Project Start: Summer 2018

Initial Project Completion: Winter 2020

Revised Project Start: Summer 2020

Revised Project Completion: Winter 2022

Project Number: WC-17001

Trenching for installation of HDPE sewer main by open trench method

Wastewater Collection System Rehabilitation/Augmentation Project 30

Description

This project funds the design and construction of high priority main and lateral replacement work, which reduces inflow of rainfall and groundwater into the collection system. The project replaces 15,680 linear feet for various streets in the City, including large sections in the Green Acres, Ventura and Barron Park neighborhoods. The project will be comprised of laterals identified in video inspection work or through maintenance records as deficient and in need of replacement. Priority will be given to areas identified by Public Works as targeted work zones ensuring infrastructure coordination among different City departments.

Justification

The 2004 Collection System Master Plan (Master Plan Study) update indicated certain facilities are in need of enlargement to handle growth and peak flows. The mains selected for replacement and/or rehabilitation are determined by the recommendations for the Master Plan Study; research and analysis of sewer main maintenance records; cleaning and videotaping of sanitary sewer mains; condition assessment; real-time flow monitoring of existing sewers; and hydraulic computer modeling.

Supplemental Information

Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.

WASTEWATER COLLECTION FUND

Significant Changes

2019-2023 CIP: Project budget has increased by \$0.9 million to account for construction cost escalation.

2018-2022 CIP: Due to delays in WCSR 24, 25, 26, and 27, the construction for this project is postponed to FY 2021.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	0	0	0	0	421,684	4,209,845	0	0	4,631,529	0	4,631,529
Total	0	0	0	0	421,684	4,209,845	0	0	4,631,529	0	4,631,529

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	4,209,845	0	0	4,209,845	0	4,209,845
Design	0	0	0	0	421,684	0	0	0	421,684	0	421,684
Total	0	0	0	0	421,684	4,209,845	0	0	4,631,529	0	4,631,529

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Wastewater Collection - Operating

Category: System Improvements

Project Location: Various locations

Managing Department: Utilities

Initial Project Start: Summer 2019

Initial Project Completion: Winter 2021

Revised Project Start: Summer 2021

Revised Project Completion: Winter 2023

Project Number: WC-19001

Sewer Trench Line

Wastewater Collection System Rehabilitation/Augmentation Project 31

Description

This project funds the design and construction of high priority lateral replacement work, which reduces inflow of rainfall and groundwater into the collection system. The project replaces 24,983 linear feet for various streets in the City, including large sections in the Southgate and University Park neighborhoods. The project will be comprised of laterals identified in video inspection work or through maintenance records as deficient and in need of replacement. Priority will be given to areas identified by Public Works as targeted work zones ensuring infrastructure coordination among different City departments.

Justification

The 2004 Collection System Master Plan (Master Plan Study) update indicated certain facilities are in need of enlargement to handle growth and peak flows. The mains selected for replacement and/or rehabilitation are determined by the recommendations for the Master Plan Study; research and analysis of sewer main maintenance records; cleaning and videotaping of sanitary sewer mains; condition assessment; real-time flow monitoring of existing sewers; and hydraulic computer modeling.

Supplemental Information

Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.

WASTEWATER COLLECTION FUND

Significant Changes

2019-2023 CIP: Project budget has increased by \$1.0 million to account for construction cost escalation.

2018-2022 CIP: Due to delays in WCSR 24, 25, 26, and 27, the construction for this project is postponed to FY 2022.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	0	0	0	0	0	465,185	4,408,150	0	4,873,335	0	4,873,335
Total	0	0	0	0	0	465,185	4,408,150	0	4,873,335	0	4,873,335

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	4,408,150	0	4,408,150	0	4,408,150
Design	0	0	0	0	0	465,185	0	0	465,185	0	465,185
Total	0	0	0	0	0	465,185	4,408,150	0	4,873,335	0	4,873,335

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Wastewater Collection - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Summer 2020
Initial Project Completion: Winter 2022
Revised Project Start: Summer 2022
Revised Project Completion: Winter 2024
Project Number: WC-20000

A bursting head attached with 8' HDPE, for a sewer main replacement project by pipe bursting method

Wastewater Collection System Rehabilitation/Augmentation Project 32

Description

This project funds the design and construction of high priority main and lateral replacement work, which reduces inflow of rainfall and groundwater into the collection system. The project replaces approximately 15,437 linear feet for various streets in the City, including sections in the Midtown/Midtown West and Palo Verde neighborhoods and a portion of University Avenue in the Crescent Park neighborhood. The project will be comprised of laterals identified in video inspection work or through maintenance records as deficient and in need of replacement. Priority will be given to areas identified by Public Works as targeted work zones ensuring infrastructure coordination among different City departments.

Justification

The 2004 Collection System Master Plan (Master Plan Study) update indicated certain facilities are in need of enlargement to handle growth and peak flows. The mains selected for replacement and/or rehabilitation are determined by the recommendations for the Master Plan Study; research and analysis of sewer main maintenance records; cleaning and videotaping of sanitary sewer mains; condition assessment; real-time flow monitoring of existing sewers; and hydraulic computer modeling.

WASTEWATER COLLECTION FUND

Supplemental Information

Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.

Significant Changes

2019-2023 CIP: Project budget has increased by \$1.0 million to account for construction cost escalation.

2018-2022 CIP: Due to delays in WCSR 24, 25, 26, and 27, the construction for this project is postponed to FY 2023.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	0	0	0	0	0	0	448,249	4,482,495	4,930,744	0	4,930,744
Total	0	0	0	0	0	0	448,249	4,482,495	4,930,744	0	4,930,744

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	4,482,495	4,482,495	0	4,482,495
Design	0	0	0	0	0	0	448,249	0	448,249	0	448,249
Total	0	0	0	0	0	0	448,249	4,482,495	4,930,744	0	4,930,744

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Wastewater Collection - Operating

Category: System Improvements

Project Location: Various locations

Managing Department: Utilities

Initial Project Start: Summer 2023

Initial Project Completion: Winter 2024

Revised Project Start:

Revised Project Completion:

Project Number: WC-21000

Rehabilitation equipment

Wastewater Collection System Rehabilitation/Augmentation Project 33

Description

This project funds the design and construction of high priority main and lateral replacement work, which reduces inflow of rainfall and groundwater into the collection system. The project will include approximately 15,000 to 25,000 linear feet for various streets within the City's limits. The project will be comprised of laterals identified in video inspection work or through maintenance records as deficient and in need of replacement. Priority will be given to areas identified by Public Works as targeted work zones ensuring infrastructure coordination among different City departments.

Justification

The 2004 Collection System Master Plan Study update indicated certain facilities are in need of enlargement to handle growth and peak flows. The mains selected for replacement and/or rehabilitation are determined by the recommendations for the Master Plan Study; research and analysis of sewer main maintenance records; cleaning and videotaping of sanitary sewer mains; condition assessment; real-time flow monitoring of existing sewers; and hydraulic computer modeling.

Supplemental Information

Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.

WASTEWATER COLLECTION FUND

Significant Changes

2019-2023 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	0	0	0	0	0	0	0	461,696	461,696	4,611,820	5,073,516
Total	0	0	0	0	0	0	0	461,696	461,696	4,611,820	5,073,516

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	0	0	0	0	0	0	461,696	461,696	4,611,820	5,073,516
Total	0	0	0	0	0	0	0	461,696	461,696	4,611,820	5,073,516

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

Potential Board/Commission Review:

Storm Drain Oversight Committee

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

WASTEWATER COLLECTION FUND



Fund: Wastewater Collection - Operating
Category: System Improvements
Project Location: Municipal Service Center
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: WC-13002

Equipment used to install fuse HDPE pipe

Wastewater General Equipment and Tools

Description

This funding allows for the acquisition of new fusion equipment and other associated tools. This equipment is used to fuse together pipe joints in the City's Wastewater Collection System.

Justification

As the equipment ages, the quality of the fusion joints begin to decline and the operators must spend more time scraping, aligning, and fusing construction joints. In order to maintain high quality standards for the installation of the City's wastewater collection mains, along with the associated service standards and worker safety and productivity measures, equipment and tools require continuous upgrades.

Significant Changes

2015-2019 CIP: Project was retitled from "Wastewater Fusion and General Equipment/Tools".

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	N/A	72,854	22,854	50,000	50,000	50,000	50,000	50,000	250,000	0	N/A
Total	N/A	72,854	22,854	50,000	50,000	50,000	50,000	50,000	250,000	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	72,854	22,854	50,000	50,000	50,000	50,000	50,000	250,000	0	N/A
Total	N/A	72,854	22,854	50,000	50,000	50,000	50,000	50,000	250,000	0	N/A

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

WASTEWATER COLLECTION FUND



Fund: Wastewater Collection - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: WC-15002

Trenching for installation of HDPE sewer main by directional drilling method

Wastewater System Improvements

Description

This project provides funding as needed to improve the Wastewater Collection System. Typical activities include: increasing system capacity for growth, flow monitoring, hydraulic modeling and system analysis, load simulations, asset management analysis and assessment, system inflow/infiltration analysis, and sanitary sewer overflow monitoring and reduction.

Justification

Wastewater Collection System reliability and adequate capacity are critical to providing a high level of service to customers. Mainline sewer backups and overflows into homes and businesses are costly and a health risk. Reducing the losses associated with these backup claims requires a continuous evaluation of system needs and making improvements to maintain a high level of service.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	N/A	251,452	185,453	253,000	260,000	269,000	276,875	285,181	1,344,056	0	N/A
Total	N/A	251,452	185,453	253,000	260,000	269,000	276,875	285,181	1,344,056	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	251,452	185,453	253,000	260,000	269,000	276,875	285,181	1,344,056	0	N/A
Total	N/A	251,452	185,453	253,000	260,000	269,000	276,875	285,181	1,344,056	0	N/A

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



CITY OF
**PALO
ALTO**

WASTEWATER TREATMENT FUND

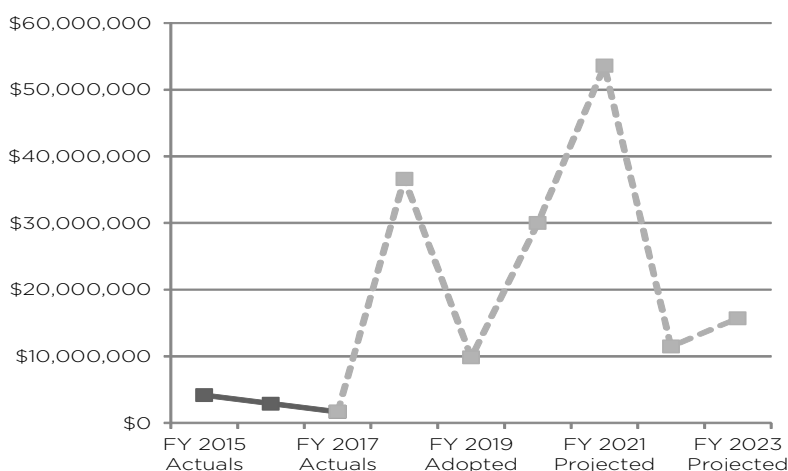
Overview

Activities related to the replacement, rehabilitation, optimization, and upgrading of the City's wastewater treatment plant infrastructure are accounted for in the Wastewater Treatment Fund. For detailed information on the maintenance and operation of the wastewater treatment plant, please refer to the Wastewater Treatment Fund section of the Operating Budget. As part of the 2019-2023 Capital Improvement Program (CIP) expenditures of \$120.5 million are programmed, with \$9.8 million allocated in Fiscal Year 2019. It is important to note that about 64% of expenditures in the Wastewater Treatment Fund are reimbursed by five contributing partner agencies outside of the City of Palo Alto, based on each agency's expected capacity share. The Wastewater Treatment Fund recovers costs from the Palo Alto Wastewater Collection Fund and from the City's five partner agencies (Stanford University, East Palo Alto Sanitary District, Mountain View, Los Altos, and Los Altos Hills). Each agency bills their respective sewer ratepayers for associated sewer and treatment costs as well as the Wastewater Treatment Fund's capital projects. Approximately 250,000 residents are served by the six agencies contributing sewage to the Regional Water Quality Control Plant. Overall, a total of eight capital projects are programmed over the five-year CIP, and the capital program budget for the Wastewater Treatment Fund is divided into two categories: Buildings and Facilities; and System Improvements.

The Long Range Facilities Plan, which evaluated the infrastructure needs of the wastewater treatment plant, was completed in July 2012. The Plan analyzed and made recommendations on future regulations, needed replacement and rehabilitation, site planning, and flow and load projections. A key component of the Plan was an analysis of biosolids handling options. Community and partner agency coordination on the Long Range Facilities Plan, and further stakeholder outreach and engineering analysis was completed in October 2014 as part of the Biosolids Facilities Plan, further detailing the solution to a new plant solids handling system. The major projects in the five-year CIP originated from the Long Range Facilities Plan and Biosolids Facilities Plan.

Although biosolids generated at the Regional Water Quality Control Plant are currently incinerated, Palo Alto is planning to retire the incinerators in 2019, after 47 years of service. In May 2014 City Council approved an Organic Facilities Plan to address treatment of sludge, food scraps, and yard trimmings. The plan laid out a strategy to deliver four components of organics processing facilities. Given space constraints at the wastewater treatment plant, the project was divided into individual phases. The dewatering and loadout facility is needed to both retire the

**Wastewater Treatment Fund
Capital Expenditures**



incinerators and open the site for later components of a permanent solids handling system. Once sludge is hauled away successfully, demolition of the incinerators will commence, followed by installation of a long-term biosolids treatment solution such as anaerobic digesters, gasification, pyrolysis, or another solution.

Funding for the major projects included in the 2019-2023 CIP requires debt financing and approval by the partners, per the individual agreements between the City and each of the partners. Over the years, staff has met with partner agencies at the staff and board/council level to discuss major capital projects. It should be noted that a portion of the expenses for these projects are expected to be incurred after the five years included in the 2019-2023 CIP. Staff is in the process of applying for state revolving fund loans and considering revenue bonds for projects that are ready for planning, design, CEQA or construction. Major projects planned include New Laboratory and Environmental Services Building (2019-2023 CIP: \$18.8 million), Primary Sedimentation Tank Replacement (2019-2023 CIP: \$6.8 million), Secondary Treatment Upgrades (2019-2023 CIP: \$30.6 million), Headworks Facility Replacement (2019-2023 CIP: \$15.8 million; total cost \$39.1 million), and Outfall Line Construction (2019-2023 CIP: \$7.5 million).

Minor CIP projects are funded through recurring payments to the City by the partner agencies (with the total dollar amount for the minor CIP projects capped by the partner agreements and adjusted annually for inflation). Minor projects including System Flowmeters Rehabilitation, Plant Equipment Replacement, Facility Condition Assessment and Retrofit are recommended to be consolidated and budgeted in Plant Repair, Retrofit, and Equipment Replacement (2019-2023 CIP: \$16.8 million).

Infrastructure Inventory

CLASSIFICATION	TYPE
Liquid Treatment Systems	Preliminary, Primary, Secondary, and Tertiary Treatment UV Disinfection and Outfall
Solids Treatment Systems	Solids Handling
Staff Buildings	Staff Buildings and Support Systems
Recycled Water	Recycled Water Treatment

Buildings and Facilities

The Buildings and Facilities category accounts for projects that will improve or construct facilities that house equipment related to wastewater treatment at the Regional Water Quality Control Plant. During the 2019-2023 CIP, two projects are programmed in this category at a total cost of \$19.8 million, of which \$1.0 million is allocated in Fiscal Year 2019.

Recent Accomplishments

- Completed more than 60% of construction of the Dewatering and Loadout Facility in Fiscal Year 2018 utilizing funding from a state revolving fund loan.

Recurring Projects

The one recurring project in this category, Facility Condition Assessment, is recommended to be closed as of Fiscal Year 2018 and future funding for facility conditional assessment activities

WASTEWATER TREATMENT FUND

will be budgeted in the Plant Repair, Retrofit, and Equipment Replacement project starting Fiscal Year 2019.

Non-Recurring Projects

There are two non-recurring projects in this category as part of the 2019-2023 CIP: New Laboratory and Environmental Services Building (Fiscal Year 2019: \$1.0 million; 5-Year CIP: \$18.8 million), and Plant Master Plan (Fiscal Year 2019: \$0.03 million; 5-Year CIP: \$0.9 million). Both projects were identified in the Long Range Facilities Plan. The New Laboratory and Environmental Services Building, with its larger and updated lab, will consolidate staff currently located in four separate facilities. The project is expected to be completed by Summer 2021 and funded by state revolving fund loans or revenue bonds. The Plant Master Plan project includes the planning and program management functions for the Long Range Facilities Plan.

System Improvements

The System Improvements category accounts for all infrastructure and equipment related to the safe and efficient treatment of wastewater received at the Regional Water Quality Control Plant. Over the course of the 2019-2023 CIP, approximately \$100.8 million is allocated towards System Improvements projects, with \$8.8 million allocated in Fiscal Year 2019. Significant projects programmed in this category include the Secondary Treatment Upgrades; Advanced Water Purification Facility; and Plant Repair, Retrofit, and Equipment Replacement. Completion of projects within this category will ensure the plant meets regulatory requirements with modern and reliable equipment.

Recent Accomplishments

- Commenced design of the Primary Sedimentation Tank Rehabilitation project.
- Completed a technical analysis of secondary treatment upgrade alternatives to best inform decision-making regarding fixed film reactor rehabilitation, secondary system upgrade needs, and potential regulatory rulings on nutrient loadings.

Recurring Projects

There is one recurring project in this category: Plant Repair, Retrofit, and Equipment Replacement (Fiscal Year 2019: \$3.9 million; 5-Year CIP: \$16.8 million). This project provides funding for the assessment, repair, and retrofit of the concrete and metal structural condition; the replacement of necessary plant equipment to maintain treatment reliability and ancillary facilities to maintain existing infrastructure; and the replacement of large diameter flow meters built into the wastewater treatment system on sewers, pipes, and water lines. The United States Environmental Protection Agency mandates that funding is allocated for equipment replacement to ensure adequate wastewater treatment reliability. This project is new in the Fiscal Year 2019-2023 CIP and is a consolidation of the minor capital projects that are recommended to be closed out in Fiscal Year 2018.

Non-Recurring Projects

There are five non-recurring projects in this category, totaling \$83.9 million over the 2019-2023 CIP with \$4.9 million allocated in Fiscal Year 2019. Significant projects programmed in this cate-

WASTEWATER TREATMENT FUND

gory include: Advanced Water Purification Facility (Fiscal Year 2019: \$1.0 million; 5-Year CIP: \$23.3 million), Primary Sedimentation Tank Replacement (Fiscal Year 2019: \$2.3 million; 5-Year CIP: \$6.8 million), Secondary Treatment Upgrades (Fiscal Year 2019: \$1.5 million; 5-Year CIP: \$30.6 million), Headworks Facility Replacement (5-Year CIP: \$15.8 million), and Outfall Line Construction (Fiscal Year 2019: \$0.01 million; 5 year CIP: \$7.5 million).

Summary of Capital Activity

WASTEWATER TREATMENT FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Source of Funds									
Revenue from the State of California									
WQ-14001	Dewatering and Loadout Facility	0	22,167,666	0	0	0	0	0	0
	Revenue from the State of California Total	0	22,167,666	0	0	0	0	0	0
Miscellaneous Revenue									
WQ-19003	Advanced Water Purification Facility	0	0	1,000,000	10,000,000	12,000,000	0	0	23,000,000
WQ-16002	Headworks Facility Replacement	0	0	0	1,147,000	1,147,000	1,147,000	12,060,221	15,501,221
WQ-14002	New Laboratory and Environmental Services Building	0	400,000	910,000	6,500,000	5,550,000	5,540,000	0	18,500,000
WQ-19000	Outfall Line Construction	0	0	0	3,300,000	3,850,000	242,000	0	7,392,000
WQ-14003	Primary Sedimentation Tank Replacement	0	720,000	2,240,000	2,240,000	2,132,000	0	0	6,612,000
WQ-19001	Secondary Treatment Upgrades	0	0	1,500,000	3,000,000	25,000,000	1,000,000	0	30,500,000
	Miscellaneous Revenue Total	0	1,120,000	5,650,000	26,187,000	49,679,000	7,929,000	12,060,221	101,505,221
	Total Sources	0	23,287,666	5,650,000	26,187,000	49,679,000	7,929,000	12,060,221	101,505,221
Use of Funds									
Buildings and Facilities									
WQ-14001	Dewatering and Loadout Facility	224,891	25,623,116	0	0	0	0	0	0
WQ-04011	Facility Condition Assessment and Retrofit *	282,957	1,639,903	0	0	0	0	0	0
WQ-14002	New Laboratory and Environmental Services Building	0	413,940	962,959	6,558,574	5,604,046	5,672,077	25,000	18,822,656
WQ-10001	Plant Master Plan	209,833	2,933,285	25,944	450,000	453,946	0	0	929,890
	Buildings and Facilities Total	717,681	30,610,244	988,903	7,008,574	6,057,992	5,672,077	25,000	19,752,546
System Improvements									
WQ-19003	Advanced Water Purification Facility	0	0	1,030,073	10,097,623	12,116,856	30,000	0	23,274,552
WQ-14004	Fixed Film Reactor Rehabilitation *	0	0	0	0	0	0	0	0
WQ-16002	Headworks Facility Replacement	0	0	5,000	1,158,197	1,158,169	1,179,182	12,274,185	15,774,733
WQ-19000	Outfall Line Construction	0	0	10,000	3,332,216	3,887,491	252,152	5,000	7,486,859

WASTEWATER TREATMENT FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
WQ-80021	Plant Equipment Replacement *	742,687	5,138,554	0	0	0	0	0	0
WQ-19002	Plant Repair, Retrofit, and Equipment Replacement	0	0	3,910,232	3,084,824	3,169,558	3,295,486	3,386,020	16,846,120
WQ-14003	Primary Sedimentation Tank Replacement	0	757,185	2,336,471	2,261,868	2,152,761	10,000	0	6,761,100
WQ-19001	Secondary Treatment Upgrades	0	0	1,545,109	3,029,287	25,024,345	1,028,058	10,000	30,636,799
WQ-80022	System Flow Meters *	212,586	100,517	0	0	0	0	0	0
	System Improvements Total	955,273	5,996,256	8,836,885	22,964,015	47,509,180	5,794,878	15,675,205	100,780,163
	Total Uses	1,672,954	36,606,500	9,825,788	29,972,589	53,567,172	11,466,955	15,700,205	120,532,709

* Projects recommended to be closed in FY 2018, see project pages for more details.

Buildings and Facilities



Fund: Wastewater Treatment - Operating
Category: Buildings and Facilities
Project Location: 2501 Embarcadero Way
Managing Department: Public Works
Initial Project Start: Summer 2013
Initial Project Completion: Fall 2019
Revised Project Start: Winter 2015
Revised Project Completion: Winter 2019
Project Number: WQ-14001

Dewatering and loadout facility, construction in progress

Dewatering and Loadout Facility

Description

This project provides funding for the sludge dewatering and truck loadout facility, replacing the current sewage sludge incinerators with a new biosolids handling system.

Justification

The sewage sludge incinerators were constructed in 1972 and are at the end of their useful life. A new facility is required to improve the operational reliability of the wastewater plant. Council voted to retire the incinerators as soon as possible when accepting the Long Range Facilities Plan and approved a \$2.3 million contract for the new sludge and dewatering facility design, CEQA and engineering costs in project WQ-80021, Plant Equipment Replacement.

Supplemental Information

This project was identified in the Long Range Facilities Plan accepted by Council in 2012. A biosolids facility plan was completed in 2014, and CEQA documentation was approved by Council on March 28, 2016. Construction commenced in Fiscal Year 2017 and will continue through Fiscal Year 2019.

Funding via a low 1.8% interest state revolving fund loan (SRF) will reimburse planning, program management, design, CEQA, and construction costs.

Significant Changes

2018-2022 CIP: Project construction cost adjusted after the design was completed. The contractor bids were received in early 2017, with SRF funding arriving shortly thereafter. Project schedule revised accordingly.

WASTEWATER TREATMENT FUND

2017-2021 CIP: Total project costs reflect the latest construction cost estimate based on 90% design. Approval by partner agencies (Stanford University, the Cities of Mountain View and Los Altos, and the Board of the East Palo Alto Sanitary District) was required for project approval and to guarantee repayment of any state loans.

2016-2020 CIP: Title changed from Biosolids Facility to better define the project. This component's project construction costs were updated from the Fiscal Year 2015 estimate of \$13.6 million due to more recent preliminary design cost estimates found higher than earlier master planning level cost estimates.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Revenue from the State of California	0	22,167,666	22,167,666	0	0	0	0	0	0	0	22,167,666
Wastewater Treatment Fund	1,874,435	3,455,450	3,455,450	0	0	0	0	0	0	0	5,329,885
Total	1,874,435	25,623,116	25,623,116	0	0	0	0	0	0	0	27,497,551

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	7,017	25,618,616	22,988,283	0	0	0	0	0	0	0	22,995,300
Design	1,867,418	4,500	2,634,833	0	0	0	0	0	0	0	4,502,251
Total	1,874,435	25,623,116	25,623,116	0	0	0	0	0	0	0	27,497,551

Operating Impact

This project is anticipated to impact operating expenses in the future. A net increase of \$0.4 million is estimated in Fiscal Year 2019 for utilities costs adjustments and for the new contract expenses for sludge hauling and treatment services that will replace the existing ash hauling service starting January 2019. A corresponding recommendation for funding can be found in the Operating Budget document for the Wastewater Treatment Fund.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation

Commission

Environmental Impact Analysis:

CEQA MND has been completed.

WASTEWATER TREATMENT FUND



Fund: Wastewater Treatment - Operating
Category: Buildings and Facilities
Project Location: 2501 Embarcadero Way
Managing Department: Public Works
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: WQ-04011

UV Control Building

Facility Condition Assessment and Retrofit

Description

This project provides funding for the structural condition assessment of existing plant facilities and, once issues are identified, the construction of repair and retrofits. Concrete and metal structures are evaluated for evidence of damage caused by corrosion, weathering, age, and ground movement.

Justification

Plant facilities are subject to many adverse conditions, including a highly corrosive environment and potential ground movement. Facilities with repair and retrofit deficiencies need to be returned to good structural condition to ensure that the plant continues to operate safely and reliably.

Significant Changes

2019-2023 CIP: This project is recommended to be closed as of Fiscal Year 2018. Future tasks and funding will be budgeted in WQ-19002, Plant Repair, Retrofit, and Equipment Replacement.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Treatment Fund	N/A	2,377,903	1,639,903	0	0	0	0	0	0	0	N/A
Total	N/A	2,377,903	1,639,903	0	0	0	0	0	0	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	2,283,947	1,639,903	0	0	0	0	0	0	0	N/A
Design	N/A	93,956	0	0	0	0	0	0	0	0	N/A
Total	N/A	2,377,903	1,639,903	0	0	0	0	0	0	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses in the future.

Relationship to Comprehensive Plan Primary Connection Element: Natural Environment Section: Water Resources Goal: N-4 Policy: N-4.16 Program: N4.16.1	Potential Board/Commission Review: Planning and Transportation Commission
Environmental Impact Analysis: This project is expected to have a possible exemption from CEQA under Section 15301.	



Fund: Wastewater Treatment - Operating
Category: Buildings and Facilities
Project Location: 2501 Embarcadero Way
Managing Department: Public Works
Initial Project Start: Winter 2015
Initial Project Completion: Fall 2021
Revised Project Start: Fall 2018
Revised Project Completion: Summer 2022
Project Number: WQ-14002

Water Quality Control Plant Laboratory

New Laboratory And Environmental Services Building

Description

This project provides funding for a new building that will consolidate staff and provide a larger updated lab.

Justification

The existing laboratory does not have adequate space for staff, instruments, chemical storage, and microbiology testing. Due to limited space, staff is currently located in four separate aging buildings which house industrial pumps, limiting the number of staff that can be assigned to each building.

Supplemental Information

This project was identified in the Long Range Facilities Plan accepted by Council in 2012. Construction funding via a low interest state revolving fund loan (SRF) or a revenue bond will be pursued for this project, which is subject to approval from partner agencies (Stanford University, Mountain View, Los Altos, and the East Palo Alto Sanitary District). Partners have already approved repayment of an SRF design/planning loan, while staff evaluate the revenue bond option as an alternative funding source.

Significant Changes

2019-2023 CIP: Design phase of the project is expected to start in Fall 2018. The City is exploring funding alternatives for the project, therefore the funding source is no longer stated explicitly as Revenue from the State of California.

WASTEWATER TREATMENT FUND

2018-2022 CIP: All partners approved repayment of the SRF design and planning loan, but securing the SRF design and planning loan took longer than expected and there was uncertainty about availability of State funds. The City will have to explore alternate methods of funding such as a revenue bond. Project planning/design can commence once the funds are secured, but the project timeline has been impacted.

2017-2021 CIP: Approval by partner agencies was required for project approval and to guarantee repayment of any state loans.

2016-2020 CIP: Project budget in Fiscal Year 2016 now captures an additional \$4.0 million more in Fiscal Year 2020 for final design and start of construction.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	400,000	910,000	6,500,000	5,550,000	5,540,000	0	18,500,000	0	18,900,000
Revenue from the State of California	0	437,246	0	0	0	0	0	0	0	0	0
Wastewater Treatment Fund	0	9,653	13,940	52,959	58,574	54,046	132,077	25,000	322,656	0	336,596
Total	0	446,899	413,940	962,959	6,558,574	5,604,046	5,672,077	25,000	18,822,656	0	19,236,596

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	9,653	0	0	5,534,040	5,554,046	5,632,077	25,000	16,745,163	0	16,745,163
Design	0	437,246	413,940	962,959	1,024,534	50,000	40,000	0	2,077,493	0	2,491,433
Total	0	446,899	413,940	962,959	6,558,574	5,604,046	5,672,077	25,000	18,822,656	0	19,236,596

Operating Impact

This project is anticipated to impact operating expenses in the future. As these costs are quantified, adjustments will be brought forward in future budgets, as necessary.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

Environmental Impact Analysis:

CEQA will be required.

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation

Commission



Fund: Wastewater Treatment - Operating
Category: Buildings and Facilities
Project Location: 2501 Embarcadero Way
Managing Department: Public Works
Initial Project Start: Summer 2009
Initial Project Completion: Summer 2012
Revised Project Start:
Revised Project Completion: Fall 2020
Project Number: WQ-10001

Looking West from Fixed Film Reactors

Plant Master Plan

Description

This project provides funding for the planning and program management of the Long Range Facilities Plan (LRFP) completed in 2012. Program management includes project definitions of long range capital projects, acquisition of funding for new large capital projects, preparation of City issued design consultant Request for Proposal packages, and ancillary services related to plan implementation.

Justification

The long range facilities needed for a wastewater treatment plant primarily consist of replacing aging industrial facilities, but also include plant process optimizations, new support infrastructure, and responsiveness to changing situations and regulations.

Significant Changes

2019-2023 CIP: The term of the Program Manager contract is extended to Fiscal Year 2021 to continue to support implementation of the LRFP.

2017-2021 CIP: The Plant is in the second year of the program manager contract and program implementation continues to be dependent upon securing state revolving fund loans.

2016-2020 CIP: After completion of the Long Range Facilities Plan in 2012, a program manager was brought on board to support implementation of the master plan. About \$0.6 million of the consultant's work was approved during Fiscal Year 2015, and the remainder was subject to approval of an additional \$3.3 million in capital funding authorization in the Fiscal Year 2016 capital budget.

WASTEWATER TREATMENT FUND

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Treatment Fund	2,065,011	2,959,229	2,933,285	25,944	450,000	453,946	0	0	929,890	0	5,928,186
Total	2,065,011	2,959,229	2,933,285	25,944	450,000	453,946	0	0	929,890	0	5,928,186

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	1,328,946	0	0	0	0	0	0	0	0	0	1,328,946
Design	604,392	2,959,229	2,933,285	25,944	450,000	453,946	0	0	929,890	0	4,467,567
Study	131,672	0	0	0	0	0	0	0	0	0	131,672
Total	2,065,010	2,959,229	2,933,285	25,944	450,000	453,946	0	0	929,890	0	5,928,185

Operating Impact

This project is not anticipated to impact operating expenses in the future.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

Potential Board/Commission Review:

Planning and Transportation
Commission



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System Improvements



Filtration system testing unit

Fund: Wastewater Treatment - Operating
Category: System Improvements
Project Location: 2501 Embarcadero Way
Managing Department: Public Works
Initial Project Start: Winter 2019
Initial Project Completion: Spring 2021
Revised Project Start:
Revised Project Completion:
Project Number: WQ-19003

Advanced Water Purification Facility

Description

This project provides funding for an Advanced Water Purification Facility to further improve the quality of the tertiary-treated recycled water by microfiltration or ultrafiltration followed by reverse osmosis to reduce the level of total dissolved solids (TDS).

Justification

The Regional Water Quality Control Plant (Plant) currently provides tertiary-treated recycled water to permitted users in its service area, mostly for irrigation. The current recycled water delivered has a TDS level of 800-900 mg/L. Council adopted a goal to reduce the TDS level to 600 mg/L in 2010. In 2015, Council adopted an Environmental Impact Report for the Phase III Recycled Water Pipeline to South Palo Alto and Stanford research park, which specifically mentioned recycled water quality would be improved through additional treatment at the Plant. In addition, there are approximately 40 potential recycled water users in the service area with their connection still pending until the Plant lowers the recycled water TDS.

Supplemental Information

The Plant, in collaboration with the Santa Clara Valley Water District (SCVWD) and the City of Mountain View, conducted an Advanced Water Purification System Feasibility Study. This study recommended microfiltration or ultrafiltration followed by reverse osmosis after comparing different water quality improvement options. The study also included evaluations of greenhouse gas emissions, storage requirements, facility sites, concentrate treatment options, and initial design and construction cost estimates.

WASTEWATER TREATMENT FUND

This project was also identified in the Long Range Facilities Plan accepted by Council in 2012. Funding via contributions from the SCVWD, the City of Mountain View, and other external sources such as a low interest state revolving fund loan or revenue bond will be pursued for this project.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	1,000,000	10,000,000	12,000,000	0	0	23,000,000	0	23,000,000
Wastewater Treatment Fund	0	0	0	30,073	97,623	116,856	30,000	0	274,552	0	274,552
Total	0	0	0	1,030,073	10,097,623	12,116,856	30,000	0	23,274,552	0	23,274,552

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	8,067,000	12,116,856	30,000	0	20,213,856	0	20,213,856
Design	0	0	0	1,030,073	2,030,623	0	0	0	3,060,696	0	3,060,696
Total	0	0	0	1,030,073	10,097,623	12,116,856	30,000	0	23,274,552	0	23,274,552

Operating Impact

This project is anticipated to impact operating expenses in the future. As these costs are quantified, adjustments will be brought forward in future budgets, as necessary.

Relationship to Comprehensive Plan Primary Connection Element: Natural Environment Section: Water Resources Goal: N-4 Policy: N-4.17	Relationship to Comprehensive Plan Secondary Connection Element: Natural Environment Section: Water Resources Goal: N-4 Policy: N-4.16 Program: N4.16.1	Potential Board/Commission Review: Architectural Review Board Planning and Transportation Commission
Environmental Impact Analysis: An addendum to the existing EIR completed in 2015 for the expansion of the Palo Alto recycled water distribution system will be required.		



Fund: Wastewater Treatment - Operating
Category: System Improvements
Project Location: 2501 Embarcadero Way
Managing Department: Public Works
Initial Project Start: Spring 2015
Initial Project Completion: Winter 2019
Revised Project Start: N/A
Revised Project Completion: N/A
Project Number: WQ-14004

Fixed Film Reactor Distribution Arms

Fixed Film Reactor Rehabilitation

Description

This project provides funding for the rehabilitation of fixed film reactors, which provide biological treatment helping the City to comply with discharge permit limits. The two reactors, which came online in 1980, need replacement of core structural components including fiberglass barriers, steel supports, and concrete underdrains. Process components needing replacement include biofilter media, 20-foot deep plastic media, rotating distributor mechanisms, electrical motor control centers, and process piping and pumping.

Justification

This project was identified in the Long Range Facilities Plan accepted by Council in 2012. The fixed film reactors were built in 1980 and have numerous issues, including stressed concrete with exposed reinforcing steel bars, brittle plastic media continually clogged with rags/plastic, corroded steel piping and distributors, and biofilter media and electrical controls at the end of their useful life.

Supplemental Information

Construction funding via a low interest state revolving fund loan (SRF) or a revenue bond will be pursued for this project, which is subject to approval from partner agencies. Partners have already approved repayment of an SRF design/planning loan, while staff evaluate a revenue bond option as alternative.

Significant Changes

2019-2023 CIP: This project was closed. A special study was completed in 2017, which proposed a complete Secondary Treatment Process upgrade instead of individual rehabilitation

WASTEWATER TREATMENT FUND

projects like this one. WQ-19001 has been created for the complete Secondary Treatment Process upgrade.

2018-2022 CIP: Securing the SRF design/planning loan is taking longer than expected, and there is uncertainty about availability of State funds. The City may have to explore alternate methods of funding such as a revenue bond. Project planning/design can commence once the funds are secured, but the project timeline is impacted.

2017-2021 CIP: Approval by the partner agencies was required for project approval and to guarantee repayment of any state loans.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Revenue from the State of California	0	10,732,170	0	0	0	0	0	0	0	0	0
Total	0	10,732,170	0	0	0	0	0	0	0	0	0

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	7,841,982	0	0	0	0	0	0	0	0	0
Design	0	2,890,188	0	0	0	0	0	0	0	0	0
Total	0	10,732,170	0	0	0	0	0	0	0	0	0

Operating Impact

This project is not anticipated to impact operating expenses in the future.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Wastewater Treatment - Operating
Category: System Improvements
Project Location: 2501 Embarcadero Way
Managing Department: Public Works
Initial Project Start: Spring 2020
Initial Project Completion: Winter 2024
Revised Project Start: Summer 2019
Revised Project Completion: Spring 2025
Project Number: WQ-16002

Headworks Facility

Headworks Facility Replacement

Description

This project provides funding for replacing influent pumping, including the suction and discharge piping; pipe manifolds; valves; the electrical and controls system; screening equipment; grit handling equipment; the force main to the primaries and modifying headworks building; and yard piping.

Justification

This project was identified in the Long Range Facilities Plan (LRFP) report accepted by Council in 2012. The existing headworks are at the end of their useful life and replacement is required for operational reliability of pumping the raw sewage from the influent sewers into the treatment plant.

Supplemental Information

The total project cost is estimated at \$39.1 million and includes planning, design and construction for a project that will span from Fiscal Year 2020 through Fiscal Year 2025. Partner agencies' approval to repay design and construction loans is needed as a low interest state revolving fund loan (SRF) or a revenue bond will be pursued to fund the project.

Significant Changes

2019-2023 CIP: Staff is evaluating alternative funding options, therefore the funding source is no longer stated explicitly as Revenue from the State of California.

2018-2022 CIP: Staff revised the Funding Sources Schedule and the Expenditure Schedule to better reflect the project timeline recommended in the LRFP, where design will take place from 2020 to 2022, with CEQA and construction to follow.

WASTEWATER TREATMENT FUND

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	0	1,147,000	1,147,000	1,147,000	12,060,221	15,501,221	23,356,442	38,857,663
Wastewater Treatment Fund	0	0	0	5,000	11,197	11,169	32,182	213,964	273,512	0	273,512
Total	0	0	0	5,000	1,158,197	1,158,169	1,179,182	12,274,185	15,774,733	23,356,442	39,131,175

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	11,858,478	11,858,478	23,356,442	35,214,920
Design	0	0	0	5,000	1,158,197	1,158,169	1,179,182	415,707	3,916,255	0	3,916,255
Total	0	0	0	5,000	1,158,197	1,158,169	1,179,182	12,274,185	15,774,733	23,356,442	39,131,175

Operating Impact

This project is not anticipated to impact operating expenses in the future.

Relationship to Comprehensive Plan Primary Connection Element: Natural Environment Section: Water Resources Goal: N-4 Policy: N-4.16 Program: N4.16.1	Potential Board/Commission Review: Architectural Review Board Planning and Transportation Commission
Environmental Impact Analysis: This project is expected to have a possible exemption from CEQA under Section 15301.	



Fund: Wastewater Treatment - Operating

Category: System Improvements

Project Location: Wastewater Treatment Plant and Palo Alto Airport

Managing Department: Public Works

Initial Project Start: Summer 2018

Initial Project Completion: Fall 2019

Revised Project Start: Summer 2019

Revised Project Completion: Spring 2022

Project Number: WQ-19000

Outfall, Winter 2017

Outfall Line Construction

Description

This project consists of the construction of a new parallel outfall pipe to convey final plant effluent to San Francisco Bay.

Justification

Installation of a new outfall line is needed to address outfall age (built in 1964), and more importantly to address the outfall capacity in light of peak wet-weather flow, peak tide, and future sea level rise scenarios. The existing system of a 54-inch outfall line and a 36-inch emergency backup outfall line are inadequate to pass the Plant's peak wet weather hydraulic flow capacity of 80 million gallons per day.

Supplemental Information

This project was identified in the Long Range Facilities Plan report accepted by Council in 2012. Construction funding via a low interest state revolving fund loan (SRF) will be pursued for this project, while staff evaluate revenue bond options as an alternative funding source.

The existing 54-inch outfall needs rehabilitation, which can only be completed after the new outfall is operational. Rehabilitating the existing 54-inch outfall will be a future project. Once rehabilitated, the 54-inch outfall along with the new parallel outfall in this project are anticipated to work together to convey peak flows for another 50 or more years.

Significant Changes

2019-2023 CIP: Staff is evaluating alternative funding options, therefore the funding source is no longer stated explicitly as Revenue from the State of California.

WASTEWATER TREATMENT FUND

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	0	3,300,000	3,850,000	242,000	0	7,392,000	0	7,392,000
Wastewater Treatment Fund	0	0	0	10,000	32,216	37,491	10,152	5,000	94,859	0	94,859
Total	0	0	0	10,000	3,332,216	3,887,491	252,152	5,000	7,486,859	0	7,486,859

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	10,000	3,332,216	3,887,491	252,152	5,000	7,486,859	0	7,486,859
Total	0	0	0	10,000	3,332,216	3,887,491	252,152	5,000	7,486,859	0	7,486,859

Operating Impact

This project is not anticipated to impact operating expenses in the future.

Relationship to Comprehensive Plan Primary Connection Element: Natural Environment Section: Water Resources Goal: N-4 Policy: N-4.16 Program: N4.16.1	Relationship to Comprehensive Plan Secondary Connection Element: Natural Environment Section: Water Resources Goal: N-4 Policy: N-4.16 Program: N4.16.2	Potential Board/Commission Review: Planning and Transportation Commission
Environmental Impact Analysis: This project is expected to have a mitigated negative declaration from CEQA under Section 15070.		

WASTEWATER TREATMENT FUND



Fund: Wastewater Treatment - Operating
Category: System Improvements
Project Location: 2501 Embarcadero Way
Managing Department: Public Works
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: WQ-80021

Belt Filter Press

Plant Equipment Replacement

Description

This project provides funding for replacing necessary plant equipment to maintain treatment reliability and ancillary facilities to maintain existing infrastructure.

Justification

Plant equipment requires periodic replacement to maintain reliability. United States Environmental Protection Agency and State Water Resources Control Board regulations and permits require ongoing allocated funding for equipment replacement to ensure adequate treatment reliability and equipment maintenance. In renovating and replacing ancillary facilities such as building structures and landscaping, the City affirms its commitment to maintain sound infrastructure and facility sites and energy efficiency.

Significant Changes

2019-2023 CIP: This project is recommended to be closed as of Fiscal Year 2018. Future tasks and funding will be budgeted in WQ-19002, Plant Repair, Retrofit, and Equipment Replacement.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Treatment Fund	N/A	5,212,708	5,138,554	0	0	0	0	0	0	0	N/A
Total	N/A	5,212,708	5,138,554	0	0	0	0	0	0	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	5,021,181	4,041,677	0	0	0	0	0	0	0	N/A
Design	N/A	191,527	1,096,877	0	0	0	0	0	0	0	N/A
Total	N/A	5,212,708	5,138,554	0	0	0	0	0	0	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses in the future.

Relationship to Comprehensive Plan Primary Connection Element: Natural Environment Section: Water Resources Goal: N-4 Policy: N-4.16 Program: N4.16.1	Potential Board/Commission Review: Planning and Transportation Commission
Environmental Impact Analysis: This project is expected to have a possible exemption from CEQA under Section 15301.	



Fund: Wastewater Treatment - Operating
Category: System Improvements
Project Location: 2501 Embarcadero Way
Managing Department: Public Works
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: WQ-19002

Removal of old pumping plant flowmeter

Plant Repair, Retrofit, and Equipment Replacement

Description

This project provides funding for the assessment, repair, and retrofit of the Plant's concrete and metal structures; the replacement of necessary Plant equipment and ancillary facilities to maintain treatment reliability and existing infrastructure; and the replacement of large diameter flow meters built into the wastewater treatment system on sewers, pipes, and water lines.

Tasks and funding previously budgeted in three separate maintenance related projects, WQ-80021, WQ-80022, and WQ-04011, will now be consolidated and budgeted in this one recurring project.

Justification

Plant facilities are subject to many adverse conditions and plant equipment requires periodic replacement to maintain reliability. Concrete and metal structures are evaluated for evidence of damage caused by corrosion, weathering, age, and ground movement. Facilities with repair and retrofit deficiencies need to be repaired to good structural condition to ensure that the plant continues to operate safely and reliably. In addition, United States Environmental Protection Agency and State Water Resources Control Board regulations and permits require ongoing allocated funding for equipment replacement to ensure adequate treatment reliability.

In addition to equipment physically located at the plant, there are 13 key magnetic flow meters throughout the collection system. Meters have an average life of ten years, however when the meter's reliability fails, the meter must be replaced immediately to continue accurate partner billing, process control, and regulatory reporting.

WASTEWATER TREATMENT FUND

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Treatment Fund	N/A	0	0	3,910,232	3,084,824	3,169,558	3,295,486	3,386,020	16,846,120	0	N/A
Total	N/A	0	0	3,910,232	3,084,824	3,169,558	3,295,486	3,386,020	16,846,120	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	0	0	3,408,949	2,717,824	2,792,558	2,908,486	2,988,020	14,815,837	0	N/A
Design	N/A	0	0	501,283	367,000	377,000	387,000	398,000	2,030,283	0	N/A
Total	N/A	0	0	3,910,232	3,084,824	3,169,558	3,295,486	3,386,020	16,846,120	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses in the future.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Wastewater Treatment - Operating
Category: System Improvements
Project Location: 2501 Embarcadero Way
Managing Department: Public Works
Initial Project Start: Spring 2014
Initial Project Completion: Fall 2019
Revised Project Start: Winter 2018
Revised Project Completion: Fall 2020
Project Number: WQ-14003

Primary Sedimentation Tank

Primary Sedimentation Tank Rehabilitation

Description

This project provides funding for new protective coatings on each of the four concrete primary sedimentation tanks and replacement of worn rotating parts. The tanks, installed in 1972, are 220 feet long by 41 feet wide and remove settleable solids and grease. The coating ensures reinforcing steel bars within the concrete are protected from penetrating corrosive sewer gases and extends the concrete's life another 30 years.

Justification

Without recoating, the concrete will lose its structural integrity, gradually spalling and harming pumps, pipes, and treatment systems as a result. In a mild seismic event, weakened concrete could potentially collapse, endangering staff and the treatment system. Rehabilitation of the concrete slabs will extend the life of the tanks, preserving capital resources for other uses.

Supplemental Information

This project was identified in the Long Range Facilities Plan report accepted by Council in 2012. Construction funding via a low interest state revolving fund loan (SRF) will be pursued for this project, which is subject to approval from the partner agencies. The partners already approved repayment of an SRF design/planning loan, while staff evaluate a revenue bond option as an alternative to an SRF for construction.

Significant Changes

2019-2023 CIP: Design phase of the project started in Winter 2018. The City is exploring funding alternatives for the project, therefore the funding source is no longer stated explicitly as Revenue from the State of California.

2018-2022 CIP: All partner agencies approved repayment of a planning/design loan. Securing the SRF planning/design loan took longer than expected, and there is uncertainty about availability of State funds. The City may have to explore alternative methods of funding such as a revenue bond, but the project planning/design can commence once the funds are secured. Project timeline is impacted.

2017-2021 CIP: Approval by the partner agencies was required for project approval and to guarantee repayment of any state loans.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	720,000	2,240,000	2,240,000	2,132,000	0	0	6,612,000	0	7,332,000
Revenue from the State of California	0	772,798	0	0	0	0	0	0	0	0	0
Wastewater Treatment Fund	0	27,202	37,185	96,471	21,868	20,761	10,000	0	149,100	0	186,285
Total	0	800,000	757,185	2,336,471	2,261,868	2,152,761	10,000	0	6,761,100	0	7,518,285

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	64,385	37,185	2,041,536	2,032,148	2,033,380	10,000	0	6,117,064	0	6,154,249
Design	0	735,615	720,000	294,935	229,720	119,381	0	0	644,036	0	1,364,036
Total	0	800,000	757,185	2,336,471	2,261,868	2,152,761	10,000	0	6,761,100	0	7,518,285

Operating Impact

This project is not anticipated to impact operating expenses in the future.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Aeration basins

Fund: Wastewater Treatment - Operating
Category: System Improvements
Project Location: 2501 Embarcadero Way
Managing Department: Public Works
Initial Project Start: Summer 2018
Initial Project Completion: Fall 2021
Revised Project Start:
Revised Project Completion:
Project Number: WQ-19001

Secondary Treatment Upgrades

Description

This project provides funding for upgrades to the Secondary Treatment process at the Regional Water Quality Control Plant. The existing Secondary Treatment process has two main components; the Fixed Film Reactors (FFR) and the Activated Sludge (AS) Process. This project includes the reconstruction of the AS process, rehabilitation of the AS Aeration Basins and the elimination of the FFRs. The AS Aeration Basins will be subdivided with concrete walls creating different zones where different pollutants can be treated. One of the zones will then operate without oxygen, treating nitrogen and cutting the nitrogen in the treated wastewater in half. The project will not only reduce organics and ammonia in the existing processes, but will also reduce total nitrogen, the next pollutant being regulated.

Justification

The components of the Secondary Treatment process are between 35 and 45 years old, they show extreme signs of wear and structural weakness. The rehabilitation of both the FFRs and the AS Process were identified in the Long Range Facilities Plan accepted by Council in 2012. In addition, regulatory agencies are developing new compliance and permit requirements for total nitrogen. A special study was completed in 2017 which proposed a complete Secondary Treatment process upgrade instead of individual rehabilitation projects. The completion of the upgrades will meet several objectives.

Supplemental Information

The project cost is estimated to be \$30.6 million, which is less than the combined estimated cost for the FFRs, AS Aeration Basins rehabilitation, and large-scale Denitrification System (or other nutrients removal) projects.

WASTEWATER TREATMENT FUND

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	1,500,000	3,000,000	25,000,000	1,000,000	0	30,500,000	0	30,500,000
Wastewater Treatment Fund	0	0	0	45,109	29,287	24,345	28,058	10,000	136,799	0	136,799
Total	0	0	0	1,545,109	3,029,287	25,024,345	1,028,058	10,000	30,636,799	0	30,636,799

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	2,217,511	24,324,345	1,028,058	10,000	27,579,914	0	27,579,914
Design	0	0	0	1,545,109	811,776	700,000	0	0	3,056,885	0	3,056,885
Total	0	0	0	1,545,109	3,029,287	25,024,345	1,028,058	10,000	30,636,799	0	30,636,799

Operating Impact

This project is anticipated to impact operating expenses in the future, potentially by lowering utilities usage. As these costs are quantified, adjustments will be brought forward in future budgets, as necessary.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

Potential Board/Commission Review:

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

WASTEWATER TREATMENT FUND



Fund: Wastewater Treatment - Operating
Category: System Improvements
Project Location: 2501 Embarcadero Way
Managing Department: Public Works
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: WQ-80022

System Flow Meter

System Flow Meters

Description

This project provides funding to replace the large diameter flow meters built into the wastewater treatment system on sewers, pipes, and water lines.

Justification

Generally, magnetic flow meters, used to measure the flow of wastewater by magnetic field, have a life of over ten years. When the reliability of the meter's electronics fail, the meter needs expeditious replacement to continue accurate partner billing, process control, and regulatory reporting.

Supplemental Information

There are 13 key meters that require replacement through an ongoing capital project.

Significant Changes

2019-2023 CIP: This project is recommended to be closed as of Fiscal Year 2018. Future tasks and funding will be budgeted in Plant Repair, Retrofit, and Equipment Replacement (WQ-19002), created to combine all ongoing plant facilities repair, retrofit, and equipment replacement.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Treatment Fund	N/A	120,517	100,517	0	0	0	0	0	0	0	N/A
Total	N/A	120,517	100,517	0	0	0	0	0	0	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
	N/A	0	0	0	0	0	0	0	0	0	N/A
Construction	N/A	120,517	100,517	0	0	0	0	0	0	0	N/A
Design	N/A	0	0	0	0	0	0	0	0	0	N/A
Total	N/A	120,517	100,517	0	0	0	0	0	0	0	N/A

Operating Impact

This project is not anticipated to impact operating expenses in the future.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

Potential Board/Commission Review:

Planning and Transportation
Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



CITY OF
**PALO
ALTO**

WATER FUND

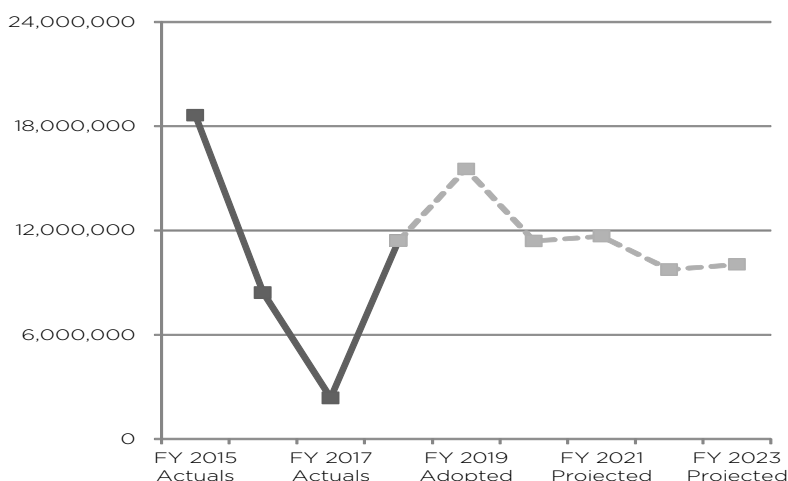
Overview

The City of Palo Alto is the only municipality in California that operates a full suite of City-owned utility services. The municipal Water Distribution System began operation in 1896 and continues to provide safe, reliable, and cost-effective water service to residents and customers of Palo Alto. For the 2019-2023 Capital Improvement Program (CIP), approximately \$58.4 million is programmed, with \$15.5 million allocated in Fiscal Year 2019. Overall, a total of 18 projects are programmed for the 5-year CIP. Major projects funded in the 2019-2023 CIP include Water Main Replacements (cumulative total of \$35.4 million), Water System Customer Connections (\$3.9 million), Water Meters (\$3.1 million) and Water, Gas, and Wastewater Utility GIS Data (\$2.4 million). The budget for the Water Fund CIP is broken into three separate categories: Customer Connections, System Improvements, and Water Main Replacements.

Customer Connections

As customers continually change their water needs due to equipment additions, new construction, building expansions, building remodels, teardowns and rebuilds, and new building occupancy types, the water system must evolve to meet these needs. The Water System Customer Connections is the only project in this category and includes work required to meet the needs of customers who have applied for new or upgraded water service. The Water Fund pays for a portion of this project, while remaining costs are supported by reimbursements from customers for project work performed by the City.

Water Fund Capital Expenditures



Infrastructure Inventory

CLASSIFICATION	QUANTITY
Miles of water main	235.58 miles
Number of wells	1 active standby and 7 emergency standby
Number of reservoirs	4 steel and 3 reinforced concrete

Recent Accomplishments

- In Fiscal Year 2017 the Water Utility completed over 70 customer service projects with a total cost of \$0.7 million.

2019-2023 Capital Improvement Program

Recurring Projects

The Water System Customer Connections is the only project within this category. Over the course of the 2019-2023 CIP, \$3.9 million is programmed, with \$0.7 million allocated in Fiscal Year 2019.

System Improvements

To ensure reliable water services for the City of Palo Alto's residents and customers, infrastructure must be replaced at the end of its expected life. The System Improvements category includes 10 projects during the 2019-2023 CIP at a total cost of \$19.1 million, with \$6.4 million allocated in Fiscal Year 2019.

Recent Accomplishments

- Completed the remaining roof coating of Boronda Reservoir Seismic Upgrade and Rehabilitation project.
- Completed the construction of the Montebello Reservoir Seismic Upgrade and Rehabilitation project, including a new roof, interior and exterior coatings, a new control valve, and paving.
- Engaged a consultant to review water storage and operational needs. The consultant will develop a water model that will assist in the storage and operations recommendations.
- Engaged a consultant to perform a geotechnical investigation of the subgrade of the Mayfield Reservoir.
- Completed two transmission main repairs in the foothills west of Interstate 280.
- Completed the first annual water loss audit (SB 555) and submitted to the State Water Resource Control Board.

2019-2023 Capital Improvement Program

Recurring Projects

A total of \$10.9 million is programmed for System Improvement recurring projects during the 2019-2023 CIP, with \$2.6 million allocated in Fiscal Year 2019. Recurring projects in this category include the following:

- Water Distribution System Improvements (Fiscal Year 2019: \$0.5 million; 5-Year CIP: \$1.6 million)
- Water Fusion and General Equipment/Tools (Fiscal Year 2019: \$0.1 million; 5-Year CIP: \$0.3 million)
- Water Meters (Fiscal Year 2019: \$0.9 million; 5-Year CIP: \$3.1 million)
- Water Service Hydrant Replacement (Fiscal Year 2019: \$0.4 million; 5-Year CIP: \$2.3 million)
- Water System Supply Improvements (Fiscal Year 2019: \$0.3 million; 5-Year CIP: \$1.3 million)

- Water, Gas, Wastewater Utility GIS Data (Fiscal Year 2019: \$0.4 million; 5-Year CIP: \$2.3 million)

Non-Recurring Projects

A total of \$8.3 million is programmed for non-recurring projects during the 2019-2023 CIP, with the \$3.9 million allocated in Fiscal Year 2019. Non-recurring projects in this category include the following:

- Water Tank Seismic Water System Upgrades (Fiscal Year 2019: \$3.0 million; 5-Year CIP: \$7.0 million)
- Mayfield Reservoir Subgrade and Venting Repair (Fiscal Year 2019: \$0.2 million; 5-Year CIP: \$0.6 million)
- Water Regulation Station Improvements (Fiscal Year 2019: \$0.3 million; 5-year CIP: \$0.3 million)
- Water Reservoir Coating Improvements (Fiscal Year 2019: \$0.3 million; 5-year CIP: \$0.3 million)

Water Main Replacements

The Water Main Replacements category accounts for the replacement of inadequately-sized and structurally deficient water mains. In the next five years, it is estimated that approximately 55,000 linear feet of water mains will be replaced. The annual replacement totals were reduced by approximately 15% due to significant increases in labor and material costs. Based on the last two water main replacement project bids, the engineer's estimate was increased and a budget augmentation was necessary in FY 2018 to cover construction costs.

The annual replacement footage was reduced to compensate for some of the market changes that forced a rebid and a single bid in the past. Water main replacement project (WMR) 26B - Upgrade Downtown did not receive any bids. Rebids and the reduction of total footage completed annually will extend overall system replacement time. Seismic vulnerability was factored in as a replacement criterion based on the most recent master study.

Recent Accomplishments

- Completed design and started construction of WMR 26 to replace approximately 11,000 linear feet of water main pipelines, 200 service pipelines, and 40 fire hydrants, with approximately 29% of construction completed in 2017.
- Completed design and started water main replacement for Upgrade Downtown to replace approximately 3,155 linear feet of water main pipelines, 52 service pipelines, and 10 fire hydrants.

2019-2023 Capital Improvement Program

Recurring Projects

There are no recurring projects in this category.

Non-Recurring Projects

The 2019-2023 CIP includes \$35.4 million in funding for 7 non-recurring projects within this category, with \$8.4 million approved for Fiscal Year 2019, which includes the increased budget to cover the Upgrade Downtown project cost escalation. The Utilities Department coordinates with the Public Works Department's street maintenance projects to minimize damage to the City's pavement and maximize cost efficiencies.

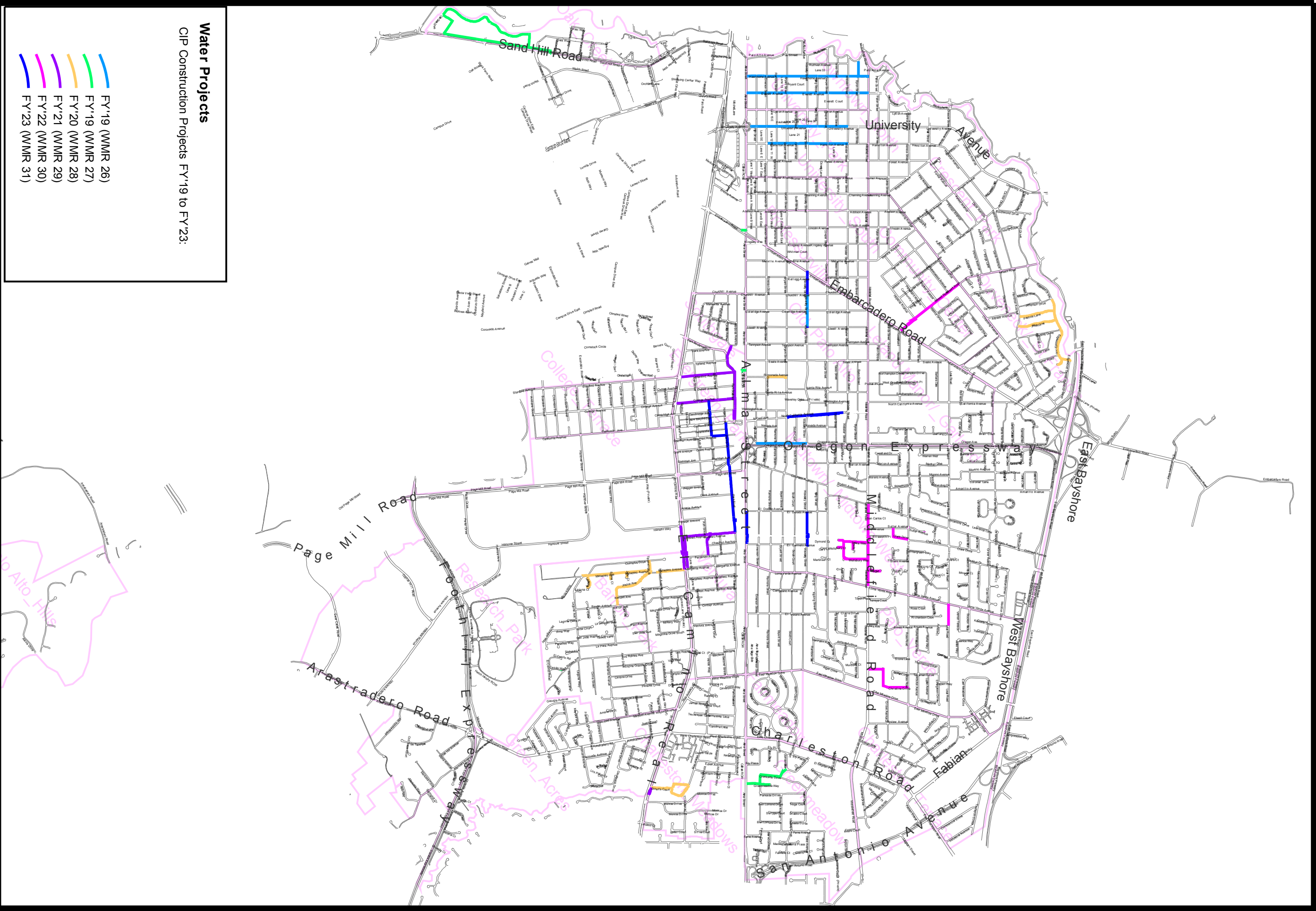
Summary of Capital Activity

WATER FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Source of Funds									
Transfer from Other Funds									
Gas Fund									
WS-02014	Water Gas Wastewater GIS Data	122,009	134,209	147,630	152,059	156,621	161,320	166,160	783,790
	Total Gas Fund Transfers	122,009	134,209	147,630	152,059	156,621	161,320	166,160	783,790
Wastewater Collection Fund									
WS-02014	Water Gas Wastewater GIS Data	122,009	134,209	147,630	152,059	156,621	161,320	166,160	783,790
	Total Wastewater Collection Fund	122,009	134,209	147,630	152,059	156,621	161,320	166,160	783,790
	Total Transfer from Other Funds	244,018	268,418	295,260	304,118	313,242	322,640	332,320	1,567,580
Other Revenues									
WS-80014	Water Service Hydrant Replacement	657	0	0	0	0	0	0	0
WS-80013	Water System, Customer Connections	1,895,431	1,438,420	929,348	957,228	985,946	1,015,524	1,045,990	4,934,036
	Other Revenue Total	1,896,088	1,438,420	929,348	957,228	985,946	1,015,524	1,045,990	4,934,036
	Total Sources	2,140,106	1,706,838	1,224,608	1,261,346	1,299,188	1,338,164	1,378,310	6,501,616
Use of Funds									
Customer Connections									
WS-80013	Water System, Customer Connections	646,071	650,000	732,021	753,981	776,601	799,899	823,896	3,886,398
	Customer Connections Total	646,071	650,000	732,021	753,981	776,601	799,899	823,896	3,886,398
System Improvements									
WS-19000	Mayfield Reservoir Subgrade and Venting Repair	0	0	200,000	200,000	200,000	0	0	600,000
WS-11003	Water Distribution System Improvements	6,770	510,000	500,000	261,620	269,469	277,553	285,880	1,594,522
WS-13002	Water Fusion and General Equipment/Tools	0	50,000	50,000	50,000	50,000	50,000	50,000	250,000

WATER FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
WS-02014	Water, Gas, Wastewater Utility GIS Data	165,706	450,000	442,890	456,177	469,862	483,958	498,477	2,351,364
WS-80015	Water Meters	78,195	100,000	900,000	515,000	530,450	546,364	562,755	3,054,569
WS-07000	Water Regulation Station Improvements	136,702	624,355	345,000	0	0	0	0	345,000
WS-08001	Water Reservoir Coating Improvements	892,177	781,114	330,000	0	0	0	0	330,000
WS-80014	Water Service Hydrant Replacement	387,512	300,000	424,360	437,091	450,204	463,710	477,621	2,252,986
WS-11004	Water System Supply Improvements	74,897	303,000	254,000	261,620	269,469	277,553	285,880	1,348,522
WS-09000	Water Tank Seismic Water System Upgrades	747,065	2,786,154	3,000,000	2,000,000	2,000,000	0	0	7,000,000
	System Improvements Total	2,489,024	5,904,623	6,446,250	4,181,508	4,239,454	2,099,138	2,160,613	19,126,963
Water Main Replacements									
WS-12001	Water Main Replacement - Project 26	218,686	6,553,048	600,000	0	0	0	0	600,000
WS-13001	Water Main Replacement - Project 27	42,500	150,000	7,175,000	0	0	0	0	7,175,000
WS-14001	Water Main Replacement - Project 28	0	0	585,107	5,851,070	0	0	0	6,436,177
WS-15002	Water Main Replacement - Project 29	0	0	0	602,660	6,026,602	0	0	6,629,262
WS-16001	Water Main Replacement - Project 30	0	0	0	0	620,740	6,207,400	0	6,828,140
WS-19001	Water Main Replacement - Project 31	0	0	0	0	0	639,362	6,396,320	7,035,682
WS-20000	Water Main Replacement - Project 32	0	0	0	0	0	0	658,820	658,820
	Water Main Replacements Total	261,186	6,703,048	8,360,107	6,453,730	6,647,342	6,846,762	7,055,140	35,363,081
	Total Uses	3,396,282	13,257,671	15,538,378	11,389,219	11,663,397	9,745,799	10,039,649	58,376,442



Water Projects

CIP Construction Projects FY'19 to FY'23:

- FY'19 (WMR 26)
- FY'19 (WMR 27)
- FY'20 (WMR 28)
- FY'21 (WMR 29)
- FY'22 (WMR 30)
- FY'23 (WMR 31)

WATER FUND MAP
CAPITAL IMPROVEMENT PROGRAM

The City of
Palo Alto



This map is a product of the
City of Palo Alto GIS

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CITY OF
**PALO
ALTO**

Customer Connections

WATER FUND



Fund: Water Fund - Operating
Category: Customer Connections
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: WS-80013

Installation of 8" HDPE pipe by directional drilling method

Water System Customer Connections

Description

This project allows for improvements that include new main extensions, valves, domestic services, meters on upgraded services, backflow devices, fire services, and fire hydrants.

Justification

System extensions are required to provide service to new customers and to serve existing customers requesting expanded service.

Significant Changes

2015-2019 CIP: This project was previously titled "Water System Extensions". As part of the Fiscal Year 2015 budget, this project was re-titled to "Water System, Customer Connections" to more accurately reflect the work done with this funding.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	N/A	902,280	1,438,420	929,348	957,228	985,946	1,015,524	1,045,990	4,934,036	0	N/A
Water Fund	N/A	(128,915)	(788,420)	(197,327)	(203,247)	(209,345)	(215,625)	(222,094)	(1,047,638)	0	N/A
Total	N/A	773,365	650,000	732,021	753,981	776,601	799,899	823,896	3,886,398	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	773,365	650,000	732,021	753,981	776,601	799,899	823,896	3,886,398	0	N/A
Total	N/A	773,365	650,000	732,021	753,981	776,601	799,899	823,896	3,886,398	0	N/A

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



CITY OF
**PALO
ALTO**

System Improvements



Fund: Water Fund - Operating
Category: System Improvements
Project Location: Mayfield Reservoir
Managing Department: Utilities
Initial Project Start: Fall 2019
Initial Project Completion: Fall 2021
Revised Project Start:
Revised Project Completion:
Project Number: WS-19000

Exterior view of Mayfield Reservoir

Mayfield Reservoir Subgrade and Venting Repair

Description

As part of the City's recent Seismic Upgrade and Emergency Water Supply and Storage projects, the reservoir was drained in 2012 for approximately two years to allow extensive seismic rehabilitation work to be performed and construction of a new pump station. While the reservoir was empty, a number of cracks developed in the concrete slabs. After construction was completed and the reservoir was refilled, the cracks that had formed in the concrete caused the reservoir to leak. It was determined that the cracking had not been caused by construction activities but was due to the age of the concrete and the expansion and contraction of the structure during the extended period of time the reservoir was empty.

Justification

In order to minimize the risk of further damage to the reservoir and adjacent properties, the City hired a contractor to perform a crack assessment within the reservoir. Once the assessment was complete, the contractor sealed cracks in the concrete slabs and filled voids that had developed under the concrete slabs. The reservoir was filled and all leaks appeared to be sealed. However, during a recent inspection of the reservoir, it was found that a large number of additional cracks had formed on the concrete slabs, indicating potential problems with the structure and subgrade support. Furthermore, the perimeter venting was also found inadequate for keeping debris out and preserving water quality as required by the State Water Resources Control Board (SWRCB). To repair the reservoir's existing subgrade, this project will include excavation around and under the existing reservoir, backfill and compaction of excavated areas, and instal-

lation of a new reservoir floor. The project will also include State required improvements to the existing venting system.

Significant Changes

2019-2023 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	0	0	0	200,000	200,000	200,000	0	0	600,000	0	600,000
Total	0	0	0	200,000	200,000	200,000	0	0	600,000	0	600,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	200,000	200,000	200,000	0	0	600,000	0	600,000
Total	0	0	0	200,000	200,000	200,000	0	0	600,000	0	600,000

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

WATER FUND



Fund: Water Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: WS-11003

Installation of a new fire hydrant with FlowGuard fire hydrant check valve

Water Distribution System Improvements

Description

This project provides funds to improve Water Distribution System deliverability and reliability. Typical activities include installing restraining joints at critical pipelines and bridge crossings; increasing the size of inadequate facilities, system leakage surveys, network modeling, and fire flow studies; and other system improvements as required.

Justification

Water Distribution System reliability and adequate capacity are critical to providing a high level of service to customers in Palo Alto. Continuous evaluation of system needs and making required improvements are necessary to maintain adequate quantities of quality water, that meets local, state, and federal safe drinking water standards.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	N/A	1,110,136	510,000	500,000	261,620	269,469	277,553	285,880	1,594,522	0	N/A
Total	N/A	1,110,136	510,000	500,000	261,620	269,469	277,553	285,880	1,594,522	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	1,110,136	510,000	500,000	261,620	269,469	277,553	285,880	1,594,522	0	N/A
Total	N/A	1,110,136	510,000	500,000	261,620	269,469	277,553	285,880	1,594,522	0	N/A

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

WATER FUND



Fund: Water Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: WS-13002

16" HDPE pipe being fused prior to installation

Water General Equipment/Tools

Description

This funding allows for the acquisition of new equipment and tools, and the replacement of existing fusion equipment and other associated tools. The fusion equipment is used to fuse together pipe joints in the City's Water Distribution System.

Justification

As equipment ages, the quality of the fused joints begin to decline, and the operators must spend more time scraping, aligning, and fusing construction joints. In order to maintain high quality standards for the installation of the City's water distribution mains, along with the associated service standards and worker safety and productivity measures, equipment and tools need to be upgraded on an annual basis.

Significant Changes

2015-2019 CIP: Project was retitled from "Water Fusion and General Equipment/Tools".

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	N/A	50,000	50,000	50,000	50,000	50,000	50,000	50,000	250,000	0	N/A
Total	N/A	50,000	50,000	50,000	50,000	50,000	50,000	50,000	250,000	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	50,000	50,000	50,000	50,000	50,000	50,000	50,000	250,000	0	N/A
Total	N/A	50,000	50,000	50,000	50,000	50,000	50,000	50,000	250,000	0	N/A

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

WATER FUND



Fund: Water Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: WS-80015

5/8" Badger water meter

Water Meters

Description

This funding allows for purchasing meters for new customers, upgrading meters for current customers, installing meter bypasses, and replacing obsolete meters that are no longer repairable. This funding also allows for annual testing and calibration of select meters.

Justification

This project will maintain meter accuracy, reliability, and stock meter equipment and replacement parts. Meter replacements enhance information on system water volume; align the Utility's ten-year meter testing and replacement cycle in accordance with industry-standard best management practices; and provide accurate data for the Water Utility billing system.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	N/A	565,000	100,000	900,000	515,000	530,450	546,364	562,755	3,054,569	0	N/A
Total	N/A	565,000	100,000	900,000	515,000	530,450	546,364	562,755	3,054,569	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	565,000	100,000	900,000	515,000	530,450	546,364	562,755	3,054,569	0	N/A
Total	N/A	565,000	100,000	900,000	515,000	530,450	546,364	562,755	3,054,569	0	N/A

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Water Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Spring 2011
Initial Project Completion: Spring 2015
Revised Project Start:
Revised Project Completion:
Project Number: WS-07001

Recycled water piping

Water Recycling Facilities

Description

This funding allows the City of Palo Alto to hire a consultant to prepare a business plan, prepare a preliminary design, and secure funding options for an expansion of the existing recycled water delivery system in the City. The pipeline will primarily serve the Stanford Research Park and provide an alternative supply source of 1,000 acre feet or 435,600 cubic feet per year. For context this represented roughly 10% of Palo Alto's total water consumption in 2015. A key part of the proposed business plan will be evaluating potential alternative uses of the new pipeline to serve future needs in Direct Potable Reuse and Indirect Potable Reuse. This more detailed plan follows the successful completion and certification of the project's environmental impact report in September 2015. The next phase of the project is to evaluate the results of this business plan and other deliverables, and pending a satisfactory assessment, move forward with the full design work of the proposed expansion of the recycled water delivery system.

Justification

Palo Alto is aggressively pursuing all options to meet future water supply needs. Recycled water provides a stable, drought-proof supply of water that replaces the need to use Hetch Hetchy potable supplies for irrigation purposes and other non-potable uses. In anticipation of extended periods of drought and mandatory potable water reduction imposed by the State, the City is evaluating a wide range of alternative water supplies. Recycled water and groundwater are two such resources that are interrelated in their development and potential. Therefore, the City is taking an integrated approach to evaluating non-potable recycled water, shallow aquifer groundwater, deep aquifer groundwater, and Direct Potable Reuse and Indirect Potable Reuse.

The end product will be a recycled water strategic plan for the most flexible and robust use of these resources.

Significant Changes

2018-2022 CIP: While staff has addressed many issues regarding a future recycled water project including the completion and certification by the Council of the project's environmental impact report (EIR), the replacement of high quality potable water with recycled water remains a concern for the landscape community among others. Completion of the EIR was essential for securing Federal or State grant or loan funding for the construction of the project, and now the City of Palo Alto needs to reassess a more exhaustive number of potential end uses, assess customer demand, prepare a business plan, finish a preliminary design, and secure funding.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Revenue from the Federal Government	111,013	0	0	0	0	0	0	0	0	0	111,013
Water Fund	346,037	395,649	0	395,649	0	0	0	0	395,649	0	741,686
Total	457,050	395,649	0	395,649	0	0	0	0	395,649	0	852,699

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	365,639	395,649	0	395,649	0	0	0	0	395,649	0	761,288
Design	91,409	0	0	0	0	0	0	0	0	0	91,409
Total	457,048	395,649	0	395,649	0	0	0	0	395,649	0	852,697

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Water Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Fall 2006
Initial Project Completion: Summer 2008
Revised Project Start: Summer 2014
Revised Project Completion: Spring 2019
Project Number: WS-07000

Siesmic Upgrade, Arastradero Turnout, June 2010

Water Regulation Station Improvements

Description

This project will improve fourteen underground vaults and two above-ground water regulation facility locations. The improvements include: supervisory control and data acquisition (SCADA) chloramine monitors, pipe coating, wall sealing/painting, vault door replacement, lighting, valve replacement, and electrical upgrades.

Justification

These critical components in the water system require various improvements to increase reliability, safety and to prolong their service life. The San Francisco Public Utility Commission (SFPUC) turnouts are the main source of water supply to Palo Alto residents and need maintenance improvements. The pressure regulating stations protect pipelines from over-pressurization, which prevents water main breaks and customer outages. The electrical systems for these facilities need to be improved for staff safety.

Supplemental Information

The work locations of this project include Page Mill, Arastradero, California, Charleston, Mayfield, Hillview, Hewlett, Foothill 6, Foothill 7, Corte Madera, Boronda, Park, Dahl, Montebello vaults, Dahl booster, and Lytton pump station.

Significant Changes

2019-2023 CIP: Seismic and vault improvements were completed at Page Mill and Arastradero. In Fiscal Year 2019, staff will address the turnout at California.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	1,130,702	972,412	627,412	345,000	0	0	0	0	345,000	0	2,103,114
Total	1,130,702	972,412	627,412	345,000	0	0	0	0	345,000	0	2,103,114

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	904,558	972,412	627,412	345,000	0	0	0	0	345,000	0	1,876,970
Design	226,136	0	0	0	0	0	0	0	0	0	226,136
Total	1,130,694	972,412	627,412	345,000	0	0	0	0	345,000	0	2,103,106

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Water Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Spring 2008
Initial Project Completion: Spring 2009
Revised Project Start: Summer 2013
Revised Project Completion: Spring 2018
Project Number: WS-08001

Seismic Upgrade, Dahl Reservoir, May 2006

Water Reservoir Coating Improvements

Description

This project will remove and replace the coatings on the interiors and exteriors of the City's four foothill steel water reservoirs. Detailed inspection of the remaining metal structural components will be made after the coatings are completely removed. Minor strengthening of the structural components is expected.

Justification

Recent coating inspection of the interiors showed signs of heavy rusting on the interior walls, roof, and support beams on each of the steel reservoirs. The reservoirs' coatings need to be replaced to extend the life of the reservoir structures.

Supplemental Information

These reservoirs were last coated in 1995.

Significant Changes

2019-2023 CIP: The City is currently under contract with an engineering consultant to study the Water Distribution System. Staff will make recommendations for upgrades and/or improvements when the study is completed.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	1,010,331	1,130,852	800,852	330,000	0	0	0	0	330,000	0	2,141,183
Total	1,010,331	1,130,852	800,852	330,000	0	0	0	0	330,000	0	2,141,183

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	808,261	1,130,852	800,852	330,000	0	0	0	0	330,000	0	1,939,113
Design	202,062	0	0	0	0	0	0	0	0	0	202,062
Total	1,010,323	1,130,852	800,852	330,000	0	0	0	0	330,000	0	2,141,175

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

WATER FUND



Fund: Water Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: WS-80014

Newly installed fire hydrant service line and assembly on Greenwood Avenue

Water Service Hydrant Replacement

Description

This project replaces system control valves, deteriorated galvanized service lines, lead goose-necks, and fire hydrant valves and assemblies as a result of Fire Department flow testing; upgrades fire hydrants in main replacement project areas; and replaces existing undersized or deteriorated copper water services. Upgrading hydrants and system control valves is consistent with fire protection policies.

Justification

In order to maintain a high water quality standard for Palo Alto's water supplies, it is necessary to replace old, lead, galvanized, and corroded copper water service lines.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	N/A	423,158	300,000	424,360	437,091	450,204	463,710	477,621	2,252,986	0	N/A
Total	N/A	423,158	300,000	424,360	437,091	450,204	463,710	477,621	2,252,986	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	423,158	300,000	424,360	437,091	450,204	463,710	477,621	2,252,986	0	N/A
Total	N/A	423,158	300,000	424,360	437,091	450,204	463,710	477,621	2,252,986	0	N/A

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

WATER FUND



Fund: Water Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: WS-11004

Installation of 8" HDPE pipe and valve between two main connection points on El Camino Real at El Camino Way

Water System Supply Improvements

Description

This project provides funding to improve the City's Water Distribution System, which connects facilities between the City's and the San Francisco Public Utility Commission's pipelines, emergency water wells within the City, pumping stations, and water reservoirs.

Justification

It is critical that the City has an adequate supply of water that meets federal and state drinking water requirements. To meet these objectives, the City must continually evaluate the system and make improvements as needed.

Supplemental Information

Typical activities performed under this project include: piping modifications, equipment replacements associated with water delivery, Supervisory Control software upgrades, system modifications for water system quality compliance, implementation of an asset management system, conditional assessment of the reliability of transmission mains, and security system installations.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	N/A	386,213	303,000	254,000	261,620	269,469	277,553	285,880	1,348,522	0	N/A
Total	N/A	386,213	303,000	254,000	261,620	269,469	277,553	285,880	1,348,522	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	386,213	303,000	254,000	261,620	269,469	277,553	285,880	1,348,522	0	N/A
Total	N/A	386,213	303,000	254,000	261,620	269,469	277,553	285,880	1,348,522	0	N/A

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Water Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Spring 2014
Initial Project Completion: Winter 2017
Revised Project Start:
Revised Project Completion: Summer 2021
Project Number: WS-09000

Seismic Upgrade, Boronda Reservoir, December 2014

Water Tank Seismic Upgrade and Rehabilitation

Description

This project will provide tank rehabilitation, seismic upgrades, and/or tank replacement structural reinforcement for the Corte Madera, Park, Boronda, and Dahl reservoirs in order to improve earthquake resistance in compliance with the American Society of Civil Engineers (ASCE 7) seismic codes. Work at the reservoir sites will also include the installation of: new seismic shut off valves between the reservoirs and valve vaults, new plug valves, piping and pipe supports in the valve vaults, and recoating of the interior and exterior reservoir walls.

Justification

Palo Alto's water tanks have no protection from water loss in a seismic event. If an earthquake causes a significant water leak, various impacts such as loss of water for fire fighting purposes, loss of water storage for drinking, property damage from flooding or mudslides, and environmental damages could occur. The seismic protection systems will preserve potable water after a seismic event. Additionally, during the seismic upgrade of the Montebello reservoir the structural condition of the tank required significant repair, which is now anticipated in the remaining three tanks constructed in a similar time period.

Significant Changes

2019-2023 CIP: Project was retitled from "Seismic Water System Upgrade". Budget has also increased by \$6.4 million to account for scope changes and construction cost escalation.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	2,104,216	3,623,828	2,786,154	3,000,000	2,000,000	2,000,000	0	0	7,000,000	0	11,890,370
Total	2,104,216	3,623,828	2,786,154	3,000,000	2,000,000	2,000,000	0	0	7,000,000	0	11,890,370

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	1,683,370	3,623,828	2,786,154	3,000,000	2,000,000	2,000,000	0	0	7,000,000	0	11,469,524
Design	420,837	0	0	0	0	0	0	0	0	0	420,837
Total	2,104,207	3,623,828	2,786,154	3,000,000	2,000,000	2,000,000	0	0	7,000,000	0	11,890,361

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

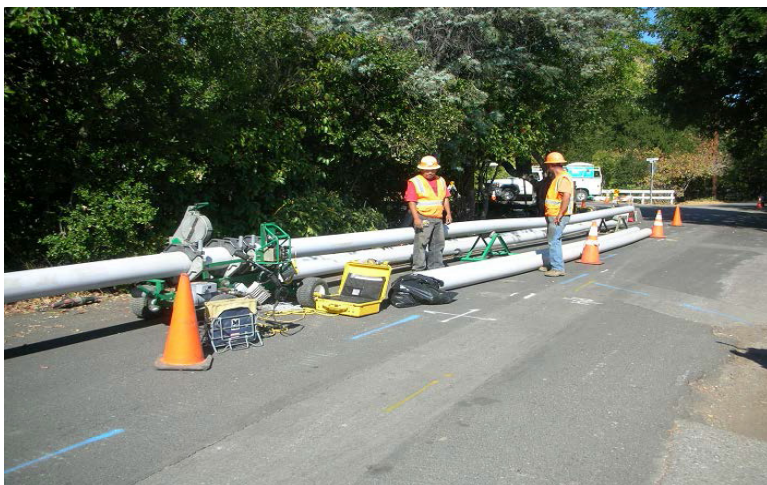
Program: N4.13.2

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Water Fund - Operating
Category: System Improvements
Project Location: Software maintenance & update
Managing Department: Utilities
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: WS-02014

Staff collecting data for GIS system

Water, Gas, Wastewater Utility GIS Data

Description

This project covers the annual maintenance and support contract to improve the ability of Utilities Department staff to use the Geographic Information System (GIS). As with other GIS activities, continuing the completion of data-related tasks is the primary emphasis. Because field personnel still need accurate paper maps in the field, standard map books will be produced that meet their specific needs. Funding is also included to improve the GIS user interface to better serve the unique requirements of Utility Department users.

Justification

The GIS program is used for interfacing with modeling software to perform engineering analysis and master planning; developing and prioritizing cost-effective capital improvement designs; and asset management of the City's utility enterprise system; thereby enhancing the level of service to utility customers.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Transfer from Gas Fund	N/A	134,209	134,209	147,630	152,059	156,621	161,320	166,160	783,790	0	N/A
Transfer from Wastewater Collection Fund	N/A	134,209	134,209	147,630	152,059	156,621	161,320	166,160	783,790	0	N/A
Water Fund	N/A	283,036	181,582	147,630	152,059	156,620	161,318	166,157	783,784	0	N/A
Total	N/A	551,454	450,000	442,890	456,177	469,862	483,958	498,477	2,351,364	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	551,454	450,000	442,890	456,177	469,862	483,958	498,477	2,351,364	0	N/A
Total	N/A	551,454	450,000	442,890	456,177	469,862	483,958	498,477	2,351,364	0	N/A

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Efficient and Effective Service Delivery

Goal: C-1

Policy: C-1.3

Program: C1.3.1

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



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Water Main Replacements



Fund: Water Fund - Operating
Category: Water Main Replacements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Summer 2015
Initial Project Completion: Winter 2017
Revised Project Start:
Revised Project Completion: Winter 2019
Project Number: WS-12001

16" HDPE pipe ready to be installed

Water Main Replacement - Project 26

Description

This project will fund the design and replacement of structurally deficient water mains and appurtenances in Fiscal Year 2019. Mains are selected by researching the maintenance history of the system and identifying those that are undersized, corroded, and subject to breaks. The project scope includes approximately 9,708 linear feet (which represents 0.8% of the City's Water Distribution System) of mains and services on various streets within the City, including areas in University Park and Downtown North.

Justification

Some mains are inadequate in size to supply required flows and pressures for fire protection, and others are subject to recurring breaks.

Supplemental Information

Each year the projects are re-evaluated and the highest priority is given to the most deteriorated portions of the system. Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.

Significant Changes

2019-2023 CIP: This project included Upgrade Downtown which added an additional \$3.0 million for construction services. Funding was increased by \$0.6 million in 2019 to include project closing activities for both WMR 26 and Upgrade Downtown projects.

2018-2022 CIP: This project was delayed due to recent increases in construction cost which has required the department to reduce the scope of the project.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	353,122	9,574,668	6,553,048	600,000	0	0	0	0	600,000	0	7,506,170
Total	353,122	9,574,668	6,553,048	600,000	0	0	0	0	600,000	0	7,506,170

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	282,494	9,574,668	6,553,048	600,000	0	0	0	0	600,000	0	7,435,542
Design	70,619	0	0	0	0	0	0	0	0	0	70,619
Total	353,113	9,574,668	6,553,048	600,000	0	0	0	0	600,000	0	7,506,161

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Water Fund - Operating
Category: Water Main Replacements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Summer 2016
Initial Project Completion: Winter 2018
Revised Project Start: Summer 2018
Revised Project Completion: Winter 2020
Project Number: WS-13001

Installed 16" HDPE pipe waiting to be backfilled

Water Main Replacement - Project 27

Description

This project will fund the design and replacement of structurally deficient water mains and appurtenances in Fiscal Years 2018 and 2019. Mains are selected by researching the maintenance history of the system and identifying those that are undersized, corroded, and subject to breaks. The project scope includes approximately 9,150 linear feet (which represents 0.8% of the City's Water Distribution System) of mains and services on various streets within the City, including areas in the Oak Creek and Greenmeadow neighborhoods.

Justification

Some mains are inadequate in size to supply required flows and pressures for fire protection, some are located in areas of high liquefaction, and others are subject to recurring breaks.

Supplemental Information

Each year the projects are re-evaluated and the highest priority is given to the most deteriorated portions of the system. Linear footage and locations are subject to change; please refer to the City of Palo Alto Utilities webpage to confirm project details.

Significant Changes

2019-2023 CIP: Project budget has increased by \$0.6 million to account for construction cost escalation.

2018-2022 CIP: The construction is postponed to start in the later part of FY 2019 due to delays of WMR 26.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	42,500	675,000	0	7,175,000	0	0	0	0	7,175,000	0	7,217,500
Total	42,500	675,000	0	7,175,000	0	0	0	0	7,175,000	0	7,217,500

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	34,000	0	150,000	6,500,000	0	0	0	0	6,500,000	0	6,684,000
Design	8,500	675,000	(150,000)	675,000	0	0	0	0	675,000	0	533,500
Total	42,500	675,000	0	7,175,000	0	0	0	0	7,175,000	0	7,217,500

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Water Fund - Operating
Category: Water Main Replacements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Summer 2017
Initial Project Completion: Winter 2019
Revised Project Start: Summer 2019
Revised Project Completion: Winter 2021
Project Number: WS-14001

New HDPE main connecting to side street with new valve

Water Main Replacement - Project 28

Description

This project will fund the design and replacement of structurally deficient water mains and appurtenances in Fiscal Years 2019 and 2020. Mains are selected by researching the maintenance history of the system and identifying those that are undersized, corroded, and subject to breaks. The project scope includes approximately 11,810 linear feet (which represents 1.1% of the City's Water Distribution System) of mains and services on various streets within the City, including areas in the Duveneck/St. Francis, Barron Park, and Charleston Meadows neighborhoods.

Justification

Some mains are inadequate in size to supply required flows and pressures for fire protection, some are located in areas of high liquefaction, and others are subject to recurring breaks.

Supplemental Information

Each year the projects are re-evaluated and the highest priority is given to the most deteriorated portions of the system. Linear footage and locations are subject to change; please refer to the City of Palo Alto Utilities webpage to confirm project details.

Significant Changes

2018-2022 CIP: Due to delays of WMR 26 and 27, the project design and construction will be delayed to FY 2019 and FY 2020.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	0	0	0	585,107	5,851,070	0	0	0	6,436,177	0	6,436,177
Total	0	0	0	585,107	5,851,070	0	0	0	6,436,177	0	6,436,177

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	5,851,070	0	0	0	5,851,070	0	5,851,070
Design	0	0	0	585,107	0	0	0	0	585,107	0	585,107
Total	0	0	0	585,107	5,851,070	0	0	0	6,436,177	0	6,436,177

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Water Fund - Operating
Category: Water Main Replacements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Summer 2018
Initial Project Completion: Winter 2020
Revised Project Start: Summer 2020
Revised Project Completion: Winter 2022
Project Number: WS-15002

16" HDPE pipe ready to be installed by open trench method

Water Main Replacement - Project 29

Description

This project will fund the design and replacement of structurally deficient water mains and appurtenances in Fiscal Years 2020 and 2021. Mains are selected by researching the maintenance history of the system and identifying those that are undersized, corroded, and subject to breaks. The project scope includes approximately 10,550 linear feet (which represents 0.9% of the City's Water Distribution System) of mains and services on various streets within the City, including areas in the Evergreen Park, Ventura, and Charleston Meadows neighborhoods.

Justification

Some mains are inadequate in size to supply required flows and pressures for fire protection, some are located in areas of high liquefaction, and others are subject to recurring breaks.

Supplemental Information

Each year the projects are re-evaluated and the highest priority is given to the most deteriorated portions of the system. Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.

Significant Changes

2018-2022 CIP: Due to delays of WMR 26, 27 and 28, the project design and construction will be postponed to FY 2020 and FY 2021.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	0	0	0	0	602,660	6,026,602	0	0	6,629,262	0	6,629,262
Total	0	0	0	0	602,660	6,026,602	0	0	6,629,262	0	6,629,262

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	6,026,602	0	0	6,026,602	0	6,026,602
Design	0	0	0	0	602,660	0	0	0	602,660	0	602,660
Total	0	0	0	0	602,660	6,026,602	0	0	6,629,262	0	6,629,262

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Water Fund - Operating
Category: Water Main Replacements
Project Location:
Managing Department: Utilities
Initial Project Start: Summer 2019
Initial Project Completion: Winter 2021
Revised Project Start: Summer 2021
Revised Project Completion: Winter 2023
Project Number: WS-16001

HDPE pipe waiting to be fused

Water Main Replacement - Project 30

Description

This project will fund the design and replacement of structurally deficient water mains and appurtenances in Fiscal Years 2021 and 2022. Mains are selected by researching the maintenance history of the system and identifying those that are undersized, corroded, and subject to breaks. The project scope includes approximately 10,425 linear feet (which represents 0.9% of the City's Water Distribution System) of mains and services on various streets within the City, including areas in the Community Center, Midtown/Midtown West and Palo Verde, and Greenmeadow neighborhoods.

Justification

Some mains are inadequate in size to supply required flows and pressures for fire protection, some are located in areas of high liquefaction, and others are subject to recurring breaks.

Supplemental Information

Each year the projects are re-evaluated and the highest priority is given to the most deteriorated portions of the system. Linear footage and locations are subject to change; please refer to the City of Palo Alto Utilities webpage to confirm project details.

Significant Changes

2018-2022 CIP: Due to delays of WMR 26 - 29, the project design and construction is postponed to FY 2021 and FY 2022.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	0	0	0	0	0	620,740	6,207,400	0	6,828,140	0	6,828,140
Total	0	0	0	0	0	620,740	6,207,400	0	6,828,140	0	6,828,140

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	6,207,400	0	6,207,400	0	6,207,400
Design	0	0	0	0	0	620,740	0	0	620,740	0	620,740
Total	0	0	0	0	0	620,740	6,207,400	0	6,828,140	0	6,828,140

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Water Fund - Operating
Category: Water Main Replacements
Project Location: Various Locations
Managing Department: Utilities
Initial Project Start: Summer 2020
Initial Project Completion: Winter 2022
Revised Project Start: Summer 2022
Revised Project Completion: Spring 2024
Project Number: WS-19001

Installed 16" HDPE pipe waiting to be backfilled

Water Main Replacement - Project 31

Description

This project will fund the design and replacement of structurally deficient water mains and appurtenances in Fiscal Years 2022 and 2023. Mains are selected by researching the maintenance history of the system and identifying those that are undersized, corroded, and subject to breaks. The project scope includes 9,550 linear feet (which represents 0.8% of the City's Water Distribution System) of mains and services on various streets within the City, including areas in the Evergreen Park, Midtown/Midtown West, Old Palo Alto, and Ventura neighborhoods.

Justification

Some mains are inadequate in size to supply required flows and pressures for fire protection, some are located in areas of high liquefaction, and others are subject to recurring breaks.

Supplemental Information

Each year the projects are re-evaluated and the highest priority is given to the most deteriorated portions of the system. Linear footage and locations are subject to change; please refer to the City of Palo Alto Utilities webpage to confirm project details.

Significant Changes

2018-2022 CIP: Due to delays of WMR 26 - 30, project design and construction is postponed to FY 2022 and FY 2023.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	0	0	0	0	0	0	639,362	6,396,320	7,035,682	0	7,035,682
Total	0	0	0	0	0	0	639,362	6,396,320	7,035,682	0	7,035,682

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	6,396,320	6,396,320	0	6,396,320
Design	0	0	0	0	0	0	639,362	0	639,362	0	639,362
Total	0	0	0	0	0	0	639,362	6,396,320	7,035,682	0	7,035,682

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

WATER FUND



Old water main being replaced

Fund: Water Fund - Operating
Category: Water Main Replacements
Project Location: Various Locations
Managing Department: Utilities
Initial Project Start: Summer 2023
Initial Project Completion: Fall 2024
Revised Project Start:
Revised Project Completion:
Project Number: WS-20000

Water Main Replacement - Project 32

Description

This project will fund the design and replacement of structurally deficient water mains and appurtenances in Fiscal Years 2023 and 2024. Mains are selected by researching the maintenance history of the system and identifying those that are undersized, corroded, and subject to breaks. The project scope will include approximately 15,000 to 25,000 linear feet of mains and services on various streets within the City.

Justification

Some mains are inadequate in size to supply required flows and pressures for fire protection, and others are subject to recurring breaks.

Significant Changes

2019-2023 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	0	0	0	0	0	0	0	658,820	658,820	6,588,200	7,247,020
Total	0	0	0	0	0	0	0	658,820	658,820	6,588,200	7,247,020

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	0	0	6,588,200	6,588,200
Design	0	0	0	0	0	0	0	658,820	658,820	0	658,820
Total	0	0	0	0	0	0	0	658,820	658,820	6,588,200	7,247,020

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



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Internal Service Fund Projects





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TECHNOLOGY FUND

Overview

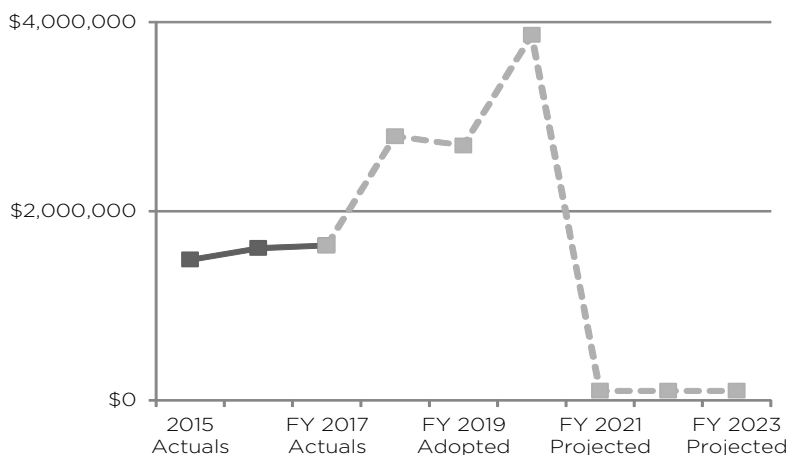
The Technology Fund accounts for expenses associated with citywide Information Technology activities. Technology Fund capital projects enhance service delivery to the community and to City staff through the delivery and implementation of Information Technology infrastructure. It is important to note that all expenditures in the Technology Fund are reimbursed by transfers from the other City funds benefiting from the services and purchases incurred in the Technology Fund. Overall, a total of six capital projects are programmed over the five-year Capital Improvement Program (CIP). The projects outlined in the capital program represent only a small subset of the total number of technology projects delivered to the City, as most technology projects are funded through the operating budget and do not meet the criteria of a capital project. Please refer to the Information Technology Department section of the Operating Budget for additional information.

The budget for the Technology Fund Capital Improvement Program is accounted for in two separate categories: Citywide Technology Upgrades and Department Technology Upgrades and Improvements.

Citywide Technology Upgrades

The Citywide Technology Upgrades category includes projects that benefit multiple City departments. They tend to have a larger scope and thus entail more coordination and complexity. For the 2019-2023 Capital Improvement Program, \$6.0 million is allocated within this category, of which \$0.5 million in funding was approved by the City Council in prior years.

Technology Fund Capital Expenditures



Recent Accomplishments:

- Implemented additional disaster recovery and security software/hardware to further bolster the City's network security presence.
- Implemented an Infrastructure Management System (IMS) (configuration of the existing Maintenance Connection and Questica systems) to maintain an up-to-date inventory of the City's infrastructure, which will support ongoing staff and City Council attention to infrastructure budgeting, planning, and accountability.
- Purchased radios and related equipment to move to the new Countywide radio communication system.

2019-2023 Capital Improvement Program

Recurring Projects:

There is one recurring project within this category:

- **Radio Infrastructure Replacement:** This project, which is funded by annual transfers from the General Fund and Utility Enterprise Funds, allows for the replacement of various items in the City's Public Safety infrastructure inventory. Most recently, the City has participated with 14 other local agencies in an effort organized by the Silicon Valley Regional Interoperability Authority (SVRIA) to move towards a Countywide 700 Mhz radio communication system. The City's share for this project is estimated to be \$4.2 million (General Fund: \$2.8 million; Utility Funds: \$1.4 million). The remaining share will be funded in future years as the costs associated with this project are refined.

Non-Recurring Projects:

- **IT Disaster Recovery:** This initiative identifies and addresses gaps in business continuity. The project includes \$0.08 million for additional enhancements.
- **Enterprise Resource Planning Upgrade (Reserve):** This project will replace the existing Enterprise Resource Planning (ERP) system and Customer Information System (CIS) with a best-fit solution to better meet the City's needs.

Department Technology Upgrades and Improvements

The Department Technology Upgrades and Improvements category includes projects that benefit one or a limited number of City departments. For the 2019-2023 Capital Improvement Program, \$0.9 million is programmed within this category.

Recent Accomplishments:

- Initiated a replacement of the My Utilities Account (MUA) self-service customer portal scheduled to complete by Summer 2018 providing new online services and functionality.
- Continued to enhance technology used at the Development Center for efficiency and effectiveness of the services offered.

2019-2023 Capital Improvement Program

Recurring Projects:

The 2019-2023 Adopted CIP includes one recurring project within this category:

- **Utilities Customer Billing System Continuous Improvements:** This project allows for enhancements to the Utilities Billing system particularly in response to new legislative, regulatory, and security requirements. Other system enhancements may include third party or hosted services for bill printing and invoicing, customer self-service portal (My Utilities Account), and reporting capabilities. This project will continue to be recurring until an upgrade or replacement of the ERP and Utilities Billing system is completed. After the systems are implemented, the project will be reevaluated to determine if recurring funding is required (\$0.3 million).

TECHNOLOGY FUND

Non-Recurring Projects:

- Public Safety Computer-Aided Dispatch (CAD) Replacement: The old Public Safety CAD system, PSSI, was replaced by the Intergraph CAD system. This replacement was a Tri-City coordinated effort between Mountain View, Los Altos, and Palo Alto. The FY 2019 Capital Budget includes \$0.4 million for the completion of this project.
- Development Center Blueprint Technology Enhancements: This project allows for the introduction of new technologies to support business processes and optimize customer service at the Development Center. Major enhancements to the existing Accela permitting system are included in this initiative. The FY 2019 Capital Budget includes \$0.2 million for the completion of this project.

Summary of Capital Activity

TECHNOLOGY FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Source of Funds									
Transfers from Other Funds									
Transfers from Electric Fund									
TE-10001	Utilities Customer Billing System Continuous Support	122,856	73,713	0	0	0	0	0	0
TE-05000	Radio Infrastructure Replacement	132,413	80,913	0	0	0	0	0	0
	Transfers from Electric Fund Total	255,269	154,626	0	0	0	0	0	0
Transfers from Fiber Optics Fund									
TE-10001	Utilities Customer Billing System Continuous Support	941	565	0	0	0	0	0	0
	Transfers from Fiber Optics Fund Total	941	565	0	0	0	0	0	0
Transfers from Gas Fund									
TE-10001	Utilities Customer Billing System Continuous Support	47,317	28,391	0	0	0	0	0	0
TE-05000	Radio Infrastructure Replacement	132,413	80,912	0	0	0	0	0	0
	Transfers from Gas Fund Total	179,730	109,303	0	0	0	0	0	0
Transfers from General Fund									
TE-05000	Radio Infrastructure Replacement	246,798	479,300	64,000	64,000	64,000	64,000	64,000	320,000
	Transfers from General Fund Total	246,798	479,300	64,000	64,000	64,000	64,000	64,000	320,000
Transfers from Refuse Fund									
TE-10001	Utilities Customer Billing System Continuous Support	28,718	17,231	20,103	0	0	0	0	20,103
	Transfers from Refuse Fund Total	28,718	17,231	20,103	0	0	0	0	20,103

TECHNOLOGY FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Transfers from Storm Drainage Fund									
TE-10001	Utilities Customer Billing System Continuous Support	6,142	3,685	4,299	0	0	0	0	4,299
	Transfers from Storm Drainage Fund Total	6,142	3,685	4,299	0	0	0	0	4,299
Transfers from Utilities Administration Fund									
TE-05000	Radio Infrastructure Replacement	0	0	20,000	20,000	20,000	20,000	20,000	100,000
TE-10001	Utilities Customer Billing System Continuous Support	0	0	150,598	0	0	0	0	150,598
	Transfers from Utilities Administration Fund Total	0	0	170,598	20,000	20,000	20,000	20,000	250,598
Transfers from Wastewater Collection Fund									
TE-10001	Utilities Customer Billing System Continuous Support	15,856	9,513	0	0	0	0	0	0
TE-05000	Radio Infrastructure Replacement	132,413	80,912	0	0	0	0	0	0
	Transfers from Wastewater Collection Fund Total	148,269	90,425	0	0	0	0	0	0
Transfers from Water Fund									
TE-10001	Utilities Customer Billing System Continuous Support	28,178	16,902	0	0	0	0	0	0
TE-05000	Radio Infrastructure Replacement	132,413	80,912	0	0	0	0	0	0
	Transfers from Water Fund Total	160,591	97,814	0	0	0	0	0	0
	Total Transfers from Other Funds	1,026,458	952,949	259,000	84,000	84,000	84,000	84,000	595,000
Other Revenue									
TE-05000	Radio Infrastructure Replacement: Stanford	0	114,464	16,000	16,000	16,000	16,000	16,000	80,000
	Other Revenue Total	0	114,464	16,000	16,000	16,000	16,000	16,000	80,000
	Total Other Revenue	0	114,464	16,000	16,000	16,000	16,000	16,000	80,000
	Total Sources	1,026,458	1,067,413	275,000	100,000	100,000	100,000	100,000	675,000
Use of Funds									
Citywide Technology Upgrades and Improvements									
TE-13004	Infrastructure Management System	33,090	84,978	0	0	0	0	0	0
TE-13001	Interactive Voice Response	58,917	0	0	0	0	0	0	0
TE-01012	IT Disaster Recovery Plan	63,570	51,214	80,929	0	0	0	0	80,929
TE-05000	Radio Infrastructure Replacement	1,200,820	2,200,903	529,904	100,000	100,000	100,000	100,000	929,904
TE-00010	Telephone System Replacement	1,125	0	0	0	0	0	0	0
	Total Citywide Technology Upgrades and Improvements	1,357,522	2,337,095	610,833	100,000	100,000	100,000	100,000	1,010,833

TECHNOLOGY FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Department Technology Upgrades and Improvements									
TE-12001	Development Center Blueprint Technology Enhancement	169,899	120,562	150,000	62,814	0	0	0	212,814
TE-19000	Enterprise Resource Planning Upgrade (Reserve)	0	0	1,250,000	3,700,000	0	0	0	4,950,000
TE-08004	Fire Mobile Data Computer	5,895	0	0	0	0	0	0	0
TE-11001	Library Computer System Software	51,326	148,578	0	0	0	0	0	0
TE-06001	Library RFID Implementation	0	8,525	0	0	0	0	0	0
TE-11002	Mobile In-Car Video System Replacement	17,793	0	0	0	0	0	0	0
TE-95016	Permit Information Tracking System	0	73,359	0	0	0	0	0	0
TE-09000	Public Safety Computer-Aided Dispatch Replacement	12,101	67	408,000	0	0	0	0	408,000
TE-10001	Utilities Customer Bill System Improvements	23,235	104,122	275,000	0	0	0	0	275,000
	Total Department Technology Upgrades and Improvements	280,249	455,213	2,083,000	3,762,814	0	0	0	5,845,814
	Total Uses	1,637,771	2,792,308	2,693,833	3,862,814	100,000	100,000	100,000	6,856,647

Citywide Technology Upgrades and Improvements



Fund: Technology Fund

Category: Citywide Technology Upgrades and Improvements

Project Location: Various

Managing Department: Information Technology

Initial Project Start: Summer 2018

Initial Project Completion: Summer 2022

Revised Project Start:

Revised Project Completion:

Project Number: TE-19000

New Financial System

Enterprise Resource Planning Upgrade (Reserve)

Description

This project provides funding to replace the existing Enterprise Resource Planning (ERP) system and Customer Information System (CIS) with a best-fit solution to better meet the City's needs.

Justification

The City's existing ERP system, SAP, was selected in 2002 with the purpose of integrating various business process and moving towards electronic Government (eGovernment). In Fiscal Year 2003, the implementation of SAP's Enterprise Central Component (ECC 4.6C) core modules was completed and since then the City has been running SAP to support Accounting, Finance, Purchasing, Project Management, Plant Maintenance, Budgeting, Payroll, Human Resource Management, and Service Order Management. In 2009, the City completed a major upgrade to SAP (ECC 6.0). The City also replaced the former utility billing system (Banner) with the implementation of SAP's Customer Relationship Management (CRM) Utilities Customer Electronic Services (also known as My Utilities Account customer portal) and Business Intelligence Systems (BI).

Supplemental Information

Technology and Business needs have changed dramatically since the current ERP solution was selected and implemented.

Funds current recommended reflected only estimated costs for a limited number of licenses, a vendor design team, and very limited back-fill of staff. Once a vendor is selected, full system and implementation costs will be updated.

The replacement of the existing ERP is anticipated to address a number of issues currently facing the City, including the following:

- The City is currently running an old version of SAP which does not support increasing demands in business and technology;
- The investment required to support and maintain the current ERP systems is high;
- The City requires a new system that is user friendly with faster response times for any add/modify needs;
- A new system will facilitate automation of additional business processes which are not supported in the current software;
- The City anticipates improvements to quality and reliability of information will enhance decision making with a new system;
- Strengthen the reporting capacity of the City in a user-friendly manner.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	0	0	0	1,250,000	3,700,000	0	0	0	4,950,000	0	4,950,000
Total	0	0	0	1,250,000	3,700,000	0	0	0	4,950,000	0	4,950,000

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	0	0	1,250,000	3,700,000	0	0	0	4,950,000	0	4,950,000
Total	0	0	0	1,250,000	3,700,000	0	0	0	4,950,000	0	4,950,000

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Efficient and Effective Service Delivery

Goal: C-1

Policy: C-1.3

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Technology Fund

Category: Citywide Technology Upgrades and Improvements

Project Location: Various

Managing Department: Information Technology

Initial Project Start: Summer 2012

Initial Project Completion: Summer 2015

Revised Project Start: Summer 2015

Revised Project Completion: Spring 2019

Project Number: TE-01012

IT Disaster Recovery

IT Disaster Recovery Plan

Description

Provide the means to resume mission critical business operations should any disaster occur that renders the City's primary computer system infrastructure inoperable. The funding within this project allows for the City to deploy appropriate disaster recovery and business continuity solutions.

Justification

Over the last five years the City has deployed disaster recovery solutions for the City's data and mission critical applications. Remaining funds from this CIP will be used to further enhance the disaster recovery and business continuity solutions.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	446,479	132,143	51,214	80,929	0	0	0	0	80,929	0	578,622
Total	446,479	132,143	51,214	80,929	0	0	0	0	80,929	0	578,622

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	414,537	132,143	51,214	80,929	0	0	0	0	80,929	0	546,680
Design	31,941	0	0	0	0	0	0	0	0	0	31,941
Total	446,478	132,143	51,214	80,929	0	0	0	0	80,929	0	578,621

Relationship to Comprehensive Plan

Primary Connection

Element: Safety

Section: Natural Hazards

Goal: S-2

Policy: S-2.1

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Fund: Technology Fund

Category: Citywide Technology Upgrades and Improvements

Project Location: Various

Managing Department: Information Technology

Initial Project Start: Recurring

Initial Project Completion: Recurring

Project Number: TE-05000

Public Safety Radios

Radio Infrastructure Replacement

Description

This project funds the transition to the new Silicon Valley Regional Communications System (SVRCS) Radio System from the City's legacy analog radio system. The City is participating with 14 other local agencies in an effort organized by the Silicon Valley Regional Interoperability Authority (SVRIA) to move to a countywide 700 Mhz radio communication system. This project provides funding for the City's share of establishing an interoperable radio communication system within the region and radios for all Palo Alto City users. Upon completion of the project, the law enforcement, fire and rescue service, emergency medical response, and disaster recovery units within the participating agencies will be able to communicate via an integrated voice and data communications system.

Justification

Communications systems require continued replacement as infrastructure and equipment ages. Within the region, the communications systems have been fragmented. The new SVRCS system will provide interoperable communications compliant with Department of Homeland Security communications guidelines.

Supplemental Information

The current SVRCS schedule provides for Palo Alto users to migrate to the system beginning in Summer 2018, with an estimated full implementation by Winter 2018. Expenses planned for Fiscal Year 2019 include radio infrastructure and digital voice recorders. Recurring capital costs of \$100,000 are programmed in each of the years of the CIP.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Revenue from Other Agencies	N/A	114,464	114,464	16,000	16,000	16,000	16,000	16,000	80,000	0	N/A
Technology Fund	N/A	1,713,394	1,283,490	429,904	0	0	0	0	429,904	0	N/A
Transfer from Electric Fund	N/A	80,913	80,913	0	0	0	0	0	0	0	N/A
Transfer from Gas Fund	N/A	80,912	80,912	0	0	0	0	0	0	0	N/A
Transfer from General Fund	N/A	479,300	479,300	64,000	64,000	64,000	64,000	64,000	320,000	0	N/A
Transfer from Utilities Administration Fund	N/A	0	0	20,000	20,000	20,000	20,000	20,000	100,000	0	N/A
Transfer from Wastewater Collection Fund	N/A	80,912	80,912	0	0	0	0	0	0	0	N/A
Transfer from Water Fund	N/A	80,912	80,912	0	0	0	0	0	0	0	N/A
Total	N/A	2,630,807	2,200,903	529,904	100,000	100,000	100,000	100,000	929,904	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	2,630,807	2,200,903	529,904	100,000	100,000	100,000	100,000	929,904	0	N/A
Total	N/A	2,630,807	2,200,903	529,904	100,000	100,000	100,000	100,000	929,904	0	N/A

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Service to the Public

Goal: C-2

Policy: C-2.2

Potential Board/Commission Review:

Architectural Review Board

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



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Department Technology Upgrades and Improvements



Fund: Technology Fund

Category: Department Technology Upgrades and Improvements

Project Location: Various

Managing Department: Information Technology

Initial Project Start: Summer 2011

Initial Project Completion: Spring 2014

Revised Project Start: Summer 2011

Revised Project Completion: Summer 2021

Project Number: TE-12001

Development Center

Development Center Blueprint Technology Enhancements

Description

This project will focus on installing an operating electronic permitting system, including the hardware, software, and training for system operations. Project funds may also be used to provide continued enhancement and integration with the City's permitting software Accela. The department, in collaboration with the City Manager's Office and Information Technology Department, may also utilize funds for new emerging technologies which increase customer service or improve service delivery.

Justification

This project falls under the scope of the Development Center Blueprint Project that was approved by the City Council in December of 2011 and will enhance the efficiency and effectiveness of the Development Services Department.

Supplemental Information

2018-2022 CIP: The Department anticipates the need to extend the original completion date to allow time to finish projects that are in progress, not yet started, and to accomplish new initiatives. For Fiscal Year 2018, the Department will focus on installing an operating electronic permitting system, including the hardware, software, and training for system operations. Some of the other projects that are in progress are the creation of web self-service and publications sites; the development of permit-centric mobile applications; the purchase of field ready hardware and associated data plans to support inspections; and the creation of performance reports/metrics.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	1,103,230	421,956	120,562	150,000	62,814	0	0	0	212,814	0	1,436,606
Total	1,103,230	421,956	120,562	150,000	62,814	0	0	0	212,814	0	1,436,606

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	1,072,081	421,956	120,562	150,000	62,814	0	0	0	212,814	0	1,405,457
Design	31,149	0	0	0	0	0	0	0	0	0	31,149
Total	1,103,230	421,956	120,562	150,000	62,814	0	0	0	212,814	0	1,436,606

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Service to the Public

Goal: C-2

Policy: C-2.2

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301



Fund: Technology Fund
Category: Department Technology Upgrades and Improvements
Project Location: Various
Managing Department: Information Technology
Initial Project Start: Summer 2008
Initial Project Completion: Summer 2011
Revised Project Start: Spring 2012
Revised Project Completion: Summer 2019
Project Number: TE-09000

New CAD Console

Public Safety Computer-Aided Dispatch Replacement

Description

This project was established to replace the public safety Computer Aided Dispatch (CAD), installed in 1999, as phase one and replace the legacy Records Management System (RMS) as phase two. The new applications were purchased in partnership with the cities of Mountain View and Los Altos. The CAD installation was completed in 2014 and the system is operated over a microwave network with the partner cities. The configuration of the RMS phase continues in partnership with the neighboring agencies. However, the RMS phase has encountered delays due to vendor product development and resource management.

Justification

The project has improved information sharing between the dispatch centers in Palo Alto, Mountain View, and Los Altos with the implementation of the CAD system in 2014. The purchase and/or sharing of a joint CAD and RMS system will provide some level of consolidation of services, but does not require the significant capital investment that a physical consolidation would require. The joint purchase leveraged funds from all three cities to purchase better technology.

Supplemental Information

This replacement project takes advantage of the foundation of hardware, software, and knowledge in the North County, and provides integration across the jurisdictions that will help to improve communication, provide enhanced connectivity, and allow for better coordination of public safety operations in the field. The implementation of the Records Management System (RMS) is in process, with completion estimated for summer 2019.

Significant Changes

2018-2022 CIP: The RMS portion of the project has taken longer to complete than anticipated due to additional configuration work on the system by the vendor to meet the Tri-City requirements that are necessary for successful project completion. The three cities have allocated considerable time and resources to the RMS project but issues with the application must be addressed by the vendor before the system can go online.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	991,932	408,067	67	408,000	0	0	0	0	408,000	0	1,399,999
Total	991,932	408,067	67	408,000	0	0	0	0	408,000	0	1,399,999

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	802,156	408,067	67	408,000	0	0	0	0	408,000	0	1,210,223
Design	189,776	0	0	0	0	0	0	0	0	0	189,776
Total	991,932	408,067	67	408,000	0	0	0	0	408,000	0	1,399,999

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

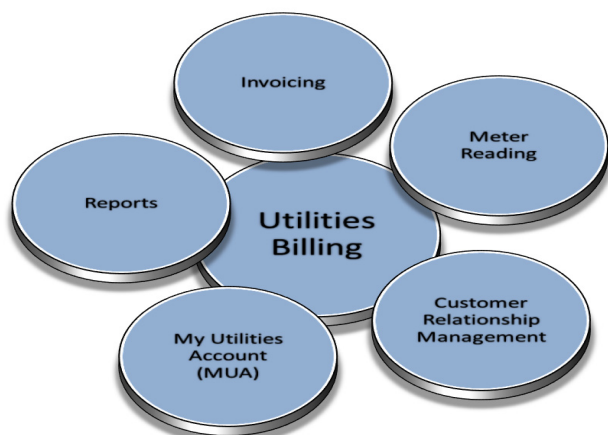
Section: Service to the Public

Goal: C-2

Policy: C-2.2

Environmental Impact Analysis:

N/A



Fund: Technology Fund

Category: Department Technology Upgrades and Improvements

Project Location: Various

Managing Department: Information Technology

Initial Project Start: Recurring

Initial Project Completion: Recurring

Project Number: TE-10001

Utilities Customer Billing System Improvements

Utilities Customer Bill System Improvements

Description

This project provides regulatory enhancements and improved security for the Utilities billing system. Through the implementation of this recurring project the Utilities Department will be responsive to new legislation and legal requirements. Securing customer sensitive information and complying with Payment Card Industry (PCI) data security standards will continue to be a priority as well.

Justification

This project provides software system updates to meet mandatory security, regulatory, and governing requirements. This includes reviewing the various Meter-to-Cash business processes, the My Utilities Account online customer portal, reporting tools, bill print software, and the Customer Relationship Management (CRM) solution for the Utilities Billing System. The Enterprise Funds share proportionately in the costs of this project.

Significant Changes

2019-2023 CIP: Enhancements to the new customer portal will continue to allow for enhancements to the bill print software and Utilities Billing system, particularly in response to new legislative, regulatory, and security requirements.

2018-2022 CIP: A replacement of the My Utilities Account (MUA) self-customer service portal is scheduled to be completed by Summer 2018 and will provide new online self-services and functionality.

Supplemental Information

This project will continue to be recurring until an upgrade or replacement of the City's Enterprise Resource Planning (ERP) system and Utilities Billing system are complete. After the systems are implemented, the project will be reevaluated to determine if recurring funding is required.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	N/A	120,602	(45,878)	100,000	0	0	0	0	100,000	0	N/A
Transfer from Electric Fund	N/A	73,713	73,713	0	0	0	0	0	0	0	N/A
Transfer from Fiber Optics Fund	N/A	565	565	0	0	0	0	0	0	0	N/A
Transfer from Gas Fund	N/A	28,391	28,391	0	0	0	0	0	0	0	N/A
Transfer from Refuse Fund	N/A	17,231	17,231	20,102	0	0	0	0	20,102	0	N/A
Transfer From Storm Drainage Fund	N/A	3,685	3,685	4,300	0	0	0	0	4,300	0	N/A
Transfer from Utilities Administration Fund	N/A	0	0	150,598	0	0	0	0	150,598	0	N/A
Transfer from Wastewater Collection Fund	N/A	9,513	9,513	0	0	0	0	0	0	0	N/A
Transfer from Water Fund	N/A	16,902	16,902	0	0	0	0	0	0	0	N/A
Total	N/A	270,602	104,122	275,000	0	0	0	0	275,000	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	270,602	0	0	0	0	0	0	0	0	N/A
Design	N/A	0	104,122	275,000	0	0	0	0	275,000	0	N/A
Total	N/A	270,602	104,122	275,000	0	0	0	0	275,000	0	N/A

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Service to the Public

Goal: C-2

Policy: C-2.2

Environmental Impact Analysis:

This project is categorically exempt from CEQA under section 15301.



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VEHICLE REPLACEMENT FUND

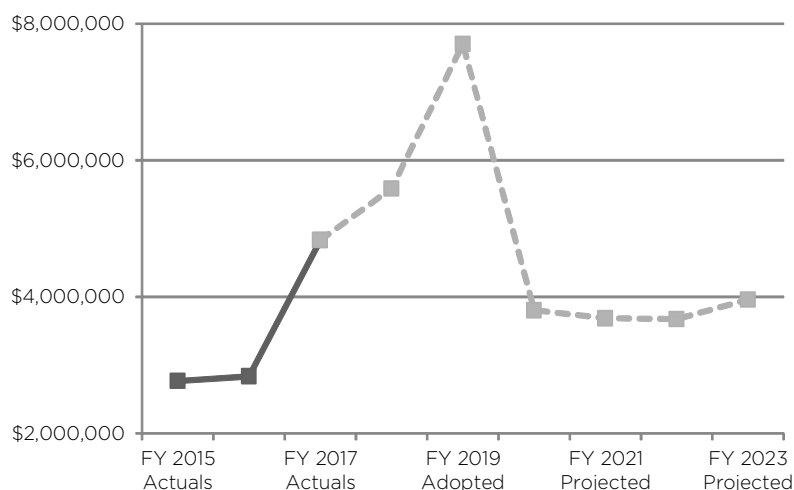
Overview

Activities related to the replacement, maintenance, and operations of the City's fleet and equipment are accounted for within the Vehicle Replacement and Maintenance Fund (VRF). The VRF Capital Improvement Program (CIP) accounts for activities related to the replacement of the City's fleet and equipment, and infrastructure necessary to operate and maintain the fleet and equipment. For detailed information on the maintenance and operation of the fleet, please refer to the Vehicle Replacement and Maintenance Fund section of the Operating Budget. The 2019-2023 CIP includes projects totaling \$22.8 million, with \$7.7 million allocated in Fiscal Year 2019. Of the \$7.7 million, \$3.8 million is for the continuation of projects approved by City Council in prior fiscal years. It is important to note that all expenditures in the fund are reimbursed by transfers from the funds benefiting from the services and purchases incurred in the fund. A total of ten capital projects are programmed over the five year program. The budget for the VRF Capital Improvement Program is divided into two categories: Fleet Infrastructure Improvements and Vehicle and Equipment Replacement.

Fleet Infrastructure Improvements

The Fleet Infrastructure Improvements category accounts for the repair or improvement of existing systems or structures. Examples of projects previously funded in this category include fuel management software, diesel particulate filters required by Bay Area Air Quality Management District, and new fuel tanks. No projects have been recommended in this category for the 2019-2023 CIP.

Vehicle Fund Capital Expenditures



Recent Accomplishments

- Removed and replaced the vehicle/equipment wash rack system located at the Municipal Services Center (MSC)
- Added multi-product fuel dispensers to station at the MSC
- Transitioned to 100% paperless work order and parts requisition system

Vehicle and Equipment Replacement

The Vehicle and Equipment Replacement Category accounts for the purchase, repair, and replacement of vehicles/equipment. Funds are collected from the department/fund that will utilize the vehicle/equipment over its projected useful life to ensure funds will be available when replacement is needed. When a vehicle is estimated to meet replacement criteria and has been reviewed and approved for replacement by the Fleet Review Committee, it is programmed into the Vehicle Replacement CIP that corresponds to the year the vehicle's useful life will expire.

Over the 2019-2023 CIP, approximately 36% of the fleet is programmed for replacement at a cost of \$22.2 million, \$7.6 million of which is allocated in Fiscal Year 2019. This figure includes \$3.8 million previously approved for continuation of projects into Fiscal Year 2019 that could not be completed in Fiscal Year 2018 due to timing of replacements.

Key replacements in the 2019-2023 CIP are six ambulances (\$1.9 million); 27 marked patrol vehicles (\$1.7 million); two digger derricks (\$0.7 million); and one wildland pumper (\$0.6 million).

Infrastructure Inventory

TYPE/GROSS VEHICLE WEIGHT (GVW)	UNLEADED	DIESEL	CNG	HYBRID	ELECTRIC	NO ENGINE TRAILER	TOTAL
Sedans/SUVs	30	-	22	6	2	-	60
Police marked units	27	-	-	-	-	-	27
Motorcycles	4	-	-	-	-	-	4
Scooters	5	-	-	-	1	-	6
Truck/Van <6k GVW ¹	71	-	-	-	-	-	71
Truck/Van 6K-11K GVW ²	82	2	15	-	-	-	99
Trucks 11K-15K GVW ¹	10	2	-	-	-	-	12
Trucks 15K-26K GVW ¹	4	16	-	-	-	-	20
Dump Truck <11K GVW ¹	10	14	-	-	-	-	24
Large Equip: Boom & crane trucks, aerials	-	15	-	-	-	-	15
Wildland patrol vehicles	3	-	-	-	-	-	3
Water truck	-	1	-	-	-	-	1
Fire safety	2	18	-	-	-	-	20
Sweepers	-	5	-	-	-	-	5
Backhoe, mowers, tractors, forklifts, rollers, air compressors, chippers, trailers ¹	8	47	-	-	8	59	122
Asphalt rollers, water pumps, spray rigs ¹	3	8	-	-	-	3	14
Generators, ditch witches, cable reelers ¹	8	43	4	-	-	-	55
TOTAL	267	171	41	6	11	62	558

¹ Vehicle classification aligned with recommended study results, shifting budgeted inventory within these categories

² Budgeted inventory in this category shifted due to restricted availability of fuel types from the manufacturer

VEHICLE REPLACEMENT FUND

Recent Accomplishments

- Delivered 51 vehicles and six pieces of equipment, including 16 vehicles for the Police Department, 15 light duty trucks/vans/SUVs, 14 heavy duty trucks, and six vehicles for the Fire Department.

2019-2023 Capital Improvement Program

Recurring Projects

The 2019-2023 CIP includes one recurring project, Emergency Repair and Replacement, providing \$100,000 annually plus salary and benefits for maintenance staff to repair and/or replace emergency vehicles/equipment that sustain damage due to accidents or unpreventable failure. This project mitigates impact to service delivery that could occur if these vehicles experienced lengthy times out of service. Since the inception of this project in Fiscal Year 2015, it has funded 25 repairs on vehicles/equipment and four replacements.

Non-Recurring Projects

The 2019-2023 CIP includes nine projects, with \$22.2 million allocated for vehicle and equipment replacements. All replacements are programmed for vehicles/equipment at the end of their useful life. Criteria for vehicles/equipment replacement include but are not limited to: utilization based on mileage or hours of operation, age, maintenance/repair records, and funding availability. As part of the replacement policy and wherever possible, electric vehicles are considered first, then vehicles that use alternative fuels.

VEHICLE REPLACEMENT FUND

Summary of Capital Activity

VEHICLE REPLACEMENT FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Source of Funds									
Transfer From the Electric Fund									
VR-15000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2015	20,426	0	0	0	0	0	0	0
VR-16000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2016	15,426	0	0	0	0	0	0	0
VR-17000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2017	15,426	0	0	0	0	0	0	0
	Transfer From the Electric Fund Total	51,278	0	0	0	0	0	0	0
Transfer From the Water Fund									
VR-17000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2017	15,407	0	0	0	0	0	0	0
	Transfer From the Water Fund Total	15,407	0	0	0	0	0	0	0
Transfer From the General Fund									
VR-16000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2016	79,915	0	0	0	0	0	0	0
	Transfer From the General Fund Total	79,915	0	0	0	0	0	0	0
Transfer From the Gas Fund									
VR-17000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2017	15,407	0	0	0	0	0	0	0
	Transfer From the Storm Drainage Fund Total	15,407	0	0	0	0	0	0	0
Transfer From the Wastewater Collection Fund									
VR-17000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2017	15,406	0	0	0	0	0	0	0
	Transfer From the Wastewater Collection Fund Total	15,406	0	0	0	0	0	0	0
Transfer From the Wastewater Treatment Fund									
VR-17000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2017	15,213	0	0	0	0	0	0	0
	Transfer From the Wastewater Treatment Fund Total	15,213	0	0	0	0	0	0	0
	Total Sources	177,220	0	0	0	0	0	0	0

VEHICLE REPLACEMENT FUND

Project Number	Project Title	FY 2017 Actuals	FY 2018 Estimate	FY 2019 Adopted	FY 2020	FY 2021	FY 2022	FY 2023	5-Year Total
Use of Funds									
Fleet Infrastructure Improvements									
VR-14002	Municipal Services Center Fuel Station Demolition	228,739	6,210	0	0	0	0	0	0
Fleet Infrastructure Improvements Total		228,739	6,210	0	0	0	0	0	0
Vehicle and Equipment Replacement									
VR-17001	Co-Owned Fire Apparatus Replacement	630,543	0	0	0	0	0	0	0
VR-15001	Emergency Repair and Replacement	68,326	22,837	115,000	120,000	123,000	125,000	128,000	611,000
VR-15000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2015	1,532,246	678,686	419,853	0	0	0	0	419,853
VR-16000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2016	1,024,743	1,889,503	371,965	0	0	0	0	371,965
VR-17000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2017	1,348,126	2,218,989	641,031	0	0	0	0	641,031
VR-18000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2018	0	771,857	2,633,000	85,000	0	0	0	2,718,000
VR-19000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2019	0	0	3,522,922	160,000	92,000	0	0	3,774,922
VR-20000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2020	0	0	0	3,438,120	165,000	97,000	0	3,700,120
VR-21000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2021	0	0	0	0	3,307,294	170,000	100,000	3,577,294
VR-22000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2022	0	0	0	0	0	3,283,064	175,000	3,458,064
VR-23000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2023	0	0	0	0	0	0	3,557,624	3,557,624
Vehicle and Equipment Replacement Total		4,603,984	5,581,872	7,703,771	3,803,120	3,687,294	3,675,064	3,960,624	22,829,873
Total Uses		4,832,723	5,588,082	7,703,771	3,803,120	3,687,294	3,675,064	3,960,624	22,829,873

Vehicle and Equipment Replacement

VEHICLE REPLACEMENT FUND



Fund: Vehicle Replacement & Maintenance Fund

Category: Vehicle and Equipment Replacement

Project Location: 3201 East Bayshore Road

Managing Department: Public Works

Initial Project Start: Recurring

Initial Project Completion: Recurring

Project Number: VR-15001

Marked Police & Fire Vehicle, February 2013

Emergency Repair and Replacement

Description

This project provides funding to replace or repair vehicles/equipment that sustain damage due to accidents or unpreventable failure.

Justification

Service levels are impacted when critical vehicles/equipment such as utility trucks and police sedans experience lengthy down times. Therefore, when damage or failure occurs, these critical vehicles/equipment need to be replaced/repared quickly to ensure uninterrupted service. In some cases, reserve vehicles/equipment exist; however, it is unrealistic to have a back-up for each vehicle/piece of equipment in the City.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	N/A	111,688	22,837	115,000	120,000	123,000	125,000	128,000	611,000	0	N/A
Total	N/A	111,688	22,837	115,000	120,000	123,000	125,000	128,000	611,000	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	0	0	0	0	0	0	0	0	0	N/A
Other	N/A	111,688	22,837	115,000	120,000	123,000	125,000	128,000	611,000	0	N/A
Total	N/A	111,688	22,837	115,000	120,000	123,000	125,000	128,000	611,000	0	N/A

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-5.2

Potential Board/Commission Review:

Fleet Review Committee

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

VEHICLE REPLACEMENT FUND



Fund: Vehicle Replacement & Maintenance Fund

Category: Vehicle and Equipment Replacement

Project Location: 3201 East Bayshore Road

Managing Department: Public Works

Initial Project Start: Summer 2014

Initial Project Completion: Spring 2015

Revised Project Start:

Revised Project Completion: Winter 2018

Project Number: VR-15000

Brush Chipper, March 2015

Scheduled Vehicle and Equipment Replacement - Fiscal Year 2015

Description

This project provides funding for the existing City fleet vehicles and equipment scheduled for replacement in Fiscal Year 2015.

Justification

The ongoing replacement of the City's fleet vehicles and equipment is prescribed by the City's policy for vehicle replacement, which includes guidelines based on age, mileage accumulation, and obsolescence. Timely replacement of vehicles lowers maintenance costs, helps maintain or even increase productivity, and allows for a technologically current fleet.

Supplemental Information

Funding in this project allows for the following replacements: two sedans; four Compressed Natural Gas (CNG) sedans; two hybrid sedans; 15 pickup trucks; ten CNG vans; seven vans; three fire apparatus; four police vehicles; two SUVs; two chippers; and nine miscellaneous equipment units. Of the 60 vehicles and pieces of equipment scheduled for replacement in Fiscal Year 2015, 29 support General Fund operations (\$2.4 million), and 31 support the operations of various Enterprise Funds (\$1.8 million). As part of the replacement policy and wherever possible, electric vehicles are considered first, then vehicles that use alternative fuels.

Significant Changes

2019-2023 CIP: One vehicle to be delivered and outfitting to take place once received which extends this project to Winter 2018.

VEHICLE REPLACEMENT FUND

2018-2022 CIP: The total funding amount of was increased by \$20,426 since bids for the 40' aerial crane came in higher than expected. This item was brought before City Council in CMR 7593. Since this vehicle will take up to a year to build, the completion date of this project has been extended to Spring 2018.

2017-2021 CIP: After review with the Office of Management and Budget and the Fleet Review Committee, eight additional vehicles were added to the 2015 Replacement List. Additionally, the cost of one vehicle was higher than estimated, resulting in an addition of \$247,552 to the total project budget. The transfer of \$146,394 was approved by City Council (CMR 5896); the transfer of \$26,466 from Utilities Enterprise Fund, \$28,000 from General Fund, and \$46,692 from the Vehicle Fund was approved midyear 2016.

2016-2020 CIP: Due to long lead times, staffing shortages, and vacancy of a Fleet Manager, not all vehicles under this CIP have been put in service. Since the approval of this project 31 vehicles have been ordered, 26 have been received, and five are being assembled. In addition, 18 remain to be ordered, which includes 11 pickups; three vans; two sedans; one police vehicle; and one miscellaneous equipment unit.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Transfer from Electric Fund	20,426	0	0	0	0	0	0	0	0	0	20,426
Vehicle Replacement Fund	3,091,030	1,088,392	678,686	419,853	0	0	0	0	419,853	0	4,189,569
Total	3,111,456	1,088,392	678,686	419,853	0	0	0	0	419,853	0	4,209,995

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	3,111,402	1,088,392	678,686	419,853	0	0	0	0	419,853	0	4,209,941
Total	3,111,402	1,088,392	678,686	419,853	0	0	0	0	419,853	0	4,209,941

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-5.2

Potential Board/Commission Review:

Fleet Review Committee

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

VEHICLE REPLACEMENT FUND



GMC 3500 with crane, February 2015

Fund: Vehicle Replacement & Maintenance Fund

Category: Vehicle and Equipment Replacement

Project Location: 3201 East Bayshore Road

Managing Department: Public Works

Initial Project Start: Summer 2015

Initial Project Completion: Spring 2017

Revised Project Start:

Revised Project Completion: Fall 2018

Project Number: VR-16000

Scheduled Vehicle and Equipment Replacement - Fiscal Year 2016

Description

This project provides funding for the existing City fleet vehicles and equipment scheduled for replacement in Fiscal Year 2016.

Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by the City's policy for vehicle replacement, which includes guidelines based on age, mileage accumulation, and obsolescence. Timely replacement of vehicles lowers maintenance costs, helps maintain or even increase productivity, and allows for a technologically current fleet.

Supplemental Information

Funding in this project allows for the following replacements: five sedans; 13 pickup trucks; six vans; three police vehicles; one wildland pumper; two SUVs; one utility truck, one dump truck, and eight miscellaneous equipment units. Of the 40 vehicles and pieces of equipment scheduled for replacement in Fiscal Year 2016, 29 support operations in the General Fund (\$2.4 million), and 11 support the operations in various Enterprise Funds (\$1.3 million). As part of the replacement policy, electric vehicles are considered first, then vehicles that use alternative fuels.

Significant Changes

2019-2023 CIP: In total 38 vehicles/equipment have been delivered, the last two vehicles are expected to be delivered by Summer 2018 and outfitting should be completed by Fall 2018.

VEHICLE REPLACEMENT FUND

2018-2022 CIP: The total funding amount was increased by \$100,341 since bids for the wildland pumper and 40' aerial crane came in higher than expected. Each of these items were brought before City Council in CMR 7477 and CMR 7593, respectively. Since both of these vehicles will take up to a year to build the completion date of this project has been extended to Spring 2018.

2017-2021 CIP: After review with the Office of Management and Budget and Fleet Review Committee, one utility truck was approved and added to the Fiscal Year 2016 replacement list. Additionally, the cost of two of the utility trucks was higher than estimated, increasing the total project cost by \$0.5 million and requiring City Council approval (CMR 6371). Total number of vehicles or pieces of equipment is now 40.

2016-2020 CIP: The original funding amount was \$2.3 million for 32 vehicle/equipment replacements. Adopted Capital Budget request was increased by \$0.5 million due to the addition of a pickup truck, step van, green machine, two trailers, wash trailer for substation transformers, and a F-550 utility aerial truck which brought the total up to 39 vehicles at a budget of \$2.7 million.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Transfer from Electric Fund	15,426	0	0	0	0	0	0	0	0	0	15,426
Transfer from General Fund	79,915	0	0	0	0	0	0	0	0	0	79,915
Vehicle Replacement Fund	1,350,885	2,251,468	1,889,503	371,965	0	0	0	0	371,965	0	3,612,353
Total	1,446,226	2,251,468	1,889,503	371,965	0	0	0	0	371,965	0	3,707,694

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	1,446,192	2,251,468	1,889,503	371,965	0	0	0	0	371,965	0	3,707,660
Total	1,446,192	2,251,468	1,889,503	371,965	0	0	0	0	371,965	0	3,707,660

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-5.2

Potential Board/Commission Review:

Fleet Review Committee

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

VEHICLE REPLACEMENT FUND



DMT generator, March 2015

Fund: Vehicle Replacement & Maintenance Fund

Category: Vehicle and Equipment Replacement

Project Location: 3201 East Bayshore Road

Managing Department: Public Works

Initial Project Start: Summer 2016

Initial Project Completion: Spring 2018

Revised Project Start:

Revised Project Completion: Spring 2019

Project Number: VR-17000

Scheduled Vehicle and Equipment Replacement - Fiscal Year 2017

Description

This project provides funding for the existing City fleet vehicles and equipment scheduled for replacement in Fiscal Year 2017.

Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by the City's policy for vehicle replacement, which includes guidelines based on age, mileage accumulation and obsolescence. Timely replacement of vehicles lowers maintenance costs, helps maintain or even increase productivity, and allows for a technologically current fleet.

Supplemental Information

Funding in this project allows for the following replacements: one fire engine; 12 pickup trucks; 13 vans; one dump truck; one flatbed truck with crane; one aerial truck; seven marked police vehicles; one vac/flush truck; three miscellaneous equipment units, and one trailer. Of the 41 vehicles and equipment, 22 support the operations of the General Fund (\$1.9 million), and 19 support the operations of various Enterprise Funds (\$2.1 million). As part of the replacement policy, electric vehicles are considered first, then vehicles that use alternative fuels.

Significant Changes

2019-2023 CIP: 33 vehicles/equipment have been delivered; one vehicle to order; seven vehicles to arrive by Fall 2018 and outfitting should be completed by Spring 2019. One vehicle was moved to VR-18000.

VEHICLE REPLACEMENT FUND

2018-2022 CIP: The project was revised to eliminate two vehicles and add four (CMR 7411 and 8176). In addition, bids for the flatbed truck with crane and 40' aerial crane were higher than estimated (CMR 7486 and CMR 7593). A Combination Vacuum/Flush, was also approved to be replaced. These changes added \$0.8 million to the total project cost. To accommodate the 12-month lead-time for the cranes, the completion date has been extended to Spring 2018.

2017-2021 CIP: After working with the Office of Management and Budget and the Fleet Review Committee it was decided staff would address the backlog of replacements from Fiscal Year 2015 and Fiscal Year 2016. The previously scheduled replacements were re-evaluated to ensure critical replacements were addressed and funding for all but critical vehicles/equipment scheduled for replacement was set aside in a reserve.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Transfer from Electric Fund	15,426	0	0	0	0	0	0	0	0	0	15,426
Transfer from Gas Fund	15,407	0	0	0	0	0	0	0	0	0	15,407
Transfer from Wastewater Collection Fund	15,406	0	0	0	0	0	0	0	0	0	15,406
Transfer from Wastewater Treatment Fund	15,213	0	0	0	0	0	0	0	0	0	15,213
Transfer from Water Fund	15,407	0	0	0	0	0	0	0	0	0	15,407
Vehicle Replacement Fund	1,271,267	2,790,020	2,218,989	641,031	0	0	0	0	641,031	0	4,131,287
Total	1,348,126	2,790,020	2,218,989	641,031	0	0	0	0	641,031	0	4,208,146

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	1,348,115	2,790,020	2,218,989	641,031	0	0	0	0	641,031	0	4,208,135
Total	1,348,115	2,790,020	2,218,989	641,031	0	0	0	0	641,031	0	4,208,135

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-5.2

Potential Board/Commission Review:

Fleet Review Committee

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

VEHICLE REPLACEMENT FUND



Fund: Vehicle Replacement & Maintenance Fund

Category: Vehicle and Equipment Replacement

Project Location: 3201 East Bayshore Road

Managing Department: Public Works

Initial Project Start: Summer 2017

Initial Project Completion: Spring 2019

Revised Project Start:

Revised Project Completion:

Project Number: VR-18000

Freightliner with aerial, February 2012

Scheduled Vehicle and Equipment Replacement - Fiscal Year 2018

Description

This project provides funding for the existing City fleet vehicles and equipment scheduled for replacement in Fiscal Year 2018.

Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by the City's policy for vehicle replacement, which includes guidelines based on age, mileage accumulation, and obsolescence. Timely replacement of vehicles lowers maintenance costs, helps to maintain or even increase the productivity of client departments, and allows the City to take advantage of new technology. As part of the policy, staff will first consider electric vehicles and then other alternative fuel vehicles when replacing existing vehicles.

Supplemental Information

Funding in this project allows for the following replacements: one sedan; five pickups; eight patrol vehicles; three SUVs; six vans; one aerial truck; three wildland trucks; one dump truck; and seven miscellaneous equipment units. Of the 35 vehicles and pieces of equipment, 22 support the operations in the General Fund (\$1.7 million), and 13 support the operations of various Enterprise Funds (\$1.5 million).

VEHICLE REPLACEMENT FUND

Significant Changes

2019-2023 CIP: 10 vehicles/equipment have been delivered; 10 vehicles still to be ordered, 15 vehicles are expected to be delivered by Fall 2018 and outfitting on those 15 should be completed by Winter 2019. One vehicle moved to VR-19000.

2018-2022 CIP: Current backlog is being addressed. A generator and forklift were taken off the list for this year and five other vehicles were added instead due to maintenance exceeding the surplus value for each vehicle.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	0	3,254,857	771,857	2,633,000	85,000	0	0	0	2,718,000	0	3,489,857
Total	0	3,254,857	771,857	2,633,000	85,000	0	0	0	2,718,000	0	3,489,857

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	3,254,857	771,857	2,633,000	85,000	0	0	0	2,718,000	0	3,489,857
Total	0	3,254,857	771,857	2,633,000	85,000	0	0	0	2,718,000	0	3,489,857

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-5.2

Potential Board/Commission Review:

Fleet Review Committee

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

VEHICLE REPLACEMENT FUND



Fund: Vehicle Replacement & Maintenance Fund

Category: Vehicle and Equipment Replacement

Project Location: 3201 East Bayshore Road

Managing Department: Public Works

Initial Project Start: Summer 2018

Initial Project Completion: Spring 2020

Revised Project Start:

Revised Project Completion:

Project Number: VR-19000

Ambulance, January 2011

Scheduled Vehicle and Equipment Replacement - Fiscal Year 2019

Description

This project provides funding for the existing City fleet vehicles and equipment scheduled for replacement in Fiscal Year 2019.

Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by the City's policy for vehicle replacement, which includes guidelines based on age, mileage accumulation, and obsolescence. Timely replacement of vehicles lowers maintenance costs, helps to maintain or even increase the productivity of client departments, and allows the City to take advantage of new technology. As part of the policy, staff will first consider electric and other alternative fuel vehicles when replacing existing vehicles.

Supplemental Information

Funding in this project allows for the following replacements: two ambulances; two Compressed Natural Gas (CNG) sedans; eight CNG pickups; eight gasoline pickups; seven patrol vehicles; two SUVs; two dump trucks; one patch truck; seven miscellaneous equipment units; and two sweepers. Of the 41 vehicles and pieces of equipment, 23 support the operations in the General Fund (\$2.1 million), and 18 support the operations of various Enterprise Funds (\$1.3 million).

Significant Changes

2019-2023 CIP: Five trailers were deferred to a future year and nine vehicles were added to the list, including one forklift, one grapppler, one marked Interceptor, one GMC Terrain Code 3, one F-

VEHICLE REPLACEMENT FUND

250, two F-150s, and two sweepers. General Fund increased by \$0.2 million. Enterprise Funds increased by \$0.4 million. There was shift in vehicle fuel type due to restricted availability from manufactures on inventory for the eight CNG F-150 pickups, and therefore they will be replaced with regular fueled pickups.

2018-2022 CIP: One patrol vehicle was removed from the Fiscal Year 2019 replacement list.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	0	0	0	3,522,922	160,000	92,000	0	0	3,774,922	0	3,774,922
Total	0	0	0	3,522,922	160,000	92,000	0	0	3,774,922	0	3,774,922

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	3,522,922	160,000	92,000	0	0	3,774,922	0	3,774,922
Total	0	0	0	3,522,922	160,000	92,000	0	0	3,774,922	0	3,774,922

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-5.2

Potential Board/Commission Review:

Fleet Review Committee

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

VEHICLE REPLACEMENT FUND



Fund: Vehicle Replacement & Maintenance Fund

Category: Vehicle and Equipment Replacement

Project Location: 3201 East Bayshore Road

Managing Department: Public Works

Initial Project Start: Summer 2019

Initial Project Completion: Spring 2021

Revised Project Start:

Revised Project Completion:

Project Number: VR-20000

Isuzu cab chassis with custom utility body, February 2014

Scheduled Vehicle and Equipment Replacement - Fiscal Year 2020

Description

This project provides funding for the existing City fleet vehicles and equipment scheduled for replacement in Fiscal Year 2020.

Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by the City's policy for vehicle replacement, which includes guidelines based on age, mileage accumulation, and obsolescence. Timely replacement of vehicles lowers maintenance costs, helps to maintain or even increase the productivity of client departments, and allows the City to take advantage of new technology. As part of the policy, staff will first consider electric vehicles and then other alternative fuel vehicles when replacing existing vehicles.

Supplemental Information

Funding in this project allows for the following replacements: three sedans; 26 pickups; two vans; two dump trucks; one aerial truck; four miscellaneous equipment units; and four trailers. Of the 45 vehicles and pieces of equipment, 32 support the operations in the General Fund (\$2.3 million), and 13 support the operations of various Enterprise Funds (\$1.0 million).

Significant Changes

2019-2023 CIP: Five vehicles/pieces of equipment were removed including two sedans, one van, one generator, and one mower; while three were added including one F-150 and two F-

VEHICLE REPLACEMENT FUND

350s with utility bodies. General Fund reduced by \$0.3 million. Enterprise funds increased by \$0.2 million.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	0	0	0	0	3,438,120	165,000	97,000	0	3,700,120	0	3,700,120
Total	0	0	0	0	3,438,120	165,000	97,000	0	3,700,120	0	3,700,120

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	0	3,438,120	165,000	97,000	0	3,700,120	0	3,700,120
Total	0	0	0	0	3,438,120	165,000	97,000	0	3,700,120	0	3,700,120

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-5.2

Potential Board/Commission Review:

Fleet Review Committee

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

VEHICLE REPLACEMENT FUND



Fund: Vehicle Replacement & Maintenance Fund
Category: Vehicle and Equipment Replacement
Project Location: 3201 East Bayshore Road

Managing Department: Public Works

Initial Project Start: Summer 2020

Initial Project Completion: Spring 2022

Revised Project Start:

Revised Project Completion:

Project Number: VR-21000

Freightliner Truck w/ Aerial Device, June 2017

Scheduled Vehicle and Equipment Replacement - Fiscal Year 2021

Description

This project provides funding for the existing City fleet vehicles and equipment scheduled for replacement in Fiscal Year 2021.

Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by City's policy for vehicle replacement, which includes guidelines based on age, mileage accumulation, and obsolescence. Timely replacement of vehicles lowers maintenance costs, helps to maintain or even increase the productivity of client departments, and allows the City to take advantage of new technology. As part of the policy, staff will first consider electric vehicles and then other alternative fuel vehicles when replacing existing vehicles.

Supplemental Information

Funding in this project will allow for the following replacements: three sedans; six patrol vehicles; one van; four pickup trucks; nine trailers; 11 miscellaneous pieces of equipment; and two ambulances. Of the 36 vehicles and pieces of equipment scheduled for replacement in Fiscal Year 2021, 23 support the operations in the General Fund (\$1.6 million), and 13 support the operations of various Enterprise Funds (\$1.6 million).

Significant Changes

2019-2023 CIP: Four vehicles/pieces of equipment were removed and six added including two undercover sedans; one pickup truck, one flatbed/crane, one marked police vehicle and one

VEHICLE REPLACEMENT FUND

digger derrick. General Fund reduced by \$0.1 million. Enterprise Funds increased by \$0.7 million.

2018-2022 CIP: One patrol vehicle was eliminated from the Fiscal Year 2021 list and one under-cover sedan was added.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	0	0	0	0	0	3,307,294	170,000	100,000	3,577,294	0	3,577,294
Total	0	0	0	0	0	3,307,294	170,000	100,000	3,577,294	0	3,577,294

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	0	0	3,307,294	170,000	100,000	3,577,294	0	3,577,294
Total	0	0	0	0	0	3,307,294	170,000	100,000	3,577,294	0	3,577,294

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-5.2

Potential Board/Commission Review:

Fleet Review Committee

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

VEHICLE REPLACEMENT FUND



Fund: Vehicle Replacement & Maintenance Fund

Category: Vehicle and Equipment Replacement

Project Location: 3201 East Bayshore Road

Managing Department: Public Works

Initial Project Start: Summer 2021

Initial Project Completion: Spring 2023

Revised Project Start:

Revised Project Completion:

Project Number: VR-22000

Pierce Heavy Rescue Unit, February 2012

Scheduled Vehicle and Equipment Replacement - Fiscal Year 2022

Description

This project provides funding for the existing City fleet vehicles and equipment scheduled for replacement in Fiscal Year 2022.

Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by the City's policy for vehicle replacement, which includes guidelines based on age, mileage accumulation, and obsolescence. Timely replacement of vehicles lowers maintenance costs, helps to maintain or even increase the productivity of client departments, and allows the City to take advantage of new technology. As part of the policy, staff will first consider electric vehicles and then other alternative fuel vehicles when replacing existing vehicles.

Supplemental Information

Funding in this project will allow for the following replacements: four sedans; five Compressed Natural Gas (CNG) sedans; seven patrol vehicles; 11 pickup trucks; three trailers; one SUV hybrid; one mower; one turf sweeper; three freightliner trucks; one patch truck; one digger derrick; and one cargo van. Of the 39 vehicles and pieces of equipment scheduled for replacement in Fiscal Year 2022, 23 support the operations in the General Fund (\$1.6 million), and 16 support the operations of various Enterprise Funds (\$1.6 million).

VEHICLE REPLACEMENT FUND

Significant Changes

2019-2023 CIP: Three vehicles/pieces of equipment were removed from the list and 12 added including two sedans, four pickups, one turf sweeper, two aerials, an undercover sedan, digger derrick, and tow truck. General Funds amount decreased by \$0.2 million. Enterprise Funds increased by \$0.6 million.

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	0	0	0	0	0	0	3,283,064	175,000	3,458,064	0	3,458,064
Total	0	0	0	0	0	0	3,283,064	175,000	3,458,064	0	3,458,064

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	0	0	0	3,283,064	175,000	3,458,064	0	3,458,064
Total	0	0	0	0	0	0	3,283,064	175,000	3,458,064	0	3,458,064

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment
Section: Air Quality
Goal: N-5
Policy: N-5.2

Potential Board/Commission Review:

Fleet Review Committee

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

VEHICLE REPLACEMENT FUND



Peterbilt Dump Truck, March 2018

Fund: Vehicle Replacement & Maintenance Fund

Category: Vehicle and Equipment Replacement

Project Location: 3201 East Bayshore Road

Managing Department: Public Works

Initial Project Start: Summer 2022

Initial Project Completion: Spring 2024

Revised Project Start:

Revised Project Completion:

Project Number: VR-23000

Scheduled Vehicle and Equipment Replacement - Fiscal Year 2023

Description

This project provides funding for the existing City fleet vehicles and equipment scheduled for replacement in Fiscal Year 2023.

Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by the City's policy for vehicle replacement, which includes guidelines based on age, mileage accumulation, and obsolescence. Timely replacement of vehicles lowers maintenance costs, helps to maintain or even increase the productivity of client departments, and allows the City to take advantage of new technology. As part of the policy, staff will first consider electric vehicles and then other alternative fuel vehicles when replacing existing vehicles.

Supplemental Information

Funding will allow for the following replacements: one SUV; two dump trucks; seven patrol vehicles; two pickup trucks; six trailers; one mower; one wildland pumper; one trailer; two cargo vans; one forklift; two motorcycles; one pavement milling machine; two ambulances, and one miscellaneous equipment unit. Of the 30 vehicles and pieces of equipment scheduled for replacement in Fiscal Year 2023, 22 support the operations in the General Fund (\$2.8 million), and eight support the operations of various Enterprise Funds (\$0.6 million).

VEHICLE REPLACEMENT FUND

Funding Sources Schedule

Funding Source	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	0	0	0	0	0	0	0	3,557,624	3,557,624	0	3,557,624
Total	0	0	0	0	0	0	0	3,557,624	3,557,624	0	3,557,624

Expenditure Schedule

Project Phase	Prior Years	FY 2018 Budget	FY 2018 Est.	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	0	0	0	0	3,557,624	3,557,624	0	3,557,624
Total	0	0	0	0	0	0	0	3,557,624	3,557,624	0	3,557,624

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-5.2

Environmental Impact Analysis:

Not Applicable

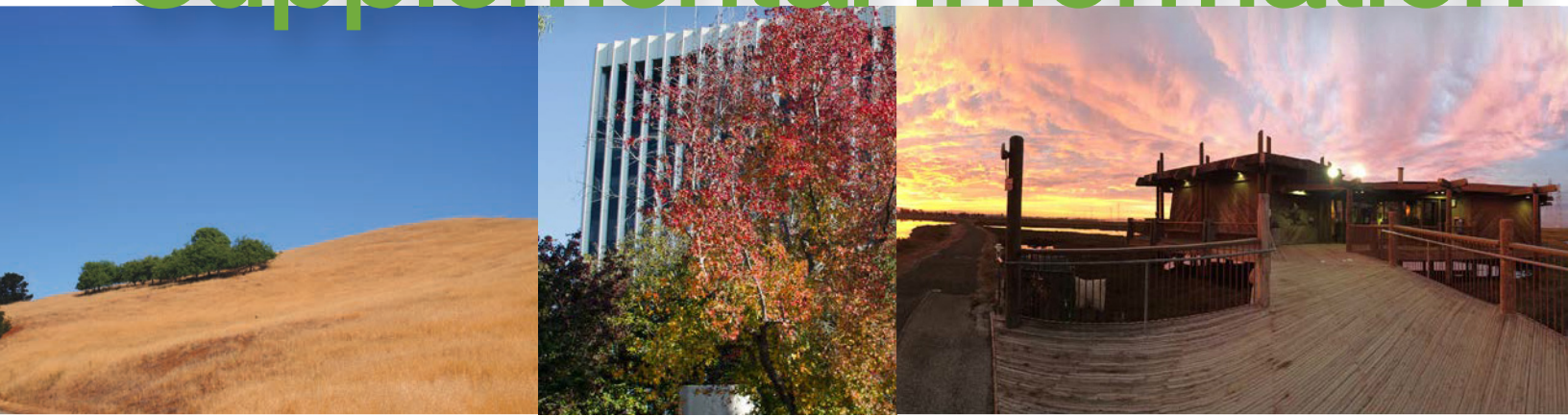
Potential Board/Commission Review:

Fleet Review Committee



CITY OF
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Supplemental Information





CITY OF
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GLOSSARY

Key Budget Terms

Accrual Accounting: A method of accounting that recognizes expenses when incurred and revenues when earned rather than when payment is made or received

Adopted Budget: The budget that is approved and enacted by the City Council annually on or before June 30th.

Appropriation: The allocation of an expense budget for a particular project or program usually for a specific period of time.

Balanced Budget: A balanced budget exists when total revenues are equal to, or greater than, total expenses.

Bond: A debt investment in which an investor loans money to an entity (governmental or otherwise) that borrows the money for a defined period of time at a fixed interest rate to pay for a variety of projects.

Budget Stabilization Reserve (BSR): The BSR was established as a prudent measure to maintain the City's fiscal stability in the event that unanticipated events reduce revenue or create obligations that significantly impact the current-year budget. Examples of such events include a downturn in the economy, a natural disaster or actions that may be taken by another governmental agency that reduce revenues and/or increase expenses for the City.

Capital Budget: A plan of proposed capital outlays and the means of financing them for the current fiscal period. In a two-year budget, the second year of the Capital Improvement Program is adopted-in-concept.

Capital Improvement Program (CIP): The City's plan for current and future projects related to the acquisition, expansion, or rehabilitation of buildings, equipment, parks, streets, and other public infrastructure.

Capital Projects Fund: A fund created to account for all resources to be used for the construction or acquisition of designated fixed assets by a governmental unit except those financed by proprietary or fiduciary funds.

City Manager's Report (CMR): Staff reports for City Council meetings as well as boards and commissions that are prepared by City staff and submitted through the City Manager's Office.

Comprehensive Plan: The Palo Alto Comprehensive Plan contains the City's official policies on land use and community design, transportation, housing, natural environment, business and economics, and community services. Its focus is on the physical form of the City and is applicable to both public and private properties. The Budget integrates the 1998-2010 Comprehensive Plan into the budget process.

GLOSSARY

Cost Accounting: The branch of accounting that provides for the assembling and recording of all the elements of cost incurred to accomplish a purpose, carry on an activity or operation, or complete a unit of work or a specific job.

Enterprise Funds: Funds used to account for services that are provided to the public on a user charge basis, similar to the operation of a commercial business. The City's enterprise funds include the gas, electric, water, fiber optics and wastewater collection and treatment funds.

Fiduciary Fund: A fund used to account for assets held by the City acting in a fiduciary capacity for other individuals or entities. These funds are operated to carry out the specific actions required by the trust agreements, ordinances and other governing regulations.

Fiscal Agent: A bank or other corporate fiduciary that performs the function of paying, on behalf of the governmental unit, or other debtor, interest on debt or principal of debt when due.

Fiscal Year: A 12-month period of time to which the annual budget applies and at the end of which a governmental unit determines its financial position and the results of operations. Palo Alto's fiscal year begins on July 1st and ends on June 30th.

Fixed Assets: Assets such as land, structures and improvements, furniture and/or equipment that are expected to last and/or be used for more than one year.

Full-Time Equivalent (FTE): Used to quantify staffing hours for permanent and temporary employees. A 1.0 FTE employee works full time; a .50 FTE employee works half-time.

Fund Balance: An excess of the assets of a fund over its liabilities.

General Fund: The primary fund used to account for the City's general purpose revenues such as sales, property, utility users and transient occupancy taxes. General Fund revenues typically pay for citywide services such as public safety, community development, recreation, libraries and parks. The General Fund is distinguished from Special Funds in that the latter are used to account for revenues that have restricted uses (e.g. gas tax funds that must be used for street maintenance or repair).

Governmental Funds: A generic classification used to refer to all funds other than proprietary and fiduciary funds. Governmental funds include the general fund, capital fund, special revenue funds and debt service funds.

Infrastructure Assets: Roads, bridges, curbs and gutters, streets, sidewalks, drainage systems, and lighting systems installed for the common good.

Infrastructure Management Plan (IMP): A portion of the General Fund capital improvement program which focuses on rehabilitating the City's infrastructure. In 1998-99, an outside consultant on the City's infrastructure prepared a report known as the Adamson report. Within this report the City's infrastructure was cataloged and ranked based on when the infrastructure needed to be upgraded or replaced and the cost for each item. At that time, the City Council decided to establish a plan using the Adamson report as a guide for both timeline and cost.

Internal Service Funds: These funds provide services to City departments and recover their costs through user charges. For example the Vehicle Replacement Fund is an Internal Service Fund managing the replacement and maintenance of the City fleet.

Method of Accounting: The City's General Fund budget is developed using a modified accrual basis of accounting, with revenues being recorded when measurable and available, and expenditures recorded when the liability is incurred. Enterprise Funds and Internal Service Funds are budgeted on a generally accepted accounting principles (GAAP) basis, which for Proprietary Funds is on a full accrual accounting basis.

Operating Transfer: Amounts transferred between funds, not considered a revenue or expense. For example, legally authorized transfers from a fund receiving revenue to the fund through which the resources are to be expended.

Pay-As-You-Go-Basis: A term used to describe the financial policy of a governmental unit that finances all of its capital outlays from current revenues rather than by borrowing.

Proposed Budget: The proposed budget is the budget that is sent to the Finance Committee by the City Manager. The proposed budget, including changes made by the Finance Committee during their review, is reviewed and then adopted by the City Council.

Proprietary Funds: A generic classification used to refer to all funds other than governmental funds or fiduciary funds. Proprietary funds include internal service funds and enterprise funds.

Reimbursements: Inter-fund transactions that constitute reimbursements to a fund for expenditures or expenses initially made from it but that properly apply to another fund. For example, the Enterprise Funds reimburse the Technology Fund for CIP projects from which the Enterprise Funds benefit.

Reserve: Represents the portion of fund balance set aside for financing future financing needs and addressing one-time emergency or unanticipated events.

Revenues: Revenues include compensation received by the project for specific services to the public (external revenues), as well as revenues received from other funds (internal revenues).

Special Revenue Funds: These funds account for the proceeds derived from specific revenue sources that are legally restricted to expenditures for specified purposes. The Street Improvement Fund (SIF) is a Special Revenue Fund that derives its funding from state gas tax revenues. Capital appropriations from the SIF must be spent on the construction and maintenance of the road network system of the City.



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CITY OF
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AMERICANS WITH DISABILITIES ACT



IN COMPLIANCE WITH
AMERICANS WITH DISABILITIES ACT (ADA) OF 1990,
THIS DOCUMENT MAY BE PROVIDED
IN OTHER ACCESSIBLE FORMATS.

For information contact:
ADA Coordinator
City of Palo Alto
285 Hamilton Ave
(650) 329-2550



CITY OF
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Palo Alto



Spanish explorers named the area for the tall, twin-trunked redwood tree they camped beneath in 1769. Palo Alto incorporated in 1894 and the State of California granted its first charter in 1909. The City has long been known for its innovative people and its exploration of ideas that have changed the world. In Palo Alto, our history has always been about the future.