



# Agenda General Obligation Bond Environment & Sustainability Subcommittee

Meeting Location:  
City Council Chambers  
200 W. Jefferson St.  
Phoenix, Arizona 85003

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Monday, August 22, 2022

9:00 AM

City Council Chambers

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## **OPTIONS TO ACCESS THIS MEETING**

### **Virtual Request to speak at a meeting:**

- **Register online** by visiting <http://www.phoenix.gov/bond/meetings> **at least 2 hours prior to the start of this meeting**. Then, click on this link at the time of the meeting and join the Webex to speak:

<https://phoenixpublicmeetings.webex.com/phoenixpublicmeetings/onstage/g.php?MTID=e1ee8baf83dc7f634564cafe658ab9909>

- **Register via telephone** at 602-262-6001 **at least 2 hours prior to the start of this meeting**. Then, use the call-in phone number and Meeting ID listed below at the time of the meeting to call-in and speak.

### **In-Person Requests to speak at a meeting:**

- Register in person at a kiosk located at the City Council Chambers, 200 W. Jefferson St., Phoenix, Arizona, 85003. Arrive **1 hour prior to the start of this meeting**. Depending on seating availability, residents will attend and speak from the Upper Chambers or Lower Chambers.

- Individuals should arrive early, 1 hour prior to the start of the meeting to submit an in-person request to speak before the Call to the Public item is called. After the Call to the Public item is called, requests to speak will not be accepted.

### **At the time of the meeting:**

- Watch the meeting live streamed on [phoenix.gov](http://phoenix.gov) or Phoenix Channel 11 on Cox Cable, or using the Webex link provided above.

- **Call-in** to listen to the meeting. Dial 602-666-0783 and Enter Meeting ID 2491 726 9633# (for English) or 2482 163 0162# (for Spanish). Press # again when prompted for attendee ID.

- **Watch** the meeting in-person from the Upper Chambers or Lower Chambers depending on seating availability.



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**Para nuestros residentes de habla hispana:**

- **Para registrarse para hablar en español**, llame al 602-262-6001 **al menos 2 horas antes del inicio de esta reunión** e indique el número del tema. El día de la reunión, llame al 602-666-0783 e ingrese el número de identificación de la reunión 2482 163 0162#. El intérprete le indicará cuando sea su turno de hablar.

- **Para solamente escuchar la reunión en español**, llame a este mismo número el día de la reunión (602-666-0783); ingrese el número de identificación de la reunión 2482 163 0162#. Se proporciona interpretación simultánea para nuestros residentes durante todas las reuniones.

- **Para asistir a la reunión en persona**, vaya a las Cámaras del Concejo Municipal de Phoenix ubicadas en 200 W. Jefferson Street, Phoenix, AZ 85003. Llegue 1 hora antes del comienzo de la reunión. Si desea hablar, regístrese electrónicamente en uno de los quioscos, antes de que comience el Llamado al Público. Una vez que comience el Llamado al Público, no se aceptarán nuevas solicitudes para hablar. Dependiendo de cuantos asientos haya disponibles, usted podría ser sentado en la parte superior de las cámaras, o en el piso de abajo de las cámaras.



# **Agenda General Obligation Bond Environment & Sustainability Subcommittee**

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**Monday, August 22, 2022**

**9:00 AM**

**City Council Chambers**

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## **CALL TO ORDER**

## **DISCUSSION AND POSSIBLE ACTION**

### **1. Introductory Remarks**

Introductory remarks by the Subcommittee Chair.

### **2. Appointment of Vice Chair**

The Subcommittee will appoint a member as Vice Chair.

**THIS ITEM IS FOR DISCUSSION AND POSSIBLE ACTION**

### **3. Capital Needs Study**

Staff will provide background on the current Environment & Sustainability programs, and will review the prioritized and future capital needs identified in the Capital Needs Study. Subcommittee members may introduce and discuss project concepts outside those identified in the Capital Needs Study, and may direct staff to provide further reports in future meetings.

**THIS ITEM IS FOR INFORMATION, DISCUSSION AND POSSIBLE ACTION**

## **CALL TO THE PUBLIC**

## **FUTURE AGENDA ITEMS**

## **ADJOURN**



# Agenda General Obligation Bond Environment & Sustainability Subcommittee

Meeting Location:  
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200 W. Jefferson St.  
Phoenix, Arizona 85003

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**Monday, August 22, 2022**

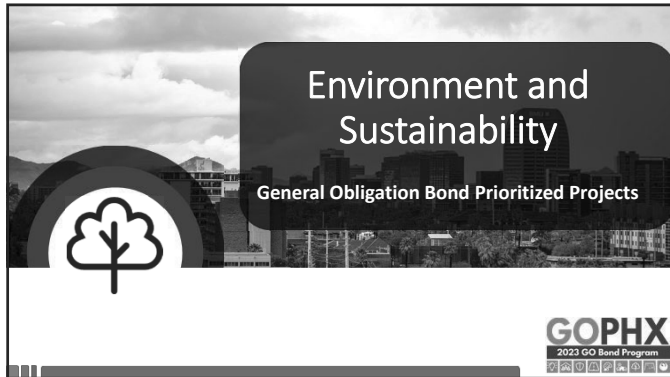
**9:00 AM**

**City Council Chambers**

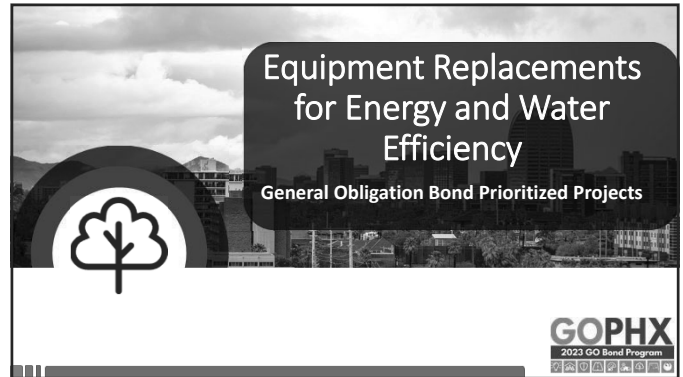
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*For reasonable accommodations, please contact Genevieve Siri at 602-495-7320 a minimum of two business days prior to the meeting. 7-1-1 Friendly.*

*Persons paid to lobby on behalf of persons or organizations other than themselves must register with the City Clerk prior to lobbying or within five business days thereafter, and must register annually to continue lobbying. If you have any questions about registration or whether or not you must register, please contact the City Clerk's Office at 602-534-0490.*



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## Equipment Replacements for Energy and Water Efficiency

- Facility Condition Assessments identified climate control systems that are past useful life and need replacement.
- This program will also replace climate control systems with "smart" technology and address "hard water" in cooling towers.



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## Equipment Replacements for Energy and Water Efficiency



Modern Building Mechanical System



Evaluating Climate Control via Technology

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## Phoenix Sky Harbor Project

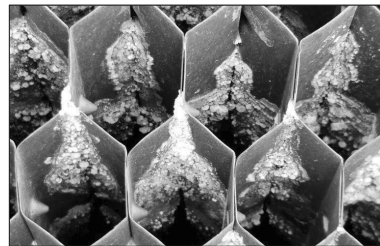
- Terminal 4 Cooling Towers.
- An annual saving of more than 10 million gallons of water in the airport's largest and busiest terminal.
- Harmful water treatment chemicals were reduced by 13,000 pounds per year.
- PHX is saving about \$200,000 annually in water conservation and chemicals.



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## Equipment Replacements for Energy and Water Efficiency



Cooling Tower Scale Build-Up due to Hard Water



Cooling Tower Water Softener

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## Upgrade HVAC and Other Climate Control Equipment for Energy Savings

TOTAL PROJECT COST	OTHER FUNDING	GO BOND FUNDING
\$15,000,000	\$0	\$15,000,000

Install energy efficient HVAC equipment or other climate control systems to reduce energy consumption and greenhouse gas emissions from City facilities.


Location: Public Works Properties - All  
Council District: Citywide

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## Upgrade HVAC and Other Climate Control Equipment for Energy Savings

- End of life HVAC units contribute greatly to overall energy consumption.
- Climate control devices work in conjunction with the HVAC units.
- Replacements are prioritized based on Facility Condition Assessments and department requests.




Old HVAC Unit at Encanto Park


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## Upgrade HVAC and Other Climate Control Equipment for Energy Savings



Encanto Clubhouse-Old Unit




New Unit


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## Upgrade HVAC and Other Climate Control Equipment for Energy Savings



Circle K Park-Old Unit

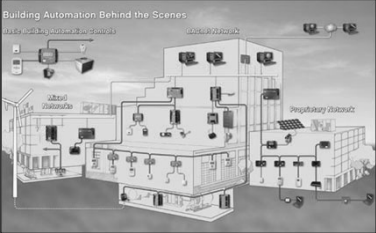


New Unit

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## Upgrade HVAC and Other Climate Control Equipment for Energy Savings



Building Automation Behind the Scenes

More Efficient HVAC


Smart Building Automation Systems

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## Fuel Tank Replacement Project

General Obligation Bond Prioritized Projects



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## Fleet Services Overview



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## Fuel Tank Replacement Project

TOTAL PROJECT COST	OTHER FUNDING	GO BOND FUNDING
\$5,134,753	\$0	\$5,134,753

Replace aging infrastructure that has exceeded the estimated useful life of 30 years.

Council Districts: 2, 6, 7, 8

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## Fuel Tank Replacement Project

- 86 fuel sites citywide to support 7,800 vehicles.
- Citywide approximately 10 million gallons of fuel issued annually.
- Asset replacement strategy addresses tanks 30+ years.



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## Fuel Tank Replacement Project

- Inventory consists of 68 under ground and 116 above ground fuel tanks.
- Average tank maintains approximately 24 days of supply.

Fuel Tank, 12,000-gallon



Fuel tank removal, 12,000-gallon



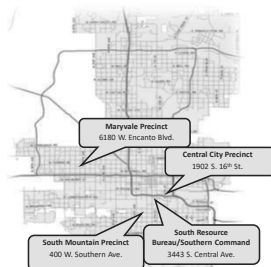
Oil tank, 550-gallon



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## Fuel Tank Replacement Project

- Average age for tanks is 32 years for the aged infrastructure in need of replacement.
- \$5.1 million identified as critical need for tank replacements at four public safety sites:
- Investment in tank infrastructure provides environmental protection and dependable fueling systems.



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## FUTURE CAPITAL NEEDS

- **Public Works**
  - City Facility Vehicle Electrification Stations
- **Office of Environmental Programs**
  - City Brownfields Redevelopment Projects
- **Office of Heat Response and Mitigation**
  - Heat Resiliency



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## Thank You

Upcoming Subcommittee Dates:

- September 12th- 9:00 am
- September 22nd- 9:00 am
- October 10th- 9:00 am

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## Future Need: Electric Vehicle Charging Stations

- Provide charging infrastructure for electrification of City fleet.
- Study budgeted for Fall 2022 to identify preferred locations, type, and quantities
- Funding Request: \$16,000,000
- Need may be reduced through Federal Infrastructure grants

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## Future Need: City Brownfields Redevelopment Projects

- Assist City Departments with environmental assessment and cleanup costs.
- Environmental costs are often unpredictable.
- Some City-owned properties do not qualify for U.S. EPA brownfield grants (i.e. landfills).
- Without funding, projects could be stopped, or amenities reduced because of unexpected environmental costs.
- Community benefits: eliminates hazardous exposures and blight, serves as a catalyst for neighborhood revitalization.
- Funding Request: \$5,000,000.

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## Future Need: Heat Resiliency Projects

- Expand the Cool Corridors and Cool Pavements program to increase community impact
- Implement new strategies and technologies to enhance shade and cooling in public spaces
- Focus on neighborhoods with high pedestrian and transit use and less shade and tree coverage
- Community benefits: improved public health and quality of life, facilitate public and active transportation options
- Funding Request: \$11,008,172

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## **ENVIRONMENT & SUSTAINABILITY SUBCOMMITTEE 2023 GO BOND PROGRAM**

### **EXECUTIVE SUMMARY**

The Environment & Sustainability Subcommittee will review unfunded capital needs of the Public Works Department, Office of Environmental Programs and Street Transportation Department that have an environmental focus. The *Prioritized Environment & Sustainability Capital Needs* total \$25.1 million and represent the most urgent needs identified by staff. The *Future Environment & Sustainability Capital Needs* total \$32.3 million and represent projects that are less urgent or may be better suited for deferral to a future bond program. The Environment & Sustainability Subcommittee will consider these projects and input from the community in developing recommendations for the Executive Committee.

### **CURRENT STATE**

Public Works manages 1,248 buildings across Phoenix. Nearly all these buildings are more than 20 years old with obsolete systems including heating, ventilation, air conditioning equipment, mechanical equipment, electrical systems, and fixtures. Modernized equipment is required to ensure proper function and improve energy efficiency and reduce water consumption. Additionally, Public Works manages 86 fuel facilities that issue approximately 10 million gallons of fuel annually. The fueling network is the main source of energy for the City's day-to-day operations and serves as the primary fueling infrastructure in case of an emergency. Of these facilities, the four proposed for replacement have an average age of 32 years. Furthermore, Public Works proposes to evaluate, design and install infrastructure for electrification of vehicles at Phoenix facilities for city, employee, and resident owned vehicles. The result is expected to lower Greenhouse Gas Emissions related to automobile activity.

The Office of Environmental Programs (OEP) Brownfields Land Recycling Program (Brownfields) aids City of Phoenix departments and the private sector with property impacted by environmental contamination. Brownfields redevelopment is challenging because of the cost of cleanup, the existence of liens or delinquent property taxes, lack of financial assistance or tax incentives from state agencies, and federal funding that is minimal, restrictive, and only available on a competitive basis.

The Street Transportation Department (Streets) is responsible for maintaining approximately 5,000 street miles throughout Phoenix. Over the last few years, a greater emphasis has been placed on efforts and strategies Phoenix can take to make its community more resilient to the impacts of climate change and the urban heat island. These environmental impacts are more directly felt and experienced in traditionally underserved areas, where people of color live, work and travel. The heat resiliency project would expand Streets' existing Cool Corridors and Cool Pavements programs and implement other innovative measures to address heat resiliency within the public rights of way.

## **PROJECT SELECTION AND PRIORITIZATION**

The proposed building improvements were derived from a series of Facilities Condition Assessments (FCA) performed by third party engineering firms. Staff prioritized the recommendations based on the most critical building systems. Recommendations for fuel tank replacements were based on the Original Equipment Manufacturer (OEM) estimated service life of 30 years. The vehicle electrification project is supported by the City Phoenix Council Climate Action Plan and Vehicle Electrification Subcommittee.

City Brownfields project funding will be to assist City departments with predevelopment costs associated with environmentally contaminated properties, such as, environmental assessments, and asbestos/lead-based paint surveys. Project selection will be based on several factors including location, benefit to community and job creation. Additionally, Brownfields funding for the Rio Reimagined Land Acquisition program may include environmental assessments and cleanup to prepare economically attractive sites along the Rio Salado. This program will be considered by the Economic Development and Education Subcommittee.

Heat related illnesses and deaths have increased in Phoenix and across Arizona because of the impacts of climate change and a growing urban heat island. The Heat Resiliency project will address these issues and the bearing they have on Phoenix residents. The project will be most impactful in areas of Phoenix without transportation mode choice, where residents don't have access to vehicles and must walk or bike to get to their destination.

## **IMPACT TO THE COMMUNITY**

Failure to fund replacement of building systems may result in facility damage and increased costs; the opportunity to save energy and water will be missed. Fuel tanks that have exceeded their service life have the potential for catastrophic failure which may result in soil contamination, costly cleanup expenses and fines. Without the addition of vehicle electrification stations at City of Phoenix facilities, Phoenix will miss an opportunity to reduce greenhouse gas emissions and improve air quality. Lack of funding for Brownfields projects means contaminated properties may remain blighted, undeveloped and a burden to the local community. Lack of funding for heat resiliency may have a negative impact on quality of life and health due to heat impacts.

## ***ENVIRONMENT & SUSTAINABILITY SUBCOMMITTEE***

### **2023 GO Bond Program Capital Needs Study Prioritized Projects**

<b>Project Name</b>	<b>Total Cost</b>	<b>Other Funds</b>	<b>GO Bond Funds</b>	<b><i>Ongoing Cost</i></b>
Equipment Replacements for Energy and Water Savings Location: Various District: Citywide	5,000,000	0	5,000,000	<i>0</i>
Fuel and Oil Tank Replacement Location: Various District: 2, 6, 7, 8	5,134,753	0	5,134,753	<i>0</i>
Upgrade HVAC and other Climate Control Equipment for Energy Savings Location: Various District: Citywide	15,000,000	0	15,000,000	<i>0</i>
<b>Environment &amp; Sustainability Future Capital Needs Total</b>	<b>25,134,753</b>	<b>0</b>	<b>25,134,753</b>	<b><i>0</i></b>

## ENVIRONMENT & SUSTAINABILITY SUBCOMMITTEE

### 2023 GO Bond Program Capital Needs Study Prioritized Projects Detail

#### Equipment Replacements for Energy and Water Savings

Various (District: Citywide)

TOTAL PROJECT COST	OTHER FUNDING	GO BOND FUNDING
<b>\$5,000,000</b>	<b>\$0</b>	<b>\$5,000,000</b>

#### SCOPE

Replace and upgrade aging equipment and fixtures using new energy- or water-efficient technologies that will reduce energy and/or water use and greenhouse gas emissions associated with existing City facilities.

#### BENEFIT

Mayor and Council adopted the Climate Action Plan (CAP) in 2021 that establishes the goal to reduce greenhouse gas (GHG) emissions. This program will result in lower energy and water use, and reduce GHG emissions and other climate impacts caused from City operations. Additionally, this program improves resiliency, reliability and operating efficiency of City facilities by replacing outdated equipment and fixtures with today's best available technologies.

COST ELEMENTS	2024-25	2025-26	2026-27	2027-28	2028-29	5-YR TOTAL
STUDY	0	0	0	0	0	0
REAL PROPERTY	0	0	0	0	0	0
DESIGN / ENGINEERING	0	0	0	0	0	0
CONSTRUCTION / DEMO	0	0	0	0	0	0
EQUIPMENT	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
MOVE-IN EXPENSES	0	0	0	0	0	0
PERCENT FOR ART	0	0	0	0	0	0
<b>TOTAL PROJECT COST</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>5,000,000</b>

OTHER FUNDING	2024-25	2025-26	2026-27	2027-28	2028-29	5-YR TOTAL
N/A	0	0	0	0	0	0

ON-GOING EXPENSES	ANNUAL COST
STAFF	0
CONTRACTUALS	0
COMMODITIES	0
INTERDEPARTMENTAL	0
ON-GOING CAPITAL	0
<b>TOTAL OPERATING</b>	<b>0</b>

## ENVIRONMENT & SUSTAINABILITY SUBCOMMITTEE

### 2023 GO Bond Program Capital Needs Study Prioritized Projects Detail

#### Fuel and Oil Tank Replacement

Various (District: 2, 6, 7, 8)

TOTAL PROJECT COST  
**\$5,134,753**

OTHER FUNDING  
**\$0**

GO BOND FUNDING  
**\$5,134,753**

#### SCOPE

Replace aging fuel infrastructure that has exceeded the original estimated service life of 30 years.

#### BENEFIT

Updating fuel facilities will reduce risk and potential harm to human safety, the environment, and help avoid unexpected disruption to City operations.

COST ELEMENTS	2024-25	2025-26	2026-27	2027-28	2028-29	5-YR TOTAL
STUDY	0	0	0	0	0	0
REAL PROPERTY	0	0	0	0	0	0
DESIGN / ENGINEERING	486,880	559,584	0	0	0	1,046,464
CONSTRUCTION / DEMO	0	1,836,135	2,201,315	0	0	4,037,450
EQUIPMENT	0	0	0	0	0	0
MOVE-IN EXPENSES	0	0	0	0	0	0
PERCENT FOR ART	4,869	23,957	22,013	0	0	50,839
<b>TOTAL PROJECT COST</b>	<b>491,749</b>	<b>2,419,676</b>	<b>2,223,328</b>	<b>0</b>	<b>0</b>	<b>5,134,753</b>

OTHER FUNDING	2024-25	2025-26	2026-27	2027-28	2028-29	5-YR TOTAL
N/A	0	0	0	0	0	0

ON-GOING EXPENSES	ANNUAL COST
STAFF	0
CONTRACTUALS	0
COMMODITIES	0
INTERDEPARTMENTAL	0
ON-GOING CAPITAL	0
<b>TOTAL OPERATING</b>	<b>0</b>

## ENVIRONMENT & SUSTAINABILITY SUBCOMMITTEE

### 2023 GO Bond Program Capital Needs Study Prioritized Projects Detail

#### Upgrade HVAC and other Climate Control Equipment for Energy Savings

Various (District: Citywide)

TOTAL PROJECT COST  
**\$15,000,000**

OTHER FUNDING  
**\$0**

GO BOND FUNDING  
**\$15,000,000**

#### SCOPE

Install energy efficient HVAC equipment or other climate control systems to reduce energy consumption and greenhouse gas emissions from City facilities. Facility Condition Assessments identified the need to replace aging and inefficient HVAC systems at many facilities including City-operated community and recreation centers, arts and cultural facilities, and administrative buildings.

#### BENEFIT

Avoid service disruptions that may result from unplanned equipment and/or systems failures. Reduce operating expenses of certain City facilities by integrating the best available technologies. Reduce greenhouse gas emissions and other climate impacts caused by City operations.

COST ELEMENTS	2024-25	2025-26	2026-27	2027-28	2028-29	5-YR TOTAL
STUDY	0	0	0	0	0	0
REAL PROPERTY	0	0	0	0	0	0
DESIGN / ENGINEERING	0	0	0	0	0	0
CONSTRUCTION / DEMO	0	0	0	0	0	0
EQUIPMENT	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	15,000,000
MOVE-IN EXPENSES	0	0	0	0	0	0
PERCENT FOR ART	0	0	0	0	0	0
<b>TOTAL PROJECT COST</b>	<b>3,000,000</b>	<b>3,000,000</b>	<b>3,000,000</b>	<b>3,000,000</b>	<b>3,000,000</b>	<b>15,000,000</b>

OTHER FUNDING	2024-25	2025-26	2026-27	2027-28	2028-29	5-YR TOTAL
N/A	0	0	0	0	0	0

ON-GOING EXPENSES	ANNUAL COST
STAFF	0
CONTRACTUALS	0
COMMODITIES	0
INTERDEPARTMENTAL	0
ON-GOING CAPITAL	0
<b>TOTAL OPERATING</b>	<b>0</b>



***ENVIRONMENT & SUSTAINABILITY SUBCOMMITTEE***

**2023 GO Bond Program  
Capital Needs Study Addendum  
Future Capital Needs**

<b>Project Name</b>	<b>Total Cost</b>	<b>Other Funds</b>	<b>GO Bond Funds</b>	<b><i>Ongoing Cost</i></b>
City Brownfields Redevelopment Projects Location: Citywide District: Citywide	5,000,000	0	5,000,000	<i>0</i>
City Facility Vehicle Electrification Stations Location: Various District: Citywide	16,333,006	0	16,333,006	<i>949,000</i>
Heat Resiliency Location: Citywide District: Citywide	11,008,172	0	11,008,172	<i>123,303</i>
<b>Environment &amp; Sustainability Future Capital Needs Total</b>	<b>32,341,178</b>	<b>0</b>	<b>32,341,178</b>	<b><i>1,072,303</i></b>

## ENVIRONMENT & SUSTAINABILITY SUBCOMMITTEE

### 2023 GO Bond Program Capital Needs Study Addendum Future Capital Needs Detail

#### City Brownfields Redevelopment Projects

Citywide (District: Citywide)

TOTAL PROJECT COST  
**\$5,000,000**

OTHER FUNDING  
**\$0**

GO BOND FUNDING  
**\$5,000,000**

#### SCOPE

Funding to assist City departments with pre-development costs associated with environmentally contaminated properties. Preference would be given to projects located within the following targeted areas: Rio Reimagined Project Area, West Phoenix Revitalization Area, Infill Incentive Area, Transit-Oriented Development Areas, Downtown Development Area, Designated Redevelopment Areas and Neighborhood Initiative Areas.

#### BENEFIT

Mayor and Council approved the Phoenix Climate Action Plan (PCAP) in 2021. This program supports the PCAP by addressing public health and environmental hazards, expanding green space, and creating sustainability opportunities (e.g. green buildings and infrastructure). Without this funding source, contaminated properties may remain blighted, undeveloped, and a burden to the local community.

COST ELEMENTS	2024-25	2025-26	2026-27	2027-28	2028-29	5-YR TOTAL
STUDY	0	0	0	0	0	0
REAL PROPERTY	1,500,000	1,500,000	1,000,000	500,000	500,000	5,000,000
DESIGN / ENGINEERING	0	0	0	0	0	0
CONSTRUCTION / DEMO	0	0	0	0	0	0
EQUIPMENT	0	0	0	0	0	0
MOVE-IN EXPENSES	0	0	0	0	0	0
PERCENT FOR ART	0	0	0	0	0	0
<b>TOTAL PROJECT COST</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,000,000</b>	<b>500,000</b>	<b>500,000</b>	<b>5,000,000</b>

OTHER FUNDING	2024-25	2025-26	2026-27	2027-28	2028-29	5-YR TOTAL
N/A	0	0	0	0	0	0

ON-GOING EXPENSES	ANNUAL COST
STAFF	0
CONTRACTUALS	0
COMMODITIES	0
INTERDEPARTMENTAL	0
ON-GOING CAPITAL	0
<b>TOTAL OPERATING</b>	<b>0</b>

## ENVIRONMENT & SUSTAINABILITY SUBCOMMITTEE

### 2023 GO Bond Program Capital Needs Study Addendum Future Capital Needs Detail

#### City Facility Vehicle Electrification Stations

Various (District: Citywide)

TOTAL PROJECT COST  
**\$16,333,006**

OTHER FUNDING  
**\$0**

GO BOND FUNDING  
**\$16,333,006**

#### SCOPE

Provide infrastructure for electrification of City vehicles, as well as vehicles owned by employees and residents, when visiting City facilities. Commission a study to specify the preferred location, type, and quantities of charging units. The number and type of installations funded by this item are driven by the study which will provide a rough order of magnitude costing for each specified location.

#### BENEFIT

Mayor and Council approved the Phoenix Climate Action Plan (PCAP) in 2021. This program supports the PCAP by reducing aggregate greenhouse gas emissions related to automobile activity. Not funding this program could delay the integration of electrical vehicle infrastructure at City facilities.

COST ELEMENTS	2024-25	2025-26	2026-27	2027-28	2028-29	5-YR TOTAL
STUDY	859,200	0	0	0	0	859,200
REAL PROPERTY	0	0	0	0	0	0
DESIGN / ENGINEERING	1,432,000	2,331,600	0	0	0	3,763,600
CONSTRUCTION / DEMO	5,728,000	5,829,000	0	0	0	11,557,000
EQUIPMENT	0	0	0	0	0	0
MOVE-IN EXPENSES	0	0	0	0	0	0
PERCENT FOR ART	71,600	81,606	0	0	0	153,206
TOTAL PROJECT COST	8,090,800	8,242,206	0	0	0	16,333,006

OTHER FUNDING	2024-25	2025-26	2026-27	2027-28	2028-29	5-YR TOTAL
N/A	0	0	0	0	0	0

ON-GOING EXPENSES	ANNUAL COST
STAFF	453,000
CONTRACTUALS	203,000
COMMODITIES	21,000
INTERDEPARTMENTAL	3,000
ON-GOING CAPITAL	269,000
TOTAL OPERATING	949,000

## ENVIRONMENT & SUSTAINABILITY SUBCOMMITTEE

### 2023 GO Bond Program Capital Needs Study Addendum Future Capital Needs Detail

#### Heat Resiliency

Citywide (District: Citywide)

TOTAL PROJECT COST  
**\$11,008,172**

OTHER FUNDING  
**\$0**

GO BOND FUNDING  
**\$11,008,172**

#### SCOPE

Expand the City's Cool Corridors and Cool Pavements programs, and implement other emerging ideas to address heat resiliency within the public rights-of-way.

#### BENEFIT

Reduce the impacts of climate change and urban heat on resident and visitor health. This program will be most impactful in locations where residents tend to have limited access to vehicles, and must walk or bike to their destinations with greater frequency. This program can help to address historical equity issues in parts of the City where residents are more vulnerable to heat-related hazards.

COST ELEMENTS	2024-25	2025-26	2026-27	2027-28	2028-29	5-YR TOTAL
STUDY	801,920	0	0	0	0	801,920
REAL PROPERTY	0	0	0	0	0	0
DESIGN / ENGINEERING	0	116,580	118,990	121,520	124,110	481,200
CONSTRUCTION / DEMO	0	2,331,600	2,379,800	2,430,400	2,482,200	9,624,000
EQUIPMENT	0	0	0	0	0	0
MOVE-IN EXPENSES	0	0	0	0	0	0
PERCENT FOR ART	0	24,482	24,988	25,519	26,063	101,052
TOTAL PROJECT COST	801,920	2,472,662	2,523,778	2,577,439	2,632,373	11,008,172

OTHER FUNDING	2024-25	2025-26	2026-27	2027-28	2028-29	5-YR TOTAL
N/A	0	0	0	0	0	0

ON-GOING EXPENSES	ANNUAL COST
STAFF	117,053
CONTRACTUALS	2,350
COMMODITIES	3,900
INTERDEPARTMENTAL	0
ON-GOING CAPITAL	0
TOTAL OPERATING	123,303