

P2.2 Architecture Decision Record (Mock)

Prepared: 2026-01-22 (v1.0) | Decision: Managed-load architecture

EV Charging Site Project — Phase 2 Outputs (MOCK)

This record documents the selected EV electrical architecture based on the Phase 2 load calculation and Phase 1 site constraints. Replace with an Engineer-of-Record signed decision where required.

Decision drivers (mock):

- Project constraint: avoid service upgrade unless unavoidable.
- Unmanaged EV load (320A) exceeds headroom basis (250A).
- Maintain 8-port scope without reducing EVSE count.
- Adopt listed EMS/load management to cap aggregate EV demand.

Selected architecture (mock):

- New EV subpanel: EVSP-1, 400A bus (mock).
- Feeder OCPD: 350A, 3-pole (mock).
- Branch circuits: (8) 40A OCPD for EVSE-01..EVSE-08 (mock).
- EMS: cap aggregate EV demand to $\leq 250\text{A}$ (setpoint documented on drawings).

Downstream impacts (mock):

- P3.1 one-line must depict EMS and cap logic; include fail-safe note placeholder.
- P3.4 schedules must reflect EVSP-1 and branch circuit IDs.
- P6 utility package should include EMS brief and cap statement.

NOTE: Mock decision record; replace with signed EOR memo and attachments.