

Reach Codes and All-electric buildings challenges for Affordable Housing Developers

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MidPen Housing



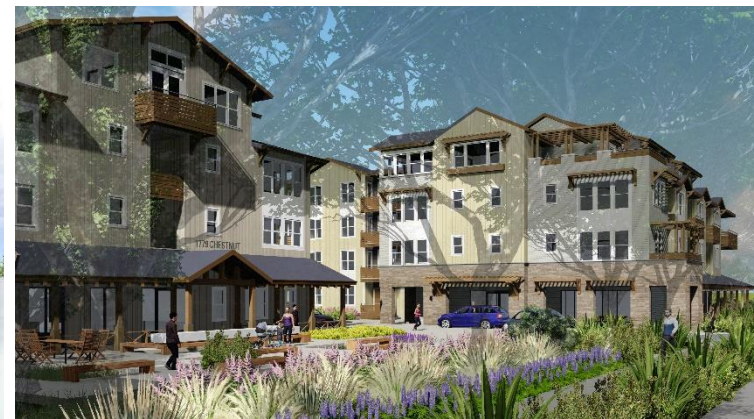
- 115 properties - 7,500 units
- Over 17,000 residents
- Developing beautiful homes
- Being good neighbors
- Empowering residents



Real Estate Development



- 6 projects in construction
– 472 units
- 3,500 units in pipeline



Edwina Benner Plaza

66 Units – Family

Construction: 04/2017 – 10/2018

Total Development Cost: \$44M

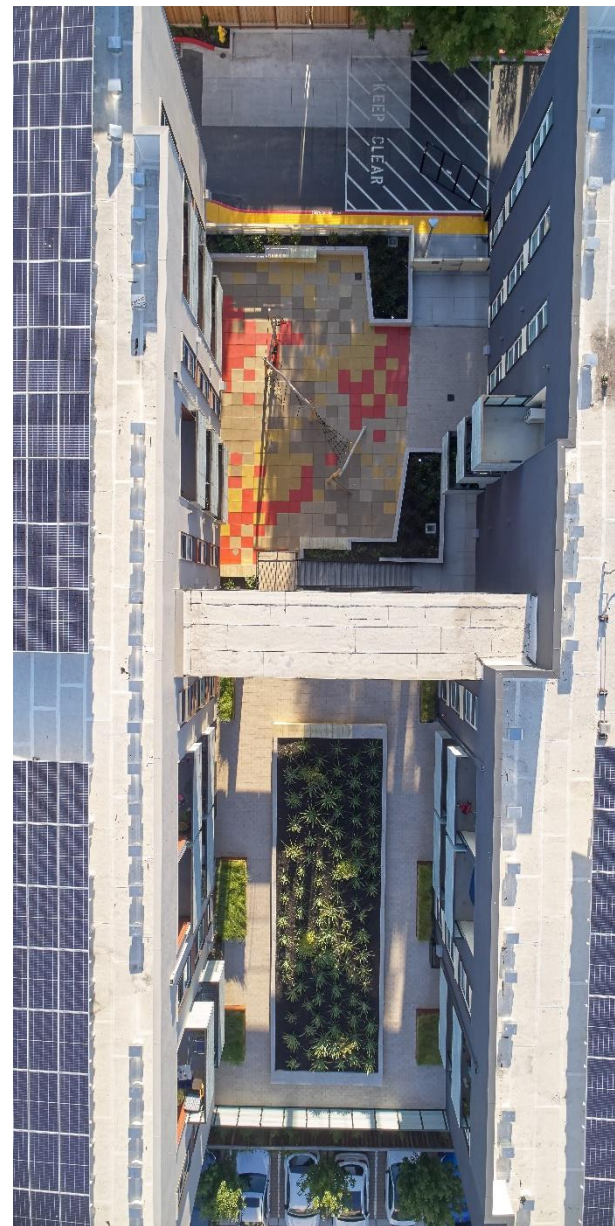
Construction Cost: \$26.5M



- Centralized heat pump water heaters
- Mini-splits space heating/cooling
- 123kW PV array

Lessons learned

- Early adopters pay a premium
 - Challenges with our electrical engineer
 - More labor than anticipated
 - Commissioning
- Cost neutral
 - CEC grant
 - No transformer upsize
 - Contracted cost for electric similar to pre-con estimates for gas
 - No impact on tenants bill
 - Property electricity bill ~\$0
- Coordination is key!



REACH Code – All Electric Buildings

- In unit
 - Already all electric
- DHW
 - Electric ~\$150-170/unit more expensive (before rebate)
 - Transformer size/placement
- Operation costs
 - \$0.22/kWh vs \$0.06/kWh



REACH Code – EV charging

- Impact on parking management
- 40 Amp dedicated/stall = upsize/additional transformer
 - \$4-5k/stall without charger
 - Add \$2.5/4k for charger
- Deal breaker



Moving forward



Thank you!