Designing EV Charging Infrastructure

Presented by: Danny Zimmermann, PE

SA Public vs. Private

CPS Owned Stations

Old Policy – only CPS can Sell Power

Flat Fee Charge Stations

CPS Managed Business

Separately Metered

Standalone Electrical Pipe/Wire

3rd Party Stations

Relatively New to Market

Pilot Tarif Program

Separately Metered

Standalone Electrical Pipe/Wire

Private Stations (non-Res.)

Amenities, no charge

Often Integral to Elec. Distribution

How We Do It

01

Establish Basis

of stations

Trickle or Rapid

Level I, II, or III

02

Determine Diversity (if any)

Retail, Office, Mixed Use

NEC hasn't Caught Up

03

Design the Infrastructure

Analyze Loads

Coordinate Poles/Easements

Switchgear and Capacity

Pipe/Duct banks, Routing

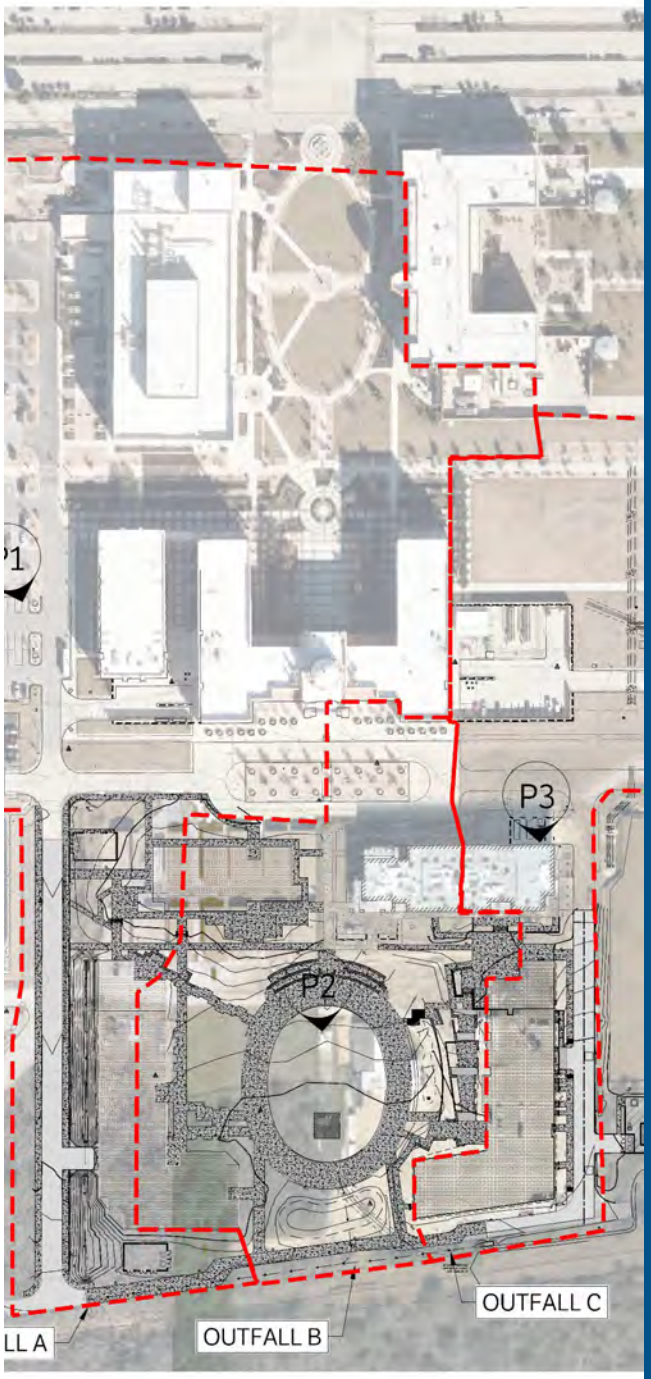
Some Recent Projects

New Braunfels Utilities (NBU)	Fleet
RBFCU San Antonio/Austin	Amenity
City of Chattanooga, TN	Pay Per
City of San Antonio, TX	Fleet
National Brand EV Manufacturer (NDA)	Amenity
Industrial Lift Trucks	Indust.
Bridgestone/Firestone	Indust.
H.E. Butt Foundation	Amentiy

Advice

Plan the Infra$tructure now for $$$avings Later

Taking a phased approach to site/campus development now will allow for future implementation of an EV charging strategy.



Make projections for number of future EV's

Analyze your use, look at national data, and decide upon a reasonable number of charging stations.

Public or Private

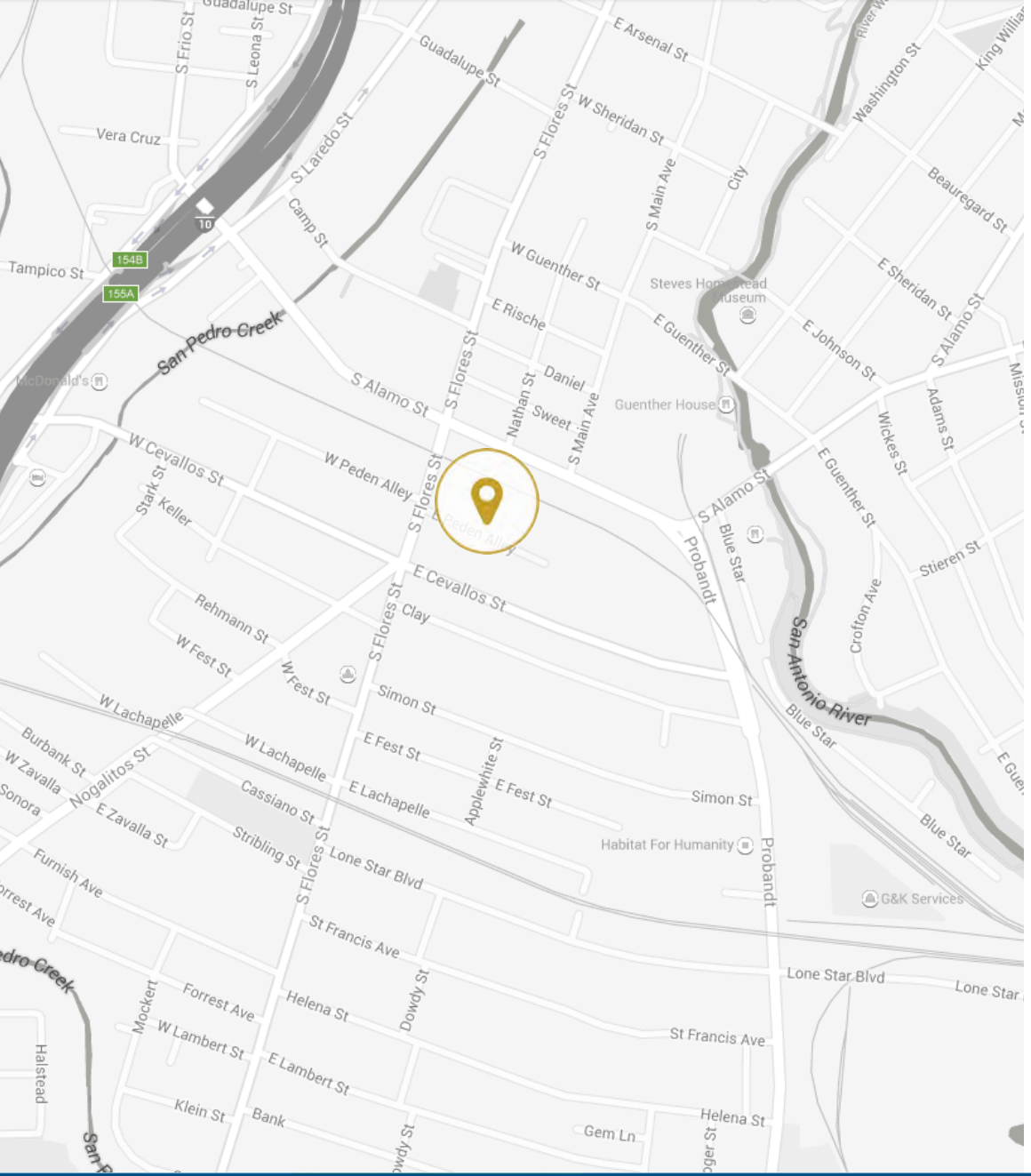
Consider if you want provision for public, for-fee charging, or amenity-based charging.

Plan the Easements

Have your engineer coordinate and plan with local utility what the future easement might look like.

Build-in the Underground Raceways

Conduit Duct banks are Cheap before roads and parking lots are in place.



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