



Cooper City IGA



Energy Savings Performance Contract
30% Milestone Meeting – July 17, 2026

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BUILDING A MORE RESILIENT AND FINANCIALLY SUSTAINABLE COOPER CITY



Our Investment Grade Audit is designed to help Cooper City maximize every capital dollar while improving infrastructure reliability and long-term financial sustainability.



MODERNIZE INFRASTRUCTURE

Address aging assets, reduce deferred maintenance, and extend the life of critical systems.



PROTECT LIMITED CAPITAL

Invest strategically in projects that deliver the highest lifecycle value for our community.



PREPARE FOR REVENUE UNCERTAINTY

Reduce operating costs and improve budget flexibility in the face of potential property tax reform.



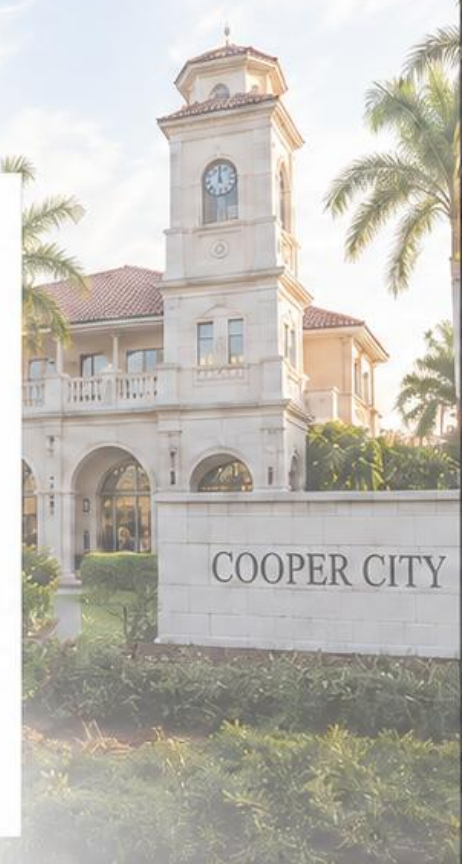
IMPROVE OPERATIONAL EFFICIENCY

Lower energy, water, and maintenance costs through efficient systems and modern technologies.



INCREASE RESILIENCE

Strengthen reliability and continuity of operations for a safe, resilient Cooper City.



The Investment Grade Audit provides a data-driven roadmap for prioritizing facility investments that support Cooper City's strategic objectives and long-term financial sustainability.



Cooper City: A Safe & Sustainable Place to Live

Current State

Aging Infrastructure

Limited Capital Budgets – i.e.
Parks Department

Inefficient Street and Sports
Lighting

Rising operating costs

Property Tax Reform Uncertainty

Finds ways to
Generate
cost savings

Address
Deferred
Maintenance



Improve
parks
experience

Use the
ESPC
process to
fund

Future State

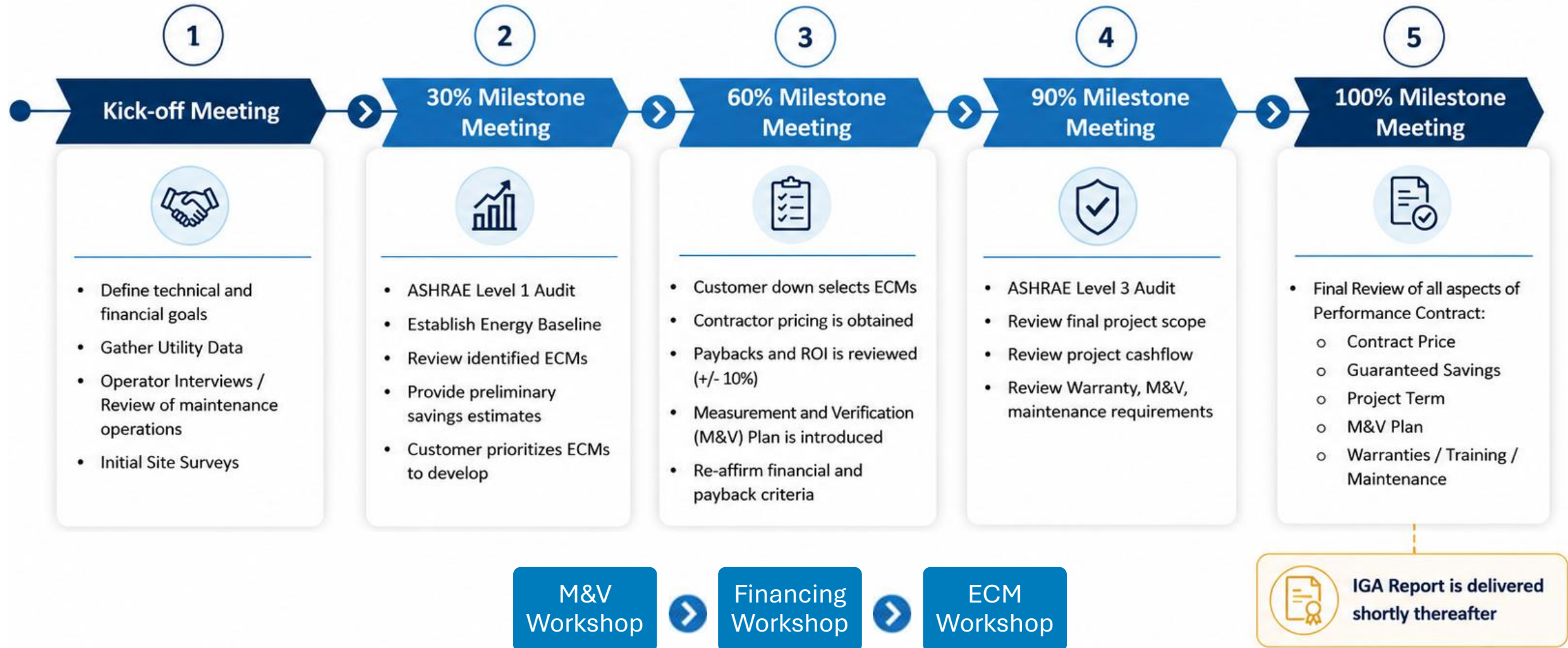
Modernized HVAC and Lighting
Infrastructure

Well lit roads and parks for
residents

Reduce maintenance

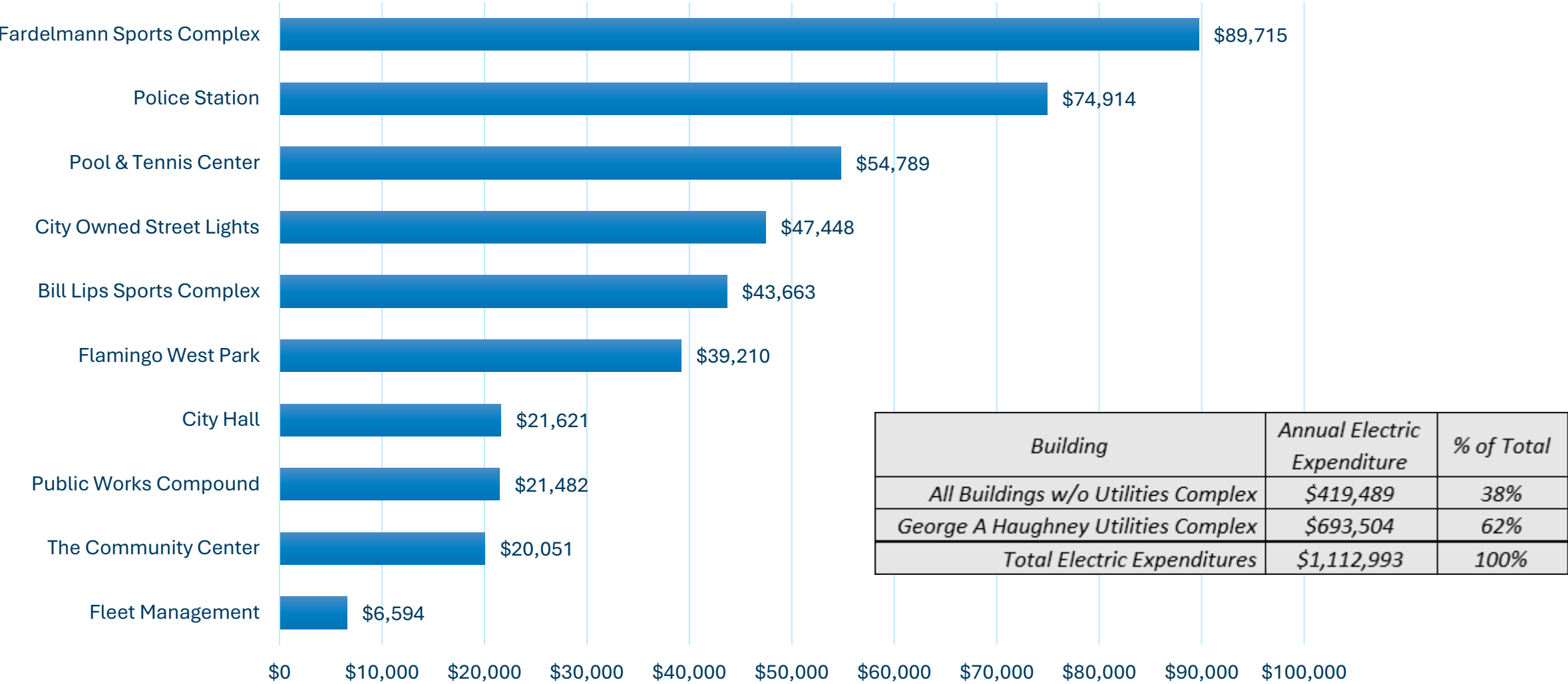
Free up CIP dollars

ESG INVESTMENT GRADE AUDIT



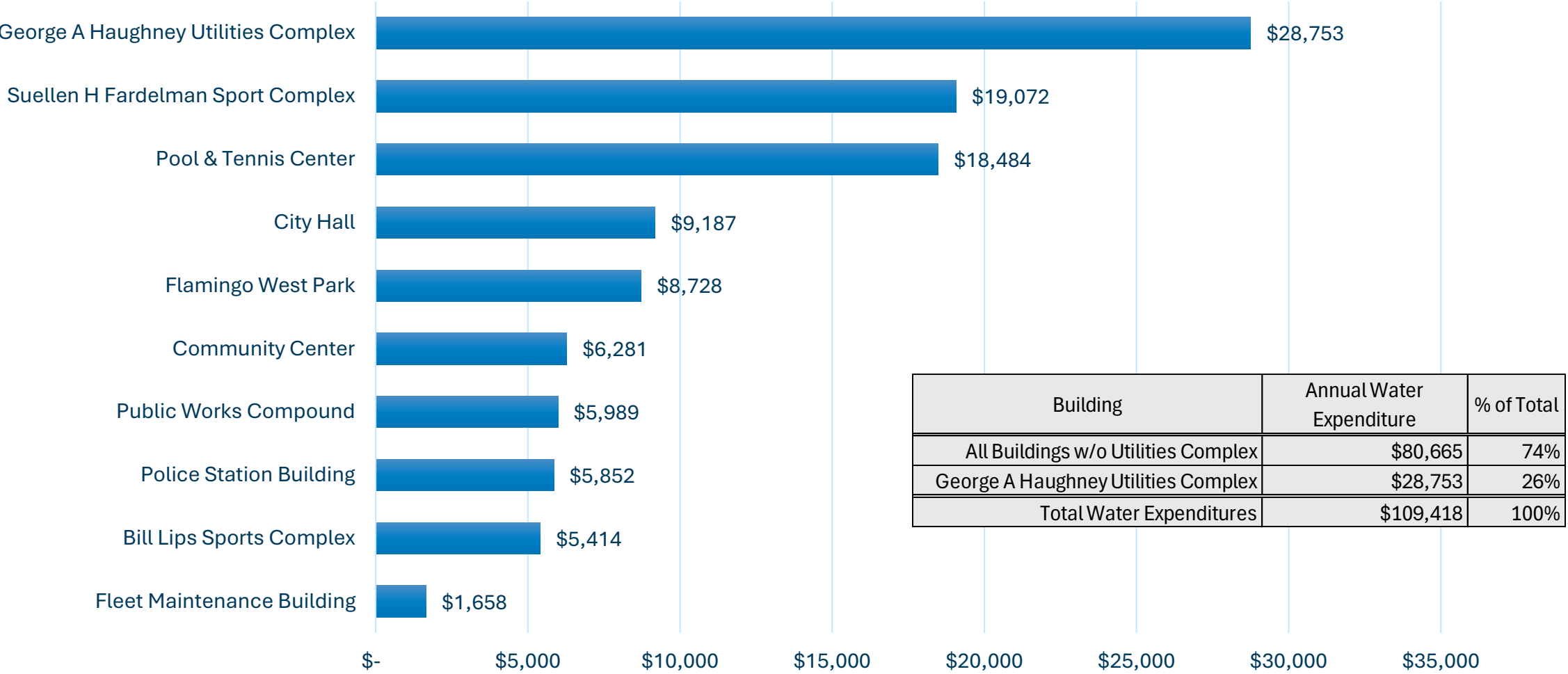
ELECTRIC UTILITY ANNUAL BASELINE

May 2025 – April 2026



WATER UTILITY ANNUAL BASELINE

May 2025 – April 2026



BUILDING ENERGY USE INDEX (EUI)

Address	Facilities	Sqft	Annual kWh	kBtu	EUI	Median EUI
10300 Stirling Road	Suellen H Fardelman Sports Complex	5,221	416,698	1,421,774	272	56
11700 SW 49th Street	Bill Lips Sports Complex	3,100	185,192	631,875	204	56
6201 S Flamingo Road	Flamingo West Park	4,966	218,160	744,362	150	56
11600 Stonebridge Parkway	Pool & Tennis Center	13,230	425,113	1,450,486	110	56
10580 Striling Road	Police Station Building	27,166	804,960	2,746,524	101	64
9090 SW 50th Place	City Hall	13,600	203,040	692,772	51	53
11221 SW 49th St	Fleet Maintenance Building	6,600	47,527	162,162	25	40
9000 SW 50th Place	Community Center	10,769	177,840	606,790	56	51
9070 SW 51st Street	Public Works Compound	22,300	195,703	667,739	30	40
11791 SW 49th Street	George A Haughney Utilities Complex	35,123	9,164,400	31,268,933	890	N/A

Above
Average

- **EUI (Energy Use Intensity)** index is a standardized metric used to measure and evaluate a building's overall energy efficiency.
- EUI allows facility managers to compare their building's energy use against similar buildings in the state or nationally via databases like the EPA's ENERGY STAR Portfolio Manager.

ENERGY CONSERVATION MEASURES AUDITED



Energy Conservation Measures

- 1 Manhole Rehabilitation
- 2 LED Sports Lighting
- 3 Solar Parking Lot and Pathway Lighting (safety lighting)
- 4 City Owned Street Lighting LED upgrade (330)
- 5 LED Indoor Lighting
- 6 HVAC Replacements
- 7 HVAC Controls
- 8 Solar PV + BESS Systems
 - 8a 8a – Canopy Solar + BESS (ITC eligible)
 - 8b ~~8b – Rooftop (solar non-ITC eligible)~~
- 9 Electric Vehicle Charging Stations
- 10 Generator Replacement / Battery Storage



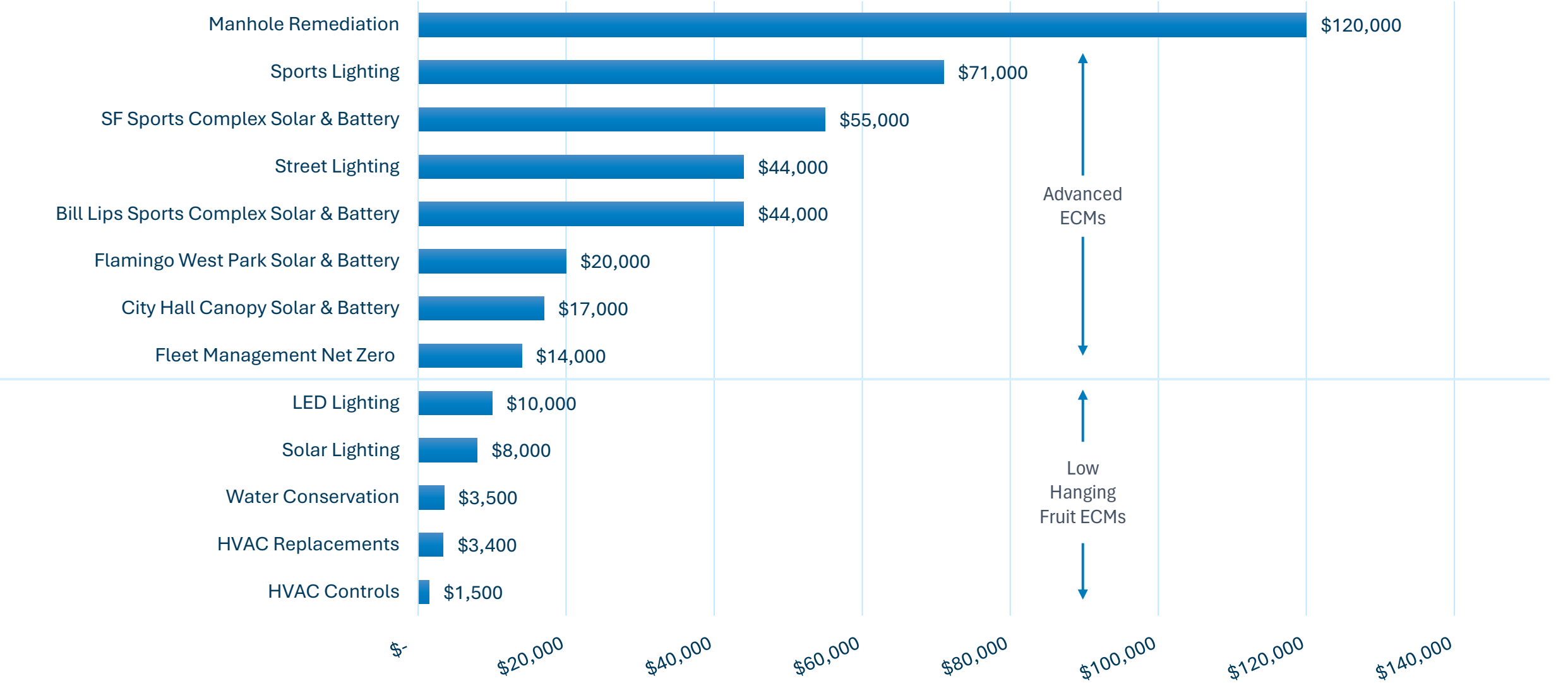
Energy Conservation Measures

- 11 Net Zero Transition for Fleet Management
 - 11a – Fleet Yard Solar Canopy
 - 11b – Generator replacement + Battery Storage
 - 11c – Carbon Monoxide Exhaust Systems
 - 11d – Low Velocity High Flow Fan System
- 12 Telecom System Audit
- 13 Chlorine Generators
- 14 Water Conservation
- 15 ~~Vending Misers~~
- 16 ~~Conversion to Air-cooled systems~~
- 17 ~~WakeSmart~~
- 18 ~~Building Envelope / Roofs~~

IDENTIFIED ENERGY CONSERVATION MEASURES

ECM	 City Wide	 Community Center	 Public Works Compound	 Utilities Complex	 Pool & Tennis Center	 Police Station	 City Hall	 Fleet Maintenance Building	 Flamingo West Park	 Fardelmann Sports Complex	 Lips Sports Complex
LED Sports Lighting										X	X
LED Interior Lighting		X	X	X	X	X	X			X	X
Solar Parking Lot and Pathway Lighting	X				X						X
CIZ (Owned Street Lighting LED) Upgrade	X										
Solar PV + Canopies & Battery Storage							X		X	X	X
Electric Vehicle Charging Stations		X	X		X		X	X	X	X	X
HVAC Controls		X	X	X	X		X				
Generator Replacement / Battery Storage			X			X		X			
HVAC Replacements		X	X	X	X	X	X				
Custom Hydronic / Exhaust System								X			
Low Velocity High Flow Fan System								X			
Fleet Yard Solar Canopy								X			
Irrigation Rehabilitation	X										
Chlorine Generators				X	X						
Water Conservation				X	X	X	X				
Telecom System Audit	X										

ESTIMATED ANNUAL ENERGY & OPERATIONAL SAVINGS BY ECM



POTENTIAL LONG-TERM ESTIMATED ENERGY SAVINGS

ECM	Year 1 Savings	Cumulative Savings year 15	Cumulative Savings year 20
LED Sports Lighting	\$71,000	\$1,320,523	\$1,970,797
Suellen Fardelmann Solar & BESS	\$55,000	\$1,022,940	\$1,477,871
LED Street Lighting	\$44,000	\$818,352	\$1,182,296
Total Estimated Savings	\$170,000	\$3,161,815	\$4,567,964

- Savings are preliminary and based on historical data, industry metrics, and information provided by staff.
- Energy Savings are escalated 3% annually to account for Utility rate increases.

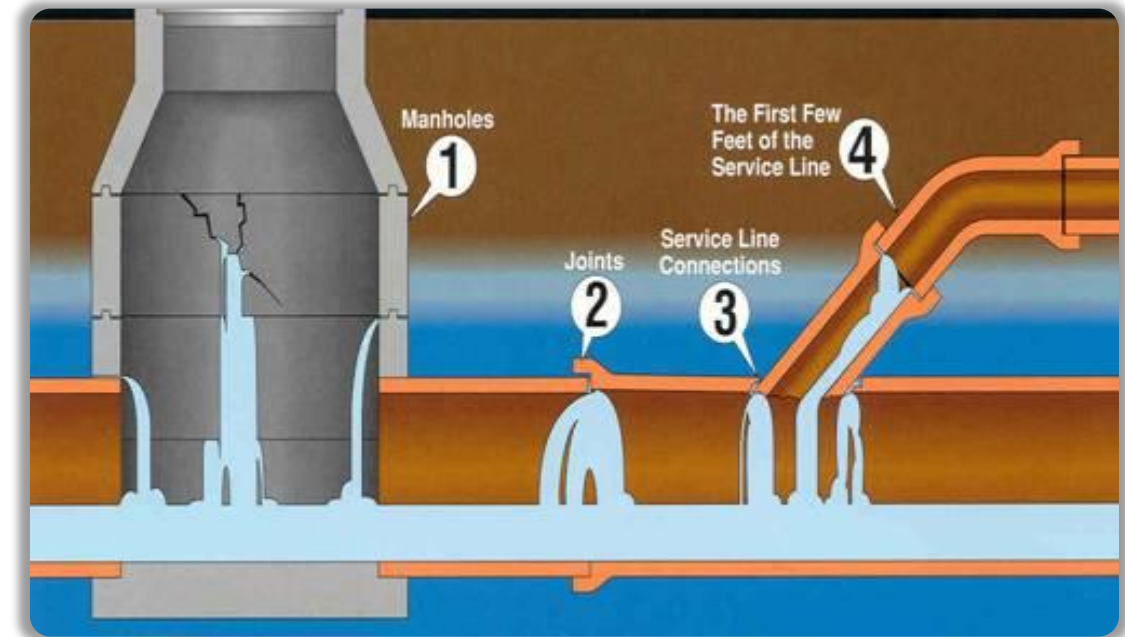
Recommendation:

- Use Energy Savings Performance Contracting to fund key energy conservation measures (ECM)
 - Continue with IGA process
 - No upfront cost
 - Firm-fixed turnkey price (no change orders)
 - Guaranteed Energy Savings
 - Projects are funded using energy savings rather than tax-payer dollars

WHAT IS INFLOW AND INFILTRATION? (I&I)

Inflow and infiltration (I&I) are terms for the ways stormwater runoff and groundwater (clear water) enter sanitary sewer pipes.

- Inflow occurs when stormwater rapidly flows into sewers via roof drain downspouts, yard drains, storm-sewer cross connections, and faulty manhole covers. Inflow is greatest during major storm events and can more than triple wastewater volumes.
- Infiltration occurs when groundwater seeps into sanitary sewer pipes through cracks, leaky pipe joints, and/or deteriorated manholes.
- Cooper City has over 2,200 Manholes.



Source: www.Wastewater101.net

WHAT IS INFLOW AND INFILTRATION? (I&I)

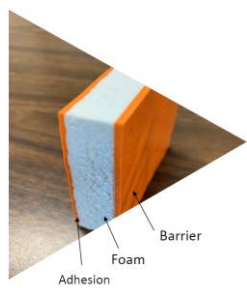
I&I has a financial cost to Cooper City:

- The cost to treat water is \$4.55/ kGal
- Cooper City treats an average of 2.48 MGD or 933M gallons at the WWTP
- Due to I&I, Stormwater, Groundwater, or seawater mixes with Wastewater
- All the water must be treated
- Addressing I&I has potential savings to the City

Every gallon of water that seeps into sewer pipes costs the City additional money to treat.

Estimated Cost Avoidance

Inflows & Infiltration (I&I) Manhole Rehabilitation



Manhole Covers and Refurbishments:

- Reduce water (I&I) inflow and infiltration
- Lining costs ~\$4k-\$5k per hole compared to \$20K to \$50K to replace.
- 50-year expected new life of the structure

Pipeline Repairs:

- Cured-in-place pipe, a no-dig method to repair faulty sewer pipes. Provide 50+ years of life at a lower cost than pipe replacements.



No. of Manholes	Water (kGal)	Water Treatment Savings (est)	Cost Implementation	Simple Payback
2201	~130,000	\$525,000	~\$9M-\$12M	8-12 years
1000	~60,000	\$237,000	~\$4M-\$8M	9-16 years
500	~30,000	\$120,000	~\$2M-4M	10-20 years

LED SPORTS LIGHTING

FACILITIES AUDITED



Bill Lips
Sports Complex



Suellen H.
Fardelmann
Sports Complex



Flamingo West
Park



Cooper City
Pool & Tennis
Center



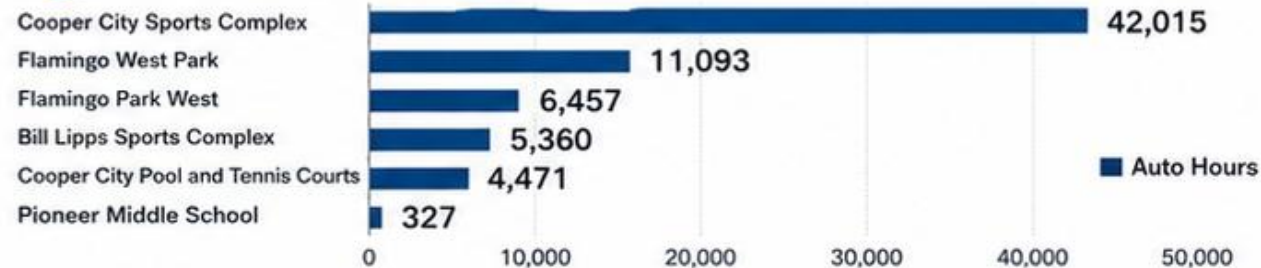
Pioneer Middle
School

The audit identified a mix of immediate retrofit opportunities, aging systems nearing warranty expiration, and facilities where recent upgrades reduce near-term needs.

- Bill Lips Sports Complex uses older, inefficient metal halide lighting and represents a strong LED upgrade opportunity.
- Suellen H. Fardelmann Sports Complex includes older Musco Green and LED technology approaching the end of its warranty period.
- Flamingo West Park and the Cooper City Pool & Tennis Center have already received lighting upgrades.
- Pioneer Middle School has older, inefficient lighting, but annual usage is comparatively low.



Automatic Lighting Usage



Bill Lips Sports Complex



Suellen H. Fardelmann Sports Complex



Pool & Tennis Center

ECM: SPORTS LIGHTING INFRASTRUCTURE

Recommendation:

- Complete LED Sports lighting retrofit using new Musco LED technology at Bill Lipps and Suellen H. Fardelmann

Benefits:

- Energy Savings – 40% to 50% kw reduction
- Longer life hours, lower maintenance costs
- 10-year warranty removes the need for the City to do lighting maintenance for 10 years
- Superior quality of light (reduced spill and glare)
- 24/7 Control-link System monitoring and management



	Year 1 Savings	Year 15 Cumulative
Energy Savings	\$21,000	\$315,000
Rate Change Savings	\$35,000	\$325,000
Operational Savings	\$15,000	\$225,000
Total	\$71,000	\$865,000

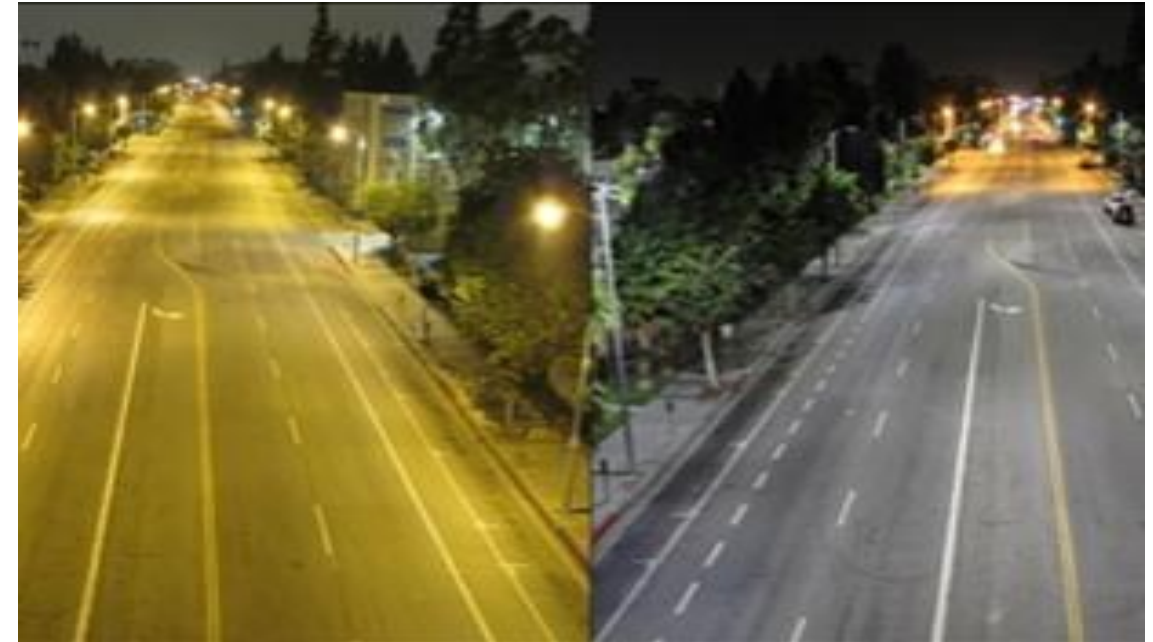
ECM: STREET LIGHTING RETROFITS

Recommendation:

- FPL confirms that City maintains and pay electrical (331) Streetlight fixtures
- Convert lamps from High Pressure Sodium (HPS) to LED
- Light fixtures are part of Broward County or FDOT.

Benefits:

- Energy Savings (potentially 50% kWh reduction)
- Longer lamp life results in reduced maintenance costs
- Allows city to redirect manhours to higher city priorities
- Higher Quality light improves driver and pedestrian vision and safety



	Year 1 Savings
Estimated Energy Savings	\$24,000
Estimated Maintenance Savings	\$20,000
Total	\$44,000

ECM: SOLAR PARKING LOT & PATHWAY LIGHTING – CITY WIDE

Recommendation:

- Convert existing lighting fixtures to solar power

Benefits:

- Energy Savings
- Eliminate future lamp replacements
- Eliminate future labor & maintenance costs
- New lamps will be designed to meet Florida Illumination Code requirements.
- Increased safety for visitors



Existing Fixture



Existing Fixture

Estimated by on 60 fixtures	Year 1 Savings
Estimated Energy Savings	\$4,000
Estimated Maintenance Savings	\$4,000
Total	\$8,000

ECM: INTERIOR LIGHTING

- Mixture of LED lamps present in multiple facilities
- Some areas incomplete, i.e., Police Station
- Mixture of lighting controls identified

Recommendation:

- Conduct full lighting audit to determine proper approach (maximize total savings vs maximize payback)
- Analyze existing light level outputs and improve where needed
- Identify areas that would benefit from lighting controls, i.e., dimming, bi-level controls, occupancy sensors

Benefits:

- Reduction in lighting consumption (kWh)
- Reduction in work orders
- Long-term maintenance savings
- 10-year warranty where appropriate



ECM: HVAC REPLACEMENTS

- Most of the buildings are conditioned by packaged DX and Split Systems equipment of varying age and efficiencies.
- Ages range from 2011 – present
- Mix of different brands
- City trending towards standardizing with Trane

Recommendation:

- Replace aging units with new high-efficiency
- Source units with a 10-year compressor warranty
- Consider coil coatings to extend the life of units



Building	Qty.	Total Tons	Average Age	Estimated Savings
City Hall	6	40	10.67	\$2,000
Community Center	3	10	11.33	\$500
Police Station	1	30	26	\$700
Pool & Tennis Center	1	7.5	12	\$100
Utilities Complex	1	4	13	\$100
SUBTOTAL	12	91.5	14.6	\$3,400

ECM: HVAC CONTROLS

- Majority of building utilize stand-alone programmable thermostats
- Setpoints and setbacks vary. Occupants change settings randomly
- No remote visibility
- Police Station has advanced BMS Controls in good condition

Recommendation:

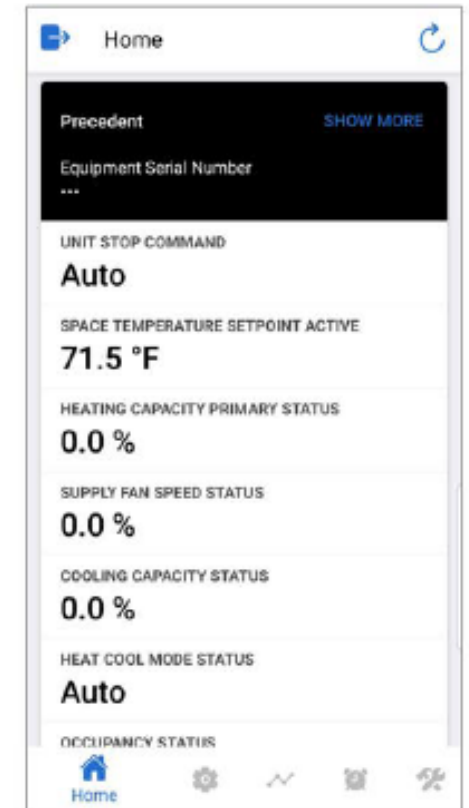
- Install new Trane Symbio thermostats for all new retrofitted units

Benefits:

- Energy Savings via nighttime setbacks
- Remote monitoring and management capabilities
- Ability to create upper and lower setpoints that occupants cannot override
- Further savings can be achieved with a standardized 72-degree daytime set point



Mobile app allows
for remote
capabilities



ECM: CANOPY SOLAR PV SYSTEM + BATTERY STORAGE

We recommend evaluating the feasibility of installing canopy solar and Battery Storage at (4) locations:



Bill Lips
Sports Complex



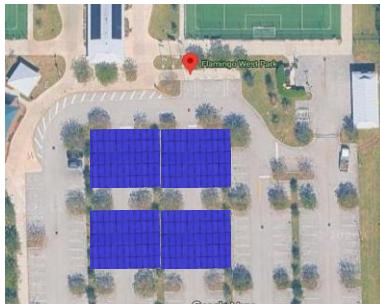
Suellen H.
Fardelmann Sports
Complex



Flamingo West
Park



City Hall



Flamingo West



SF Sports Complex



Bill Lips Sports Complex



Eligible for Federal
Investment Tax Credits
(ITC) up to **34%**
if operational by the
end of 2027.

BENEFITS



Reduced
energy
consumption



ITC Eligibility if the
project starts in
2026



Combining with BESS allows
parks to utilize stored energy
for sports lighting



BESS is also
eligible for ITC

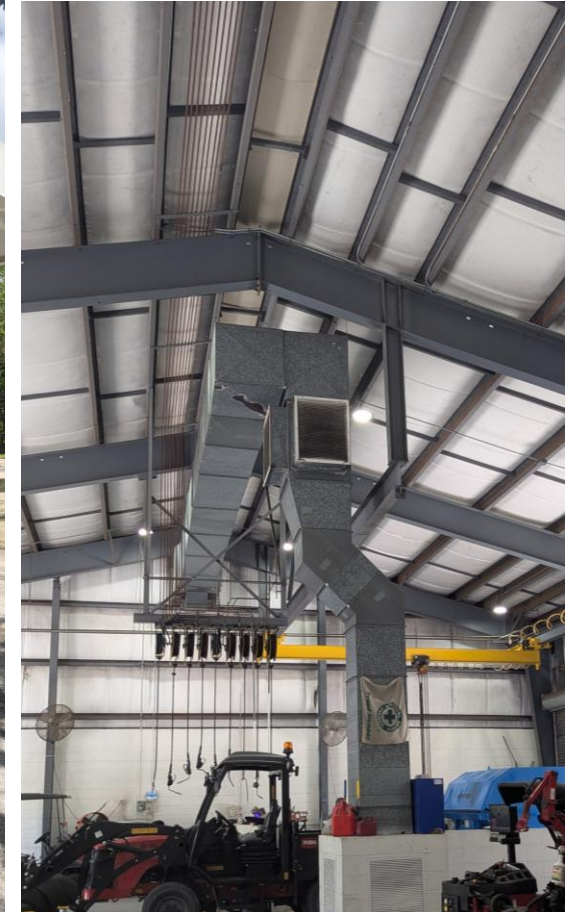


Provides
shaded parking
for visitors

ECM: NET ZERO FLEET MAINTENANCE

The Fleet Maintenance building provides an excellent opportunity to reduce energy expenditures by:

- Existing canopy has reached end of useful life
- Replacing the existing canopy with a Solar Canopy – ITC eligible
- Eliminate the existing generators with Battery Storage – ITC eligible
 - Save on diesel fuel costs
 - Save on maintenance operations
 - ITC up to 34%
- Industrial grade fan needed per Fleet Manager
- Relocate carbon monoxide exhaust System



Estimated energy/operational savings = electric + fuel savings

ECM: EV CHARGING STATIONS

- Tier 2 electric vehicle chargers
- Universal plug for most vehicles
- City revenue-generating
 - Est ~\$2k - \$10k
 - High Utilization up to ~\$18K
- Get ahead of future demand



ECM: WATER CONSERVATION



Water Closets

- Pressure-assisted tank valves to reduce water volume
- High efficiency flush valves

Urinals

- High efficiency flush valve to reduce water volume

Faucets/Aerators

- Reduce flow rates from faucets

Showerheads

- Reduce flow rates to conserve water

Smart Irrigation Systems

- Climate-controlled daily irrigation schedule to monitor and manage water flow based on parameters

ECM: HYPOCHLOROUS ACID GENERATOR



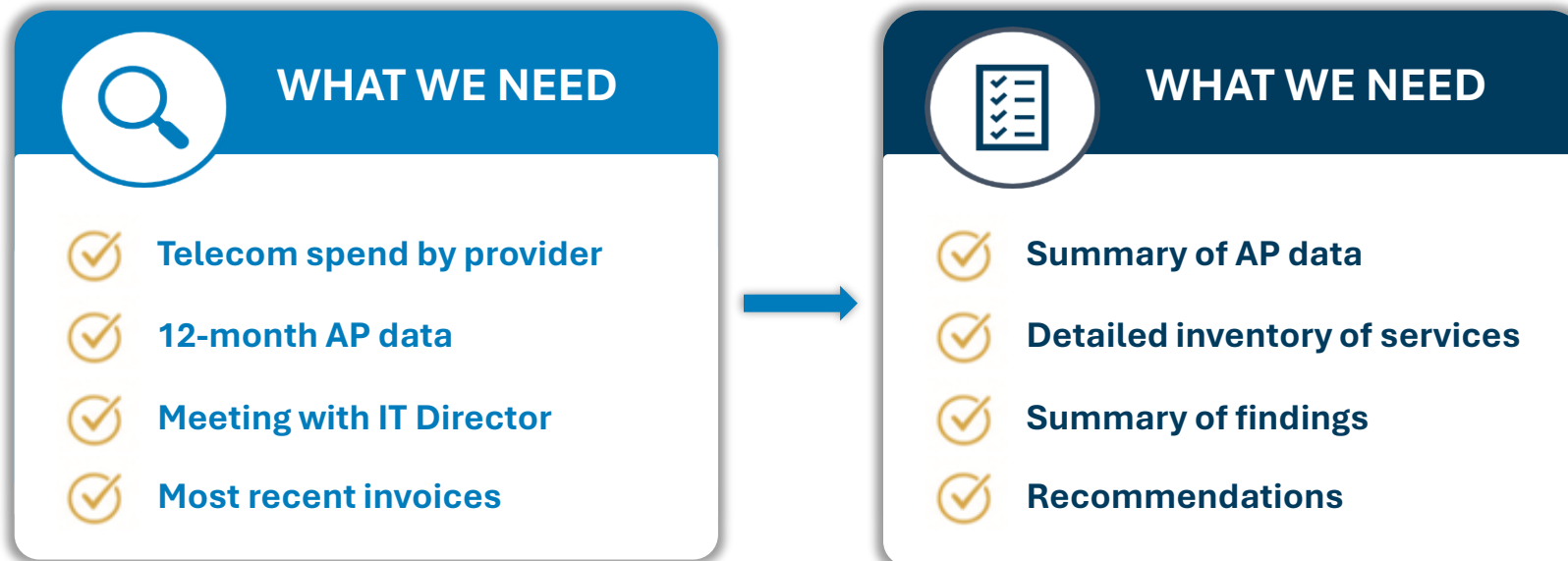
- On-site Hypochlorous Generator converts salt, water, and electricity to replace chlorine.
- Eliminates chlorine purchasing and delivery
- Kills bacteria, viruses, and sanitizes the water
- Can work for the Pool & Tennis Center and the Utility Plant.

ECM: TELECOM ASSESSMENT



Telecom Audit Average **Cost Savings** is 30-35%

- Review of all lines
- Review of all Monthly Recurring Charges (MRC)
- Compare current contract to market



Next Steps



ECMs – Go or no Go

Complete Energy Savings
Conduct Scopes of Work and Subcontractor Walkthroughs
M&V Plan



Financial Modeling

Build a cashflow positive model
Inputs from Cooper City on investment



Construction Scheduling

Base construction schedule on ECMs selected
What is Cooper City desired timeline (18-24months)



60% Meeting