

*Journey into
Electric Vehicles
and EV Charging
Infrastructure*

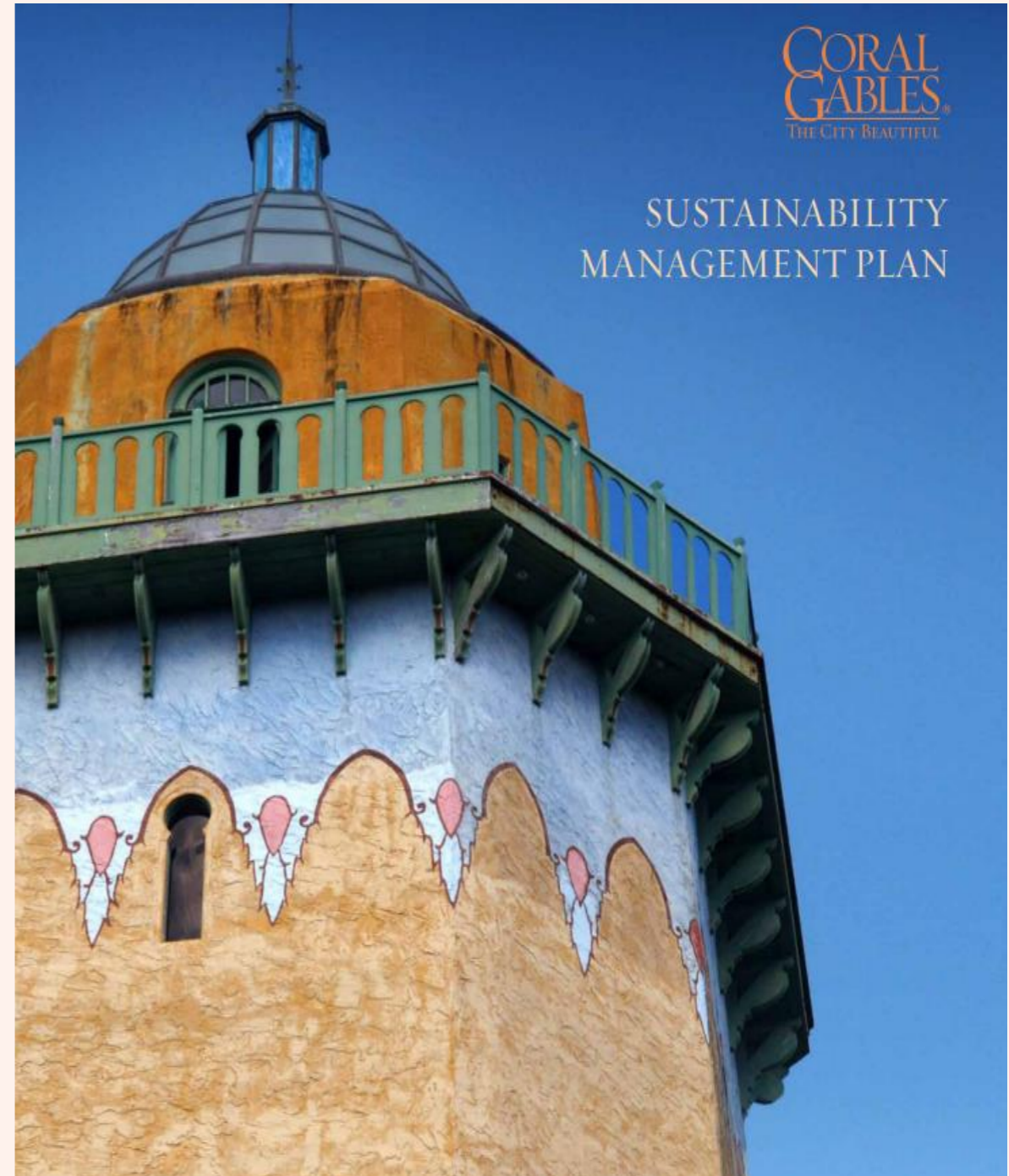
**CORAL
GABLES**[®]
THE CITY BEAUTIFUL



SUSTAINABILITY MANAGEMENT PLAN



- 10-year Plan
 - City Operations (23 projects)
 - Focus areas: (Energy, Fleet, Water, Waste, Land Use & Transportation, Outreach, Finance)
 - Reduce Fuel, Energy, Water and GHG Emissions by 20% by 2025.
 - 24% ROI over 10 years (over \$4 million)
 - 2013 & 2017 Greenhouse Gas Emission Inventory (City Operations & Community-Wide)



ELECTRIC VEHICLE FLEET

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- 51 Electric Vehicles (16 Extended Range Chevy Bolts)
- FY 2021 goal: 78 Electric Vehicles (60% of Administrative Fleet).
- Departments with EV's: Public Works, Code Enforcement/Development Services, Parking, Procurement/Finance, Automotive, Historical Resources, Fire Dept.
- EV's replaced vehicles that were not Emergency/Rescue-Recon
- 12 GEM Electric Vehicles (Neighborhood Safety Aide & Special Activities Service Vehicle)

CURRENT ELECTRIC VEHICLE CHARGING INFRASTRUCTURE



- Currently: (16 Stations): (12) Level II & (4) Level III (Total: 22 charging ports)
- Public: (5) level II Dual Port Stations: (2) Parking Garage #2, (1) Garage #4 and (2) Garage #6 , (2) Level III stations at City Hall (405 Biltmore Way)
- 10,700 Charging Sessions; Saved 12,000 gallons of fuel; Avoided 28,000 lbs of GHG
- Private: (1) Private Level III and (6) Level II at Public Works Department; (1) Level III Youth Center; (1) Level II Trolley/Admin Office
- Future Implementation: 11 Charging Stations; 21 Charging Ports
- Zoning Code Update (March 2019): (20 or more off-street spaces): Requires 2%: EV parking with charging stations. 3%: “EV Ready” (infrastructure installed except EV Station. 15%: “EV Capable” conduit run with capacity in electrical panels.

PROCUREMENT

- Nissan Leafs (2016) were priced at \$32K on the State Contract.
- Used MEARS lease program to help take advantage of additional tax incentives to bring the cost lower.
- Additional dealer incentives from Nissan lowered the cost to \$18K.
- Nissan also provided two FREE fast charging stations.
- Chevy Bolts purchased off the State Contract and leased for one year to receive \$3,000 of tax incentive.
- Purchased through vehicle replacement program. (\$3.2 million)
- Charging Stations: purchased through operations funds.
- EVGO Level III Stations: Provided space and they operate and maintain.
- EV's will be rotated every 6 yrs. to retain maximum value with battery warranty.

BEST PRACTICES

Charging Stations

- Placement of charging stations and their type, Level 2 or 3, is critical to the success of your EV fleet.
- Consider inexpensive “standard” level 2 chargers for secure government parking areas that are not available to the general public.
- Consider purchasing dual port level 2 charging stations that can charge 2 cars simultaneously. Place them between two parking spaces where cars park overnight
- Level 3 chargers should be used in outlying areas furthest away from the home base.
- Survey areas to ensure that the chargers are not placed in flood areas.
- Consult with cities/county in your area before developing your infrastructure plan!

EV Fleet

- How many average daily miles are driven? Min of 20% range available at the end of the route/workday. Is the vehicle used for multiple shifts?
- Is the vehicle deemed mission essential after a hurricane?
- Estimate a 30% reduction in battery capacity over the battery’s warranty.
- Constant fast charging will accelerate the reduction of battery capacity.
- Ancillary devices that must be installed on the car that would require battery power?

ALTERNATIVE TRANSPORTATION

- Multimodal transportation plan
- Free Trolley Service (Over 1.2 million riders per year).
- Bicycle/Pedestrian Master Plan
 - Expanding bike infrastructure (10 to 34 miles)
- Provide free bike racks to businesses
- Freebie Service (Year 1: 60,000 riders)
- Spin and Bird Scooters (1st in Florida)
- Since FY16: 1.2 miles of sidewalk extensions. 232 crosswalks.





Thank you



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