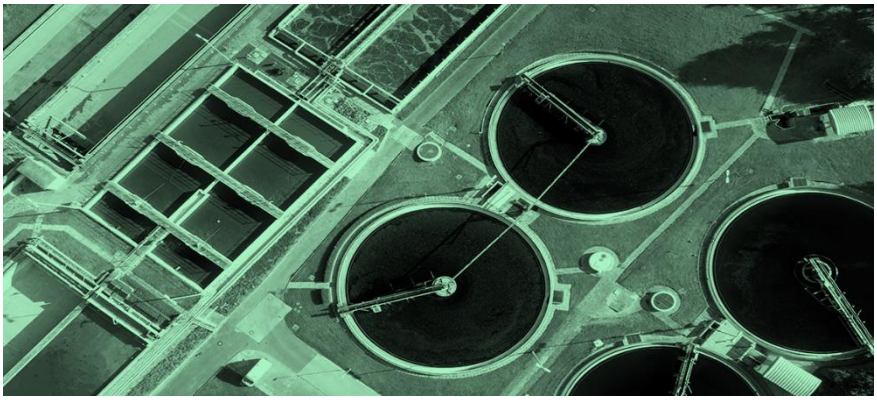


# CITY INFRASTRUCTURE STRATEGY

Brilliant At The Basics

JUNE 2023

## City Infrastructure Strategy

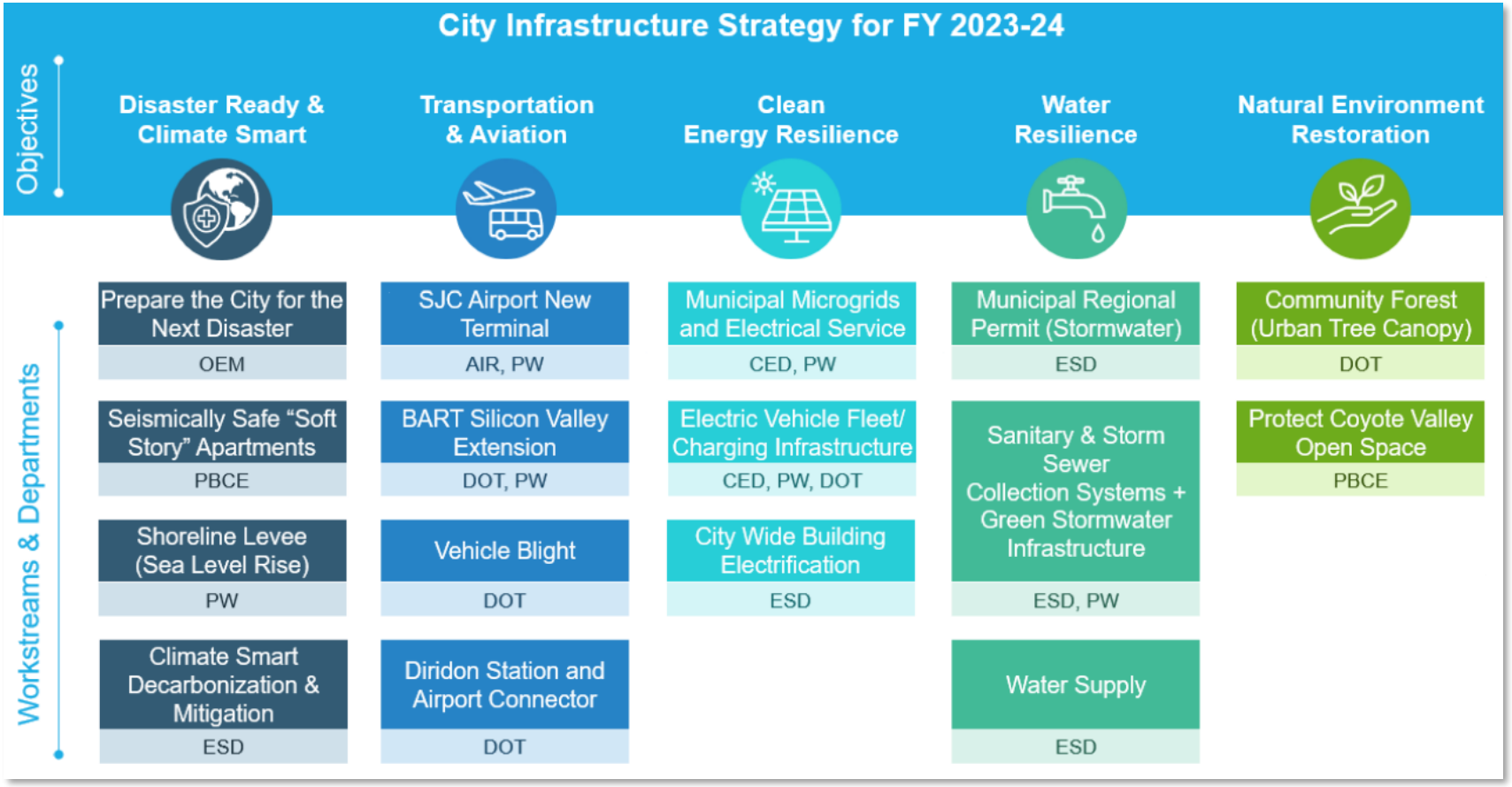
***A great City has great infrastructure***, the often-invisible networks of pipes, conduits, wires, roads, facilities, and natural spaces that connect us and enables the daily utilities that make modern life possible. Every day this infrastructure quietly brings us water, electricity, broadband, and takes away our sewage, storm water, garbage, and recycling. In San José, our city's infrastructure faces four simultaneous challenges, we must:

1. **Rehabilitate our existing aging infrastructure** to ensure we can continue to provide the backbone of day-to-day public services our community relies on.
2. **Grow our infrastructure** to accommodate more people as we welcome an additional 280,000 to San José by 2035.
3. **Mitigate climate change and become more sustainable** by reducing the carbon pollution we put into the atmosphere and powering our economy with carbon-free electrical energy.
4. **Adapt to climate change and become more resilient** in the face of deeper droughts, more frequent wildfires, changing weather, and sea level rise.

Following the direction of the Mayor's March Budget Message unanimously approved by City Council, this document presents a City Infrastructure Strategy to meet these challenges. The strategy is an evolution of the current Infrastructure Enterprise Priority and focuses on five objectives: Disaster Ready & Climate Smart, Transportation & Aviation, Clean Energy Resilience, Water Resilience, and Natural Environment Restoration. 16 workstreams align with these Objectives and represent the most impactful change initiatives underway.  This is in addition to the daily service delivery of Core Services.

Successful implementation will require: Addressing inequity and historical disinvestment; identify ongoing/new local, state, and federal funding sources, and building the team to deliver and. Each of the 16 workstreams has an identified lead and the proposed budget includes significant investments that align with the strategy. Progress on Key Results contributing to these Objectives will be reported out regularly to the Transportation and Environment Committee.

*City Infrastructure Strategy Objectives and Workstreams, FY 2023-24*



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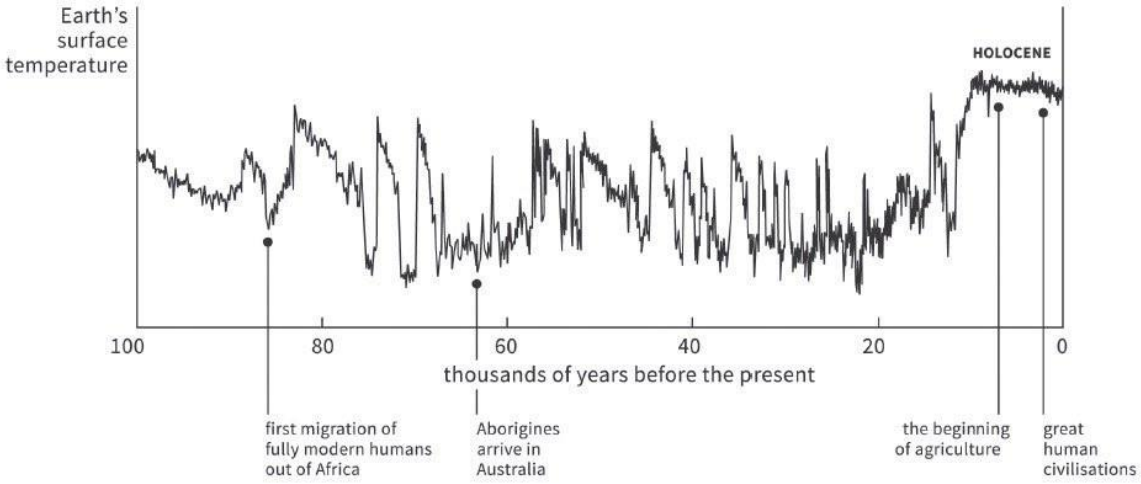
Ok,

# Background

Human beings have been anatomically like modern humans for about the last 250,000 years. They have been linguistically and cognitively like modern humans for perhaps the last 70,000 years. But all of what we know of as human civilization, including agriculture, bronze, iron and steel tools, written language, cities themselves and all of what we think of as city infrastructure has developed mostly in the last 10,000 years.

One of the reasons is that it is only during the 12,000-year period known as the Holocene that the earth's temperatures been stable for long enough, and neither too cold, nor too hot. This "long summer" has allowed human civilization to develop increasingly complex technology, systems and permanent settlements that have resulted in a dramatic shift from dispersed gatherer hunting bands that characterized all of our pre-Holocene existence to the situation today where most people live in cities.

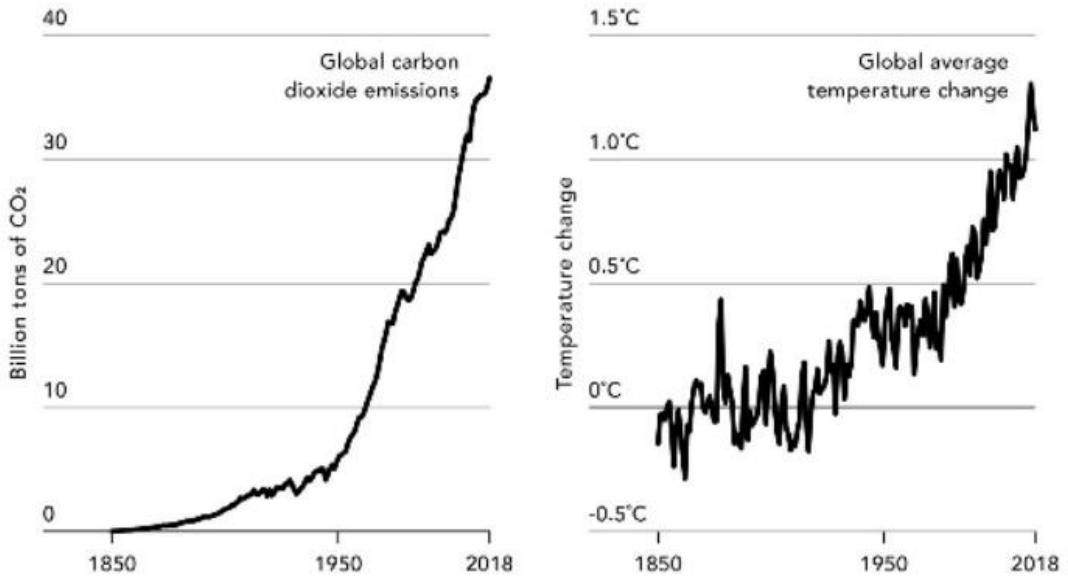



*Home sweet home in the Holocene. The graph shows Earth's changing temperature over the past 100,000 years, based on data from the Greenland ice core. The last 12,000 years have been unusually stable.*[26]

*Figure 1: Earth's surface temperature over time.*
*Gates, Bill. (2021). How to Avoid a Climate Disaster: The Solutions We Have and the Breakthroughs We Need.*

However, that relatively stable climate that has allowed civilization to thrive and expand across the globe may be coming to an end. And the primary driver of that change is civilization itself and the greenhouse gasses it produces every day in the burning of the fossil fuels that drive our industrial economy, modern transportation, and heat and cool our homes and businesses. Figure 2 shows the clear correlation between global carbon dioxide emissions and the increase in the global annual temperature.

While correlation in itself does not prove causality there is now ample evidence and a broad global scientific consensus that that human generated emissions are driving climate change and that that climate change threatens the health of our planet and the people who inhabit it.




*Gates, Bill. (2021). How to Avoid a Climate Disaster The Solutions We Have and the Breakthroughs We Need.*

*Figure 2: Correlation between global carbon dioxide emissions and global average temperature change Gates, Bill. (2021). How to Avoid a Climate Disaster: The Solutions We Have and the Breakthroughs We Need.*

Kate Raworth in her thought-provoking book Doughnut Economics lays out the simultaneous challenges to the Planet and People that we face. At the planetary level she outlines 9 aspects where our economic growth and development are overshooting the resources of the planet causing climate change, freshwater withdrawals at unsustainable rates, and destroying wild land. Solving this problem alone would be hard enough but at the same time she outlines 12 aspects where our current economic structure has resulted in significant shortfalls for people, including lack of access to affordable housing, clean water, sufficient clean energy, and social inequities.

She posits that we must approach both problems simultaneously, solving for both the planet and her people at the same time. In her framework this leaves us a space bounded by the need to avoid overshooting the capacity of the planet, and avoid shortfalls of people's needs. The resulting "doughnut" she defines as a "safe just space for humanity" and challenges us to realign our economic model and approach to development to be more sustainable, more resilient, and more regenerative.

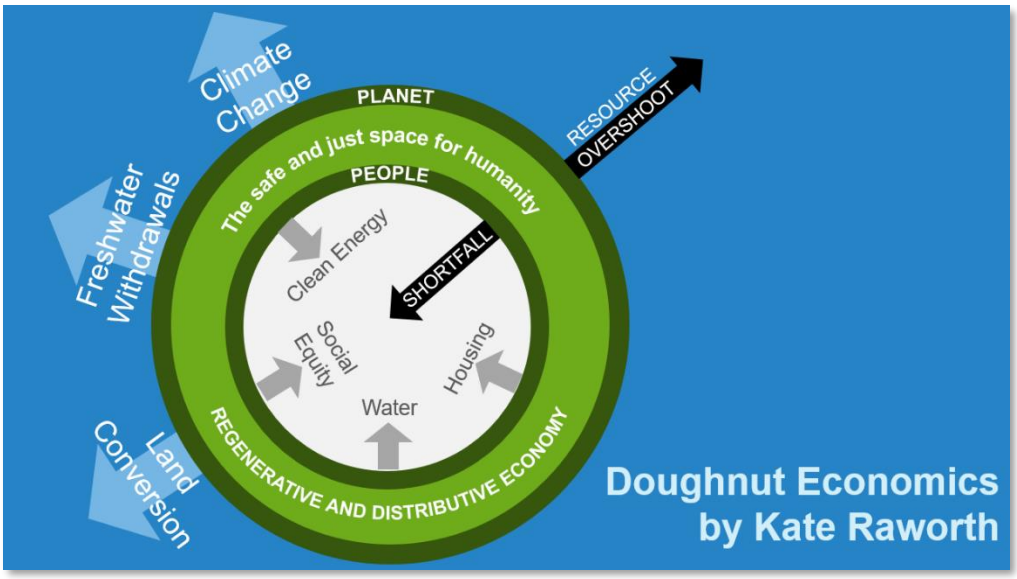



*Figure 3: Doughnut Economics by Kate Raworth (Edited)*

So, what does all this mean for us as a City? If we are to approach our work, and especially our core and critical infrastructure, in a way that meets the reality we find ourselves in then we need to shift our thinking. Specifically, we will need to

1) Change our mindset from
    a. departmental thinking to ***systems thinking***
    b. short term tactics to ***longer term future action***
    c. seeing past as prologue to ***modeling likely futures***
2) Expand beyond sustainability to adaptation and resilience, and
3) Develop bold and innovative approaches to funding capital infrastructure.

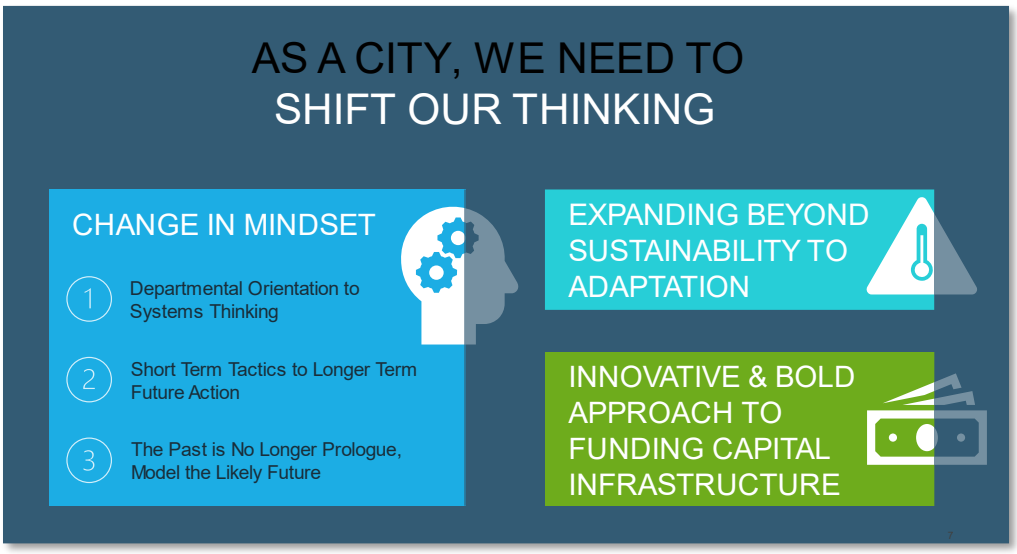



*Figure 4: A shift in thinking along three dimensions*

In addition to shifts in our thinking, we will need to focus our effort to drive change from the myriad of interesting things we might do to the vital few that will bring the most benefits for us as a city. This focus can be found in the answer to four key questions.

1. What do **people** need?
2. What does the **planet** need?
3. What is **core to the role of the City of San José**, and
4. What is **potentially transformative**, or at least has a strong return on investment when delivered at scale?

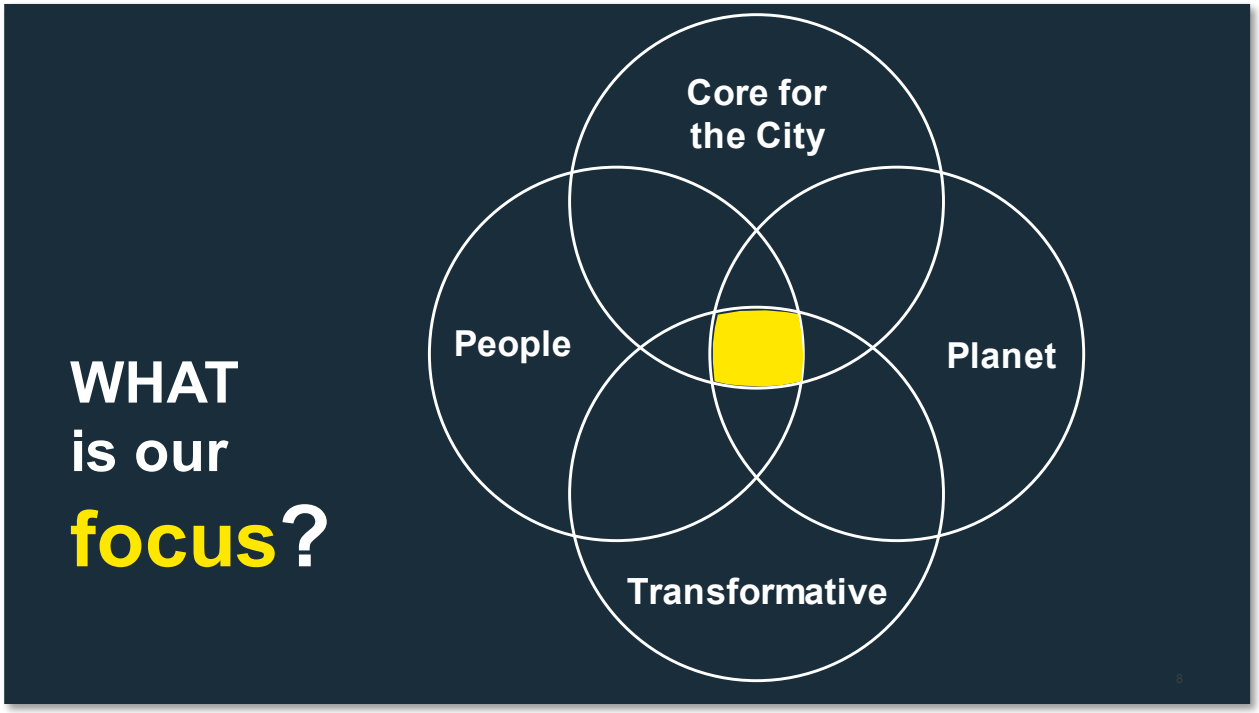



*Figure 5: What is the focus for the City of San Jose?*

## City Infrastructure Strategy at a Glance

Our answer to these four key questions is the City Infrastructure Strategy with its 5 Objectives supported by 16 aligned workstreams. Together we feel that this work represents the most important changes to our infrastructure that will move the City of San José into a future where we take care of the shortfalls affecting people and the overshoot harming our planet.

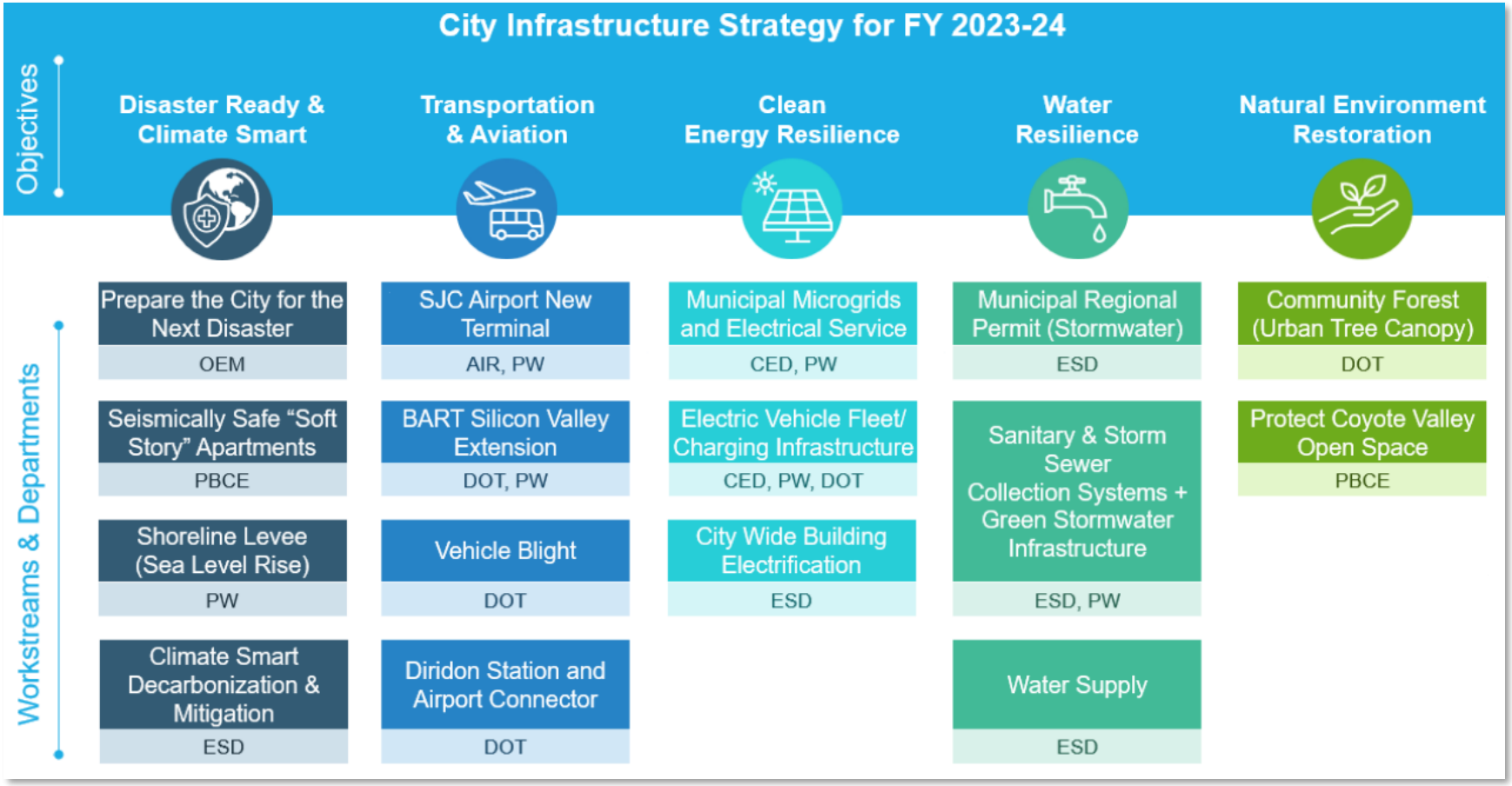



*Figure 6: City Infrastructure Strategy Objectives and Workstreams, FY 2023-24*

## Evolution to City Infrastructure Strategy

The City Infrastructure Strategy described in this report and pictured above in Figure 6 is an evolution of the Resilient and Sustainable City Infrastructure Enterprise Priority that was launched in 2022. This evolution is based on the experience gained in a year of implementation, feedback from the Transportation and Environment Committee, and the direction set in the Mayor's March Budget Message approved by City Council

The eight key shifts in the evolution from the Enterprise Priority to the City Infrastructure Strategy are summarized below.

1. Addition of guiding principles to focus on addressing equity, identifying funding, and building the team to deliver that cut across all workstreams
2. Removal of three workstreams that are considered mature in that they are firmly underway, and are part of funded ongoing business operations
    a. Complete Funded Projects (Measure T)
    b. Rebuild Regional Wastewater Facilities
    c. Ensure Cybersecurity
3. Addition of a new workstream of Municipal Regional Permit (Stormwater) to deal with this critical and pressing issues of compliance
4. Merging the work on Sanitary and Storm Sewer Collection and Green Stormwater Infrastructure into a single workstream to allow for a more comprehensive, clearly governed and Utility based approach to this work.
5. Merging the work of Downtown Municipal Electrification Large Projects and Microgrids for Resilience into the interconnected workstream of Municipal Microgrids and Electrical Service
6. Focusing the overly broad workstream of addressing infrastructure backload + O&M more narrowly over the next year on the sanitary sewer, storm sewer, and green stormwater infrastructure where there is both a high need to comply with new regulations and the potential for additional funding.
7. Revising three workstreams to focus to more accurately reflect the most important work including
    a. Shifting Understand Sea Level Rise to focus on the Shoreline Levee funding and build out to address most impacts of sea level rise in San Jose
    b. Explicitly including the Electrification of our own City Fleet as part of our Electric Vehicle Infrastructure work.
    c. Clarifying that our work in Water Supply in focused on ongoing negotiations with Valley Water, San Francisco Public Utilities Commission, and San Jose Water
8. The addition of a new Objective of Transportation & Aviation to broaden the strategy to include this City Service Area and align with the entire scope of the Transportation and Environment Committee. This new Objective includes four new workstreams of:
    a. SJC Airport New Terminal
    b. BART Silicon Valley Extension
    c. Vehicle Blight
    d. Diridon Station and Airport Connector.

## *Implementation Approach*

The City Infrastructure team will continue to use Objectives as measured by Key Results to drive implementation of the City Infrastructure Strategy. Each of the workstreams is led by workstream drivers who are empowered to define clear and specific key results that align with the delivery of each workstream. These key results should be measurable, attainable, relevant, and time-bound to a quarterly delivery cycle. Workstream drivers are individuals or teams with the necessary expertise and authority to execute the initiatives and projects related to the objectives.

We will use our interdepartmental monthly City Infrastructure meetings to engage in debate on approach and strategy, clear roadblocks to progress, and gather feedback for further improvement. In these monthly gatherings, we will also monitor progress of these key results, ensuring that teams are on track and able to address any challenges or obstacles.

Additional “Deep Dive” sessions are scheduled on an as needed basis to explore significant changes in workstreams, develop new approaches or engage in more in-depth problem solving than can be accomplished in the monthly meetings.

Regular field trips to project sites and work locations outside of City Hall are hosted by workstream drivers and the teams themselves, with a broad range of city partner and outside stakeholders attending to learn about and discuss projects in context.

A series of thought partner conversation gatherings invite city leaders and stakeholders to engage on the direction and implementation of the City Infrastructure Strategy. An initial gathering in April included leaders from Save the Bay, SPUR, Green Foothills, Coastal Conservancy, Valley Water, Keep Coyote Creek Beautiful, Silicon Valley Leadership Group, San Jose Conservation Corps, and the Stanford Doerr School of Sustainability, as well as half a dozen City Departments

On a quarterly basis, the team will report on notable achievements, challenges, and learnings to the Transportation and Environment Committee. Throughout the coming year we will use the committee as a forum to seek direction on policy and strategic approach and provide updates on individual workstreams at critical junctures. We are revising the committee workplan to focus primarily on the City Infrastructure Strategy and related workstreams.

## *Governance*

The approach to governance aligns two City Service Areas (Environment & Utilities, and Transportation & Aviation) and the work plan of the Transportation and Environment Committee with the City Infrastructure Strategy and team. The simplified governance structure is presented below in Figure 7 with Deputy City Manager Kip Harkness with the primary accountability for the City Infrastructure Strategy and team, staffing the Transportation and Environment Committee that guides the strategy, and the City Service Area of Environment and Utility Services. Deputy City Manager Rob Lloyd plays a supporting role with responsibility for the City Service Area of Transportation and Aviation. In addition to the City Infrastructure Strategy work these departments are also involved in managing numerous complex core services, department level change initiatives and many are also part of the new City’s Focus Areas. However, when it comes to Infrastructure, this strategy and the governance framework is the primary approach guiding change across the entire city organization.

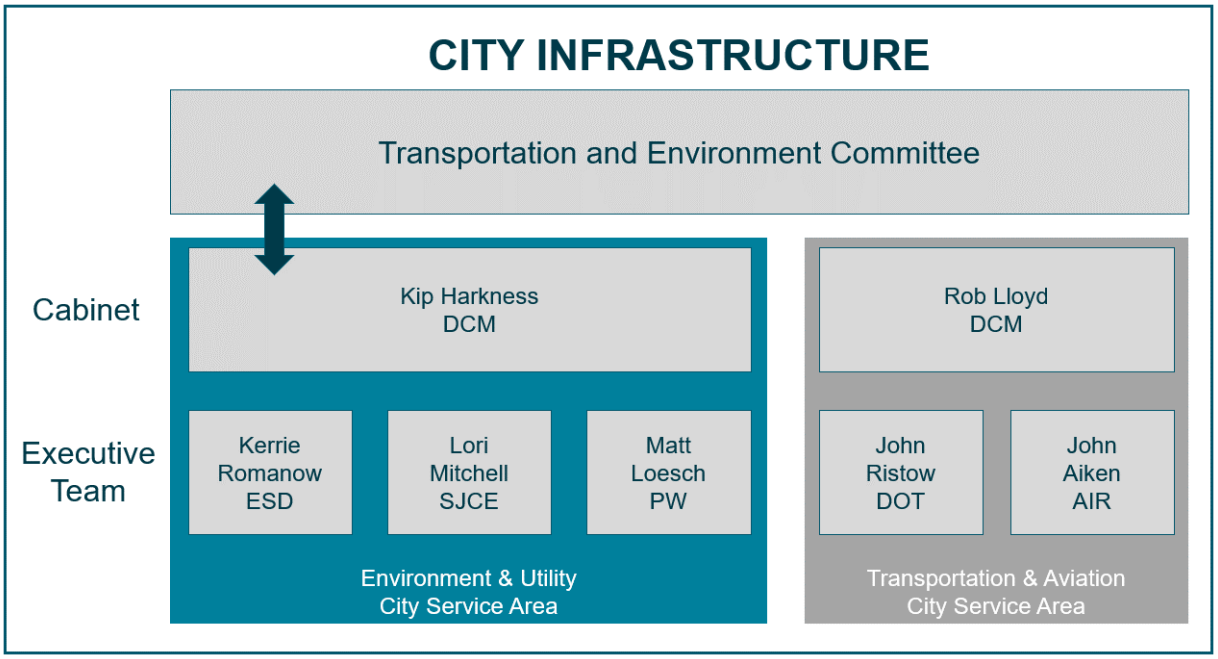



*Figure 7: City Infrastructure Governance*

## Guiding Principles

While implementing the City Infrastructure Strategy over the next year we will center our work on addressing inequity, identifying ongoing/new local, state, federal funding sources, and building the team needed to deliver.

### *Guiding Principle 1 - Addressing Inequity*

Historically investments in infrastructure in the United States have been deeply and structurally inequitable. In San José neighborhoods that were home to Mexicans/Chicanos/Latinos, Blacks, Asians, and low-income working people were literally "redlined" by insurance companies, banks and realtors who adopted formal policies to not issue loans in these communities and steer white buyers away. In the case of the Chinese neighborhoods, they were literally burned to the ground, more than once. This intentional segregation and disinvestment in neighborhood real estate owned by people of color was mirrored in public investments in infrastructure. Especially in cases such as schools, where the funding mechanism for infrastructure is based on local property taxes, this redlining drove an intentional vicious cycle of disinvestment that resulted in vastly unequal quality and distribution of infrastructure and facilities. As neighborhood conditions deteriorated as a result the cycle become self-perpetuating causing even greater concentrations of poverty and segregation thus closing off opportunities for social mobility that are inherent in mixed income neighborhoods.

The City of San José must play a role in addressing and correcting these historical wrongs. There have been several notable initiatives to begin to address these inequities, starting with the shift to district elections in the 1970s that resulted in a more diverse and representational City Council that more accurately reflected the voices of San José. In the 2000s the Strong Neighborhoods Initiative engaged some 4,000 community leaders in developing and

implementing 19 Neighborhood Improvement Plans. Drawing primarily from formerly redlined neighborhoods Downtown and on the East Side and supported by $140 Million in Redevelopment funds communities identified needed infrastructure and service improvements. Neighbors prioritized investment such as streetlights in Mayfair, functional community centers in Greater Gardner and Roosevelt, adequately paved streets in Washington, and eliminating sewer backups in Santee. All basic city infrastructure, facilities, and services that many other neighborhoods enjoyed as a matter of course.

More recently the City has prioritized a focus on racial equity and begun the hard and important work of looking at investments and service decisions through an equity lens in order to both avoid future inequity and address past inequities. In the City Infrastructure Strategy this work of addressing inequity, leading with race, will initially prioritize;

- Making decisions on future infrastructure investments and maintenance that meaningfully addresses inequities in historically underserved and under resourced communities, using tools such as the equity atlas, Racial Equity Impact Assessment Guide and assigning equity scores to projects, and
- Workforce development initiatives, such as those being undertaken by Environmental Services related to existing building electrification upgrades, that help to create a pathway to prosperity for low-income people of color as infrastructure investments are designed and built out.

With literally Billions of dollars of infrastructure investments flowing through the City, there is perhaps no other area with a greater opportunity to make a meaningful difference in addressing historical inequities. Over the course of the next year this work will be intensified and developed into a more comprehensive strategy and approach to drive change at scale.

### *Guiding Principle 2 - Identify ongoing/new local, state, federal funding sources*

The City has numerous infrastructure priorities, as identified by the Council-adopted Strategic Project List, that compete for limited local resources. Fortunately, leaders at the state and federal levels have recognized the increasing infrastructure and climate demands faced by cities and have responded with historic amounts of competitive and formula grant funding. The City has been proactive in preparing for these grant opportunities with the City Manager's Office, and the Intergovernmental Relations team, strategically identifying opportunities and working with departments to submit robust applications.

The Intergovernmental Relations team evaluates state and federal funding streams for existing and future infrastructure needs and works collaboratively and creatively with departments in resolving infrastructure funding gaps based on these opportunities. Additionally, they engage the City's local, state, and federal representatives to modify or establish policies that enable the City to make meaningful and measurable strides towards its infrastructure goals. The team also works closely with the City's State and Federal lobbyists to advocate for the City's priority projects, and coordinates between departments, project stakeholders, and the City's elected representatives to achieve alignment on priorities and how best to move them forward. Over the coming year we are strengthening this capacity with the addition of FUSE fellows looking at grants and infrastructure financing, and ongoing research into additional local funding options for infrastructure finance.

## *Guiding Principle 3 - Build the Team to Deliver*

The key to delivering all important City Infrastructure change work is the people and the teams that actually make it happen. Many of the workstreams that are part of the City Infrastructure Strategy are new and still emerging. Building out new teams in areas from microgrids to water supply is critical to the success of these initiatives. Locally there are significant leadership shifts across the City driven in part by many seasoned leaders entering retirement. At a national scale the skills needed to build, operate, and maintain modern green infrastructure are in high demand and the supply of skilled workers low. At this moment particularly critical to building the team that can deliver on this City Infrastructure Strategy is scaling the Clean Energy team and supporting significant staffing transitions in Environmental Services and Public Works Departments.

- **Clean Energy Scaling –** Scaling the provision of clean electrical energy in San José and therefore scaling the team that delivers this service is the ***condicio sine qua non,*** the indispensable action which must be done first. to meet our ambitions 2030 carbon reduction goals and address climate mitigation. Last year's mid-year budget and this year's proposed budget, if adopted, will scale the organizational head count by about 35%. This growth will take the organization from its startup phase to the next level of maturity.
- **Staffing Transitions Environmental Services and Public Works** Utility service operators and Infrastructure builders globally are seeing a mass retirement of talent and face difficulty recruiting and training replacements as well as retraining existing staff to make better use of technology and deal with the effects of climate change. Environmental Services and Public Works in San Jose are no exception to this and must focus over the coming year on building the bench to insure both continued high-quality operation and to lead needed change. This will require particular attention to emerging leaders who will soon be asked to assume higher levels of responsibility with less experience than was typical in the past.

Finally, success in building the team will require taking the time to bring diverse departments together to learn from each other, share divergent ideas, and collaborate to tackle complex and wicked problems as One Team.

# Objective and Workstreams in Detail

The remainder of the report lays out in greater detail the 5 Objectives and 16 aligned workstreams that make up the City Infrastructure Strategy. These are given as a snapshot in time and describe what each workstream is, what progress has been made to date, and the thrust of next year's planned work.

## *Disaster Ready and Climate Smart Objective*

There is a direct connection between being disaster ready and being climate smart. Climate change is in many ways a slow-moving global disaster, and each of the approaches we take to Emergency Management (mitigation, preparedness, response, and recovery), have their mirror in our approach to Climate Change (mitigation, sustainability, adaptation, and resilience). Conversely being climate smart means thinking differently about the types of disasters we are likely to face such as more extreme floods, sea level rise, and more severe wildfires. We need to adapt our emergency management plans and procedures to reflect this changing climate reality. This objective of Disaster Ready and Climate Smart comprises the workstreams of Prepare the City for the Next Disaster, Seismically Safe "Soft Story" Apartments, Shoreline Levee (Sea Level Rise), and Climate Smart Decarbonization & Mitigation.

### Prepare the City for the Next Disaster

The City of San José's Office of Emergency Management provides leadership in emergency management responsibilities through planning and coordination of programs, functions, and supporting activities to prepare for, respond to, and recover from all emergencies and disasters. In the past year, OEM

- maintained vigilant coordination with Santa Clara County regarding COVID-19 vaccination and Monkey Pox to ensure staff safety and enhancing public health.
- Led the effort to complete a comprehensive COVID-19 After Action Report.
- Provided leadership on the development of the City's first comprehensive Continuity of Operations Plan (COOP). Enhanced the delivery of the Community Emergency Response Team (CERT) program by engaging with underserved populations and increasing the CERT trained population by 20% for a total surpassing 1,000 graduates.
- Coordinated training of City staff to increase Emergency Operations Center(EOC) trained staff by 37%.

Next year, OEM will focus on the final construction and equipping the new EOC, delivery of more extensive exercises and training for the EOC staff, and reach 50% of all City staff to complete entry level Incident Command System training. The team will continue to support the CERT program with a goal of an additional 200 graduates. And will focus on the completion of an updated Emergency Operations Plan and five Supporting Annexes.

### Seismically Safe "Soft Story" Apartments

The City of San José has adopted building standards to ensure that newly constructed buildings can withstand most seismic events. However, older buildings in San José were built to previous building code standards that were less stringent with respect to seismic safety. One type of seismically vulnerable building is multifamily "soft story" buildings. A soft story

building is a multi-story building in which one or more floors have windows, wide doors, large unobstructed commercial spaces, or other openings in places where a shear wall would normally be required for stability as a matter of earthquake engineering design. Soft story buildings pose a concern because one floor of the building (usually the ground floor parking or commercial space) has significantly less lateral rigidity than stories on top of them. These buildings have a greater risk than average of collapsing during an earthquake, which would render homes uninhabitable and could physically endanger residents. Guiding principles for this program include:

- Health and Safety of residents;
- Equity and Inclusion of vulnerable and disadvantaged residents; and
- Cost avoidance for mass care and shelter in the event of a disaster.

This is a collaborative project with PBCE, Housing, and OEM. The City entered into an agreement with a consultant during Fall 2022. Since then, we have focused on identifying and developing an inventory of properties in San Jose with at least two stories and with 3+ residential units above the ground floor. A draft analysis report is due to be completed in June. Concurrently, staff has been working on development of: an outreach plan, a recommended citywide mandatory ordinance; a compliance program; an online platform for compliance document submission; and a rebate application program researching cost sharing options. It is anticipated that most of these activities will be completed during the next fiscal year and the program could be effective during Spring 2024. Staff is preparing to bring forward the program to Council during the Fall 2023 for approval.

### Shoreline Levee (Sea Level Rise)

Sea Level Rise and its potential impacts have been one of the national topics being discussed at various levels and are the concerns for local jurisdictions. Locally, Sea Level Rise has been brought up, discussed and studied by the US Army Corps of Engineers in coordination with Valley Water when preparing for the South San Francisco Bay Shoreline Phase I project; in preparation ESD with support from a consultant, completed a study to determine and mitigate the risks on the RWF due to Sea Level Rise. Besides these efforts, the City of San Jose, without an in-house expertise in this area and limited funding, has not been able to thoroughly study and understand Sea Level Rise and its impacts on the City infrastructure.

This workstream will focus on the collection and analysis of past studies and reports from various public entities (Valley Water and US Army Corps of Engineers), enlisting supports from in-house staff with guidance from consulting teams to conduct necessary studies, and coordinating with other local agencies (County of Santa Clara, Cities of Santa Clara, Milpitas, Sunnyvale, etc.) to have a deeper understanding of Sea Level Rise. This effort will allow the City and other local agencies to identify and develop mitigation plans to minimize the impacts of Sea Level Rise on local infrastructure systems. During the FY 22-23, the City has had several meetings with Valley Water and the US Army Corps of Engineers to review and track the progress of the South San Francisco Bay Shoreline Phase I project. In Spring 2023, Valley Water with the strong support of the City was awarded $91.2 Million under the Federal Disaster Supplemental Appropriations Bill for Shoreline Phase I. With this new funding secured, a steering committee between Valley Water, the City of San Jose and the California Coastal Conservancy was re-started to continue planning the remaining two reaches of the

Shoreline Levee. In FY 23-24, the focus will shift to the funding and forming of an in-house team, coordinating with other stakeholders and other local agencies, and analyzing available information and reports to support the build out of the Shoreline Levee.

### Climate Smart Decarbonization & Mitigation

The City was one of the first and largest cities to adopt a building reach code which included incentivization of all-electric construction and went into effect at the beginning of the building code cycle in January 2020. Since the California building code is updated and readopted every three years, the building reach code is required to be readopted to remain in effect.

In 2018 the City Council approved Climate Smart San Jose, the City's climate action plan, that acknowledged several areas, including natural and working lands (NWL) and solid waste, which required further evaluation for inclusion in future Climate Smart updates. In FY 18-19 and 19-20 respectively, the City funded consultant support to draft an NWL Element and a Zero Waste Element.

In FY 22-23 staff completed an administrative update of the City's building reach code thereby readopting the electric vehicle (EV) charging infrastructure requirements (October 2022) and brought the Natural and Working Lands (NWL) Element to Council (May 2023) following extensive technical work and stakeholder engagement. Staff also continued work on developing a Zero Waste Element to identify strategies to address community waste streams while reduce greenhouse gas emissions and initiated analysis of a multi-family EV charging infrastructure reach code update to increase access to EV charging with initial results presented to the Transportation and Environmental Committee in December 2022.

The FY 23-34 staff work plan includes completion of the Zero Waste Element for incorporation into Climate Smart; readopting the remainder of the City's 2019 building reach code (i.e. solar- and electrification readiness, all-electric incentivization) with the availability of supporting cost-effectiveness studies; and, returning to Council with an updated assessment, following further stakeholder engagement, of a multi-family EV charging infrastructure reach code.

## *Transportation and Aviation Objective*

The power of transportation and aviation is in how it connects people, economies, and communities. As a world-class city, San Jose depends on this infrastructure as our access with the World. Shaping this objective are post-pandemic trends affecting community life and economic vitality-- transportation safety including Vision Zero; air passenger and route recovery; major public transit decisions and investments for mode shifting; continuing projects for streets quality; and equity including streets and forestry initiatives. The teams have earned recent honors for operational excellence, performance against national benchmarks, and Airport is the #1 rated City service in the City's Annual Report. The Transportation & Aviation objective comprises the workstreams of SJC Airport New Terminal, BART Silicon Valley Extension, Vehicle Blight, and Diridon Station and Airport Connector.

### SJC Airport New Terminal

Airport Staff continue to focus on the three pre-cursor projects that must be completed or near completion prior to starting the New Terminal project. Those pre-cursor projects are;

Facilities Division Relocation (under Construction), Belly Freight Relocation (preparing the RFQ/RFP for construction) and relocation of surface lot parking, Lot 5 & 6 (project financial feasibility review).

Airport staff are also working with our financial consultants and our airline partners to develop the financing plan for the New Terminal Project.

### BART Silicon Valley Extension

Thanks to Phase I of the BART Silicon Valley extension, people can now ride BART from San José to places throughout the BART system. City staff are now focused on Phase II – extending BART six miles from the Berryessa/North San Jose Station into east and downtown San Jose. The project includes a five-mile tunnel and four new stations, including three underground stations in San Jose – at 28th Street/Little Portugal, Downtown San Jose, and Diridon Station – and one at-grade station in the City of Santa Clara.

Over the past year, City staff has worked doggedly with VTA and other partners to substantially improve the design of the stations and get ready for construction – with a major milestone in May 2023 when the City Council approved the first Construction and Transportation Management Plan (CTMP) for the project, which focuses on construction of the Newhall Yard. In the coming year, our focus will be on preparing for construction near the stations, establishing a robust Business Resource Program, including financial assistance, that helps businesses impacted by construction, and preparing detailed designs for San José's Stations, in partnership with our partners and the community.

### Vehicle Blight

Vehicle Blight services work spans six departments and includes a range of improvements that will enhance operations to produce a 30-point increase in Customer Satisfaction with the City's vehicle-related complaints for FY 2023-2024. Connected efforts include Beautify San José (BeautifySJ) response, traditional stolen and abandoned vehicle abatement, adapting to growing on-street nuisance complaints, augmenting customer service and communications, refining code enforcement handling, as well as ordinance and legislative changes that enable responsiveness to lived-in vehicle and off-road community needs. Staff will report progress to the Transportation & Environment Committee twice in FY23-24 and annually following.

### Diridon Station and Airport Connector

Diridon Station is already San Jose's main transit hub and the third-largest station on Caltrain's 80-mile system between Gilroy and San Francisco. With the electrification of Caltrain (opening Fall 2024), extension of BART, a connection to the airport, and addition of High-Speed Rail, daily trips to and from the Station are expected to grow from roughly 17,000 trips to more than 100,000. The City of San José, Caltrain, VTA, High-Speed Rail, and the Metropolitan Transportation Commission have partnered to remake the Station given the confluence of projects and additional capacity required.

Over the past year, the partners on this project have begun developing a Business Case to thoroughly evaluate and refine the concept for the Station and articulate the value proposition – ensuring that the value of the project far exceeds its cost. The partners hired a team led by Mott MacDonald to undertake this work, which includes specialists to advance our

understanding of the historic depot, project governance, track geometry, and architectural and design options, costs, and benefits (social, environmental, economic, and more). The Business Case will be complete in late 2024.

The San Jose Airport Connector project is a city-led effort to deliver a new grade-separated transit connection between San Jose Mineta International Airport and Diridon Station. City Council directed staff to develop the project as a Public Private Partnership. In April 2022, City Council approved an ordinance that authorized the use of alternative project delivery methods. Specifically, this ordinance authorized the City to procure and deliver the Diridon Station to Airport Connector Project via a design-build-finance-operate-maintain method. In April 2023, City Council authorized entering into an Predevelopment Agreement with San José Connection Partners, led by Plenary Americas US Holdings Inc. This agreement establishes a joint venture between the City and the partners of the with San José Connection Partners to validate and develop the project.

With the approval of the Predevelopment Agreement, the City and San José Connection Partners enter into a three phase project development process. Work over the next year will focus on Phase 1: Validation and Feasibility, developing the total work plan for the delivery of the project, as well as securing funding for work in Phase 2 and 3 and project construction. The Validation and Feasibility reports required by the Predevelopment Agreement will provide the City with the data and strategic information it needs to make an informed decision on if the business case, new technology, and governance approaches being developed for this project are worth continuing to pursue. The work plan for the lifecycle of the project is also required by the Predevelopment Agreement. It will give the City and its partners a roadmap to inform the management and strategic development of the project. It will provide a sense of the project's timeframe, needed deliverables, regulatory steps, major contingencies, and responsibilities.

## *Clean Energy Resilience Objective*

The City is a leader in climate change mitigation and planning, developing one of the first municipal plans to curb greenhouse gas emissions and achieve carbon neutrality by 2030 (i.e. *Climate Smart San Jose; Pathway to Carbon Neutrality by 2030*). Meeting our carbon goals will require a complete transition to clean electric energy as our primary power source. This necessitates the dramatic scaling up of renewable power production (solar, wind, hydro) and storage to support the transition of the economy (vehicles, buildings, industrial production) to electric. This will also require a massive build out and retrofit of the existing transmission and distribution lines to carry and deliver the load, as well as ultimately the retrofit of most existing buildings to eliminate existing sources of pollution. The objective of Clean Energy Resilience comprises the workstreams of Municipal Microgrids and Electrical Service, Electric Vehicle/Fleet Charging Infrastructure, and City Wide Building Electrification. Achieving these workstreams and this objective is highly dependent on the successful scaling of the Community Energy Department.

### Municipal Microgrids and Electrical Service

There is currently a significant backlog for interconnection of new loads to the electric grid. For smaller projects, the backlog averages over one year. For larger projects, especially

those that require upgrades to the bulk distribution system the backlog is as much as seven years.

The problem is systemic and related to financial fallout from Pacific Gas & Electric Company's (PG&E) recent bankruptcy and retention problems with an aging workforce. In Fall of 2022, PG&E reordered its project backlog to give priority to safety related wildfire hardening projects pushing interconnection of new residential, commercial, and industrial loads to the back of the line. The problem is likely to worsen as policy driven transportation and building electrification initiatives begin to achieve success. The California legislature is currently debating solutions, however quick or easy fixes are not available.

Interconnection delays jeopardize a wide range of critical City initiatives from housing to economic development to public transit to achievement of important goals for sustainability and resilience in this age of economic uncertainty and climate change. Adopting Municipal Code changes to allow the formation of San Jose Power make the City an "eligible wholesale customer" with the ability to apply for interconnection to the high voltage transmission system and provide municipal electrical service and deploy microgrids where it makes economic sense and advances critical completion schedules can help mitigate some of these impacts and risks. In particular, there may be benefits to serving municipal loads in improving resiliency and reducing costs, especially for critical City facilities. These impacts need further evaluation and studies.

The City of San José currently manages over 130 critical facilities including fire and police stations, emergency shelters, and pump stations; 97 have fuel backup sources that are either diesel or propane powered, but others have no backup power at all.

Microgrids offer the perfect combined solution to reducing emissions and achieving emergency resilience. By producing energy from renewable solar power without subsequent emissions and distributing energy very close to the source, microgrids reduce emissions production, heat and energy loss associated with traditional power plant and energy distribution systems. Since solar and battery technology can be independent from the grid, critical facilities and emergency shelters can operate even if the main power grid fails.

In FY 22-23, the Public Works Department initiated the Microgrids workplan through staffing and construction design. Staffing achievements included hiring the Program Manager of Microgrids in late November 2022, a Supervising Environmental Services Specialist of Green Building in March 2023, and two student interns starting in June 2023. Three recruitments for an Associate Engineer were held - two unsuccessfully and one in progress as of May. Informed by a 2019 ranking study, the top two microgrid sites, Happy Hollow Zoo and Roosevelt Community Center, entered design planning in March and will be ready for construction bids by July. Their construction costs were submitted to the CA Resilience Challenge grant in September 2022 and for FY23-24 General Fund consideration but denied by both. In May staff submitted a Notice of Interest to the Hazard Grant Mitigation Program (HMGP) to cover the sites' construction costs which was invited for full application this summer.

The FY 23-24 staff work plan includes developing a comprehensive Microgrids Roadmap that assesses various funding options. In addition to HMGP, staff expect to complete applications for the Charging and Fueling Infrastructure (CFI) Discretionary Grant Corridor Program to fund a microgrid-powered *San José Fleet and Emergency Charging*

*Infrastructure Project* at the Central Service Yard and the Regional Resilience Challenge Grant to fund development of a *Microgrids Roadmap and Grid Resiliency Strategy Plan*. The Federal Emergency Management Agency (FEMA)'s Building Resilient Infrastructure and Communities (BRIC) grant was recently pulled from the work plan at FEMA's advisement. Staff are evaluating other grants including the Department of Energy's Grid Resilience and Innovation Partnerships (GRIP) and the CA Strategic Growth Council's Community Resiliency Centers programs; and will be scoping long-term resources such as loans, fees or tariff based funding options.

### Electric Vehicle Fleet/Charging Infrastructure

In FY 23 – 24, staff will continue working from the interdepartmental action plan on electric mobility. This action plan highlights the need to electrify the City fleet, as well as support the conversion of private vehicles and commercial uses. A central piece of the action plan is the development of a Citywide network plan to help staff identify where both private and business EV uses demand is located, what type of demand it is and how it will be meet. Staff continues to assess the feasibility and budget needs to increase the amount of new electric vehicles within the municipal fleet inventory, as well as to provide more availability to electric vehicle supply equipment for City operations, employee personal cars, and public / visitor vehicles. Within the municipal vehicle replacement program, comparable all-electric or hybrid equivalents, rather than gas fueled options, are considered first for procurement, dependent on availability within the marketplace. Additionally as proposed in the FY 23 – 24 budget, $300,000 will be used to further assess the electrical capacity of several City facilities, starting with the downtown parking structures, to determine current levels of electric service that can sustain the installation of more electric vehicle charging units now, and to calculate the increase in electric service required from the utility to add more charger units in the future to accommodate for growth while not jeopardizing the integrity of the electrical distribution system.

Also in FY 23 – 24 staff will continue to review and finalize candidate sites and vendor options for a fast charging hub pilot program, and both Level 2 and fast chargers will continue to be installed through the California Electric Vehicle Infrastructure Program (CALeVIP). Staff will also further assess the placement of additional charging stations within the City with considerations involving geography, capacity, infrastructure, and access and functional needs of both the private and public sectors to ensure equitable planning in low-and-middle income communities as well as communities of color, with a particular focus in East San Jose.

### City Wide Building Electrification

Building upon the City's Climate Smart plan, the City Council-adopted Pathway to Carbon Neutrality by 2030 (plan) identified building electrification, coupled with carbon-free electricity from San Jose Clean Energy, as a key focus area to achieve San Jose's community-wide greenhouse gas (GHG) reduction goals. The City Council approved building reach code and Natural Gas Infrastructure Prohibition ordinances to require all-electric new construction in 2019 and 2020, and the City continues to focus on progress toward new building electrification as well as supporting the community in upgrading existing buildings to all-electric appliances. Building electrification can also result in co-benefits to the San Jose's

community including access to indoor space cooling, cleaner indoor and outdoor air, lower energy utility costs, and high-quality workforce opportunities.

In FY 22-23 staff completed the following: applied for over $4.5M and received over $3.5M in external funding and resources to support Climate Smart initiatives, with over $1M towards supporting building electrification efforts; executed a contract with BlocPower LLC (September 2022) to develop and implement the Building Electrification and Workforce Development Accelerator Program developed the BlocMaps tool to help identify and target all-electric building upgrade opportunities; and, established a 11-member Community Advisory Board to provide vital community input into the Accelerator Program design, outreach, and other aspects of the City's Climate Smart Plan.

The FY 23-34 staff work plan includes: implementing and scaling up (with external federal funding) an Accelerator Program to streamline building electrification assessments, incentive acquisition, and implementation; evaluating a potential zonal electrification pilot that would repurpose PG&E funding planned for natural gas infrastructure upgrades to further building electrification in targeted areas of the city; and an assessment of the City's permitting process and engagement to identify any improvements that could further support building and vehicle electrification.

## *Water Resilience Objective*

Water is life. We need solutions that provide clean water at scale in a changing climate to address both the equity needs of people (such as continuing to build housing) and the environmental needs of the city (such as clean creeks) Increasingly it is useful to see all the components that make up water as a single interconnected and interdependent system. Sanitary Sewers, Storm Sewers, Green Storm Water Infrastructure, Wastewater Treatment, recycled water, potable water and our rivers and creeks are all essentially part of a single water system. Seeing them as one system that can be made into a sustainable circle begins to open possibilities for a more resilient water future. The water and clean energy resilience objectives are themselves increasingly inter-connected in a system of systems especially with regards to projects such as purified water production or brackish water desalination with significant energy costs, or energy uses such as data centers with significant water needs. The Objective of Water Resilience comprises the workstreams of Municipal Regional Permit (Stormwater), Sanitary and Storm Sewer Collection Systems and Stormwater Management, and Water Supply.

### Municipal Regional Permit (Stormwater)

San José is home to approximately 140 miles of waterways. Protecting the water quality of this vast riparian area requires significant resources and commitment. The City of San José holds a Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (Stormwater Permit) issued by the San Francisco Bay Regional California Water Board (Water Board) on behalf of the Environmental Protection Agency. The current five-year Stormwater Permit was adopted by the Water Board on May 11, 2022, became effective July 1, 2022, and will be in effect until June 30, 2027.

The Stormwater Permit includes significant changes from previous permits impacting several existing programs and requiring additional new programs that focus on protecting the storm sewer system and waterways. Compliance with the Stormwater Permit may require the City

to increase certain permit fees. Even so, significant additional funding is needed for the City to support programs and ongoing maintenance needs in order to comply with the Stormwater Permit and Clean Water Act.

To date: Since the early 1990s, the City has actively worked to clean up debris from unsheltered populations along creeks. An average of 88% of the trash found in creeks is coming from the activities of people experiencing homelessness. The City was the first municipality in the San Francisco Bay Area that was approved by the Water Board to implement a Direct Discharge Trash Control Plan (Direct Discharge Plan). On December 13 2022, City Council approved City staff to submit an updated Direct Discharge Plan to the San Francisco Bay Regional Water Quality Control Board (Water Board). Approval of the Direct Discharge plan will help the City meet the trash reduction requirements of the Stormwater Permit. However, additional and continued hard work is required to ensure the City meets its ongoing legal obligations.

On May 9, 2023, City Council approved ordinance, policy and administrative fine updates to enable the City to implement and enforce the Stormwater Permit Provisions C.3 (new and redevelopment) and C.12 (PCB Building Demolition). This entailed (1) modifying current language to align with the Stormwater Permit's new threshold requirements for new development and redevelopment projects, single-family home projects, small projects, and smaller single-family home projects, including sidewalks and other parts of the public right-of-way that will be developed or redeveloped as a part of the project, (2) incorporating requirements for notifications, inspections, and disposal documentation in support of the City's Polychlorinated Biphenyls (PCBs) in the Demolition Program (3) updating City Council policies to ensure notice and enforceability; and (4) updating the administrative citations fines to ensure enforceability.

Next fiscal year, City staff will update Council on a long-term Trash Plan that demonstrates various City actions required to reduce trash entering the stormwater system in order to meet the Stormwater Permit's stringent trash reduction requirements by its June 30, 2025, deadline. Also, by this deadline, the City must implement programs regarding trash from private lands connected to stormwater system. A short time later, by June 2027, the City must also address PCBs found on parcels or public right of way. The Stormwater Permit's obligations also include managing discharges associated from unsheltered populations and emergency discharges from firefighting activities; and identifying and implementing an asset management plan for cost reporting, including a fiscal analysis of the capital, operation, and maintenance costs that the City incurs.

### Sanitary and Storm Sewer Collection Systems and Green Stormwater Infrastructure

The City needs to expand its investment in the storm sewer system and stormwater management as it faces challenges such as a deferred maintenance backlog, increasing regulatory compliance requirements, future population growth, and emerging effects of climate change on our aging infrastructure.

To more fully understand system needs and the associated projected costs, in FY 2022-23, the City has obtained a consultant to conduct a study of other jurisdictions and produce a proposed financing plan and rates model which considers all available sources of funding, including grants, loans, and other financing options available to the City. In addition, City staff prepared a budget proposal seeking funds to assess the anticipated investment needs for 1)

ongoing Storm Sewer System Infrastructure (Capital and O&M), 2) deferred maintenance (repair and rehabilitation backlog) of existing Storm Sewer System Infrastructure (Capital and O&M), and 3) increasing regulatory requirements (near-term and long term). The results of these effort will allow the City to identify the most attainable funding sources potentially put a measure on a future ballot for voter approval.

#### Water Supply Negotiations

San Jose developed into the City it is today based upon abundant imported water supplies. With a changing climate and potential negative impact the source and diversion of imported water supplies may have on the environment, there is real value in allocating resources to reduce San Jose's reliance on imported water supplies, strengthen climate change driven resiliency, adapt to long term impacts on water supplies, and develop local and sustainable projects, beyond the efforts of the local water wholesalers.

The City has entered in the following agreements and a letter of intent, with San Jose Water Company, Santa Clara Valley Water District, City of Santa Clara, and the San Francisco Public Utilities Commission, to evaluate multiple water supply projects.

- Letter of Intent for Collaborating on the Expansion of Purified Water in Santa Clara County
- Memorandum of Agreement Among City of San Jose, City of Santa Clara, and City & County of San Francisco Public Utilities Commission for the South Bay Purified Water Project Feasibility Study
- Memorandum of Understanding Between the City of San Jose and San Jose Water Company for a Partnership on Water Supply Resiliency

These potential projects include the expansion of recycled water for parks and schools, a brackish water desalinization project, and a purified water project that will ensure long term water supplies from SFPUC, while providing water for future development in North San Jose, and aligning with Valley Water's efforts to increase use of purified water as a water supply.

### *Natural Environment Restoration*

In addition to being an important objective, the protection and restoration of the natural environment should be considered in each of the other objectives from transportation to energy, to water, to how we approach climate and disasters. This understanding is particularly relevant as we think about workstreams like Green Stormwater Infrastructure, keeping our creeks clean as part of the Municipal Regional Permit, and the Natural and Working Lands element of the Climate Smart Plan. With some creative thinking and financing natural restoration can often be the solution to multiple problems at once, such as creating stormwater retention ponds that are also park like amenities. As they say there is no Planet B, and in urban places like San José we must act quickly and decisively to preserve and expand the limited green, natural, and wild spaces that remain. The objective of Natural Environment Restoration comprises the workstreams of Community Forest (Urban Tree Canopy) and Protect Coyote Valley Open Space.

#### Community Forest (Urban Tree Canopy)

The focus of the workstream is to protect, preserve, and plant trees in order to maintain and restore tree canopy throughout the City. DOT is scaling up this new program and has hired 5

members for its forestry team, including its first City Forester. Operational and policy improvements have resulted in increased awareness of trees in development review, as well as a planned maintenance cycle for city-owned trees. Staff have used increased funding to plant 2,000 trees in Fiscal Year 2022-23, approximately 1,400 more than the prior year. Staff continues to seek enhanced or new partnerships to increase public awareness regarding the importance of trees, and more cost-effectively plant and maintain new trees.

### Protect Coyote Valley Open Space

The City of San Jose is contracting with a consultant team to carry out a study in the area east of Monterey Road in Coyote Valley. This study will analyze potential for allowing non-residential uses which are compatible or complementary to the agriculture and open space nature of the study area. Staff has projected for this work to be completed by the end of 2024.

Accomplished in last fiscal year: Staff selected the consultant team, Placeworks, and they were contractually brought on board in April. Task expected to be completed this fiscal year include: a kickoff meeting with planning staff, a site tour, an initial assessment of CEQA issues, and a community meeting.

Focus for next fiscal year: Completion of baseline assessment, agriculture/economic assessment, and preliminary draft of development and design regulations.

# Investments in Infrastructure Resilience

## *Significant Resource Additions in FY 2022-23*

In FY 2022-23, the City allocated total funding of $1,750,000 to be spent over a two-year period for climate and seismic resilience planning and project development. As directed in the 2022 Mayor's March Message, this budget action created a multi departmental team led from the City Manager's Office to drive results informed by equity considerations on key resilience objectives and major capital projects in the areas of drought resilience, sea level rise, microgrid development, urban forests, seismic safety, Coyote Valley open space implementations, electrification, and rehabilitation of aging City infrastructure.

This budget action created three positions to help shepherd this work. First, a Lead Resilience Strategist position in the City Manager's Office to coordinate efforts across departments under the direction of a Deputy City Manager and work to secure funding for future large-scale infrastructure improvements. Second, a Microgrids Program Manager in Public Works Department to focus on microgrid development at fire stations and other City facilities. Third, a Principal Engineer in the Environmental Services Department to investigate recycled water projects. Currently the first two positions are filled and the third is under recruitment.

In addition to the budgeted positions, the City brought on two FUSE Executive Fellows to augment City staff. The two FUSE fellows are focused on: 1) Designing Resilient Water Supply and Management, and 2) Resilient Infrastructure Financing and Grants. Both FUSE Fellows began their one-year term in May 2023.

## *Summary of Relevant New Budget Proposals in FY 2023-24*

In the proposed FY 2023-24 operating budget[1], the City seeks to allocate over $14,000,000 in one-time and ongoing new funding toward Infrastructure Resilience workstreams.

| Budget Item | Depart-ment(s) | Positions | Non-Personal ($) | Total Funds ($) |
|---|---|---|---|---|
| **Workstream: Prepare the City for the Next Disaster** | | | | |
| Urban Area Security Initiative Grant Staffing | OEM | 1.0 Senior Executive Analyst and 1.0 Executive Analyst | | $403,000 |
| Emergency Preparedness: Communications and Mass Care | OEM | 1.0 Assistant to the City Manager | | $323,002 |

[1] https://www.sanjoseca.gov/home/showpublisheddocument/97189/638194951743370000

| Budget Item | Depart-ment(s) | Positions | Non-Personal ($) | Total Funds ($) |
|---|---|---|---|---|
| Disaster Recovery and Grants Management Staffing | FIN | 1.0 Division Manager and 2.0 Senior Analyst positions, continues 3.0 Accounting Technicians and 1.0 Accountant II | | $1,254,483 |
| **Workstream: Climate Smart Decarbonization & Mitigation** | | | | |
| Climate Smart San José Contractual Services* | ESD | | $400,000 | $400,000 |
| **Workstream: Vehicle Blight** | | | | |
| San José 311 Enhancement | ITD | | $500,000 | $500,000 |
| **Workstream: Municipal Microgrids and Electrical Service** | | | | |
| San José Clean Energy Regulatory Compliance, Policy and Legislative Affairs Staffing | CED | 1.0 Senior Power Resources Specialist and 2.0 Power Resources Specialist | | 574,536 |
| Customer Program Staffing and City Electrification | CED | 1.0 Senior Power Resources Specialist | | $466,520 |
| Risk Management and Contract Staffing | CED | 2.0 Senior Power Resources Specialist | | $433,039 |
| San José Clean Energy Budget and Financial Planning Staffing | CED | 1.0 Analyst and 1.0 Accounting Technician | | $298,817 |
| Power Resources Staffing | CED | 1.0 Principal Power Resources Specialist | | $262,583 |
| San José Clean Energy Account Management Staffing | CED | 1.0 Senior Power Resources Specialist | | $216,519 |
| Information Technology Staffing for Budget Office, Clean Energy, and Finance Revenue Management Support | ITD | 1.0 Enterprise Supervising Technology Analyst (ESTA) | | $212,570 |

| Budget Item | Depart-ment(s) | Positions | Non-Personal ($) | Total Funds ($) |
|---|---|---|---|---|
| **Workstream: Citywide Building Electrification** | | | | |
| Climate Smart San José Contractual Services* | ESD | | $400,000 | $400,000 |
| **Workstream: Municipal Regional Stormwater Permit** | | | | |
| Stormwater Permit Compliance Staffing | ESD | 1.0 Environmental Services Program Manager | | $203,191 |
| Sanitary Sewer Engineering Staffing | DOT | 1.0 Engineer II | | $182,793 |
| **Workstream: Sanitary & Storm Sewer Collection Systems + Green Stormwater Infrastructure** | | | | |
| Storm and Sanitary Sewer Infrastructure and Regulatory Investment Needs | ESD PW | 1.0 Principal Engineer/Architect 0.10 Deputy Director | $550,000 | $812,434 |
| Biosolids Management Strategy Support | ESD | | $1,150,000 | $1,150,000 |
| Regional Wastewater Facility Operations Staffing | ESD | 1.0 Wastewater Operations Foreperson and 1.0 Instrument Control Technician | | $377,931 |
| Internal Server Replacement and Server Storage Expansion | ESD | | $200,000 | $200,000 |
| Sanitary Sewer Maintenance Replacement Vehicle | DOT | | $2,082,000 | $2,082,000 |
| **Workstream: Water Supply Negotiations** | | | | |
| South Bay Water Recycling Operational Improvements | ESD | | $3,436,000 | $3,436,000 |
| Water Supply Resiliency Staffing | ESD | 1.0 Senior Environmental Program Manager | | $219,628 |
| **TOTAL** | | | | **$14,009,046** |

* Denotes a Budget action that applies to more than one workstream and appears multiple times in the table above

## Emerging Issues and Potential Future Workstreams

The intent of the City Infrastructure Strategy is to focus the team on the shorter list of vital few change initiatives and let them say no, or at least not yet, to other change related work. The reality is not always so neat, and there are always emerging opportunities and issues that require the focus and attention of the city. In these cases, the City Manager's Office plays a critical role in early exploration of emerging opportunities and often is the lead until a clear departmental driver and supporting funding can be identified. Two areas in particular fit this category of emerging issues that are likely to develop into formal workstreams over the next year and are important to highlight now; electrical transmission and distribution infrastructure, and the Regional Wastewater Facility Master Plan.

Electrical Transmission and Distribution Infrastructure – Our shift to green electrical energy can only happen if the electrical transmission and distribution infrastructure can safely and reliably carry the dramatically increased load and more distributed generation of electrical energy. The non-profit California Independent System Operator that oversees transmission lines in California is currently leading a massive build out of transmission infrastructure including two major High Voltage Direct Current lines that will connect into San Jose. On the distribution side the reality is PG&Es distribution infrastructure in San Jose is aging, designed for a cooler climate and inadequate to meet the load that will be required as we transition to renewable energy and electric vehicles. We must find a path to ensuring that San Jose has the safe, reliable, modern, at scale electrical grid that our community needs and deserves.

Regional Wastewater Facility Master Plan – the current master plan was adopted in 2013 and provides a thoughtful blueprint for future land uses. The recent accelerated shift to renewable electricity, interest in increased water supply using either wastewater or brackish water, new incentives made available through federal grants and tax credits, potential build out of the Shoreline Levee, shift from outdoor drying to indoor processing of sludge, success of co-generation at the plant and initial planning of economic development lands make this area a hotspot for transformation. While there is currently limited space that is not operational or already committed in the near-term, areas for possible future opportunities will open as the drying beds are transitioned to indoor uses and other changes to the plant operations. Since the City of San Jose co-owns the plant with the City of Santa Clara they will be important partner in this, as well as taking into consideration the needs and perspectives of other tributary agencies.

Over the next year the City Manager's Office will serve as the executive lead on both of these emerging opportunities and work to develop the appropriate team and necessary funding to support them as formal workstreams going forward.

# Conclusion

***A great City has great infrastructure***, the often-invisible networks of pipes, conduits, wires, roads, vehicles, facilities, and natural spaces that connect us and enables the daily utilities that make modern life possible. Every day this infrastructure quietly brings us water, electricity, broadband, and takes away our sewage, storm water, garbage, and recycling.

The City Infrastructure Strategy presented here is our recommended approach to ensuring that the City of San José builds and maintains the infrastructure needed to meet the needs of our people and address the challenges of climate change. In alignment with the direction provided by the City Council and based on deep experience and professional expertise the strategy presents a pragmatic and agile approach to focusing on the most important changes we need to make over the coming years.

Successful implementation will require: Addressing inequity and historical disinvestment; identify ongoing/new local, state, and federal funding sources, and building the team to deliver. Our clear governance structure and use of Objectives as measured by Key Results will deliver results across the 5 objectives and 17 workstreams and help quickly surface issues and obstacles.

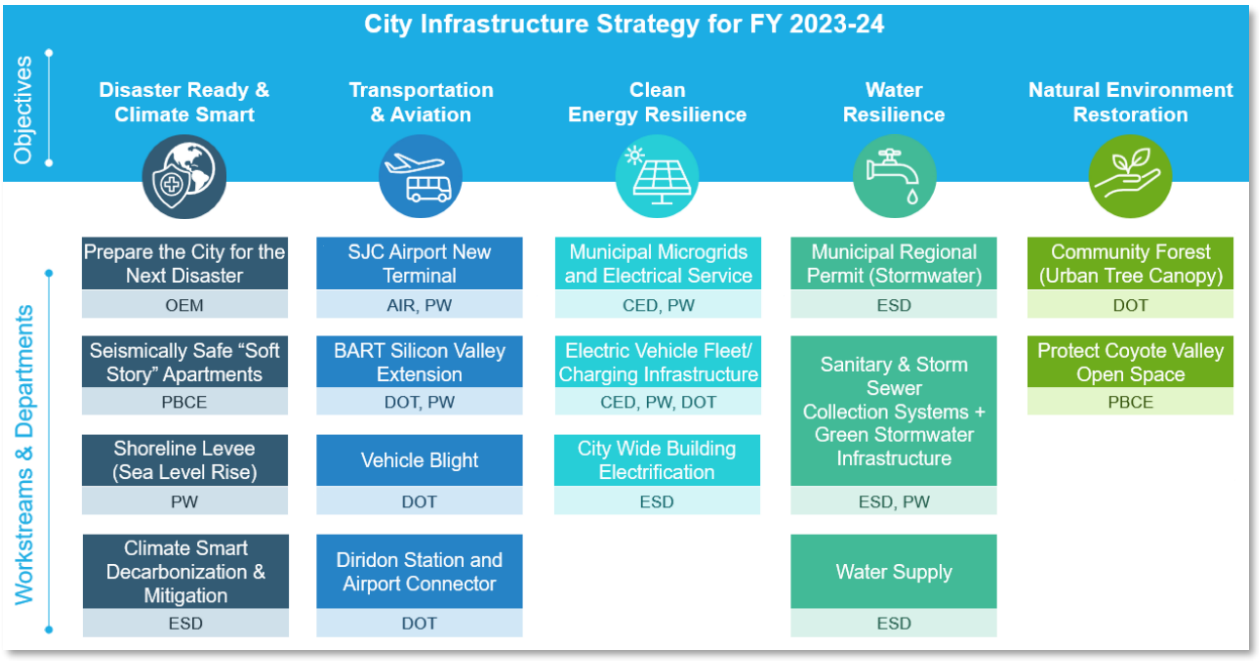



*Figure 8: City Infrastructure Strategy, FY 2023-24*

We look forward to continuing to engage with stakeholders and will be returning regularly to the City Council through the Transportation and Environment Committee to seek policy direction, provide updates on progress, and receive guidance and feedback for continuous improvement.

# Suggested Additional Reading – Books

## California Burning: The Fall of Pacific Gas and Electric - And what is Means for America's Power Grid

**Author** Katherine Blunt

**Abstract** The story of how the Camp Fire - California's deadliest and most destructive wildfire - exposed both the failure of a once-innovative company and the weakness of our national infrastructure.

**Date** 2022

## Doughnut Economics: Seven Ways to Think Like a 21rst-Century Economist

**Author** Kate Raworth

**Abstract** In Doughnut Economics, Raworth sets out seven key ways to fundamentally reframe our understanding of what economics is and does. Along the way, she points out how we can break our addiction to growth; redesign money, finance, and business to be in service to people; and create economies that are regenerative and distributive by design. Named after the now-iconic "doughnut" image that Raworth first drew to depict a sweet spot of human prosperity, Doughnut Economics offers a radically new compass for guiding global development, government policy, and corporate strategy, and sets new standards for what economic success looks like.

**Date** 2018

## Getting to Yes: Negotiating Agreement Without Giving In

**Author** Roger Fisher

**Author** William Ury

**Author** Bruce Patton

**Abstract** Based on the work of the Harvard Negotiation Project, a group that deals with all levels of negotiation and conflict resolution, it offers readers a straightforward, universally applicable method for reaching mutually satisfying agreements, at home, in business, and with people in any situation.

**Date** 2011

## How to Avoid a Climate Disaster: The Solutions we have and the Breakthroughs we Need

**Type** Book

**Author** Bill Gates

**Abstract** Bill Gates has spent a decade investigating the causes and effects of climate change. With the help of experts in the fields of physics, chemistry, biology, engineering, political science, and finance, he has focused on what must be done in order to stop the planet's slide to certain environmental disaster. In this book, he not only explains why we need to work toward net-zero emissions of greenhouse gases, but also details what we need to do to achieve this profoundly important goal.

**Date** 2022

## Introduction to Water in California

**Author** David Carle

**Abstract** This engaging and concise book tells the story of California's most precious resource, tracking the journey of water in the state from the atmosphere to the snowpack to our faucets and foods. Along the way, we learn much about California's rivers, lakes, wetlands, dams, and aqueducts and the role of water in the state's agricultural, environment, and politics. Essential reading in a state facing the future with an overextended water supply, this fascinating book shows that, for all Californians, every drop counts.

**Date** 2016

## Let There Be Water: Israel's Solution for a Water-Starved World

**Author** Seth Siegel

**Abstract** Illustrates how Israel can serve as a model for the United States and countries everywhere by showing how to blunt the worst of the coming water calamities. Even with 60 percent of its country made of desert, Israel has not only solved its water problem; it has an abundance of water.

**Date** 2015

## Measure What Matters: OKRs - The Simple Idea That Drives 10x Growth

**Author** John Doerr

**Abstract** In Measure What Matters, Doerr shares a broad range of case studies with narrators including Bono and Bill Gates, to demonstrate the focus, agility, and explosive growth that Objectives as Measured by Key results (OKRS) have spurred at so may great organizations.

**Date** 2017

## The Color of Law: A Forgotten History of how our Government Segregated America

**Author** Richard Rothstein

**Abstract** A groundbreaking investigation into how U.S. governments in the twentieth century deliberately imposed racial segregation on metropolitan areas nationwide.

**Date** 2017

## The Long Summer: How Climate Changed Civilization

**Author** Brian Fagan

**Abstract** Humanity evolved in an Ice Age in which glaciers covered much of the world. But starting about 15,000 years ago, temperatures began to climb. Civilization and all of recorded history occurred in this warm period - the long summer of the human species. In the Long Summer, Brian Fagan illuminates the centuries-long patterns of human adaptation to the challenges of an ever-changing climate - and how climate change gave rise to civilization.

**Date** 2004

## Water, Wastewater, and Stormwater Infrastructure Management

**Author** Neil Grigg

**Abstract** . A road map for public works and utility professionals, Water, Wastewater, and Stormwater Infrastructure Management, Second Edition provides clear and practical guidance for life-cycle management of water infrastructure systems. Grounded in solid engineering and business principles, the book explains how to plan, budget, design, construct, and manage the physical infrastructure of urban water systems. It blends knowledge from management fields such as facilities, finance, and maintenance with information about the unique technical attributes of water, wastewater, and stormwater systems.

**Date** 2012

# Suggested Additional Reading – Reports and Articles

- Climate Smart San Jose
  Report:
  https://www.sanjoseca.gov/home/showpublisheddocument/32171/636705720690400000
  Dashboard: https://www.sanjoseca.gov/your-government/departments-offices/environmental-services/climate-smart-san-jos/climate-smart-data-dashboard

- San Jose Pathway to Carbon Neutrality 2030
  https://www.sanjoseca.gov/home/showpublisheddocument/93082/638065452005070000

- Electrification Impacts Study Part 1, CPUC
  https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M508/K423/508423247.PDF

- San José Clean Energy 2022 Integrated Resource Plan November 1, 2022
  https://sanjosecleanenergy.org/wp-content/uploads/2022/11/sjce_irp_public_v1.pdf

- Valley Water Countywide Water Reuse (CoRe) Master Plan Draft and Appendices
  https://fta.valleywater.org/fl/XNyG7Fja6T

- San Jose – Santa Clara Regional Wastewater Facility, Plant Master Plan
  https://www.sanjoseca.gov/home/showpublisheddocument/206/636611441889800000

- City of San Jose Integrated Water Infrastructure Program
  Memo: https://sanjose.legistar.com/View.ashx?M=F&ID=8948113&GUID=00536CFF-19CF-402E-AD3A-16189D58BC45
  Presentation:
  https://sanjose.legistar.com/View.ashx?M=F&ID=8980704&GUID=EFEA308B-5003-4A8C-8441-868CC3D0AEFF

- San Jose Diridon Station Integrated Concept Plan
  Memo: https://sanjose.legistar.com/View.ashx?M=F&ID=7919130&GUID=653ADFBE-BD6A-4CB5-BAA5-419B61F93215
  Presentation:
  https://sanjose.legistar.com/View.ashx?M=F&ID=7935170&GUID=56AE0E96-C8BA-421B-9AC9-2BFB35C02225

- Coyote Valley Conserved Areas Master Plan
  https://www.openspaceauthority.org/our-work/planning-coyote-valley.html

- South San Francisco Bay Shoreline Project (Phase I) – Shoreline Levee
  Project Overview: https://www.valleywater.org/shoreline
  Video: https://youtu.be/nFOJ07Ny658