

Federal Pacific Electric Company (FPE).

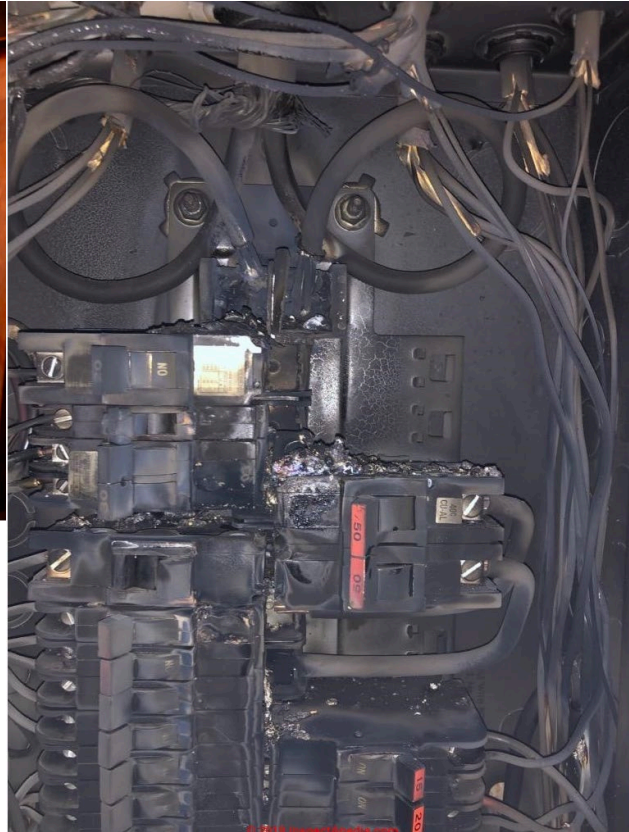
One of the most common manufacturers of circuit breaker panels in North America from the 1950s to the 1980s

- ❑ Circuit breaker panels marked stab-loc:
 - **Critical Repair** five - panels or less
 - **Non-Critical Repair** - six panels or more (due to the complexity of the job)
- ❑ Circuit breaker panels, **not** marked stab-loc - Because of the lack of readily available parts we reduce the standard effective useful life by 10 years. If the panels are 40+years recommend an evaluation by an electrician.
 - If there are reported/observed issues, recommend replacement as **Non-Critical Repairs** – due to the complexity of the job
 - With no reported issues recommend **replacement based on RUL or early in the term.**
- ❑ Main disconnect panels - Because of the lack of readily available parts we reduce the effective Useful life age by 10 years. If the main disconnect panels are 40+ years old, recommend an evaluation by an electrician.
 - If there are reported/observed issues, recommend replacement as **Non-Critical Repairs** – due to the complexity of the job.
 - With no reported issues recommend **replacement based on RUL or early in the term.**

Federal Pacific Circuit Breaker panels marked Stab Lok. These panels can fail to trip in the event of over current.



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Bulldog and ITE

Bulldog Circuit Breakers have been reported to have failures when tripping. The circuit breaker's lack of a magnetic tripping mechanism seemed to be one of the reasons for breakers to fail.

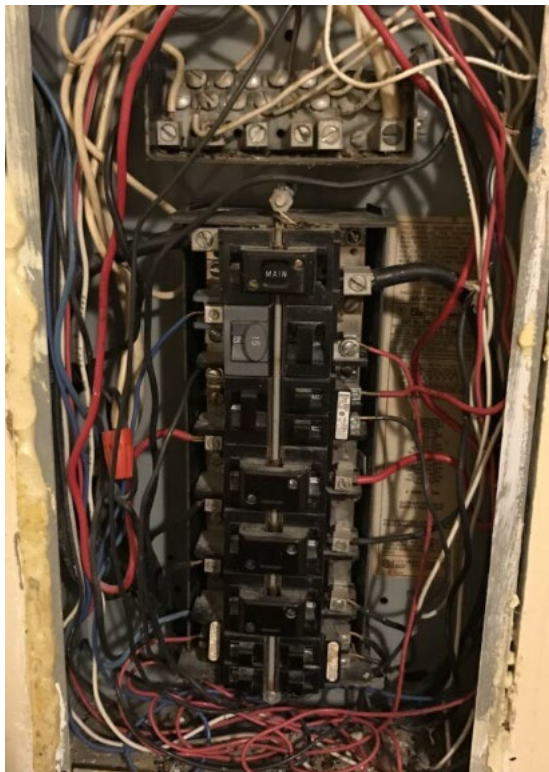
□ **Circuit breaker panels** recommend replacement:

- **Critical Repair** - five panels or less
- **Non-Critical Repair** - six panels or more

□ **Common area and MDP** recommend an evaluation by an electrician.

- If there are reported / observed issues, recommend replacement as **Non-Critical Repairs** – due to the complexity of the job.
- With no reported issues recommend **replacement based on RUL or early in the term.**

Bulldog and ITE



Zinsco

Zinsco brand no longer exists, the company's electrical panels were used in many households between the 1950s and the 1970s. *Zinsco* circuit breakers would sometimes melt to the bus bar, preventing the breaker from tripping during power shorts or surges. Melting wires inside these devices posed an even greater risk for fires and electrocutions. The *Zinsco* brand was eventually folded into *GTE-Sylvania*, so if we find a panel labeled *Zinsco*, *GTE-Sylvania*.

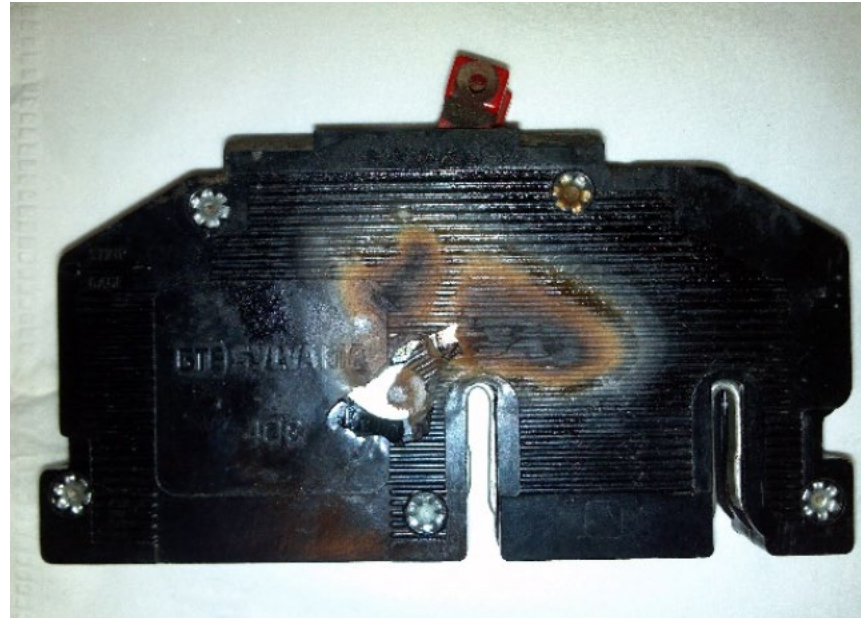
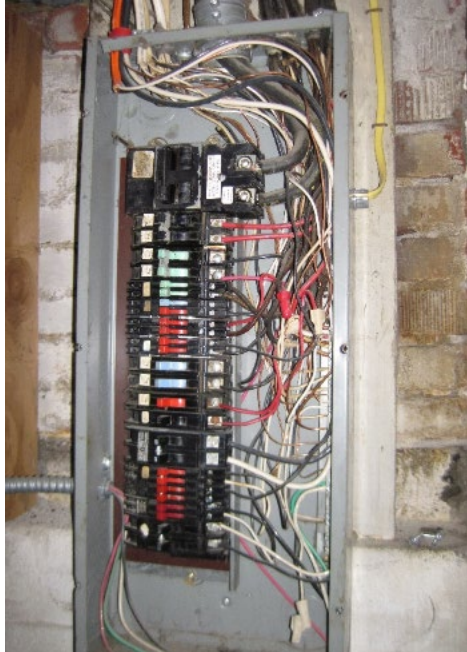
❑ **Circuit breaker** panels recommend replacement:

- **Critical Repair** five - panels or less
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❑ **Common area and MDP** recommend an evaluation by an electrician.

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Zinsco

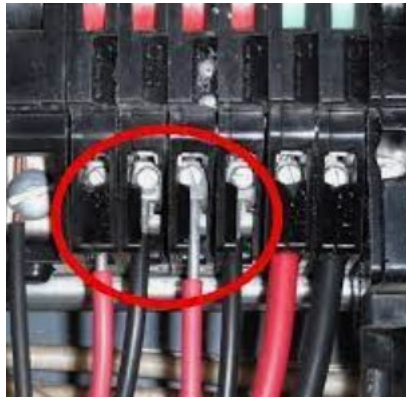


ALUMINUM BRANCH WIRING



Compared with copper, aluminum has a higher electrical resistance. For the same amount of current to flow through aluminum wire, larger wires are needed and these wires will generate more heat due to the resistance. Excessive heat can lead to warping of the aluminum wire and melting of the insulations, creating a potential fire hazard. When heated, aluminum expands much more than copper does. This extra expansion and contraction gradually causes loose connection points. In a loose connection, the wire is exposed to air. Exposed wiring is susceptible to oxidation and corrosion, which can further impede electrical flow to outlets, leading again to excessive heat.

ALUMINUM BRANCH WIRING



ALUMINUM BRANCH WIRING

COPALUM Crimp Connector

Cost is approx. \$600-\$800/unit

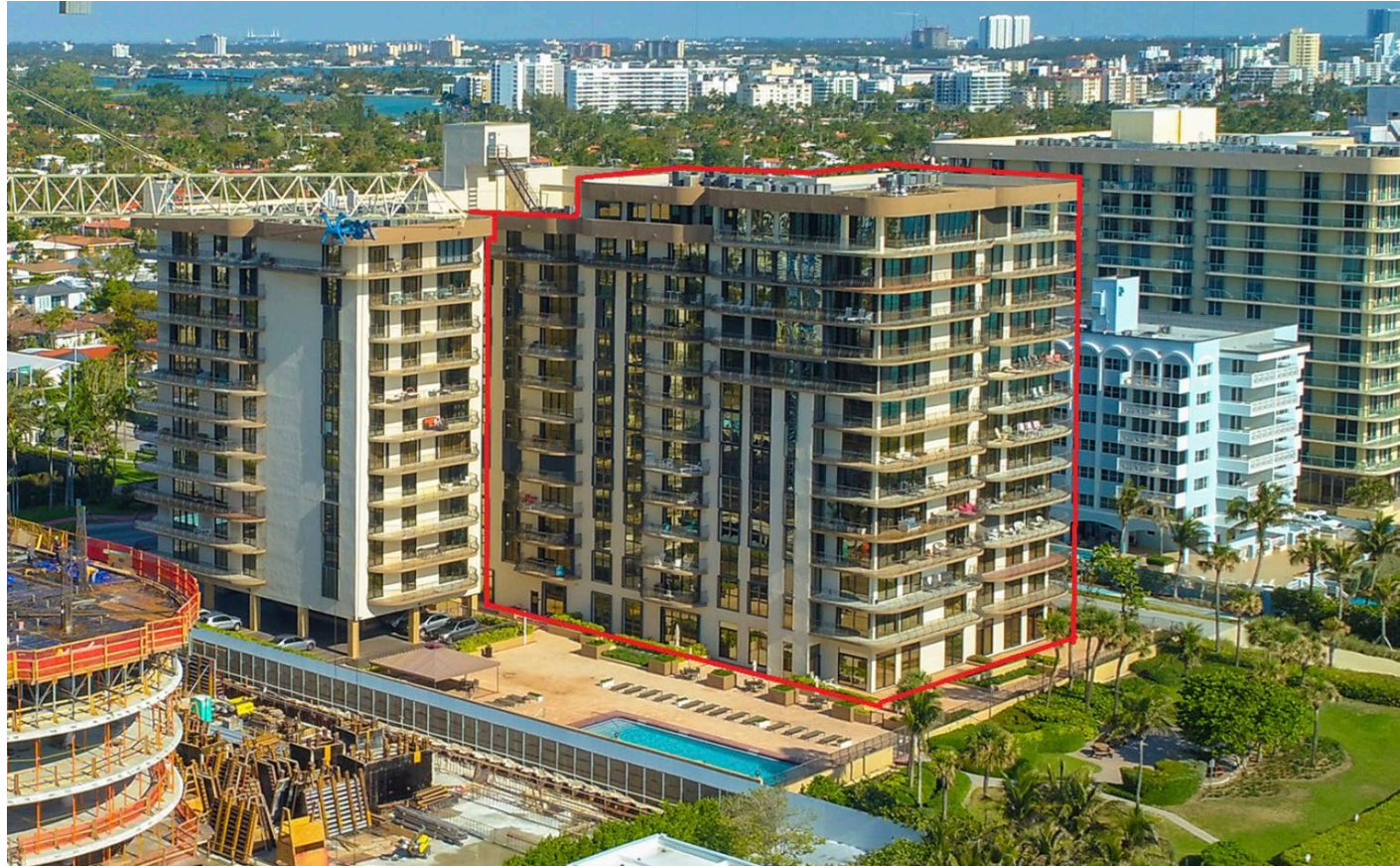


AlumiConn Connector

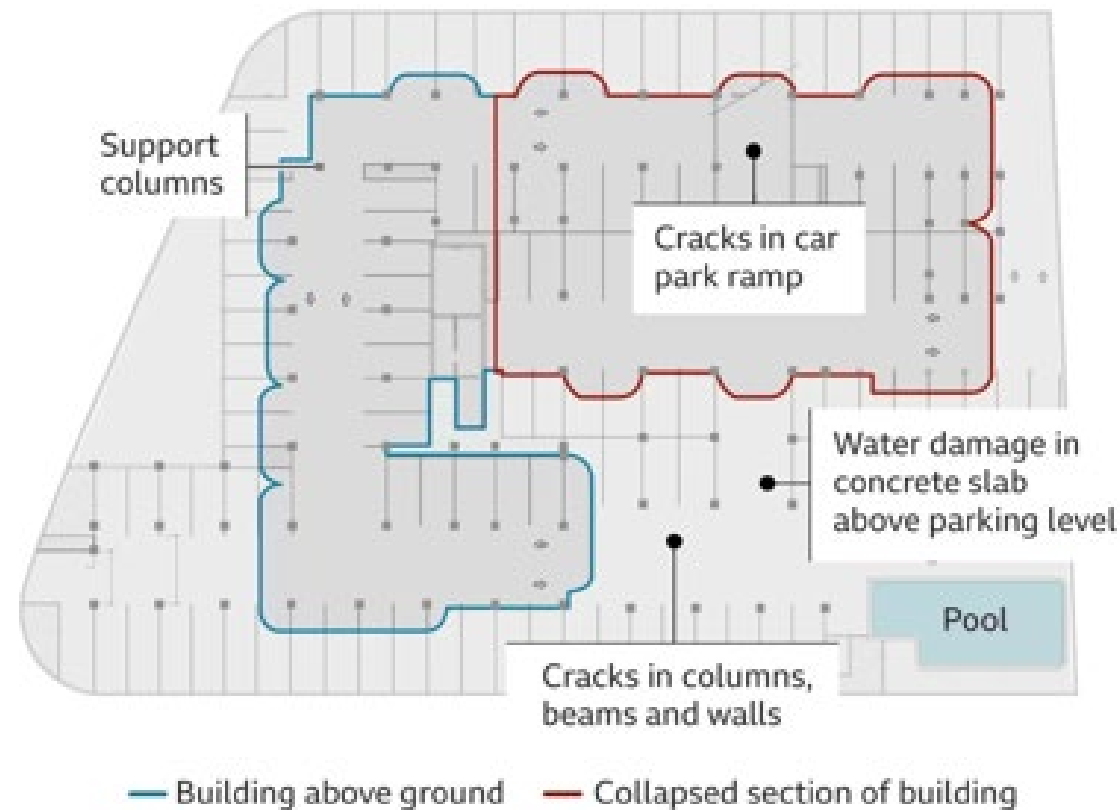
Cost is approx. \$200-\$250/unit



Miami Building Collapse. June 24, 2021



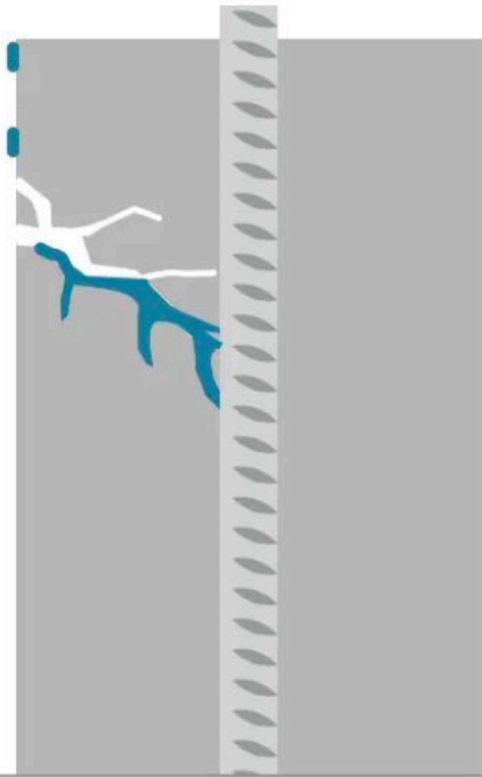
The 40-year structural Survey identified the following problems in the below-ground parking area.



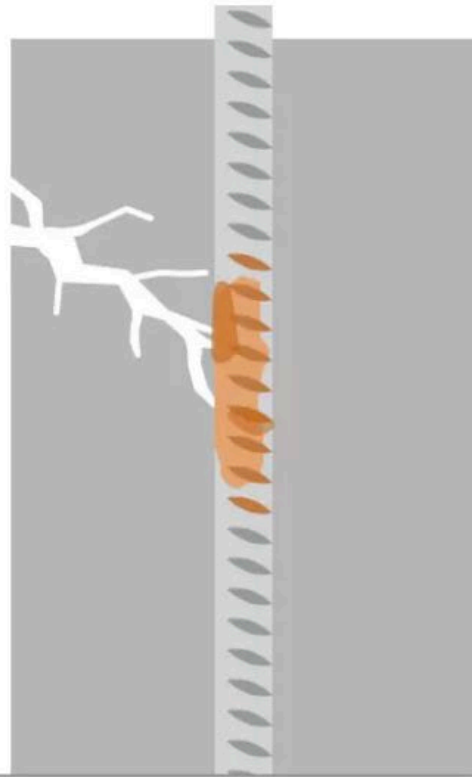
Photos from the 40-year structural report.



Water gets into concrete



Reinforced steel rusts and corrosion builds up



Pressure causes concrete to crack and spall (break away)

