

Helix Water District

Operations Center Electrification Project



Agenda

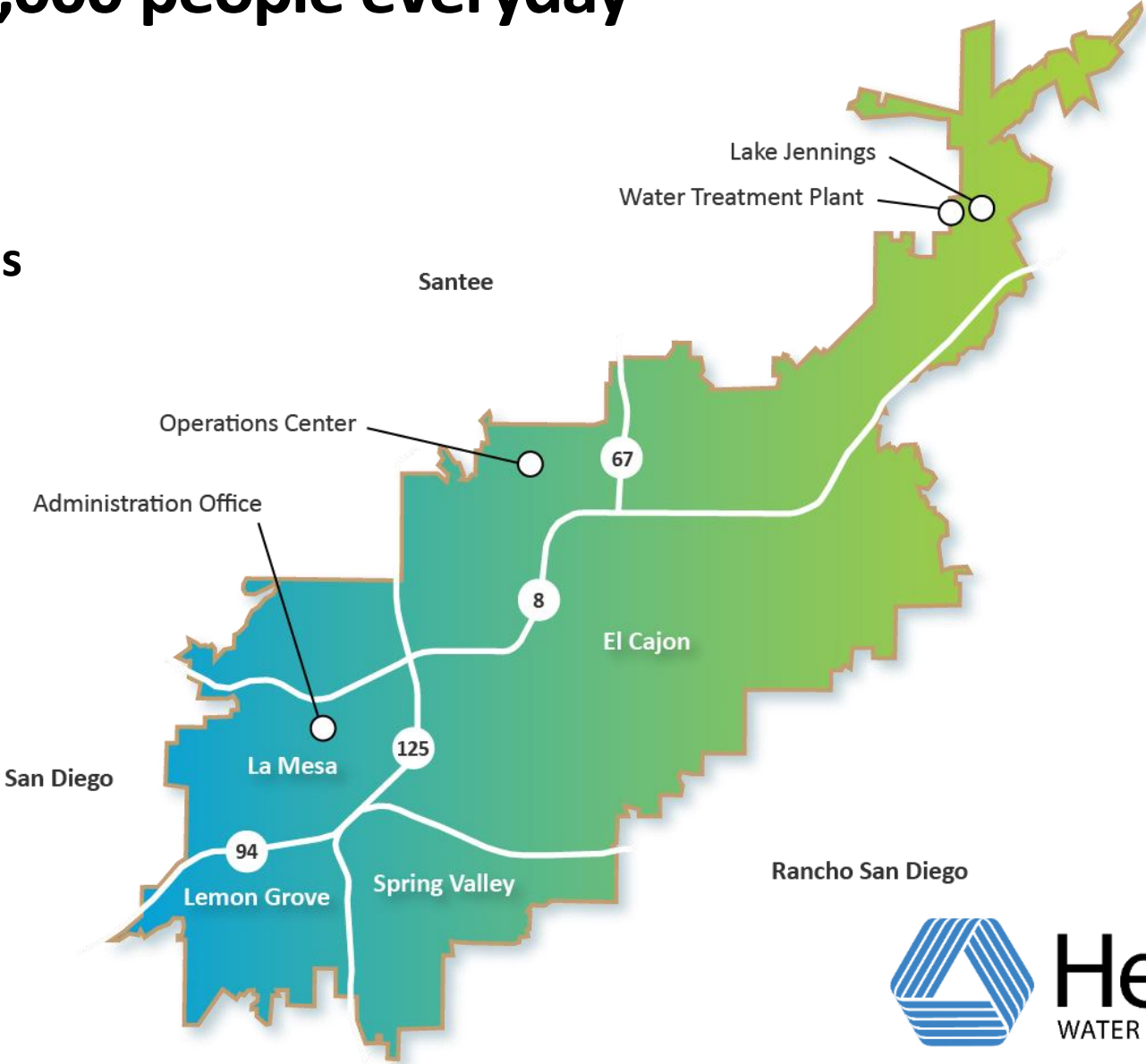
- Background
- Operational Analysis
- Project Overview
- Project Cost/Funding
- Schedule
- Questions



We deliver water to over 277,000 people everyday

Our service area covers 50 square miles

- City of El Cajon
- City of La Mesa
- City of Lemon Grove
- Portions of the County:
 - Spring Valley
 - Mount Helix
 - Lakeside



HWD: Electrification in Action

Over the past 7 years Helix has:

- Installed 10 chargers at the administration office
- Installed 11 chargers at the operations yard

Helix fleet includes:

- 6 PHEV Prius
- 2 PHEV Ford Escape
- 10 F-150 Lightnings

Operational Analysis - Electric Vehicles and Charging



Charging infrastructure analysis parameters:

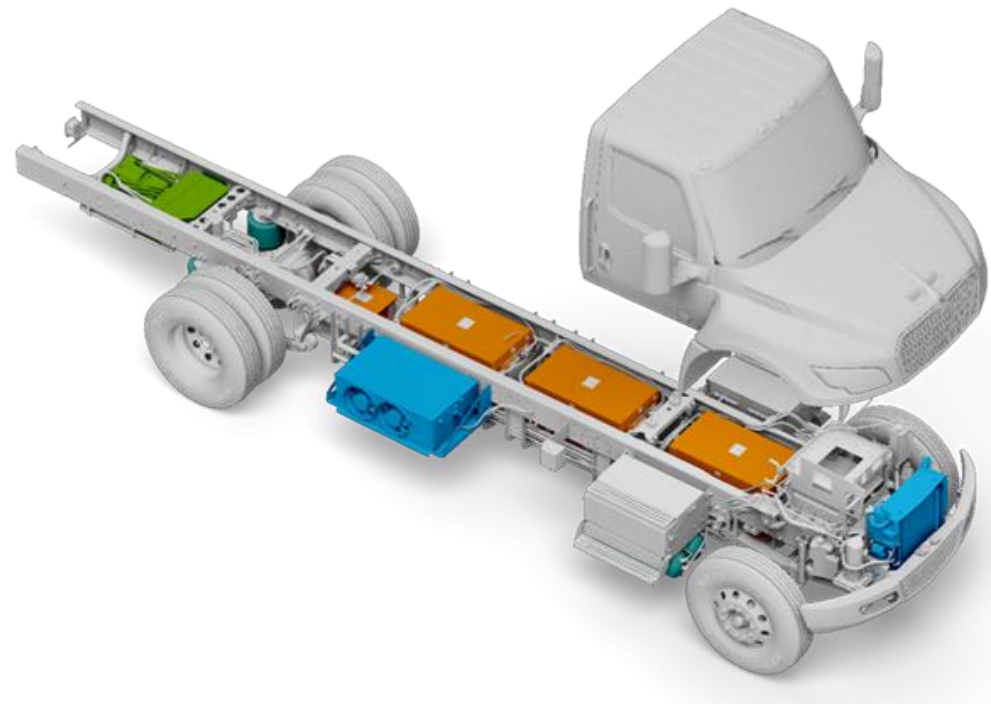
- Helix will meet all state regulations
- No change to work schedule
- No increase in vehicles
- No increase in staff
- Maintain fleet readiness

Analysis result:

70+ chargers needed

OC Electrification Analysis

- Analysis resulted in numerous questions
 - Utility Power supply
 - Charging choices
 - Space constraints
 - Redundancy/Emergency backup
 - Operational readiness
 - Charging management/software



Project Team – so far...

- Helix Staff
 - Operations
 - Engineering
 - Electricians
 - Finance
 - Public Relations
 - Contracting
 - Legal
- External
 - SDGE
 - APCD
 - Design Support – CBSI
 - Design – Black and Veatch
 - Tax Advisors
 - Product Manufacturers (chargers/cable reels)
 - Software Management - TBD

ENGINEERING/DESIGN CHALLENGES/OPPORTUNITIES

BLACK & VEATCH

Design Development

- Invest sufficient effort to understand and confirm client priorities and objectives
 - Cost
 - Schedule
 - Operational Efficiencies

Program Timeline

- Adequate time for design reviews, approvals and revisions
- Design iterations

Collaborative work relationships are essential to project success. Ensure alignment and good communication between engineer and facilities management

Equipment Ecosystem

- EPRI Approved Product List can be dynamic
- New equipment / equipment versioning
- Validate selection list is current

Municipal vs. Commercial

- Fleet owner vs. hosted site
- Scope demarcation between Engineering & Construction
- Municipal processes



OC Electrification Plan

31 Charging Ports
20/40 kW

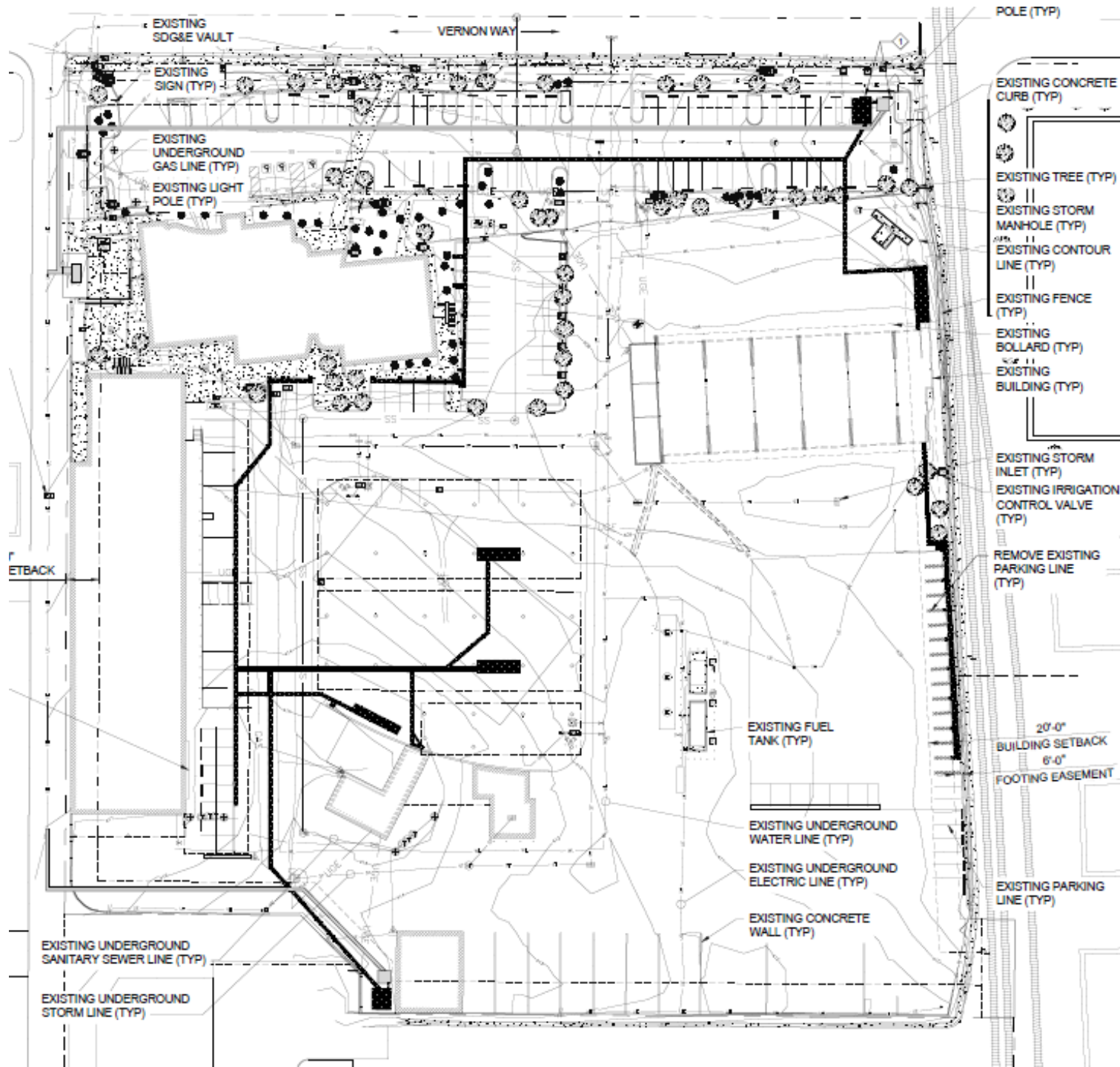
48 Charging Ports
180 kW

4 Charging Ports
350 kW

Total Charging Power
5.7 MW



Site Plan



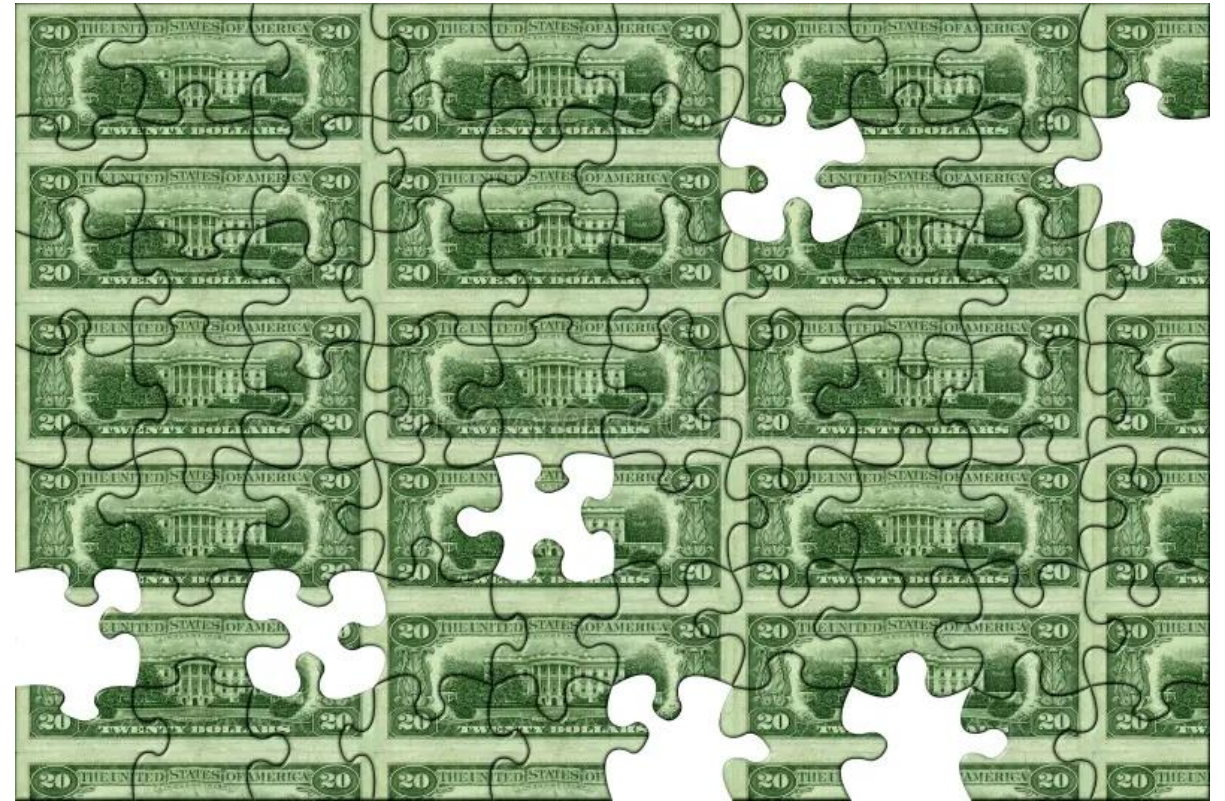
Estimated Project Cost - \$10M+

- Design \$0.8 million (10% of Construction)
- Construction \$8.0 million
- Special Inspection \$0.4 million
- Software Management \$0.3 million
- Contingency \$0.8 million (10% of Construction)

Does not include cost of backup generator.

Funding Opportunities

- SDGE Power Your Fleet
- SDGE Charger Rebate
- CARB/APCD Grants
- Inflation Reduction Act Tax Credit
- California Energy Commission Grants



Project Schedule

2024

- Q2 2024 Finish Design
- Q3 2024 Bid Project
- Q3 2024 Purchase Switchgear
- Q4 2024 Award Construction Contract/Mobilize

2025

- Q1 2025 Construction begins

2026

- Q1 2026 Construction complete
- Q2 2026 Charging system operational
- Q3 2026 Grant funding reimbursed

Transitioning to EV's

- Range Anxiety is REAL
- Charge Times can be SLOW
- Existing Infrastructure is NOT GOOD
- Filling up becomes an EVENT not an Errand
- Build for the Future
- This is just the Beginning



Questions?
