

Innovation and Technology

Budget Unit	Program	2021 Proposed Budget
I&T Administration		\$ 407,779
610-30-300	Innovation & Technology Administration	\$ 407,779
Video		\$ -
100-31-305	Video	\$ -
100-31-307	Public Access Support	\$ -
Applications		\$ 2,031,386
100-32-308	Applications	\$ 2,031,386
Infrastructure		\$ 2,136,777
610-34-310	Infrastructure	\$ 2,136,777
GIS		\$ 1,106,521
610-35-986	GIS	\$ 1,106,521
Total		\$ 5,682,463

Department Overview

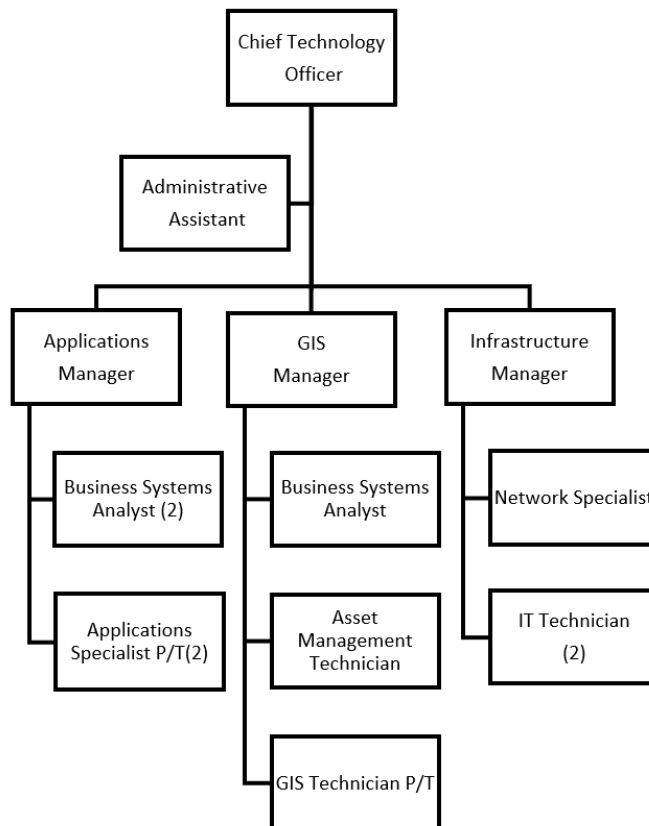
Budget at a Glance

2021 Proposed Budget

Total Revenues	\$ 3,989,234
Total Expenditures	\$ 5,682,463
Fund Balance	\$ (565,646)
General Fund Costs	\$ 1,127,583
% Funded by General Fund	19.8%
Total Staffing	11.93 FTE

Organization

Bill Mitchell, Chief Technology Officer



Performance Measures

Goal: Provide superior delivery of information and technology services to city employees and constituents while continually enhancing levels of engagement.

Benefit: Integrated information services enable customer access to the tools and information they need, when and where they need it.

Performance Measure	FY 2018 July-June	FY 2019 July-June	FY 2020 July - Dec	Ongoing Target
GIS: Open Data average site visits per month	200	210	180	190
GIS: % of time spent Developing Applications/% of time Maintaining applications	Not tracked	Not tracked	Not tracked	35%/65%
GIS: Met Requests within SLA (map, data, Web maps, Cityworks, schema, other) completed	100%	100%	100%	100%
GIS: Increase Property Information (Internal/External) site visits per month	369/No Data	420/383	601/624	610/440
GIS: Cityworks utilization - # of operational asset types Cupertino maintains vs # of operational asset types maintained in Cityworks. Also the % increase of work units completed (WOs, INSP,SRs)	42/18 10%	42/20 14%	42/21 20%	42/25 25%
Infrastructure: Percentage based upon number of scheduled projects/Number of projects completed on time	160% 8/5	100% 6/6	100% 3/3 (July - Dec) 60% 3/5 (FY20)	100%
Infrastructure: Percentage based upon number of HelpDesk KACE tickets/SLA measurements	99%	99%	99.7% 1114/1117	90%
Infrastructure: % Customer satisfaction based upon Satisfaction Rate from KACE tickets	100%	99%	100.00%	85%
Infrastructure: % of network uptime (not including planned maintenance)	99.99%	99.80%	99.90%	99%
Applications: % of citywide-enterprise application project management performed on time and on budget	96%	95%	95%	95%
Applications: Number of website visits/hits ²	1,573,821	1,615,799	846,389	5% annual increase

Performance Measure	FY 2018 July-June	FY 2019 July-June	FY 2020 July - Dec	Ongoing Target
Applications: Number of support request for the applications support per month	*	*	25	20

Video³

¹ Tracking started in FY 2016-17 Q2

² Corrected to include total number of visits/hits

³ Video Division Performance Measures can be found in the Administration Department

Workload Indicators

Applications Division

Workload Indicator	FY 2018 July-June	FY 2019 July-June	FY 2020 July-Dec
Application Support & Maintenance ¹	Not tracked	Not tracked	Not tracked
Application Development ²	Not tracked	Not tracked	Not tracked
Percentage of Project Management Performed on Time and Budget for Citywide Applications ³	96%	96%	96%

¹The Applications division is responsible for supporting enterprise applications like ERP, Land Management System, Recreation System, Laserfiche and many e-services custom applications like bid management, permit parking etc. business license as well as city's mobile apps. All these applications require constant support and maintenance. The related tasks may range from providing user access updates to issues that may require intensive programming to resolve. Troubleshooting existing or building new application configuration rules and parameters based on the current business process or new requirements. Creating custom application workflows in back office applications like Accela, and New World. Configure fee schedules in enterprise applications. Some issues require working and coordinating with software vendors to identify and resolve business workflows and other operational related problems. Coordinating the scheduling of corrective patches and upgrades between vendors and staff.

²The Applications division creates custom applications like Community Hall Speaker Card app and Bid Management app. The application development goes through all stages of Software Development Life Cycle (SDLC) of Requirement-gathering, Analysis, Designing, Coding, Testing and Deployment of these applications. The Application team works with various staff members and other key stakeholders during various phases of SDLC. Application staff gather business requirements, participate in a variety of system user and work groups to identify user needs and operational, programmatic, and or regulatory changes affecting application requirements and other related issues. Perform software application coding, building system integration and interfaces between applications. Perform end user application tests for functionality and usability. Writing test scripts based on business processes. Perform system tests, integration test and performance (volume) tests.

³This measure involves the task of project research and communications, project charter creation, creating or reviewing statement of work, contractor research and selection process, activity and resource planning, creation of work breakdown structure, team building, time management, deliverable management, customer satisfaction, risk management, communication management, project closeout process and documentation.

Infrastructure Division

Workload Indicator	FY 2018 July-June	FY 2019 July-June	FY 2020 July-Dec
Percentage of helpdesk requests completed 48 hours or less ¹	99%	Not tracked	Not tracked
% of network uptime ²	99.9%	Not tracked	Not tracked
Number of IT Projects Completed ³	160% 8/5	Not tracked	Not tracked

¹Infrastructure is responsible for the acquisition, maintenance and support of all computer hardware necessary for the City's leading edge network (server, storage, switch, security, appliance) and end user (PC, tablet, VoIP Devices, Smartphones) services. Exemplary customer service coupled with highly skilled staff is the trademark of this team.

²Ensuring the City's vast network environment meets Business Continuity and Disaster Recovery requirements is a major responsibility of Infrastructure. Two geographically diverse data centers connected with a high speed Ethernet connection that traverses over 1000 miles provides this much needed service. 24x7 monitoring is done via a plethora of tools and contract services managed by Infrastructure.

³PC based applications such as Microsoft Office, Team Collaboration, Adobe, Softphone, Antivirus, Teleconferencing and many more are procured, configured, maintained and supported. Citywide education of these products as well as end user security is the responsibility of Infrastructure which ensures a skilled City staff that know how to utilize software efficiently and securely.

GIS Division

Workload Indicator	FY 2018 July-June	FY 2019 July-June	FY 2020 July-Dec
Hours Spent Web Application Development ¹ Map, Data, Analysis, Report, Application Configuration Requests, Workflow Enhancements Completed Requests ²	Not tracked	Not tracked	Not tracked
Number of I&T workplan projects completed ³	360	Not tracked	Not tracked
	Not tracked	Not tracked	Not tracked

¹The GIS Division builds web applications for staff to use as a tool in their daily workflows. The web application Property Info is a great example of this. Staff use it to review properties for development - select a property see all the associated layers of data, and access any related laserfiche documents. Property info is the main web mapping application staff use so we are constantly making improvements based on requests or new advancements in web development, or available widgets. We also create a number of web applications for the public <https://www.cupertino.org/online-services/open-government-data/city-maps/web-maps-and-applications> everything from the service finder that give residents a one stop shop of all City services to the CIP story map that give the public a visually appealing way to quickly interpret what capitol improvement projects are scheduled this year, where the project is located, what the project entails, and current status.

2GIS receives requests from staff and sometimes Commissioners, Sheriffs office, City Council members...These requests range from hard copy maps (ex. Update a zoning designation and print all new zoning maps) to interactive web maps (ex. PW had a consultant evaluate a section of Regnart Rd and Chad asked us to create a web map with the data point locations and associate photos), data request (ex. how many Trees were trimmed this year), Data changes (ex. can I see this layer symbolized by status and added to property info application), crystal report requests (ex. fleet wants a report that shows how many times each vehicle has a repair work order based on a dynamic timeframe), to application modifications (ex. the Tree Division is tasked with mediating a tree virus issue and they would like a new work order type so they can track the problem over time or Planning had us create a layer for private trees and then add it to the Property info application.) Evaluating staff use of an application and implementing ways to streamline that workflow. Reduce the number of steps to performing a task by configuring/coding an application in a way that eliminates redundancies. We are also asked to configure GIS for enterprise applications such as Accela and ActiveNet.

3Project research and communications, project charter creation, SOW creation, contractor research and selection process, activity & resource planning/work breakdown structure, team building and motivation, time management, deliverable management, ensuring customer satisfaction, risk management, communication management, project closeout process, documentation

Video Division

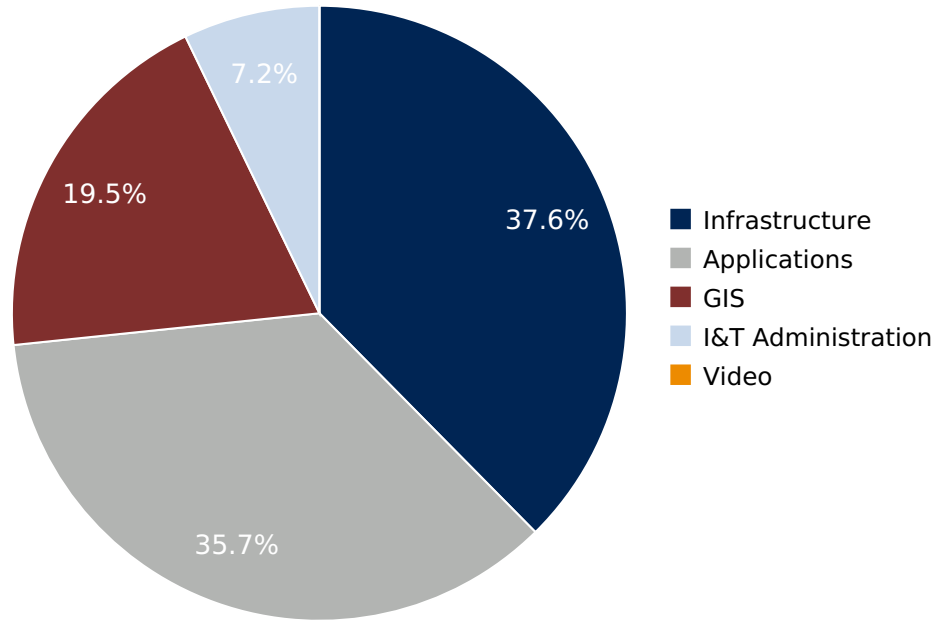
Video Division Workload Indicators can be found in the Administration Department

Proposed Budget

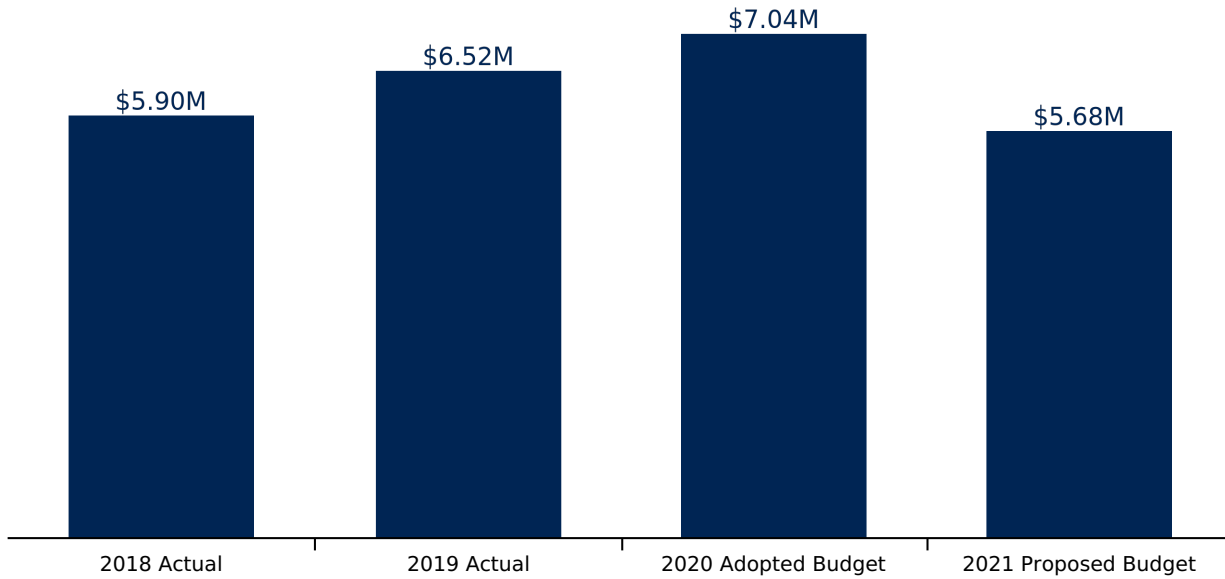
It is recommended that City Council approve a budget of \$5,682,463 for the Innovation and Technology department. This represents a decrease of \$1,358,157 (-19.3%) from the FY 2019-20 Adopted Budget.

The decrease is primarily due to a decrease in cost allocation expenses. Cost allocation charges are decreasing due to a change in methodology for allocating Internal Service Fund charges to other Departments.

Proposed Expenditures by Division



Department Expenditure History



Revenues and Expenditures

The following table details revenues, expenditures, changes in fund balance and General Fund costs by category for two prior fiscal years, the Adopted Budget for the prior fiscal year, and the Proposed Budget for the current fiscal year:

Category	2018 Actual	2019 Actual	2020 Adopted Budget	2021 Proposed Budget
Revenues				
Intergovernmental Revenue	\$ -	\$ 13,496	\$ -	\$ -
Charges for Services	\$ 10,491	\$ 3,765,092	\$ 2,741,301	\$ 3,989,234
Total Revenues	\$ 10,491	\$ 3,778,588	\$ 2,741,301	\$ 3,989,234
Expenditures				
Employee Compensation	\$ 1,875,708	\$ 2,060,331	\$ 2,075,295	\$ 1,935,740
Employee Benefits	\$ 800,653	\$ 818,248	\$ 818,509	\$ 786,454
Materials	\$ 1,509,073	\$ 1,200,801	\$ 1,497,068	\$ 1,804,586
Contract Services	\$ 741,129	\$ 917,642	\$ 860,743	\$ 490,949
Cost Allocation	\$ 781,281	\$ 1,295,911	\$ 1,340,726	\$ 246,932
Special Projects	\$ 191,925	\$ 230,769	\$ 345,500	\$ 340,000
Contingencies	\$ -	\$ -	\$ 102,779	\$ 77,802
Total Expenditures	\$ 5,899,769	\$ 6,523,702	\$ 7,040,620	\$ 5,682,463
Fund Balance	\$ (2,381,425)	\$ 257,917	\$ (858,222)	\$ (565,646)
General Fund Costs	\$ 3,507,850	\$ 3,003,035	\$ 3,441,097	\$ 1,127,583

Staffing

Total current positions - 14.95 FTE

Total proposed positions - 11.93 FTE

Innovation & Technology Administration

Budget Unit 610-30-300

Information Technology - I&T Administration - Innovation & Technology Administration

Budget at a Glance

	2021 Proposed Budget
Total Revenues	\$ -
Total Expenditures	\$ 407,779
Fund Balance	\$ (407,779)
General Fund Costs	\$ -
% Funded by General Fund	0.0%
Total Staffing	0.53 FTE

Program Overview

The Innovation & Technology Department Administration Division is responsible for the strategic planning, governance, policy setting, and leadership in the use of digital services for the City. The services include a state of the art network which provides transport for best of class business applications, e.g., financial, land management, recreation, asset management, HR, e-commerce and work order management . Additionally, Administration ensures oversight of budget, tactical plans, succession planning, partnership development (internal/external) and staffing. Procurement and budget monitoring are also responsibilities of Administration.

Service Objectives

- Develop a roadmap to effectively leverage existing technology and adopt emerging technology to meet business needs.
- Create and sustain a workplace atmosphere that promotes a balance between employee innovation, accountability and business needs.
- Ensure two-way communication between and among the City organization and stakeholders.
- Improve user experience including ease of use, availability, and accessibility within the context of compliance with industry standards.
- Ensure transparent and easy access to City information and services via multiple technologies, e.g. social media, TV, web, and radio.

Proposed Budget

It is recommended that City Council approve a budget of \$407,779 for the Innovation & Technology Administration program. This represents an increase of \$109,781 (36.8%) from the FY 2019-20 Adopted Budget.

The increase is mainly due to special projects in FY 2019-20 related to the Work Program. The projects include pilot adaptive traffic signaling, pilot multi-modal traffic count, pilot noise measurement, pilot pollution monitoring, pilot trash collection, and pilot water scheduling. Cost allocation charges are decreasing due to a

change in methodology for allocating Internal Service Fund charges to other Departments.

Special Projects

The following table shows the special projects for the fiscal year.

Special Project	Appropriation	Revenue	Funding Source	Description
Pilot Adaptive Traffic Signaling	\$65,000	\$65,000	General Fund	Adaptive Traffic Signaling (ATS) to mitigate traffic
Pilot Multi-modal Traffic Count	\$40,000	\$40,000	General Fund	Tools to measure multi-modal traffic in real-time
Pilot Noise Measurement	\$35,000	\$35,000	General Fund	IOT sensors will be deployed to measure noise levels due to air traffic
Pilot Pollution Monitoring	\$35,000	\$35,000	General Fund	IOT sensors will be deployed to measure particulate size
Pilot Trash Collection	\$25,000	\$25,000	General Fund	IOT sensors will be used to create a more efficient pick-up schedule based on the volume of trash in a container.
Pilot Waste Management	\$10,000	\$10,000	General Fund	Moisture sensors will be used to determine if/when a median should be watered
Total	\$210,000	\$210,000		

Revenues and Expenditures

The following table details revenues, expenditures, changes in fund balance and General Fund costs by category for two prior fiscal years, the Adopted Budget for the prior fiscal year, and the Proposed Budget for the current fiscal year:

Category	2018 Actual	2019 Actual	2020 Adopted Budget	2021 Proposed Budget
Revenues				
Charges for Services	\$ -	\$ 359,741	\$ 235,631	\$ -
Total Revenues	\$ -	\$ 359,741	\$ 235,631	\$ -
Expenditures				
Employee Compensation	\$ 143,639	\$ 95,800	\$ 81,057	\$ 112,457
Employee Benefits	\$ 66,242	\$ 39,116	\$ 33,737	\$ 45,468
Materials	\$ 14,004	\$ 9,900	\$ 17,223	\$ 16,784
Contract Services	\$ 3,017	\$ 21,329	\$ 75,223	\$ 16,000
Cost Allocation	\$ 20,080	\$ 85,954	\$ 89,236	\$ -
Special Projects	\$ -	\$ -	\$ -	\$ 210,000
Contingencies	\$ -	\$ -	\$ 1,522	\$ 7,070
Total Expenditures	\$ 246,982	\$ 252,099	\$ 297,998	\$ 407,779
Fund Balance	\$ (246,981)	\$ 107,642	\$ (62,367)	\$ (407,779)
General Fund Costs	\$ -	\$ -	\$ -	\$ -

Staffing

Total current positions - 0.55 FTE

Total proposed positions - 0.53 FTE

Staff time is being reallocated to better reflect actual time spent in this program.

Video

Budget Unit 100-31-305

General Fund - Video - Video

Budget at a Glance

	2021 Proposed Budget
Total Revenues	\$ -
Total Expenditures	\$ -
Fund Balance	\$ -
General Fund Costs	\$ -
% Funded by General Fund	0.0%
Total Staffing	0.00 FTE

Program Overview

In FY 2020-21, this program will be transferred to the City Manager's Office. A complete discussion of this program can be found under Budget Unit 100-12-305. This program will remain in order to maintain historical data, however once all prior year data as listed in the table below is \$0, this program will be removed.

Proposed Budget

There is no budget requested for this program.

Revenues and Expenditures

The following table details revenues, expenditures, changes in fund balance and General Fund costs by category for two prior fiscal years, the Adopted Budget for the prior fiscal year, and the Proposed Budget for the current fiscal year:

Category	2018 Actual	2019 Actual	2020 Adopted Budget	2021 Proposed Budget
Revenues				
Intergovernmental Revenue	\$ -	\$ 13,496	\$ -	\$ -
Charges for Services	\$ 10,491	\$ 11,164	\$ 9,600	\$ -
Total Revenues	\$ 10,491	\$ 24,660	\$ 9,600	\$ -
Expenditures				
Employee Compensation	\$ 501,030	\$ 493,401	\$ 505,959	\$ -
Employee Benefits	\$ 184,147	\$ 177,043	\$ 189,897	\$ -
Materials	\$ 37,688	\$ 38,380	\$ 107,040	\$ -
Contract Services	\$ 86,141	\$ 103,565	\$ 110,468	\$ -
Cost Allocation	\$ 204,749	\$ 344,883	\$ 280,610	\$ -
Special Projects	\$ 126,281	\$ 188,879	\$ 155,000	\$ -
Contingencies	\$ -	\$ -	\$ 9,125	\$ -
Total Expenditures	\$ 1,140,036	\$ 1,346,151	\$ 1,358,099	\$ -
Fund Balance	\$ -	\$ -	\$ -	\$ -
General Fund Costs	\$ 1,129,545	\$ 1,321,493	\$ 1,348,499	\$ -

Staffing

Total current positions - 3.25 FTE

Total proposed positions - 0.00 FTE

Public Access Support

Budget Unit 100-31-307

General Fund - Video - Public Access Support

Budget at a Glance

	2021 Proposed Budget
Total Revenues	\$ -
Total Expenditures	\$ -
Fund Balance	\$ -
General Fund Costs	\$ -
% Funded by General Fund	0.0%
Total Staffing	0.00 FTE

Program Overview

In FY 2020-21, this program will be transferred to the City Manager’s Office. A complete discussion of this program can be found under Budget Unit 100-12-307. This program will remain in order to maintain historical data, however once all prior year data as listed in the table below is \$0, this program will be removed.

Proposed Budget

There is no budget requested for this program.

Revenues and Expenditures

The following table details revenues, expenditures, changes in fund balance and General Fund costs by category for two prior fiscal years, the Adopted Budget for the prior fiscal year, and the Proposed Budget for the current fiscal year:

Category	2018 Actual	2019 Actual	2020 Adopted Budget	2021 Proposed Budget
Revenues				
Total Revenues	\$ -	\$ -	\$ -	\$ -
Expenditures				
Contract Services	\$ 68,121	\$ 70,301	\$ 71,542	\$ -
Cost Allocation	\$ 893	\$ 1,961	\$ 1,828	\$ -
Contingencies	\$ -	\$ -	\$ 3,577	\$ -
Total Expenditures	\$ 69,014	\$ 72,262	\$ 76,947	\$ -
Fund Balance	\$ -	\$ -	\$ -	\$ -
General Fund Costs	\$ 69,014	\$ 72,262	\$ 76,947	\$ -

Staffing

Total current positions - 0.00 FTE

Total proposed positions - 0.00 FTE

Applications

Budget Unit 100-32-308

General Fund - Applications - Applications

Budget at a Glance

	2021 Proposed Budget
Total Revenues	\$ 1,307,803
Total Expenditures	\$ 2,031,386
Fund Balance	\$ -
General Fund Costs	\$ 723,583
% Funded by General Fund	35.6%
Total Staffing	3.50 FTE

Program Overview

The Applications Division is responsible for requirements gathering, design, development, procurement, project management, implementation and ongoing maintenance of all enterprise applications, e.g., Financial Enterprise Resource Planning (ERP), Land Based Management System, Recreation Software. Additionally and Electronic Content Management (Records Retention). Additionally, the Applications Division is responsible for the City's website, Intranet, mobile apps and e-service applications, e.g., permit request/payment, public records act (PRA), job application, business license, contract and bid management applications.

Service Objectives

- Deliver business solutions that meet customer requirements and integrate within the City's application framework.
- Assist departments in developing streamlined and effective business processes that are easy to understand and translate into existing and new enterprise applications.
- Work closely with City staff and members of the community to ensure that the City's enterprise applications are relevant and provide value to all the stakeholders.
- Collaborate with various City departments to determine that the City's enterprise applications meet the functional requirements and long-term application implementation strategy of the organization.
- Create and maintain effective online and mobile user access to municipal information and services.
- Enable and facilitate the use of communication and technical resources by nontechnical staff and customers.

Proposed Budget

It is recommended that City Council approve a budget of \$2,031,386 for the Applications program. This represents an increase of \$87,735 (4.5%) from the FY 2019-20 Adopted Budget.

The increase is primarily due to increases in salaries, benefits, and materials expenses. This is offset by a decrease in cost allocation expenses. The increase in salaries and benefits expenses is due to negotiated increases. The increase in materials expenses is related to enhancing ProjectDox software which is utilized for

electronic plan submission and review. Cost allocation charges are decreasing due to a change in methodology for allocating Internal Service Fund charges to other Departments.

ProjectDox improves the permitting process, making it fast and easy to submit requests, plan check review documents and drawings, and process corrections - all visible to the customer. IT is proposing to move the current on-prem application to cloud based enterprise SaaS. The move allows for increased functionality for Building and provides additional workflows for Planning and Public Works. Additionally, this change aligns with the IT Strategic Plan in transitioning from on-prem to the cloud based applications.

Special Projects

The following table shows the special projects for the fiscal year.

Special Project	Appropriation	Revenue	Funding Source	Description
Vehicle Miles Travelled	\$25,000	\$25,000	General Fund	Select an application that can automate analysis of Vehicle Miles Travelled (VMT) through crowd sourcing or similar technology.
Total	\$25,000	\$25,000		

Revenues and Expenditures

The following table details revenues, expenditures, changes in fund balance and General Fund costs by category for two prior fiscal years, the Adopted Budget for the prior fiscal year, and the Proposed Budget for the current fiscal year:

Category	2018 Actual	2019 Actual	2020 Adopted Budget	2021 Proposed Budget
Revenues				
Charges for Services	\$ -	\$ -	\$ -	\$ 1,307,803
Total Revenues	\$ -	\$ -	\$ -	\$ 1,307,803
Expenditures				
Employee Compensation	\$ 425,079	\$ 488,649	\$ 506,539	\$ 623,650
Employee Benefits	\$ 152,025	\$ 167,895	\$ 172,493	\$ 225,939
Materials	\$ 872,533	\$ 510,914	\$ 776,401	\$ 989,941
Contract Services	\$ 214,457	\$ 298,617	\$ 187,502	\$ 131,833
Cost Allocation	\$ 84,240	\$ 143,205	\$ 178,096	\$ -
Special Projects	\$ 11,250	\$ -	\$ 80,000	\$ 25,000
Contingencies	\$ -	\$ -	\$ 42,620	\$ 35,023
Total Expenditures	\$ 1,759,584	\$ 1,609,280	\$ 1,943,651	\$ 2,031,386
Fund Balance	\$ -	\$ -	\$ -	\$ -
General Fund Costs	\$ 1,759,583	\$ 1,609,280	\$ 1,943,651	\$ 723,583

Staffing

Total current positions - 3.45 FTE

Total proposed positions - 3.50 FTE

Staff time is being reallocated to better reflect actual time spent in this program.

Infrastructure

Budget Unit 610-34-310

Information Technology - Infrastructure - Infrastructure

Budget at a Glance

	2021 Proposed Budget
Total Revenues	\$ 1,767,098
Total Expenditures	\$ 2,136,777
Fund Balance	\$ 34,321
General Fund Costs	\$ 404,000
% Funded by General Fund	18.9%
Total Staffing	4.50 FTE

Program Overview

The IT Infrastructure Division is responsible for technology-related expenses for the citywide management of information technology services. The Infrastructure Manager and staff are responsible for computer helpdesk, network availability, and performance, security and compliance, incident response, disaster recovery and business continuity, project management of implementations and upgrades, purchasing and inventory control, technical training, and maintenance of systems. Infrastructure is also tasked with ensuring that the City continues to follow best practices in technology adoption and security practices.

Service Objectives

- Provide and continuously improve helpdesk support as this function is often the face of IT that staff interacts with on a daily basis.
- Maintain standards and procedures for the replacement, support, and maintenance of all City-owned computing devices, printers, networks, peripherals and systems defined by City policy.
- Continue innovation and outreach to ensure the City follows best IT practices relating to equipment, policy, and security practices.

Proposed Budget

It is recommended that City Council approve a budget of \$2,136,777 for the Infrastructure program. This represents a decrease of \$131,055 (-5.8%) from the FY 2019-20 Adopted Budget.

The decrease is primarily due to a decrease in cost allocation expenses. This is offset by increases to negotiated salaries, benefits, and materials expenses. The increase to salaries and benefits expenses is due to negotiated increases. The increase to materials expenses is due to new projects such as the Blackberry Farm Zoom Room. Cost allocation charges are decreasing due to a change in methodology for allocating Internal Service Fund charges to other Departments.

Special Projects

The following table shows the special projects for the fiscal year.

Special Project	Appropriation	Revenue	Funding Source	Description
Artificial Intelligence Remediation	\$50,000	\$50,000	General Fund	See Below
Facility Battery	\$40,000	\$40,000	General Fund	See Below
Total	\$90,000	\$90,000		

In FY 2020-21, Infrastructure plans to implement AI remediation tools. Cyber intrusion, e.g., Ransomware, continues to negatively impact both public and private entities. Each year reports of cities falling victim to ransomware and the significant cost in dollars, downtime and customer service is of significant concern. Recently the financial impact to individual cities were in the millions of dollars. The AI will learn the City's network patterns and isolate patterns that deviate outside the norm, allowing the City to respond immediately to cyber intrusion. Ongoing costs will be \$50,000 per year if approved.

A data center facility battery for City Hall is also planned. Due to more stringent air quality regulations, replacing the generator is not viable with the current state of the City Hall building, which is currently near maximum critical loads. In the event a power event damages critical infrastructure due to generator malfunction or brownout, the City risks extended downtime due to equipment damage. An extended run-time backup battery will ensure proper operation and protection of critical business equipment.

Revenues and Expenditures

The following table details revenues, expenditures, changes in fund balance and General Fund costs by category for two prior fiscal years, the Adopted Budget for the prior fiscal year, and the Proposed Budget for the current fiscal year:

Category	2018 Actual	2019 Actual	2020 Adopted Budget	2021 Proposed Budget
Revenues				
Charges for Services	\$ -	\$ 2,284,031	\$ 1,629,376	\$ 1,767,098
Total Revenues	\$ -	\$ 2,284,031	\$ 1,629,376	\$ 1,767,098
Expenditures				
Employee Compensation	\$ 445,632	\$ 537,277	\$ 527,859	\$ 645,656
Employee Benefits	\$ 235,859	\$ 248,851	\$ 251,652	\$ 283,050
Materials	\$ 503,552	\$ 516,478	\$ 431,601	\$ 593,060
Contract Services	\$ 254,464	\$ 300,142	\$ 306,254	\$ 252,554
Cost Allocation	\$ 373,784	\$ 553,720	\$ 605,404	\$ 246,932
Special Projects	\$ 34,829	\$ 41,890	\$ 110,500	\$ 90,000
Contingencies	\$ -	\$ -	\$ 34,562	\$ 25,525
Total Expenditures	\$ 1,848,120	\$ 2,198,358	\$ 2,267,832	\$ 2,136,777
Fund Balance	\$ (1,298,412)	\$ 85,672	\$ (566,456)	\$ 34,321
General Fund Costs	\$ 549,708	\$ -	\$ 72,000	\$ 404,000

Staffing

Total current positions - 4.50 FTE

Total proposed positions - 4.50 FTE

There are no changes to the current level of staffing.

GIS

Budget Unit 610-35-986

Information Technology - GIS - GIS

Budget at a Glance

	2021 Proposed Budget
Total Revenues	\$ 914,333
Total Expenditures	\$ 1,106,521
Fund Balance	\$ (192,188)
General Fund Costs	\$ -
% Funded by General Fund	0.0%
Total Staffing	3.40 FTE

Program Overview

The Geographic Information Systems (GIS) program captures, manages, analyzes, and displays all forms of geographically referenced information for the City of Cupertino. Through maps, reports, dashboards, and charts we provide ways to view, understand, question, interpret, and visualize, our City in ways that reveal relationships, patterns, and trends. The GIS Program works to help our staff, citizens, business, and development communities answer questions and solve problems by looking at our data in a way that is quickly understood and easily shared – on a map!

Service Objectives

- Cupertino GIS works to provide and support state-of-the-art GIS mapping services and applications in the rapidly evolving and expanding field of geospatial technology.
- Create, collect, maintain, and distribute high quality, up-to-date, and complete geospatial data.
- Ensure that the City’s GIS systems and data are available for day-to-day City and regional purposes.
- Share the City’s GIS data and services as widely as possible.
- Raise the awareness of GIS.
- Integrate spatial technology into Cupertino’s business processes and applications.
- Support emergency planning, response, and recovery.

Proposed Budget

It is recommended that City Council approve a budget of \$1,106,521 for the GIS program. This represents an increase of \$10,428 (1.0%) from the FY 2019-20 Adopted Budget.

The budget is relatively unchanged from the prior fiscal year. Increases in salaries and benefits are due to negotiated increases. This is offset by decreases in cost allocation expenses. Cost allocation charges are decreasing due to a change in methodology for allocating Internal Service Fund charges to other Departments.

In FY 2020-21, GIS plans to pilot different sensor programs. ESRI IOT for Analytics is a SaaS solution that enables users to ingest, visualize, and analyze spatial big data real-time to gain insights that allow for analysis and data driven action. This application will allow the City to categorize and make sense of the data generated

from sensors. This is the underlying software for all IOT pilot programs adopted for the FY 2020-21 Work Program. GIS also plans to implement telematics for City vehicles. Telematics will enable fleet managers to download engine performance, and vehicle operations data for City vehicles. This data will help improve preventative maintenance, operator safety, fuel efficiency, vehicle utilization, and reduce vehicle downtime.

Special Projects

The following table shows the special projects for the fiscal year.

Special Project	Appropriation	Revenue	Funding Source	Description
IoT for Analytics	\$15,000	\$15,000	General Fund	A SaaS solution that enables users to ingest, visualize, and analyze spatial big data real-time to gain insights that allow for analysis and data driven action.
Total	\$15,000	\$15,000		

Revenues and Expenditures

The following table details revenues, expenditures, changes in fund balance and General Fund costs by category for two prior fiscal years, the Adopted Budget for the prior fiscal year, and the Proposed Budget for the current fiscal year:

Category	2018 Actual	2019 Actual	2020 Adopted Budget	2021 Proposed Budget
Revenues				
Charges for Services	\$ -	\$ 1,110,156	\$ 866,694	\$ 914,333
Total Revenues	\$ -	\$ 1,110,156	\$ 866,694	\$ 914,333
Expenditures				
Employee Compensation	\$ 360,328	\$ 445,204	\$ 453,881	\$ 553,977
Employee Benefits	\$ 162,380	\$ 185,343	\$ 170,730	\$ 231,997
Materials	\$ 81,296	\$ 125,129	\$ 164,803	\$ 204,801
Contract Services	\$ 114,929	\$ 123,688	\$ 109,754	\$ 90,562
Cost Allocation	\$ 97,535	\$ 166,188	\$ 185,552	\$ -
Special Projects	\$ 19,565	\$ -	\$ -	\$ 15,000
Contingencies	\$ -	\$ -	\$ 11,373	\$ 10,184
Total Expenditures	\$ 836,033	\$ 1,045,552	\$ 1,096,093	\$ 1,106,521
Fund Balance	\$ (836,032)	\$ 64,603	\$ (229,399)	\$ (192,188)
General Fund Costs	\$ -	\$ -	\$ -	\$ -

Staffing

Total current positions - 3.20 FTE

Total proposed positions - 3.40 FTE

Staff time is being reallocated to better reflect actual time spent in this program.

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