

Schneider Electric  
Phase II Energy Project

April 12<sup>th</sup>, 2022

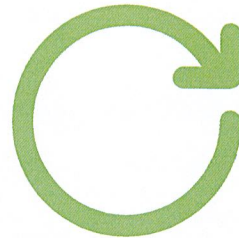




# What is a Capital Recovery & Reinvestment Program?



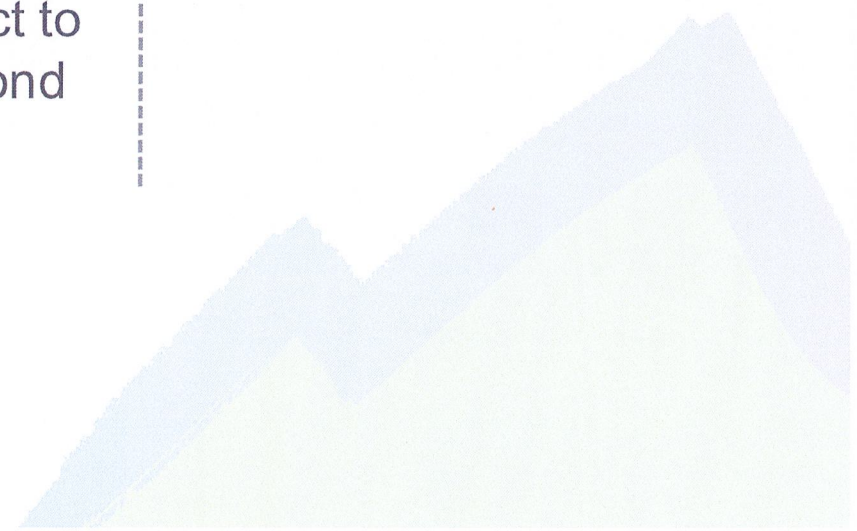
Identify and capture  
**energy & operational  
savings**



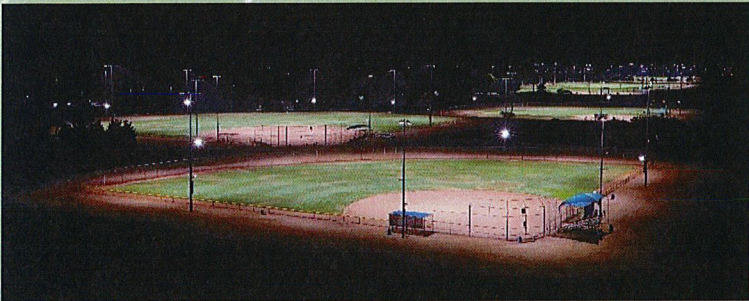
**Reinvest those savings**  
back into tackling CIP  
priorities, modernizing  
the City, and driving  
economic development  
with little to no impact to  
current budget or bond  
capacity



Providing a **turnkey  
funding & modernization  
solution** with guaranteed  
savings



# Phase 1 Results



**\$13.9M**

In City modernization  
& efficiency upgrades

**\$740k**

In projected annual  
savings & revenue

**\$482k**

Actual 2019-2021  
Electricity Savings

**\$3.3M**

Actual 2019-2021  
Economic Impact

**28**

Additional Tournaments

**11,490**

Additional Visitors

## City Needs Addressed:

- 5 Synthetic turf soccer fields at Cyr and DP
- LED Sports Field Lighting at 17 fields & courts
- Over 3,500 LED replacements Citywide
- Significant HVAC upgrades at multiple sites
- New electrical infrastructure at VMP
- Replacement of the inoperable wave machine
- Wastewater aeration control upgrades



## Why Did We Engage with Schneider Electric on Phase II?

Staff worked with Schneider Electric for the past 12 months to develop a turnkey solution to advancing Council's Strategic Plan and Parks Master Plan.

The final solution advances the following Council Strategic Plan Goals:

- **Goal 4** - Effectively plan for and manage water resources
- **Goal 6.1** - Explore different technologies and partnerships relevant to economic development and expand where appropriate, such as broadband and 5G availability, EV charging stations, and relevant emerging technologies.
- **Goal 6.4** - Maximize the economic impact of the municipal airport.
- **Goal 6.5** - Expand sports tourism opportunities
- **Goal 6.5.2** - Identify phases and the funding plan for improvements at the VMPSC
- **Goal 10** - Increase sports tourism revenue by \$3M over the next 2 years
- **Goal 10.4** - Prioritize the implementation of the Parks Master Plan as funding permits
- **Goal 12** - Fully fund the Parks Master Plan over the next 10 years



# Why Did we Engage with Schneider Electric?

## Current Challenges

Dilapidated Sports Complex with no water or electrical access

Unreliable Airport Runway Lighting and Controls

Very Limited EV Charging Infrastructure

Aspirations of a Smart City Infrastructure

Outdated pumping and mech. systems at COVE

Inefficient systems and aging city buildings

40-Year-old leaking City Hall roof

Strategic Leadership Plan (FY22-23)

## What are we trying to accomplish with this project?

- Kick-start Parks Master Plan and initiate development of Veterans Memorial Park Sports Complex
- Provide the community with new athletic amenities
- Increase sports tourism with marketable modernizations to sports areas
- Address aging City infrastructure
- Launch Electric Vehicle (EV) Infrastructure pilot for community and guests
- Advance Sierra Vista's energy & water-savings commitment
- Increase direct revenue and economic impact
- **Tangibly advance City's Strategic Leadership Plan:**

**INCLUDE**

Citizen Engagement

**IGNITE**

Economic Dev. and Community Prosperity

**INVEST**

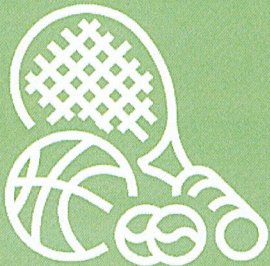
Responsible Stewardship

**INNOVATE**

Quality of Life



## Sports Tourism & Parks Master Plan



- Football Field and Track
- New Howard Field
- LED Sports Field Lighting
- Add Basketball Courts
- Add ADA Pathways
- New Irrigation Lines
- Well, Storage Tank, and Booster Pumps
- Upgrade Gym HVAC System

Strategic Plan Goals  
6.5 | 6.5.2 | 10 | 10.4 | 12

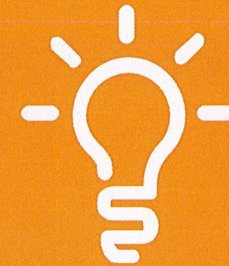
## Economic Development



- EV Charging Stations
- LED Runway Light and Control Upgrades

Strategic Plan Goals  
6.1 | 6.4

## Efficiency & Infrastructure



- Smart Irrigation System
- Major COVE Renovations
- Solar Covered Parking
- City Hall Roof Replacement
- Sports Building HVAC
- Bldg. Envelope Upgrades

Strategic Plan Goals  
4 | 6.1



## Scope of Work

### Football Field and Track

New Howard Field

LED Sports Field Lighting

Add Basketball Courts

Add ADA Pathways

New Irrigation Lines Well, Storage Tank, and Booster Pumps

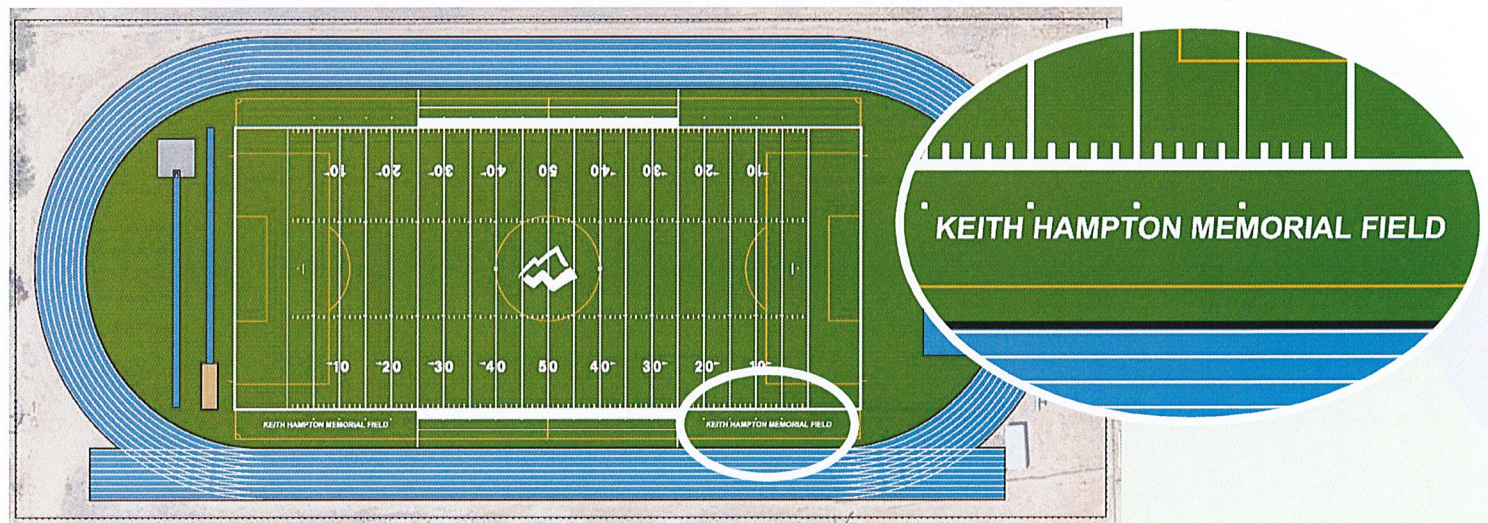
Upgrade Gym HVAC System

## Council Strategic Plan Goals:

- **6.5** - Expand sports tourism opportunities
- **6.5.2** - Identify phases and the funding plan for improvements at the VMPSC
- **10** - Increase sports tourism revenue by \$3M over the next 2 years
- **10.4** - Prioritize the implementation of the Parks Master Plan as funding permits
- **12** - Fully fund the Parks Master Plan over the next 10 years

## Scope Details

- Complete synthetic turf replacement of dilapidated football field at VMPSC
- Turnkey Rubberized sports running track
- ADA compliant path to all sports complex
- All secondary improvements for a turnkey field and track solution:
  - Goal post replacement
  - Shotput and discus
  - Secondary field lines for multi-use
  - Long Jump/Triple Jump
  - Pole Vaulting Boxes
  - Concrete curbing & security fencing





## Scope of Work

Football Field and Track

### New Howard Field

LED Sports Field Lighting

Add Basketball Courts

Add ADA Pathways

New Irrigation Lines Well, Storage Tank, and Booster Pumps

Upgrade Gym HVAC System

## Council Strategic Plan Goals:

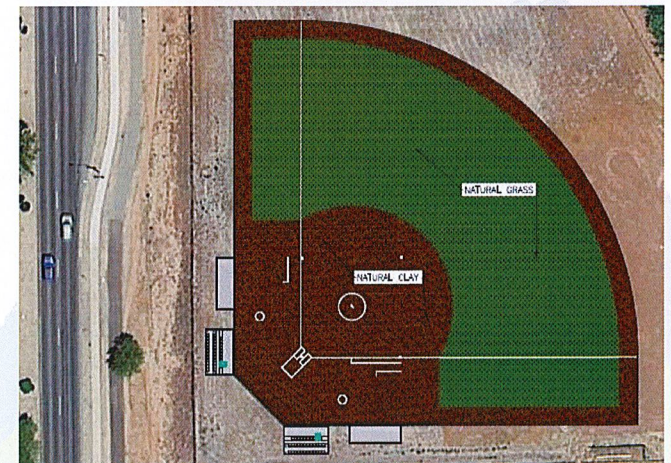
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## Current Challenges

- Abandoned field was originally configured for middle school baseball
- Inadequate drainage
- Fly-ball safety hazard with MLK

## Scope Details

- Design and install completely new Howard Field
- Modify existing layout to be north facing
- Provide all improvements for a turnkey baseball/softball field:
  - Dugouts (x2)
  - 30' Backstop netting system
  - 3-row bleachers (x2)
  - Bases, foul poles, etc.
  - Concrete Curbing
  - Perimeter security fencing
  - Sand base with sub-drainage







## Scope of Work

Football Field and Track

New Howard Field

LED Sports Field Lighting

Add Basketball Courts

Add ADA Pathways

New Irrigation Lines Well, Storage Tank, and Booster Pumps

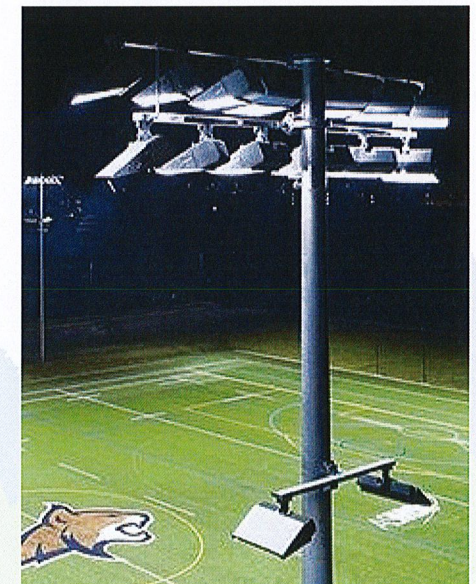
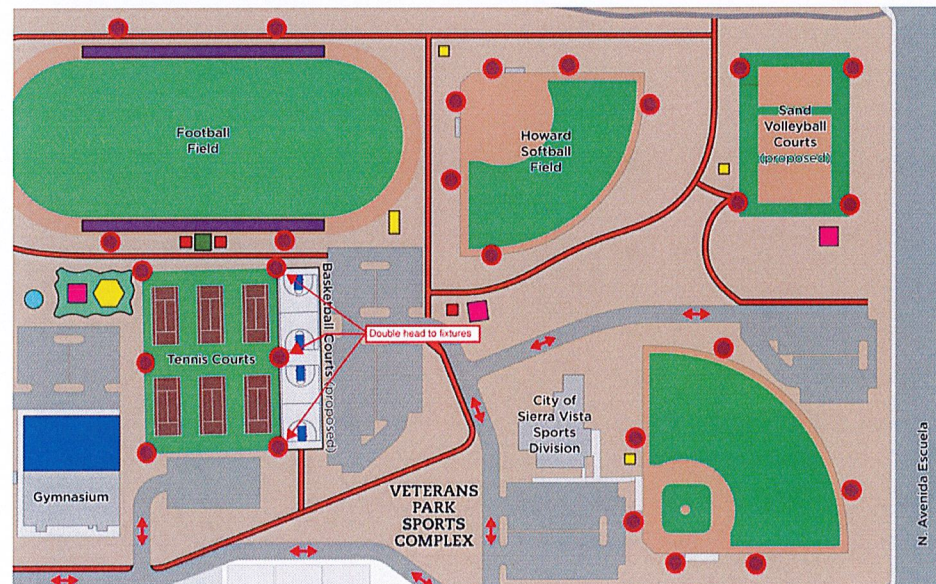
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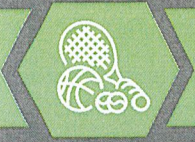
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- 12 - Fully fund the Parks Master Plan over the next 10 years

## Scope Details

- Install New LED MUSCO sports field lights and electrical infrastructure
- Areas include:
  - New Football Field and Track
  - (6) Existing Tennis Courts
  - (2) New Basketball Courts
  - New Howard Softball Field
  - Proposed Sand Volleyball Court
  - Existing Baseball Field





## Scope of Work

Football Field and Track

New Howard Field

LED Sports Field Lighting

Add Basketball Courts

Add ADA Pathways

New Irrigation Lines Well, Storage Tank, and Booster Pumps

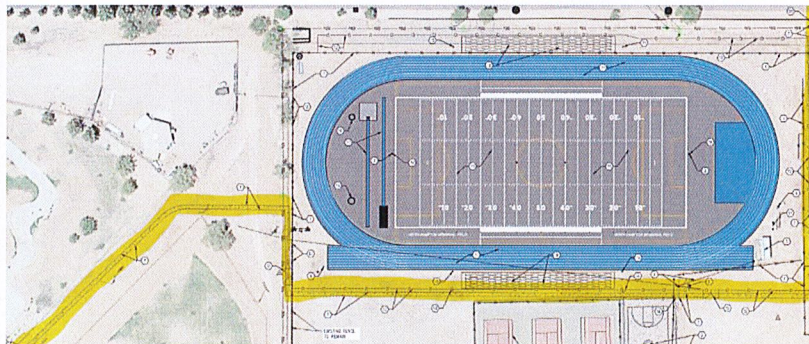
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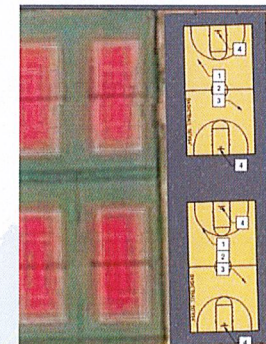
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## Scope Details

- Add (2) new turnkey full-court basketball courts at VMPSC
- Add ADA pathways to service new sports amenities at VMPSC
- Install new Well, Storage Tank, and Booster Pumps
  - Reconnect to existing Veteran's Memorial Park
- New irrigation lines for sports complex connected to new well & booster pumps
  - Includes new controls and flow sensors
  - Areas include Baseball, Softball, Football, and Volleyball
- Replace 20+ year-old Evaporative Coolers at Gym & upgrade ductwork



ADA Path at VMPSC



Basketball Courts



Evaporative Cooler



# Economic Development



## Scope of Work

### EV Charging Stations

LED Runway Lights & Control Upgrades

### Council Strategic Plan Goal:

- **6.1** - Explore different technologies and partnerships relevant to economic development and expand where appropriate, such as broadband and 5G availability, EV charging stations, and relevant emerging technologies

### Current Challenge

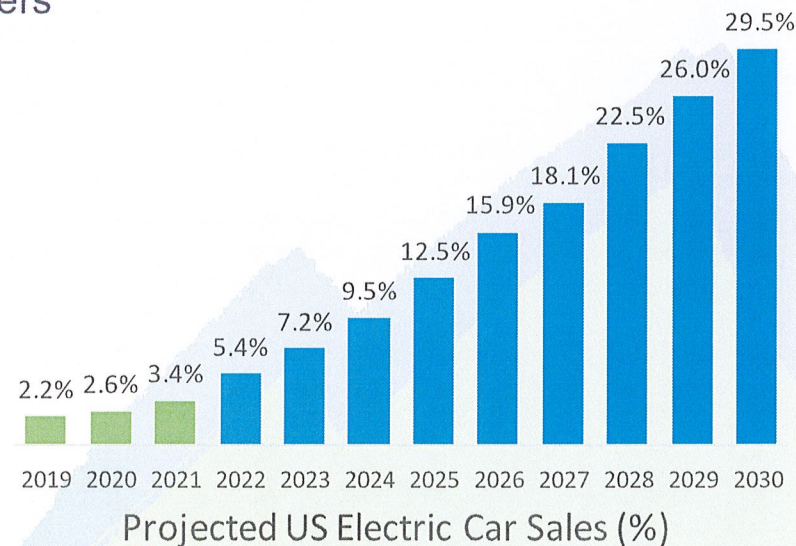
- With only 2 public charging stations, Sierra Vista is virtually inaccessible to a rapidly growing number of EV drivers

### Scope Details

- Launch EV charger pilot program in strategic locations to enhance sports tourism and ED efforts
- (8) charging stations, with (11) total charging ports
  - (5) Level III Rapid chargers
  - (3) Level II Fast Dual-chargers



Location	Charger Type	Size	# of Ports
Sports Complex	Level III Rapid	(2) 50kW	2
	Level II Fast	(1) 9.6kW	2
Stone Field	Level III Rapid	(1) 50kW	1
	Level II Fast	(1) 9.6kW	2
Library	Level III Rapid	(1) 50kW	1
	Level II Fast	(1) 9.6kW	2
Cyr Park	Level III Rapid	(1) 50kW	1
	Level II Fast	(1) 9.6kW	2





## Scope of Work

EV Charging Stations

LED Runway Lights & Control Upgrades

## Council Strategic Plan Goal:

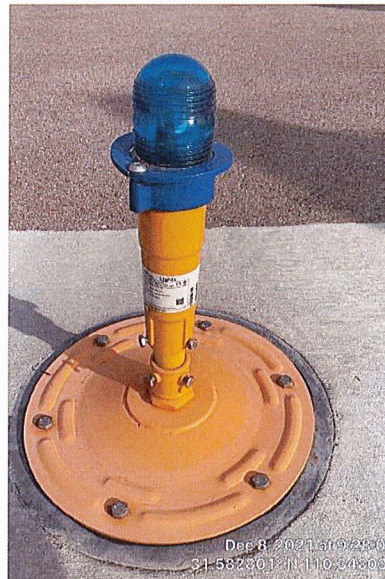
- 6.4 - Maximize the economic impact of the municipal airport

## Current Challenges

- Lack of centralized control from Control Tower
- (4) different runway light manufacturers, ongoing maintenance problems
- Signs are old halogen or incandescent which have passed useful life

## Scope Details

- Replace failing runway lights and signs with High Efficiency, long-life LED
- Replace over 8,000 feet of fiber across airfield to improve lighting controls
  - Being done in conjunction with Fort control upgrades





## Scope of Work

### Smart Irrigation System

Major COVE Renovations

Solar Covered Parking

City Hall Roof Replacement

Sports Building HVAC & Controls

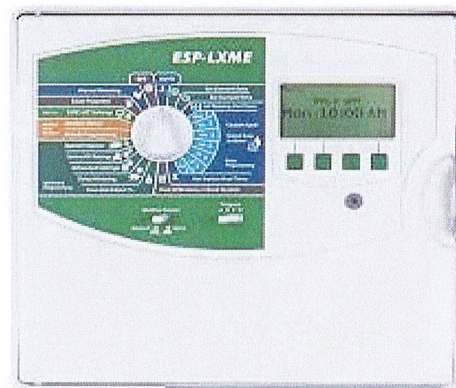
Building Envelope Upgrades

## Council Strategic Plan Goals:

- **4** - Effectively plan for and manage water resources
- **6.1** - Explore different technologies and partnerships relevant to economic development and expand where appropriate, such as broadband and 5G availability, EV charging stations, and relevant emerging technologies

## Scope Details

- Provide and install smart irrigation system with flow sensors at (19) City parks and fields
- Provide centralized and remote access including weather-based controls
- Advance Sierra Vista's water-savings commitment by optimizing water usage
  - 4.6 million gallons saved each year, or over 14 acre-feet of water - enough to fill 7 full-sized Olympic swimming pools





## Scope of Work

Smart Irrigation System

Major COVE Renovations

Solar Covered Parking

City Hall Roof Replacement

Sports Building HVAC & Controls

Building Envelope Upgrades

## Council Strategic Plan Goals:

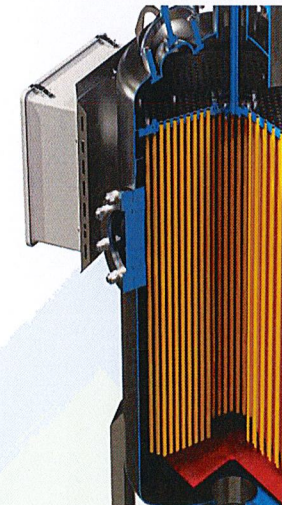
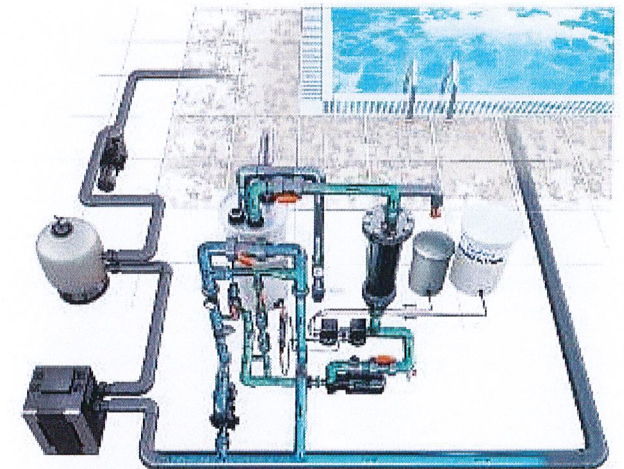
- 4 - Effectively plan for and manage water resources
- 6.1 - Explore different technologies and partnerships relevant to economic development and expand where appropriate, such as broadband and 5G availability, EV charging stations, and relevant emerging technologies

## Current Challenges

- Filtration, chemical, and mechanical systems have surpassed their useful life
- Filter changes are unsafe to perform
- Major water leaks and crumbling concrete bases

## Scope Details

- On-Site Sodium Hypochlorite Generation
- Smart Control w/ new pumps and motors
- Regenerative media filtration systems including fully automated controls
- Redesign of system with new concrete bases for filters and pumps
- Advance Sierra Vista's water-savings commitment by optimizing water usage
  - 1.4 million gallons, or over 4.3 acre-feet, of water saved each year





## Scope of Work

Smart Irrigation System

Major COVE Renovations

Solar Covered Parking

City Hall Roof Replacement

Sports Building HVAC & Controls

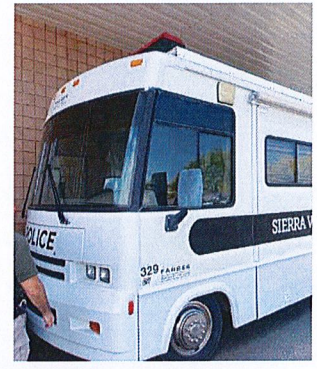
Building Envelope Upgrades

## Council Strategic Plan Goals:

- 6.1 - Explore different technologies and partnerships relevant to economic development and expand where appropriate, such as broadband and 5G availability, EV charging stations, and relevant emerging technologies

## Current Challenges

- Limited/no renewable energy sources
- Expensive police special vehicles exposed to sun year round



## Scope Details

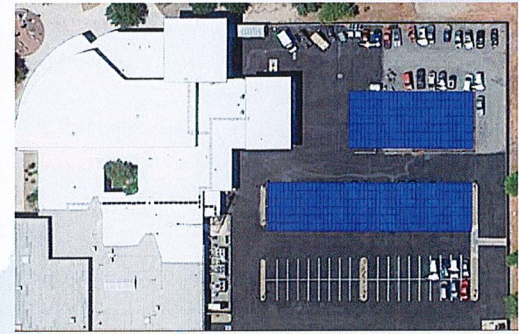
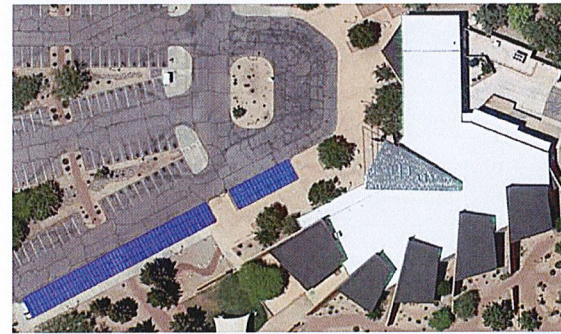
- Install Solar covered parking structures at 4 sites:

**City Hall**  
164 kW



**COVE**  
100 kW

**Library**  
100 kW



**PD**  
235 kW



## Scope of Work

Smart Irrigation System

Major COVE Renovations

Solar Covered Parking

**City Hall Roof Replacement**

Sports Building HVAC & Controls

Building Envelope Upgrades

## Current Challenges

- Roof is 40 years old - far past its useful life
- Regular roof leaks

## Scope Details

- Full Roof Replacement – Flat and metal portions, decorative siding, etc.
- 15 Year Warranty
- Solar installed on new metal roof







## Scope of Work

Smart Irrigation System

Major COVE Renovations

Solar Covered Parking

City Hall Roof Replacement

**Sports Building HVAC & Controls**

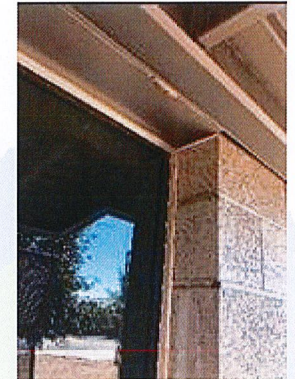
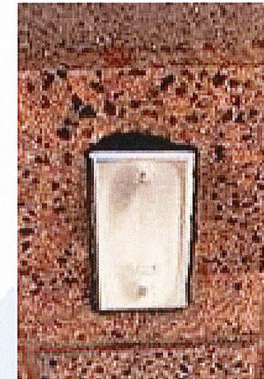
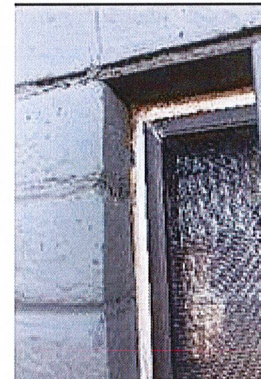
**Building Envelope Upgrades**

## Current Challenges

- Sports Division Building HVAC is 15 years old, inefficient, and past useful life
- Aging buildings have numerous air leaks, gaps, and holes that lead to major building inefficiencies

## Scope Details

- Replace 4 HVAC units at the Sports Division Building and add the facility to the City-wide Building Automation System
- Building Envelope improvements at 17 City buildings





## Total Project Cost

**\$25.9M**

\$24.4M after LWCF Grant

## Annual Savings

**\$2.2M**

Utility/O&M Savings: \$314k  
Direct Revenue: \$223k  
Capital Cost Avoidance: \$1.7M

## Lifecycle Savings

**\$37.3M**

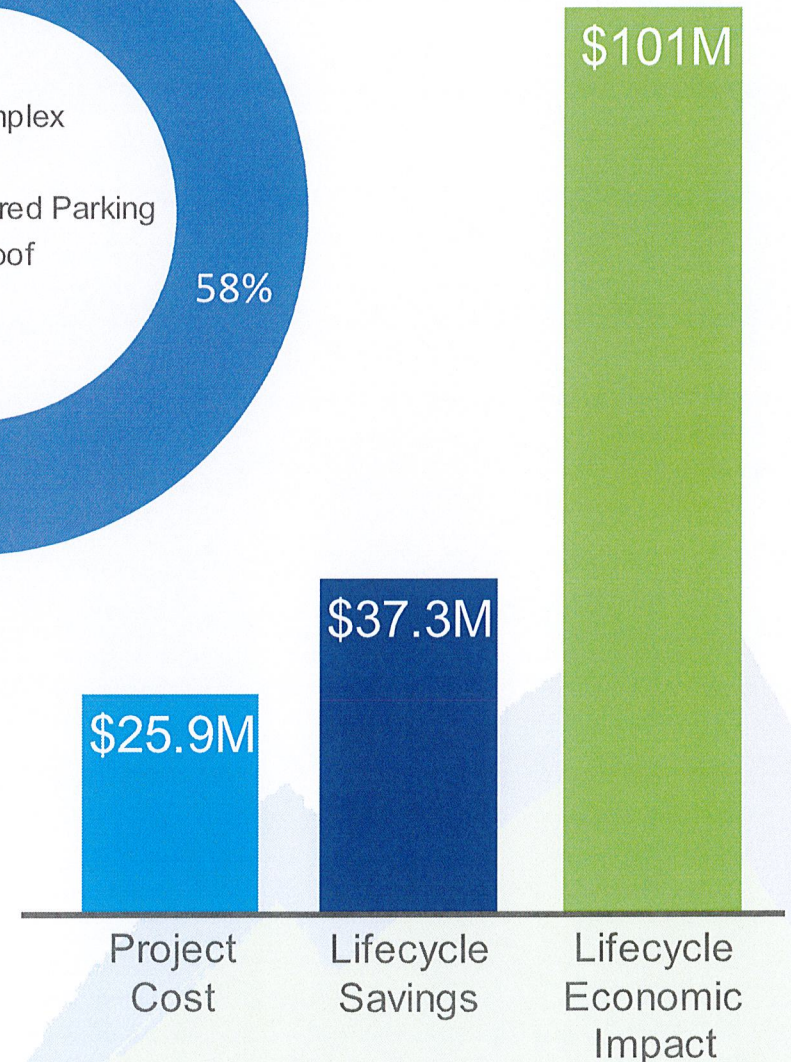
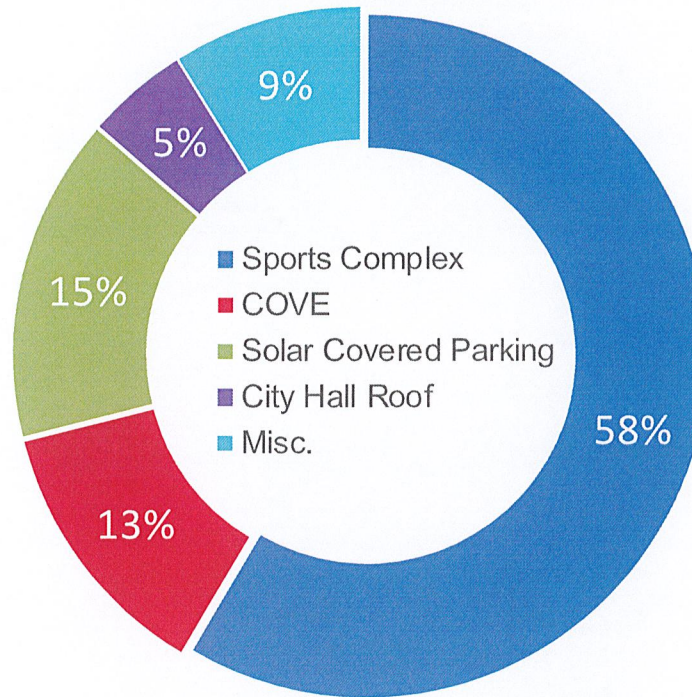
Savings, Revenue, and Avoided Cost  
Over 25-year partnership

## Lifecycle Economic Impact

**\$101M**

Over 25-year partnership

## Cost Breakout





## Finance \$25M over 15 or 20 years

- Public or Private placement
- Try to include 10 year call option
- 15 year annual debt service estimate: \$2,225,000
- 20 year annual debt service estimate: \$1,865,000
- Estimated coverage ratio with 15 year bond payment: 9x



## What does this project accomplish for the City of Sierra Vista?

- Kick-starts ~\$15.1M of progress on the Parks Master Plan and initiates development of Sports Complex
- Provides the community with brand new amenities - Football Field and Running Track
- Increases Sports Tourism with marketable modernizations to sports areas
- Launches Electric Vehicle (EV) Infrastructure pilot for community and visitors
- Saves energy & money while also increasing direct revenue and economic impact
- Generates over \$37M in savings & \$101M in economic impact over the life of the project
- Advances Sierra Vista's water-savings commitment, saving over 6 million gallons of water, or 18 acre-feet each year – enough to fill over 9 full-sized Olympic swimming pools
- Addresses \$26M in Sports Tourism, Smart City, and City infrastructure improvements
- Tangibly advances City Strategic Leadership Goals for FY22-23
- Saves water, energy, and maintenance costs while improving operations at the Cove
- Addresses critical infrastructure needs at several City facilities